Effective Pedagogy in Social Sciences/ Tikanga ā Iwi

Best Evidence Synthesis Iteration [BES]

Graeme Aitken and Claire Sinnema, The University of Auckland

Teaching as Inquiry: a model of evidence-informed pedagogy

TEACHING INQUIRY

What might work best?
What could I try?

Using evidence of effective strategies from other contexts to inform strategies that are most likely to help students learn

FOCUSING INQUIRY

What is most important and therefore worth spending time on?

Establishing valued outcomes based on the curriculum, community expectations, and student needs and dispositions

LEARNING INQUIRY

What happened?
Why did it happen?

Considering evidence from own context about what happened as a result of the teaching, and implications for future teaching

Student outcomes

Teaching design

Teaching action

The Four Mechanisms

This symbol comprises four interlocking elements that represent the mechanisms of effective pedagogy outlined in this BES: connection (pink), alignment (blue), community (yellow), and interest (green). The same four colours are used throughout the document as a means of cueing the reader to the mechanism in focus. The elements interlock to symbolise the interrelatedness of the mechanisms; each operates in conjunction with the others.

Connection
Make connections to students' lives

Alignment
Align experiences to important outcomes

Community
Build and sustain a learning community

Interest
Design experiences that interest students

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This report is one of a series of best evidence synthesis iterations (BESs) commissioned by the Ministry of Education. The Iterative Best Evidence Synthesis Programme seeks to support collaborative knowledge building and use across policy, research, and practice in education. The various BESs draw together bodies of research evidence to explain what works and why to improve valued education outcomes and make a bigger difference for the education of all our young people. Each BES is part of an iterative process that anticipates future research and development informing educational practice.

This BES follows on from BESs focused on quality teaching for diverse learners in early childhood education and schools. The *Teacher Professional Learning and Development BES* provides insights into how to most effectively use the *Social Sciences / Tikanga ā Iwi BES* as a resource for teacher professional learning.

Feedback is welcome at best.evidence@minedu.govt.nz

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Acknowledgments

Writing a Best Evidence Synthesis Iteration is not a task that can be done in isolation; it requires extensive collaboration with the educational community. Accordingly, we would like to acknowledge some of those whose contributions have been critical to the development of this synthesis.

The wider social sciences community has supported us from the start; we have appreciated the interest members have shown and their feedback on draft material.

Several groups of practitioners from early childhood centres and primary and secondary schools were involved throughout the project. A number of teacher groups met during the scoping phase to discuss the outcomes framework and sources of evidence to be used, and ways of ensuring that the BES attended to learner diversity. Teachers at Avondale College trialled the cases and provided vital feedback about their design and use. Teachers involved in the Quality Teaching Research and Development Project worked with an early draft and provided insight into how successful the material was as a tool for informing teachers' inquiries into their own practice and student outcomes. We value the critical, considered feedback we received from these teachers. Their perspectives and expertise ensured that the approach we took would lead ultimately to a synthesis that would resonate with classroom practitioners.

The cases themselves are the result of extensive collaboration with the original researchers. We deeply appreciate the time and expertise they made available to provide clarifications, additional detail, and feedback on drafts. We extend our thanks in particular to Christine Rietveld, Yatta Kanu, Christine McNeight, Karen Nairn, Russell Gersten, Elaine Vine, Alison Sewell, Ruth Millar, Jane Brown, and Kerri Fitzgerald. Some of the teachers described in the cases also contributed to their development – we are grateful to them for their willingness to be involved.

A quality assurance forum was held in December 2005, involving more than 60 people. The contribution of these participants was timely and provided invaluable direction. We are particularly appreciative of Professor Jere Brophy's critique and guidance. His commitment to the BES approach and his supportive, yet challenging feedback helped strengthen the subsequent work. We also thank the many others who, though their involvement in the quality assurance process, were able to contribute to resolutions of methodological issues and suggest further sources of evidence.

We acknowledge the support of advisers who contributed to the initial development of this project: Alison Sewell, Tanya Wendt-Samu, Philippa Hunter, and Hemi Dale. We thank our colleagues Viviane Robinson, Helen Timperley, Glenda Anthony, Margaret Walshaw, and Sarah Farquhar – writers of other BESs – for their invaluable advice throughout the process. We also acknowledge Auckland UniServices Ltd and The University of Auckland for their institutional support and Ian Reid of Learning Media Ltd, our editor.

Researchers and reviewers from national and international forums have provided significant support for the development of the synthesis. These forums include the New Zealand Association for Research in Education, the American Educational Research Association, the Invisible College for Research on Teaching, and the US National Council for the Social Studies.

The completion of this work would not have been possible without the academic leadership of the Chief Education Adviser at the Ministry of Education, Dr Adrienne Alton-Lee. Her commitment, energy, and support was crucial throughout and she did much to to engage the interest and collaboration of national and international education communities. We deeply value her contribution.

Graeme Aitken and Claire Sinnema
June 2008

Forewords

Māori

E ngā iwi, e ngā reo, e ngā karangatanga maha o ngā hau e whā, tēnā koutou, tēnā koutou, tēnā koutou katoa.

Tēnā hoki tātou i ō tātou mate tūātini e hinga mai nei, e hinga atu nā, puta noa te motu. Kia tangihia rātou, kia mihia rātou, nā reira, moe mai koutou tē whakaarahia. Koutou te hunga mate ki a koutou, tātou te hunga ora ki a tātou. Tēnā tātou katoa.

E kī ana tētahi kōrero 'ko te piko o te māhuri, tērā te tupu o te rākau.'

Nā reira, e mihi kau atu ana ki te tokomaha i tutuki ai tēnei pūrongo, *Social Sciences / Tikanga ā Iwi Best Evidence Synthesis*. Ko tā tēnei pūrongo he tāutu i ētahi huarahi ako matua e whakanikonikotia ai te ako o te kaupapa o te tikanga ā iwi i roto i ō tātou kura, huri noa i te motu. E whā ngā tino āhuatanga i kitea e ngā kaituhi o tēnei pūrongo.

Ko te tuatahi, ko te āhuatanga e pā ana ki te kaha o te pouako ki te hono i āna mahi tikanga ā iwi ki ngā wheako me ngā mōhiotanga o ngā ākonga.

Ko te tuarua o ngā āhuatanga e pā ana ki te kaha o te pouako ki te whakahāngai i ngā mahi me ngā rauemi ka whakamahia e ia ki ngā mōhio me ngā matea ako o ngā ākonga. Tāpiri atu ki tēnā, ko tōna kaha ki te whakahāngai i āna mahi ki ngā putanga ako e hiahiatia ana kia tutuki.

Tuatoru, ko te āhuatanga o te whakatū me te whakapūmau hapori ako e whakatairangatia ai te ako a te ākonga.

Ko te tuawhā o ngā āhuatanga ko te kaha o te pouako ki te waihanga wheako e whai take ana, e whai ihiihi ana, e whakahihiko ana hoki i āna ākonga.

Kei te pūrongo nei te roanga ake o ngā kōrero mō tēnā āhuatanga, mō tēnā āhuatanga, heoi rā, e tika ana kia mihia ngā kaituhi me te tūāpapa taunaki rangahau kua whakatakotoria e rāua. Nā te heke o te werawera i ō rāua rae kua whakatūngia he anga pakirehua hei ārahi i te pouako ki te whakaaroaro, ki te whakanikoniko hoki i tāna whakaako i te kaupapa o te tikanga ā iwi. Ki te whakamahia tēnei anga kāore e kore ka whakanikonikotia te ako a te ākonga i roto i te tikanga ā iwi e eke ai ia ki ngā taumata tiketike o te tikanga ā iwi. Mā reira hoki e tutuki ai te wawata kia uru mōhiohio, kia uru haepapa hoki, te ākonga ki ngā mahi waihanga porihanga.

Hemi Dale
Te Puna Wananga, School of Māori Education, The University of Auckland

International

This Best Evidence Synthesis (BES) on social science teaching is the latest addition to the series of such syntheses being developed under the aegis of New Zealand's Ministry of Education. Led by Adrienne Alton-Lee, herself a major contributor to contemporary research on teaching and teacher education, the Ministry initiated the BES Programme as a way to ensure that its policy deliberations would be informed by carefully constructed syntheses of the most relevant research and scholarship.

Given the purposes for which they are produced, the BES documents reflect the Ministry's current priorities and pay particular attention to research done in New Zealand. However, the BES documents have relevance and applicability to educational policy makers and practitioners all around the world because they address topics of universal significance and offer remarkably thorough yet reader-friendly syntheses of research findings and implications. In my opinion, their careful scholarship and practical utility position the BES documents among the most important contributions to contemporary educational scholarship.

A major reason for the high quality of the BES documents is the process developed for producing them. Looking to the long term, the Ministry took time to develop standards and guidelines for developing these syntheses before commissioning work on them. Among other things, the BES guidelines specify that research included in the syntheses not only must be relevant to the topic, but also must satisfy the highest standards of scientific quality. Priority is given to studies that include careful measurement of specified student outcomes and support the kinds of causal inferences that make it possible to specify with confidence the implications for practice.

BES authors initially search far and wide, following multiple paths through the international literature to make sure that any potentially relevant study is included. Once relevant studies have been identified, they are interrogated closely, vetted according to the criteria for quality developed for the BES Programme.

The studies that pass muster are then summarised for inclusion, but their findings and implications are phrased very carefully to reflect any needed limitations or qualifications. The age, socio-economic status, and ethnic composition of students, for example, are noted, and findings examined to see if implications need to be qualified according to any of the variables. The idea is to state findings and implications as precisely as possible, qualifying them appropriately and taking into account the needs of diverse learners.

Once BES authors have completed their vetting and summarising of research to be included, they organise their notes into a coherent synthesis. More than a simple recounting of the nature, findings, and implications of each study, this synthesis is a significant contribution in its own right because it organises the findings into a network of connected content, structured around major concepts and principles. Compared with minimally organised lists of 'what works', BES documents are much more informative and applicable to policy deliberations. They synthesise information about what works, how and why it works, for which learners, and for what outcomes. They address the complexities and qualifications that educators need to face up to, yet suggest relatively specific policy guidelines that reflect the current knowledge base.

Working independently, a scholar with unusually clear goals, who followed unusually thorough review and synthesis procedures, might produce the equivalent of a BES draft and consider it ready for publication, pending changes suggested by journal reviewers and colleagues. The BES development process, however, requires significant further vetting and revision.

The BES draft is circulated to a range of quality assurers who represent different stakeholder groups (the international research community, educational administrators, teachers and professors at levels from preschool to university, and ethnic minorities) and who are commissioned to provide formal, written feedback. The draft is also circulated to a broader

range of teacher educators, teachers, and others, who are invited to come to a public meeting with their comments and questions. Ministry officials and BES authors attend and later confer on changes or additions that will be made in response to the concerns raised by those attending the meeting, and by the quality assurers.

Following through on these revisions requires months of additional work by the writers, with input from key Ministry officials and quality assurers. The feedback often results in changes or additions, not only to the scientific content of the document, but the methods used for describing and illustrating the findings (as exemplified in the graphic displays and case studies included in this BES). Once the basic content is finalised, the document goes through several rounds of editing and revision for clarity and reader-friendliness. From beginning to end, the whole process takes several years, resulting in syntheses that are remarkable for both their scientific accuracy and their practical value to policy makers and practitioners.

While BES authors receive a great deal of useful guidance, the process demands a lot from them. In addition to possessing sufficient knowledge of the field to conduct a thorough review and produce a useable synthesis, writers must be willing to pay careful attention to the feedback they receive from stakeholders, and to revise successive drafts accordingly. I was in a good position to see this for myself, because, as a representative of the international research community, I provided written feedback on successive drafts of this BES, attended the public meeting, and participated in follow-up meetings and correspondence in which revision was planned. I can testify that the Ministry was extremely fortunate to secure the services of Graeme Aitken and Claire Sinnema as authors of the social sciences BES. I found them to be extraordinarily broad-ranging and accurate in their reviewing, coherent and compelling in their synthesising, and embracing of the spirit of the development process.

Aitken and Sinnema have produced an outstanding synthesis that embodies the ideals envisioned in the BES guidelines. It deserves praise, both as a contribution to scholarship that adds significantly to the knowledge base in social science education and as a rich source of research-based guidelines for policy makers. It is reader-friendly, yet scientifically measured. Certain features in particular deserve to be singled out for special comment.

First is the authors' identification of relevant student outcomes. Too often, standards statements, curriculum guidelines, and (especially) assessment systems confine their attention to knowledge and skills outcomes. Curriculum aims and purposes typically focus on knowledge and skills outcomes but they also include attitudinal and dispositional outcomes that often do not receive the attention they deserve. In reviewing the literature for this BES, the authors included three such outcomes that have special relevance for learning in social studies or the social sciences: affective (developing desired emotional and dispositional responses to learning, especially commitment to values such as social justice and equity), participatory (developing dispositions toward respectful interactions with diverse others, including productive discussion of controversial issues), and cultural identity (helping students to articulate their own personal and cultural identities and respect those of diverse others). This broad construal of intended student outcomes reflects the fact that the social studies and social science strands of school curricula have special relevance to the larger purpose of preparing students for citizenship.

A second noteworthy feature is the authors' consistent emphasis on the linkages between learning and teaching as they describe and explain what the research says about effective practice. Learning and teaching are discussed separately in much of the educational literature, and many 'what works' compendia present instructional methods or guidelines with little or no attempt to explain why they are effective. The effectiveness of the teaching strategies recommended in this BES is consistently explained with reference to the ways that they induce students to have learning experiences that align with important outcomes. In fact, the overall package of recommendations is conceived and represented as an aligned system in which intended outcomes imply the need for learning experiences that support progress toward those outcomes, which in turn implies the need for approaches to curriculum and instruction that afford those learning experiences.

A third noteworthy feature, related to the second, is that the authors have organised findings from a diverse research literature around just four sets of principles that reflect underlying causal mechanisms. Well chosen for their integrative power and applicability across grade levels and local teaching situations, they are:

- **connection**: connect curricular content to students' lives outside of school;
- **alignment**: align learning experiences to connect with students' prior knowledge and move them toward important outcomes;
- **community**: socialise students to collaborate and support one another within a classroom learning community;
- **interest**: design learning experiences that are aligned with important outcomes but also provide students with interesting learning experiences that engage them in a variety of learning processes.

A final noteworthy feature is the way the authors have supplemented the already clear and reader-friendly text with two additional features that support readers' understanding and better prepare them to apply its recommendations. First, sprinkled throughout the text are numerous lists, diagrams, and other graphic organisers (many of them colour-coded) that summarise the main ideas and highlight the connections between them. The text deserves thorough study in which readers take time to appreciate not only its gist but also the rich corpus of details and examples that elaborate its main ideas. Readers will find that by copying and collating the main graphic organisers they can create a powerful resource for refreshing their memory of the main ideas and recommendations.

The second additional feature is that the authors help readers understand and envision potential applications of their recommendations by providing specific classroom examples drawn from some of the featured studies. The most extensive of these are the transcripts of classroom interaction that are included in the main body of the report and the case studies found in appendix D. These show what the teaching recommendations look like and sound like in actual classroom situations – frequently situations that involve adaptations to meet the needs of diverse learners. They help to make this BES as useful for practitioners as for policy makers.

This is a sterling addition to the BES series. I congratulate the authors on an outstanding job and urge readers to give it the close study that it deserves.

Jere Brophy

Jere Brophy is University Distinguished Professor of Teacher Education at Michigan State University and a Fellow of the International Academy of Education. In 2007 he was awarded the Thorndike lifetime achievement award by the American Psychological Association for outstanding career achievement and significant accomplishments in research in educational psychology. He was a member of the United States Task Force on Social Studies Teaching and Learning that prepared the National Council for the Social Studies position statement entitled 'A vision of powerful learning in the social studies: Building social understanding and civic efficacy'.

Early childhood

Firstly, we congratulate the authors on the rigour of the procedures used to develop this synthesis. The selection of material, the consultation and feedback processes, and the thought that has gone into the coherent presentation have been systematic and thorough.

We thank the authors for the thoughtful inclusion of early childhood education throughout the synthesis. The four mechanisms of connection, alignment, community, and interest are consistent with the process-driven philosophy and pedagogy of early childhood education. Connection highlights particular aspects of children's prior knowledge and makes links to home and culture. Alignment is about providing integrating links between learning experiences so that learning becomes well established. Community focuses on relationships, belonging, dialogue, and collaboration as both outcomes and expectations. Interest involves developing a variety of curriculum experiences to make learning stimulating and memorable.

This synthesis provides rich opportunities for all teachers in early childhood education to engage with ideas about learning and teaching in the vital area of social sciences. The authors present their findings with the help of numerous summaries, tables, and lists of implications that enhance the user-friendliness of the document. The case studies and analyses in appendix D feature recognisable scenarios that challenge teachers in all sectors; they are designed to promote pedagogical reflection. Authentic curriculum evolves from a commitment to ongoing inquiry and discussion of this kind.

Early childhood education has been an integral part of our education system for some years. It is only relatively recently, however, that the relationship between professional knowledge, pedagogy, and learner outcomes has been recognised across all sectors. We note therefore the paucity of empirical evidence about social sciences pedagogy that is linked to outcomes for young children. There is a strong message here for early childhood teachers, researchers, funding bodies, and policy makers: a holistic, integrated, and process-driven curriculum, philosophy, and pedagogy requires strong research-based support. For example, project work is lauded in early childhood, but this synthesis points out that there is contradictory evidence on its efficacy. Given our emphasis on participatory outcomes, we need to undertake research that will provide clear evidence of what works and what doesn't for young children. With this imperative in mind, there are a number of important implications for the social sciences in early childhood education.

First, there is a problem with 'outcomes'. Culturally-valued knowledge is commonly defined within specific knowledge domains. Much research in the privileged domains of literacy and numeracy supports current educational and political discourse, reinforcing and validating the status of these domains. Yet notions of history, geography, sociology, and their related sub-disciplines are very relevant to *Te Whāriki*'s[1] emphasis on family and community, well-being, belonging, and contribution. Consider, for example, "an understanding of their own rights and the rights of others" and "children know they have a place".

Second, this synthesis, with its emphasis on inquiry as pedagogy and the approaches to learning as valued outcomes, supports current approaches to early childhood pedagogy that might be appropriate in other sectors, particularly in the implementation of *The New Zealand Curriculum*[2]. Together with inquiry and learning, the mechanisms provide guidance for framing future outcomes-related research across all sectors. An emphasis on the processes of children's learning and knowledge-building might be more illuminating than stressing what knowledge was learned and how this might be measured.

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[1]   Ministry of Education (1996). *Te Whāriki: He whāriki mātauranga mō ngā mokopuna o Aotearoa / Early childhood curriculum.* Wellington: Learning Media.

[2]   Ministry of Education (2007). *The New Zealand Curriculum.* Wellington: Learning Media.

Third, *Te Whāriki*'s aspiration for children "to grow up as competent and confident learners and communicators, healthy in mind, body, and spirit, secure in their sense of belonging and in the knowledge that they make a valued contribution to society" (p. 9) resonates strongly with the social sciences. But if the aim is to produce lifelong learners and responsible citizens, education is a long-term commitment and not easily measurable against short-term outcomes – particularly, for example, where these relate to children's learning about their responsibilities as group members or their understandings about diversity and equity. Further, the range of possible outcomes is very broad and their impact extends beyond the children themselves[3]. What would be desirable is funded longitudinal research that builds on New Zealand's Competent Children Project and the UK's Effective Pre-school and Primary Education studies and incorporates the mechanisms from this BES.

The writers of this synthesis present their findings with the help of frequent summaries, tables, and lists of implications that make it user-friendly. Nevertheless, like the other volumes in the series, this BES is a lengthy and daunting read for busy teachers. It is vital that funded professional learning programmes are developed to support teacher engagement with evidence-informed practice and inquiry. We would like to see such a programme for this social sciences BES provided in conjunction with the *Quality Teaching Early Foundations: Best Evidence Synthesis*[4]. The BES series is gaining international respect – let's not have these documents lie on dusty bookshelves in our schools and early childhood centres.

It behoves teacher educators and researchers who want to make a difference to incorporate the findings from the BESs into their programmes. For example, in early childhood education, communication and dialogue are a particular focus, so the suggestion that teachers closely assist children to learn "to listen, speak, ask questions, recognise and praise each other's contributions, and give and receive help" (see page 152) has implications for teacher practice, professional learning, and reflection. When supported by professional learning, teachers are able to make significant shifts in their practice that result in improved outcomes for children, as the examples taken from Sewell's study demonstrate. Such shifts are also documented in the two syntheses on teacher professional learning[5]. We would welcome collaborative interrogation of the findings of this synthesis in early childhood teacher education and professional learning programmes.

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Debora Lee, Practicum Coordinator, Early Childhood Education, School of Teacher Education Practice
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[3] Mitchell, L., Wyllie, C., & Carr, M. (2008). *Outcomes of early childhood education: Literature review*. Wellington: NZCER.

[4] Farquhar, S. (2003). *Quality Teaching Early Foundations: Best Evidence Synthesis*. Retrieved 6 June, 2008, from www.educationcounts.govt.nz/publications/series/2515/5963

[5] Mitchell, L. & Cubey, P. (2003). *Professional Development in Early Childhood Settings: Best Evidence Synthesis Iteration (BES)*. Retrieved 6 June, 2008, from www.educationcounts.govt.nz/publications/series/2515/5955
Timperley, H., Wilson, A., Barrar, H., & Fund, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration*. Wellington: Ministry of Education.

New Zealand Educational Institute Te Riu Roa

NZEI Te Riu Roa welcomes the opportunity to comment on this Best Evidence Synthesis. Drawing widely and systematically from national and international research on social sciences education, its authors have sought evidence of what works, for which students, and in what circumstances. This synthesis of findings contributes to our understanding of the relationship between pedagogy and outcomes and the importance of context. Teachers will welcome the inclusion of many practical ways in which to strengthen practice – a particular feature of the BES programme.

Social studies in primary schools is about people and their interactions. It involves social inquiry and relationships. The concepts investigated and developed at increasing levels of complexity include: cultural identity and change, interdependence, power, cooperation, and conflict. Teachers design activities that help students think for themselves. To do this, they need to know how what they plan to do fits with the big ideas, and what attitudes and values they will be developing. They must also know each of their students, so that they can teach them the skills they need to locate, analyse, and make sense of pertinent information.

The authors of the *Social Sciences / Tikanga ā Iwi BES* acknowledge the complexity of researching in this learning area and have taken corresponding care not to overlook important sets of outcomes. Their first step was to develop a classification system to categorise outcomes. In its final form, this classification synthesised curriculum intentions, the general literature on educational outcomes, and teacher experience. This classification then guided the research process. Evidence is drawn from and relevant to early childhood, kōhanga reo, kura kaupapa Māori, primary, and secondary settings, and both English- and Māori-medium contexts.

The BES identifies four broad mechanisms that facilitate and explain learning in the social sciences: connection, alignment, community, and interest. In describing these mechanisms, the authors acknowledge the interplay of context and pedagogy, and the influence of this interplay on outcomes. A series of case studies is analysed, and the learning explained in terms of these four mechanisms.

The NZEI Te Riu Roa teachers who were asked to provide feedback on the working draft of this document were generally positive about its coverage of the issues. They believed that it made the research explicit and accessible and that teachers would find it relevant and extremely useful for their practice.

Frances Nelson
National President

Primary teachers

The *Effective Pedagogy in Social Sciences / Tikanga ā Iwi Best Evidence Iteration* acknowledges that complex combination of teaching and learning, instruction and collaboration that is the *ako* of the New Zealand classroom. It does this from a variety of perspectives and acknowledges diverse cultures and abilities. To juggle all of this would seem impossible to an outsider. Yet this is what teachers strive to do every day in multicultural classrooms in every sector of education.

The classroom is an ever-changing organism, requiring constant reflection and readjustment. My belief is that this BES will be able to facilitate this process in the area of social sciences, providing as it does practical and theoretical models that are easily transferred into classroom settings. Rather than providing ivory tower solutions, from people who have never been in a classroom and cannot recognise mismatch of theory and practice, the BES findings are derived from actual teacher practice and have been used by other teachers to great effect.

Although it would have value simply as a synthesis of a major body of research, the opportunities the BES affords for practical application mean that it should be on teacher bookshelves rather than languishing in resource rooms. It is very explicit about how pedagogical practice can enhance the participation, content knowledge, and sense of belonging and citizenship of diverse learners. Underlying the four mechanisms are what I would term 'causal mechanisms' – practices that have been empirically shown to improve learning outcomes for diverse learners and that can easily be accessed, trialled, and adopted in classrooms through small changes to practice or belief.

The fact that so much of the research in this BES is derived from everyday classroom settings gives it much of its power, because teachers can see what has worked for other teachers. Such research is relevant, credible, and applicable. It is my hope that teachers will use these studies as the basis for comparisons with their own practice and as an impetus for professional learning.

There are times when, despite our best intentions and the application of well-tried strategies, we have students who continue to struggle. Although the planning, the learning experiences, and the time allocated all seem in alignment, the learning outcomes are simply not happening. This BES will help us answer a question that we often dread but sometimes have to ask: 'Why isn't this working?'

To use the BES effectively, we have to be open-minded, persistent, self-critical, reflective, and empathetic to the positions of others; we have to allow ourselves to be uncertain, to stand back and examine our own practice, and then use what we find as a basis for change. If this sounds discomforting, I can tell you from personal experience that it is; but if we are committed to enacting change in the classroom, then it is a place we have to go. Some of the BES mechanisms look very obvious, and you will find yourself saying 'but I already do that!' The danger is that, if we do not allow ourselves to be reflective and uncertain about our practice, we may simply read the BES as a checklist of what we already do ('I always assess for prior knowledge', 'I already align outcomes with learning experiences' …) If we find ourselves doing this, we need to ask ourselves three questions:

- How? How can we present these mechanisms in ways that truly support learning outcomes for diverse learners?
- Why? If we are doing all of these things already, why are some of our students still floundering?
- What? What impact is what we're doing (or not doing) having on the kids in our classrooms?

My own experience with the BES has caused discomfort, heartache, self critique, change, and – finally – success. Working in a multicultural school in central Auckland, I was continuously

disappointed with the minimal effect I seemed to be having on the learning outcomes of some of the Māori and Pasifika students in my classroom, even though I thought I was doing everything right. Using the the draft of this BES, I decided to try narrative and storytelling as a means of addressing the misconceptions of my students in social studies. I had an intuition that this might work but, using studies that I encountered in the BES (including those by Egan, Levstik, and Brophy), I began to change my practice in a deliberate, empirical manner. The results were almost instant. Narrative in the classroom follows a tradition of oral storytelling and easily integrates family stories and experiences into class discussion and study. Because such narrative does not have to be printed or illustrated, students and whānau are able to tell their stories and be experts in the classroom. For my students, who were already exploring their cultural diversity in many other ways, they gained not only deeper conceptual knowledge, but also an enhanced sense of cultural identity – and they began to participate more.

As a teacher with a passion for the social sciences, I see how they can be used to reflect, demonstrate, and explain diversity. But this document has had an influence on my pedagogy and practice that extends well beyond the social sciences. Its emphasis on building relationships, changing the locus of control, being transparent and explicit, and adopting culturally appropriate methodologies has permeated the culture of my classroom. This has had the effect of creating multiple layers of learning opportunities, which have involved teacher, student, and community in an interactive and mutually beneficial process.

This BES is timely, given the increasing diversity of our classrooms and the changing needs of learners, often reflected in lack of engagement and poor conceptual understanding. This BES does not set out to revolutionise teaching; it is more concerned with maximising the impact of common practices so that teachers can make a difference for all of our students.

Michelle Spraggon
Teacher, Grey Lynn School

Secondary Principals' Association of New Zealand

The Secondary Principals' Association of New Zealand sees the *Social Sciences / Tikanga ā Iwi Best Evidence Synthesis* as a comprehensive resource that will have a positive influence on the social sciences at every level in our schools. It is essential reading for all who teach in this subject area.

Identifying the links between pedagogy and learning is particularly difficult in the social sciences. Learners bring with them their life experiences and attitudes, influenced by incredibly diverse backgrounds, and find their understanding of the world challenged perhaps more than in any other learning area.

By identifying the four mechanisms that work to enhance learning in social sciences, the BES provides a coherent framework that can be applied from years 1 to 13. The case studies and vignettes provide excellent support for the main themes and will assist teachers to bridge the theory–practice divide. Specialist teachers in the senior secondary school will be encouraged to see that the evidence supports a consistent approach across all social science subjects.

A useful feature of the BES is that it pinpoints gaps in the available research, paving the way for future studies and providing a catalyst for continuous improvement. The challenge is now for the social sciences sector to embrace its key findings and ensure that evidence-based teaching approaches become embedded in everyday practice. The release of this BES is very timely, coinciding as it does with the work that teachers are doing on the implementation of *The New Zealand Curriculum*.

Peter Gall
President

New Zealand Post Primary Teachers' Association

This *Social Sciences / Tikanga ā Iwi Best Evidence Synthesis* will be widely welcomed by all those who work with children and young people in Aotearoa New Zealand.

It has clear, strong links to the earlier BES reports in terms of the teaching and learning process and the importance of the relational environment in which teaching professionals and students 'learn together'.

Of particular value to practising teachers and other education professionals is the identification and explanation of four mechanisms that facilitate learning for diverse students in tikanga ā iwi / social studies / social sciences. These mechanisms: connection, alignment, community, and interest, provide a powerful framework for the discussion, planning, and implemention of effective teaching programmes in this key area of the curriculum.

Teachers will welcome the accessibility of this report. The authors have managed to be academically rigorous without losing sight of their target audiences. The effective use of diagrams to exemplify the text is a valuable feature of the document.

Social scientists are by nature a disputatious bunch, so they will engage in productive, professional debates over the findings in this BES and how best to implement them. This will be the real reward for Graeme Aitken and Claire Sinnema for their outstanding contribution.

Robin Duff
President

Secondary teachers

On behalf of social science teachers in New Zealand, we would like to congratulate Graeme Aitken and Claire Sinnema for producing this comprehensive synthesis from such a wide range of studies.

The authors' aim was to "identify and explain teaching approaches that enhance outcomes for diverse learners in the domain of social sciences / tikanga ā iwi" (page 221). We feel that they have achieved this most effectively and, in doing so, have challenged us to think about the validity of the approaches we use in our everyday teaching. The synthesis suggests that we should constantly ask ourselves the question: "What will the outcomes of this be for our students?"

Broadly speaking, the material in the BES falls into three categories: what the authors did and how they did it, what they found out, and what the evidence was for their conclusions. There is much that will be of interest to secondary teachers. Aitken and Sinnema identify four mechanisms that help students learn, and that represent best practice; they provide numerous examples from New Zealand and overseas to illustrate the mechanisms at work with students of different ethnicity, gender, age, and ability. These examples make us aware of ways in which we can connect with students from different groups. The authors are careful to select examples from different social science subjects (classical studies, economics, geography, history, and social studies), but the ideas they highlight have wide applicability. The benefits of using the different mechanisms are made clear, but cautions are also spelled out.

We visualise the BES like this:
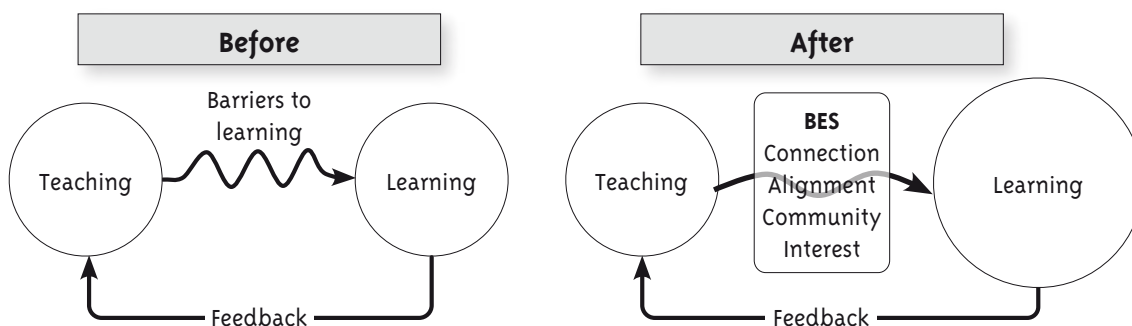
The potential effect of the *Social Sciences / Tikanga ā Iwi Best Evidence Synthesis* on teaching and learning

We had the luxury of being given time to read the BES; realistically, this will not be the case for most classroom teachers. Given its size, the document may seem daunting, but it does lend itself to being studied in smaller chunks. Heads of department could use it a section at a time as the focus for teacher professional development. A session might revolve around one mechanism or part of a mechanism. For example, there could be a focus on group work skills (community), before students are asked to work in groups. Or there could be a focus on the nature of field work (interest), and its timing in a learning sequence. The cases in appendix D could also be used as the focus for professional development; they illustrate the mechanisms and provide critical questions that can be used for reflection.

From our perspective as heads of department, the parts of the document that we would want our colleagues to start with would be section 2.1 and table 4 for overviews of the findings and table 34, which clarifies what the mechanisms are and are not saying. We would hope that these sections would encourage teachers to read further.

While the jargon may be unfamiliar to those of us who completed our tertiary studies some time ago, this is not a document to be scared of. It reflects a lot of the good teaching that is

already going on and, for many teachers, may not require huge shifts in practice. The changes it calls for are evolutionary rather than revolutionary. As we read the BES, we found ourselves oscillating between feeling comfortable with aspects of our current practice and making notes about new ideas or practices that we could use in our classrooms. This is definitely a document that deserves to be mulled over, discussed, and acted on.

Gill Hanna, Director, Social Sciences, Avondale College
Sally Brodie, TIC Geography, Botany Downs Secondary College

Pasifika

Talofa lava, taloha ni, kia orana, malo e lelei, ni sa bula, fakaakofa lahi atu, ia orana, halo olaketa, kam na mauri, greetings.

As Pasifika educators and researchers within the social sciences, we feel honoured to write a foreword for this BES. We do need to explain, however, that while we are of Pacific heritage, have served for a number of years in New Zealand's compulsory and tertiary education sectors, and have strong interests in Pasifika education and research, we do not presume to speak on behalf of all professional Pasifika education communities in Aotearoa New Zealand. The 'Pasifika umbrella'[6] is simply too large and diverse for this to be possible.

As we were asked to reflect on the potential of this BES for teachers, educators, and researchers who are committed to making a difference for Pasifika students, we have chosen to focus on these two questions:

i.   What is the relevance of this BES in terms of the education provided *for* Pasifika learners?
ii. What is the relevance of this BES in terms of the education New Zealand learners receive *about* Pacific peoples, places, and world views?

The first question invites analysis of national policy and state initiatives that are designed specifically for Pasifika students and their communities. The intentions of the state need to be contrasted with the beliefs, values, and response of Pacific communities themselves.

In our opinion, this BES does not specifically address the provision of education for Pacific students in New Zealand. It does, however, focus on "pedagogical practices [that] can improve outcomes for diverse learners" (page 36). Pacific students contribute to the landscape of diverse learners in New Zealand and have celebrated many educational successes, "but it is no secret that our education system could and should do more to get better outcomes for Pasifika students"[7].

The BES identifies specific pedagogical practices that could lead to those better outcomes within the social sciences. Teachers and educators will recognise familiar contexts, issues, and strategies and think 'Yes, I know this, I do this!' The beauty of this BES is to be found in the mechanisms, which provide a structure for in-depth, analytical discussion of the experiences of practitioner peers from New Zealand and around the world. By activating the mechanisms of connection, alignment, community, and interest, reflective teachers and educators may find themselves engaged in a (re)learning process that leads them to think 'I did not realise this; I did not know that!' The deepened understandings that result can only be of benefit for learners.

The writers clearly found there was a dearth of Pacific-specific research regarding pedagogical practices in the social sciences. We do not believe that this weakens the value of this BES for centres and schools as they strive to provide for their Pasifika learners, but the challenge for teachers will be to 'see' where and how the findings might apply.

The second of our questions reflects our belief that it is in the social sciences domain that New Zealand students are most likely to encounter, engage, and develop their knowledge about their nation's nearest neighbours. It is also within this domain that they are likely to form views about their Pasifika peers. Consider, for example, the power of the idea that it is important to select "resources that make diversity visible and avoid biased and stereotypical representations" (page 222), and that "what matters is that the *set* of resources used ... should present a variety of perspectives that collectively make diversity visible" (also page 222).

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6   Samu, T. W. (2006). The 'Pasifika umbrella' and quality teaching: Understanding and responding to the diverse realities within. *Waikato Journal of Education, 12*, pp. 35–50.

7   Ministry of Education (2006). *Pasifika Education Plan: Monitoring Report 2006*. Retrieved 23 May, 2008 from www.educationcounts.govt.nz/publications/series/22967/11743

Exactly what 'education about Pacific peoples, places, and world views' means has implications for the identities of Pasifika learners. In this connection, it is encouraging to see that the classification of outcomes in this BES takes account of the aspirations that educators have for their students. We believe that two kinds of outcomes – cultural identity and participatory – are of special relevance for Pasifika learners. Cultural identity outcomes are relevant as they explore and ask questions, but most especially as they develop identities as people of the Pacific who are part of New Zealand society and members of the global community. Participatory outcomes are highly relevant, given the multiple worlds that Pasifika students must learn to participate in and contribute to.

Having made the research accessible to educators and analysed the key points, the writers have gone a step further by summarising implications for practice and being explicit about what the evidence is *not* saying. This elaboration will be of value for any educator, but particularly so for educators of Pasifika students who are diverse in language, learning strengths, and needs. We suggest that this level of precision supports the idea that 'one size does not fit all' for Pasifika education.

We would like to express our appreciation to the writers of the *Social Sciences / Tikanga ā Iwi BES* for what they have gifted to our various professional communities. We believe that, in the hands of caring, critical thinking, reflective educators and researchers, this BES will be instrumental in making a difference for diverse learners – particularly Pasifika learners.

Ala'isia, ala'i kolonga[8].

Tanya Wendt Samu, Senior Lecturer, Faculty of Education, The University of Auckland
Alexis Siteine, Senior Lecturer, Faculty of Education, The University of Auckland

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[8]   A Tongan proverb, which may be translated as 'skilful at the mound, skilful in the hut', meaning that we have a better chance of surviving if we are adaptable, skilful, and functional in more than one environment.

University: School Support Services

The social sciences learning area has a critical role to play in ensuring that all young people are equipped to become active and positive members of their local, national, and global communities. It is particularly well placed to support the vision for education outlined in *The New Zealand Curriculum*[9] and prepare students for life in the 21st century. As in-service advisers, we have seen a particular need for a social sciences BES, so we welcome this resource and believe that it has great potential for improving outcomes for diverse students.

The New Zealand Curriculum recognises and acknowledges multiple, diverse characteristics in learners, and the Effective Pedagogy section has a focus on the development of close teacher–student relationships. This latter area has been sadly neglected in the past. The *Social Sciences / Tikanga ā Iwi BES* aligns with the aims of *The New Zealand Curriculum* and offers practical support for teachers as they look to develop their students' learning potential in an inclusive classroom environment. It fosters the concept of 'ako' and a climate of collaboration in which the teacher is also a learner.

While teachers find themselves under a professional, even moral, imperative to continually strive to make the greatest difference for their students, it has not always been clear how they might achieve this in the social sciences. They have often relied on experience, perception, and intuition when judging the effectiveness of different approaches. This BES provides firmer ground by outlining four mechanisms that research studies show are associated with effective teaching and learning, and an inquiry process by which teachers can assess the effectiveness of their practice in terms of outcomes for students.

There are many possible entry points to the document. It could initially be dipped into as a source of ideas or a troubleshooting guide. But it will have its greatest impact if teachers actively engage with it in the context of a professional learning process. Teachers need to be able to read, reflect, and discuss the points made. Then, the authors suggest (see section 2.2), they should use an evidence-informed model of inquiry and action to implement chosen strategies, and then review their effectiveness. Used in this way, the BES can help teachers respond positively to the many challenges of social sciences teaching, creating a platform for inquiry and critical consideration of pedagogical factors that enhance the learning of diverse students. We believe that teachers who adopt this model will discover that it contains within it the potential for deep and lasting change in practice.

Social sciences teaching is a complex process and this resource does not attempt to simplify it or tell teachers 'what to do'. Rather, it provides a framework that teachers can use to analyse what is happening in their own particular context and that will suggest possible solutions. Practical examples are provided throughout and in the cases found in appendix D; these illustrate the points being made and show how they can be applied in real-life situations. The cases also exemplify what is meant by an inquiry process. They outline why and how particular strategies were used, provide evidence of their impact, and describe teachers' reflections and thoughts concerning future practice.

There are numerous ways in which teachers, team leaders, principals, school support staff, and other educators can use this BES to promote social sciences learning for diverse students. It can be used in professional development meetings as a means of gaining greater understanding of the links between theory, research evidence, professional learning, and effective classroom practice. It can also be used by individual teachers as a basis for systematically questioning their own practice and repositioning their thinking.

The process used to develop the BES was inductive and iterative. Themes and mechanisms emerged or were modified progressively by the authors as new evidence was found. The critical

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[9]   Ministry of Education (2007). *The New Zealand Curriculum*. Wellington: Learning Media.

next step is for teachers to add to this knowledge base by engaging in their own inquiries into the impact of their teaching. We encourage all teachers to do this, to become actively involved in growing our understanding of what makes a greater difference for students in social sciences.

This BES provides comprehensive answers to two questions: what teaching approaches enhance outcomes for diverse learners in the social sciences curriculum domain, and how and why does this happen? Social sciences educators will be immensely grateful to Graeme Aitken and Claire Sinnema for their work. Their dedication to tracking down the relevant research, identifying the mechanisms, and suggesting how these can be used to make a difference for students, has resulted in a valuable professional learning resource for teachers.

Roger Baldwin, Lois Hawthorne
UC Education Plus
University of Canterbury

Roger and Lois are school advisers. They lead professional learning and development programmes for social sciences teachers in primary and secondary schools.

University

Others have praised this synthesis as a complete work and I, too, am deeply appreciative of the authors for their work in making this research in social sciences education available to teachers. Such a study of the connections between our learning area and pedagogical approaches is long overdue. I wholeheartedly echo the accolades the authors have received for their rigour, their faithfulness to the original research, and the usability of their synthesis.

It may seem odd then, that I commend just one very short section, section 2.2 (see page 52), to the reader for immediate consideration. This is because, in my view, the model of teaching inquiry advocated in these pages must be the focus for urgent discussion about how we meet the needs of diverse social sciences learners. In explaining this further, I want to chart some connections between contemporary societies, today's teaching realities, inquiry-led teaching, and the body of this synthesis.

Social sciences education enables learners to learn more about, and consider participating in, *their* social worlds. These worlds are characterised by flux, ambiguity, and plurality of perspective. As a result, there are myriad ways learners may participate in society; these do not conform to a rule book for social participation, and are therefore subject to debate.

Where should we social sciences teachers begin, given this continually changing societal – and therefore, educational – landscape … when our classrooms are so diverse that there is no 'silver-bullet', no plan book, that can provide pedagogical certainty? The answer cannot lie in doing more, busying ourselves in 'activity traps', or diligently responding to waves of educational expectation.

A more satisfactory pedagogical response may lie, as the authors have suggested elsewhere, in 'teaching with a travelling mindset'[10]. As travellers, we begin with a sense of purpose and priorities, yet our plans are subject to change. Open to new experiences, we are prepared to relinquish previous comforts: the well-worn notes, activities, and patterns to our lives. We tackle messiness optimistically; after all, it is the messy that will provide us with the best traveller's tales. And when we return, we do so better informed, with some interesting observations, but knowing that we can never capture the 'real' India, Samoa, China … Teaching with a travelling mindset means searching for practices that will serve our learners well, all the while aware of the provisional nature of any insights. We are attuned to subtlety; conscious that we have missed experiences and that our best-laid plans have had unexpected consequences. Crucially, we have the capacity to hold to the general and the specific at the same time, aware that theories do not hold true in all circumstances.

Inquiry-led teaching, when viewed through this metaphor, is less a series of practices that one accumulates like the contents of a suitcase and more a disposition. It relies on focus, receptiveness to new ways of doing and seeing, persistence in the face of dissonance and uncertainty, and a keen eye for the effects of change in the classroom. It is as much about learning as it is preparedness to 'unlearn and re-learn'[11]. It is a critical act. Whose frames of thinking, ways of seeing, shape my inquiry? For whom do my teaching practices work / not work? On what evidence do I base my answers?

In my view, an inquiry-led mindset is a vital response to diversity and change; it is possibly the only way we have of making sense of how we enable learners to know more about their social world. An inquiry-led approach enables us to establish and adjust priorities among countless, competing activities in a fluid environment, mitigating the sense of lurching from one recommended practice to another. These priorities are highly context-specific:

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[10] Alain de Botton introduces the notion of a 'travelling mindset' in *The Art of Travel* (2002). London: Hamish Hamilton.

[11] Wink, J. (2000). *Critical pedagogy: Notes from the real world* (2nd ed.). New York: Longman.

appropriate to *these* learners, in *their* learning context and in *this* social milieu. Inquiry-led teaching encourages us to make connections between, and to think critically about, different professional learning that we have been involved in. It mitigates the sense of lurching from one recommended practice to another. Most importantly, it re-acquaints us with our learners and re-unites us with our classrooms. It is a highly personal travel plan.

There can be no stronger recommendation for such an approach than one that comes from those who are practising and learning in the field. Recently, 27 primary and secondary social sciences teachers and 93 focus students participated in the Quality Teaching Research and Development: Social Studies (QTRD) project, which has as its goal improved outcomes for Māori and Pasifika learners. Each of the teachers in the group undertook a collaborative action-research project in which they examined the impact that one change in their practice had on their focus students. This was the first time that any of the teachers had conducted a focused inquiry of the kind outlined in section 2.2 of this BES, yet, even in the stickiest episodes of their action research, it was making a difference for their students. From the learners' perspective, by listening to their voices, observations, experiences, and aspirations, their teachers were involving them in the dilemmas and decision making of teaching. Importantly, they noticed that their teachers were not only getting to know them better as people but were attending more closely to their learning:

Interviewer: So you said that they were blown away that the attention was on them for once. What sorts of things are they saying to you that gave you [that impression]?

Teacher 1: "How come you chose us?" … I think they had that relationship more with me … so they just wanted to please me, and you could tell [because] the beginning of every lesson always before they just came in and slunk down the back. Now they would come and say, "Hey miss, how's it's going, I've done my homework, I want to show you this," and they were just really keen to please and show me what they've been doing.

Students also noticed the effects of their teachers' change in practice. In a high literacy needs secondary classroom, the teacher focused on fluency strategies designed to enable learners to develop their conceptual understanding by repeated engagement with the central concepts.

Research facilitator: The student told me that "when we go to other teachers we're like the opposite". When I asked why, she replied it was because her teacher was strict and did fun work. More specifically, however, she said that her teacher had helped the class by making them figure out for themselves how one word relates to another: "We always revise until we know the words and … until we can use it in our own sentence." In addition, the 'systems of government' topic (unlike the previous two topics) had felt relevant to her, "because I learn about the place I live in … New Zealand".

Teacher 2: You know, the more they understood about what worked really well in the classroom, the more they were able to be self-critical and to support each other.

As they attended more closely to the individual needs of their social studies learners, inquiry-led teaching began to make a difference to the teachers themselves. One QTRD teacher said "I have learnt not to assume or presume, but to test assumptions and base all future learning on the evidence collected." Another reflected: "I'm not as liable to slip back into the busywork type thing that teachers do in times of stress." And, as Michelle attests in her foreword (page 16), the professional rewards are high – a view echoed by many other QTRD teachers:

Teacher 3: My teaching practice has changed more this year than in the entire time I have been teaching. Until this year, I have never allowed myself to reflect on my teaching or given myself the time to read academic readings … I

knew that students were not achieving as well as they could be when they were flooded with content. But if the students had filled up a whole book of notes I felt good that I was doing my job. Deep down I knew that there was just too much 'stuff' and most of it was not at all relevant to the students. I was so pleased to see included in the [draft] BES the mechanism 'making connections to students' lives'. This proved to me that what was in the back of my mind was valid and important to do something about. I have tried to make the content more relevant to the learners. Interestingly, as a result, I have culled a large amount of my 'notes' and streamlined my courses. I do realise that this will always be a work in progress, but that is how it should be; the teaching should reflect the students you have in that class, at that time, on that day.

If the QTRD teachers' responses to draft versions of this synthesis are in any way indicative, I have little doubt that teachers generally will find this document of immense value as they reconsider their social sciences practice in the light of today's diverse classrooms. By connecting the traces of social sciences educational research, the authors have provided educators with a seminal travel guide, an important resource for inquiry-led teaching.

I began by urging the reader to start by reading just three pages of this BES. I conclude with four recommendations for going further:

If necessary, take it one bite at a time. Notice the sections that speak to your immediate concerns, the sections that seem familiar, and those that don't sit so well with you. Strike up a conversation with the text in whatever way suits: write your hunches in the margins, highlight the inspirational bits, use stickies to mark places that you want to come back to.

Read with a critical eye; note the authors' cautions, question assumptions. Remember that a guidebook is neither an itinerary nor a destination; BESs are not prescriptions for practice.

See your reading in a wider context. Begin by thinking critically about the purposes of social sciences, education, and educational research. What shapes your views on valued outcomes in social sciences? What purposes will you prioritise, and why? What pedagogies are coherent with those purposes?

Let a critical, sustained reading of this synthesis underpin the inquiries you make with and for your social sciences learners. A travelling mindset is not just an apt metaphor for practice, it is a vital competency for ourselves and our learners when it comes to making sense of a nuanced and rapidly changing world.

Andrea Milligan
Senior Lecturer, Social Sciences
Victoria University of Wellington College of Education

University

What a gift Graeme Aitken and Claire Sinnema have provided for social scientists in New Zealand! Over the past four years they have searched for, read, critiqued, and synthesised a disparate set of research about social sciences teaching and learning. While their work focuses on early childhood, primary, and secondary education, it also has much to offer teachers and researchers in the tertiary sector.

So what makes it such a gift?

Aitken and Sinnema identify four mechanisms that explain what works for diverse learners in the social sciences: connection, alignment, community, and interest. In presenting their findings, the authors practise what they preach. They make purposeful **connections** to teachers' and students' lives, selecting and highlighting relevant content for busy teachers and providing ample space for student perspectives. In doing so, they always return to what the research means for teacher pedagogy and student learning. By providing multiple opportunities for the reader to revisit concepts embedded in the research, they model an aspect of **alignment**. The BES encourages diverse **communities** of practitioners – early years, primary, secondary, research, and teacher education – to collaborate and to engage in dialogue about the four mechanisms. Finally, by catering for diverse motivations, it has the power to engage the **interests** of its readers. It provides a graphic pathway for busy people, includes cases that bring classroom interactions to life, and offers detailed analyses of the research.

The authors have met the criteria set down by Desforges[12]: they have 'researched the research' to provide a coherent, organised synthesis; they have assessed the quality of the research findings; and they have provided us with "vibrant working examples of success" (pp. 3–4). By doing so, they give us access to valuable information about the impact of different pedagogies on diverse learners. But the BES is more than this. It is the explanatory power of the four mechanisms that transforms it from a review of the research into a map to guide future teaching, professional development, and research. The authors take care, however, to caution readers that no one pedagogy will necessarily work for every learner.

We see the publication of this BES as an opportunity for the social sciences community to establish a vision for teaching, research, professional development, and curriculum development. Lisa Waterford, a primary school teacher involved in an action-research project, said of the draft, "[It] has opened my eyes into the world of teaching social studies. I now no longer feel uncertain about it – instead I am excited at trying to work out how to teach it using the four mechanisms."

This one reaction gives us a sense of what is possible and prompts us to think about how the social sciences community, ourselves included, might take the BES forward.

We can see the potential of the four mechanisms to guide our tertiary teaching and research. For instance, when selecting content we are more mindful of the importance of connecting with our students' lives; reviewing the alignment of activities and resources to learning goals; and persevering in developing a learning community in a university environment, where assessment processes often work against collaboration. We can also envisage doing research with teachers and postgraduate students who want to explore questions that have been prompted by this BES and that matter to them. The four mechanisms provide reference points to guide our own reflective practices and those of the teachers and students with whom we work.

The BES defines a benchmark for a nationwide agenda for research and professional development. Indeed, we see congruence between it and an existing research project, Te Kotahitanga. Both

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[12]   Desforges, C. (2000). *Familiar challenges and new approaches: Necessary advances in theory and methods in research on teaching and learning.* Paper presented at the British Educational Research Association, Cardiff.

stress respectful teacher–student relationships, making culturally responsive connections with students' lives, and fostering learning communities. We strongly advocate that these transformative practices be implemented and researched on a nationwide, longterm scale.

We want to take up the challenge offered by the *Social Sciences / Tikanga ā Iwi BES* and we ask the reader, how might you take it forward?

Karen Nairn, College of Education, The University of Otago
Alison Sewell, College of Education, Massey University

Chief Education Adviser, BES

The touchstone for this BES and the others in the series is valued outcomes for all our children and young people.

For teachers, principals, and professional leaders who are daunted by your initial encounter with this synthesis of research and development, take heart. As you engage with the findings, you will see that it is about making educational practice more effective and enjoyable for teachers as well as students. You will see how, by building a learning community, teachers can strengthen peer support structures and reduce stress correspondingly, and how, by learning more powerful strategies, they can optimise the value of the effort they expend daily in their centre or classroom. The Iterative BES Programme celebrates and builds on the work of teachers, establishing a cumulative knowledge base that is available to all. Our vision is that teachers are empowered to build on what has gone before, not left to reinvent the wheel, and that they are supported to share, inquire, and innovate in the interests of our children.

The challenge for us all is to create systemic conditions that support teachers in their learning and inquiry. The *Educational Leadership BES*[13] has found that promoting and/or participating in effective professional development is the leadership activity that has by far the greatest impact on student outcomes. The *Teacher Professional Learning and Development BES*[14] signals that availability of knowledgeable expertise is an important factor in professional learning, as is giving teachers multiple opportunities to engage in dialogue and integrate new understandings into practice. This BES will further inform deep professional learning of the kind that strengthens practice.

Neither the importance nor the challenge of teaching social studies, the social sciences, and tikanga ā iwi should be underestimated. In New Zealand, national monitoring has consistently found social studies to be one of the subjects least liked by students. Yet this is a curriculum area that helps young people understand society, their heritages, and what it means to be a contributing member of a community. It helps develop the social and participatory skills that shape identities and lives, the social fabric of the classroom, notions of citizenship, and the nature of society itself. Learning in the social sciences is not only about inquiring and understanding, it is also about developing social and collaboration skills, and about acquiring the skills to anticipate conflict and scarcity and manage these constructively.

We cannot assume that good intentions will get us closer to valued goals. While much of the synthesis celebrates the professional practice of teachers, it also reports substantial research literatures that show how, despite the very best intentions of teachers, business-as-usual may inadvertently undermine student identity, exacerbate racism, and even create the conditions for bullying, cultural dominance, and exclusion to flourish. It is timely therefore, that in education as in health, we attend to the 'at least do no harm' principle. There is no neutral place: task design, curriculum, assessment, and the way that students engage in tasks and activities shape not only their learning but also their identities and their relationships, from early childhood to senior secondary school and beyond. With so much at stake, an inquiry approach is both a moral imperative and a necessity.

While research and inquiry can powerfully illuminate the impact of practice on students and take us forward, the process may involve discomfort. One of the most inspiring teachers and teacher educators I have worked with described it as heart-rending:

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[13] Robinson, V., Hohepa, M., & Lloyd, C. (forthcoming). *School leadership and student outcomes: Identifying what works and why: Best evidence synthesis iteration*. Wellington: Ministry of Education.

[14] Timperley, H., Wilson, A., Barrar, H., & Fund, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration*. Wellington: Ministry of Education.

"heartrending because I would have liked to have thought that I was tuned into what was happening in the class … I just didn't know … Prior to doing this research … I would've said, 'Yes, you know, I'm fully aware of all these things whether it's the race issue or the gender issue, whatever' … It comes as a real blow to find out that in actual fact you're not necessarily doing things that are in line with what you believe … You're faced with this discrepancy.

"The important things in the long run are the outcomes … The outcomes for me of taking part in this research are not what we originally [foresaw]. I believe that they're extremely positive because they've increased my level of awareness. They've altered my action … It's altered the things that I think are important when I'm devising a curriculum … It's altered the way I treat other people, too" (p. 317)[15].

This first-iteration BES brings together the evidence and the organising principles by which teachers can inquire into and strengthen professional practice in ways that advance valued outcomes. It illustrates the vital role that research and development can play in illuminating and supporting teaching and learning in the social sciences. It also draws attention to areas in which research and development is needed and to the benefits to be gained from building on effective innovation, from New Zealand and elsewhere.

This BES has been developed to be a useful resource for New Zealand principals, teachers, and early childhood educators. We greatly appreciate the professional leadership, contribution, and support of teacher unions and principals, including the endorsement of the New Zealand Principals' Federation in asking that copies be available in all schools where classroom teachers can access them.

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15 Alton-Lee, A., Nuthall, G., & Patrick, J. (1993). *Harvard Educational Review 63*(1), pp. 50–84.

On their own initiative, Claire and Graeme investigated the impact that different formats for the cases had on the learning (pre-service and in-service) of teachers, which formats were preferred, and how different formats affected cognitive load. The authors engaged with a wide-ranging evidence base as they searched for more effective ways of communicating their findings and influencing the learning of their teacher audience. They have been unfailingly responsive to all those who have engaged in the dialogue around the development of this BES. Their scholarship, integrity, understanding of educational practice, and vision for making complex ideas accessible have resulted in a document that is truly a taonga.

As this BES has been circulating in draft form for some time, it has already begun to stimulate inquiry and development in teaching and teacher education. As I read the forewords of colleagues, I can see its impact in terms of serving and affirming professional communities and motivating innovation.

We in the Iterative Best Evidence Synthesis Programme still have much to learn and welcome any comment, critique, query, or suggestion that will help us better serve our children and young people. Please feel free to contact us at best.evidence@minedu.govt.nz.

Adrienne Alton-Lee, PhD
Chief Education Adviser
Iterative Best Evidence Synthesis Programme

Introduction

1.1   Social sciences and the Iterative Best Evidence Synthesis Programme

This work is part of the Ministry of Education's Iterative Best Evidence Synthesis (BES) Programme[16]. This programme aims to systematically identify, evaluate, analyse, synthesise, and make accessible, relevant evidence that links teaching approaches to enhanced outcomes for diverse learners. In doing so, it seeks to answer the question 'What works for whom and in what circumstances?'

This best evidence synthesis is concerned with teaching and learning as it occurs in a range of settings: English- and Māori-medium; early childhood to senior secondary; and in the curriculum domains of *Te Whāriki*, social studies, tikanga ā iwi, history, geography, economics, classical studies, and other social sciences. While it is firmly located in the New Zealand context, it draws also from international research into social sciences and social studies education. It seeks to answer two questions:

1. What teaching approaches enhance outcomes for diverse learners in the social sciences curriculum domain?

2. How and why does this happen?

By connecting teaching and learning via these questions, the synthesis aims to inform understanding of a pedagogy for social sciences teaching that draws on the concept of 'ako'. Linda Tuhiwai Smith explains[17]:

> Our concept of those who teach and those who are taught, our word is exactly the same word, our word is *ako*. It means to learn and to teach (p. 179).

Likewise, Loughran[18] describes the traditional European (Dutch, Belgian, German, and Scandinavian) concept of pedagogy as:

> not merely the action of teaching … more so, it is about the relationship between teaching and learning and how together they lead to growth in knowledge and understanding through meaningful practice (p. 2).

The importance and relevance of research in the social sciences curriculum domain was emphasised by Stahl[19] in his presidential address to the 74th Annual Conference of the National Council for the Social Studies:

> we must never accept that we have been highly effective or successful until after we have ample evidence that nearly every student has attained and maintained the abilities, perspectives, and orientations that we have targeted (p. 47).

This is especially important in social studies because:

> lack of success in our classrooms means that children will leave school with less of the information, abilities, perspectives, and attitudes needed to function competently as citizens of this nation and members of a pluralistic global community (p. 48).

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[16]   Ministry of Education (2004). *Guidelines for generating a best evidence synthesis iteration 2004.* Wellington: Ministry of Education.

[17]   Battiste, M., Bell, L., & Findlay, L. M. (2002). An interview with Linda Tuhiwai Te Rina Smith. *Canadian Journal of Native Education, 26*(2), pp. 169–201.

[18]   Loughran, J. (2006). *Developing a pedagogy of teacher education.* London: Routledge.

[19]   Stahl, R. J. (1995). Meeting the challenges of making a difference in the classroom: Students' academic success is the difference that counts. *Social Education, 59*(11), pp. 47–53.

1.2 Social sciences in the different sectors

The teaching of social sciences in the early childhood, primary, and secondary sectors is informed by a range of curricula.

Te Whāriki[20] is the curriculum for early childhood education. Its parallel and complementary English and Māori texts provide a basis both for English-medium early childhood education and for kōhanga reo[21]. This curriculum encourages an integrative, holistic approach to learning and teaching, so the social sciences are not separately recognised. The intent of social sciences education is, however, strongly evident in the aspirations, principles / ngā kaupapa whakahaere, and strands. The curriculum aspires, for example, to ensure that children "grow up … secure in their sense of belonging and in the knowledge that they make a valued contribution to society" (p. 9). *Te Whāriki* is based on such social sciences-relevant principles as whakamana (personal empowerment), whānau tangata (integration of family and community), and ngā hononga (learning through responsive and reciprocal relationships with people, places, and things). The strands also manifest strong social science connections in their emphasis on the importance of Mana Atūroa (active exploration of the environment) and Mana Whenua (affirming and extending links with the family and wider world).

The scope of social sciences learning in the primary and secondary sectors is set out in *The New Zealand Curriculum*[22]. The learning area is structured around four conceptual strands:

- Identity, culture, and organisation
- Place and environment
- Continuity and change
- The economic world.

Achievement objectives are suggested for these strands and a social inquiry approach recommended.

The intention is that, based on the achievement objectives, students are engaged in a learning process that asks them to:

- draw on and evaluate multiple sources of information;
- consider multiple, competing values and perspectives;
- develop deep understandings;
- reflect on the learning and on the responses it requires of them.

Although social sciences learning is typically integrative in early childhood (through *Te Whāriki*) and in years 1–10 (as social studies), individual social science disciplines do sometimes find a place in junior secondary school (years 9 and 10). Some schools teach a version of 'junior' geography and history, while others teach 'economics' or 'business studies' as separate subjects, based either on the *Economics Forms 3–7 Syllabus for Schools*[23] or on alternatives developed by the Commerce and Economics Teachers Association (CETA) or the Enterprise Trust.

The individual social sciences are, however, taught mainly in the senior secondary school years (years 11–13). Geography[24], history[25], and economics[26] are all based on syllabuses written

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[20] Ministry of Education (1996). *Te Whāriki: He whāriki mātauranga mō ngā mokopuna o Aotearoa / Early childhood curriculum*. Wellington: Learning Media.

[21] The curriculum also claims applicability within "other Māori immersion programmes" (p. 10).

[22] Ministry of Education (2007). *The New Zealand Curriculum*. Wellington: Learning Media.

[23] Ministry of Education (1990). *Economics forms 3 to 7 syllabus for schools*. Wellington: Learning Media.

[24] Ministry of Education (1990). *Syllabus for schools: Geography forms 5–7*. Wellington: Learning Media.

[25] Department of Education (1989). *History forms 5 to 7 syllabus for schools*. Wellington: Department of Education.

[26] Ministry of Education (1990). *Economics forms 3 to 7 syllabus for schools*. Wellington: Learning Media.

in the 1980s. These syllabuses have been updated only to the extent required by changes to senior secondary qualifications. The outcomes for the three subjects are most obviously expressed in the form of NCEA (National Certificate of Educational Achievement) 'achievement standards'. These standards define three levels of achievement (achieved, merit, and excellence) for key outcomes for each of the three certificate levels (1, 2, and 3). The outcomes for classical studies are also expressed as achievement standards (NCEA levels 2 and 3), but outcomes for the remaining social sciences (psychology, sociology, and legal studies) receive their official expression only as pass-or-fail 'unit standards' on the same National Qualifications Framework (NQF). In spite of the achievement standard / unit standard dichotomy, schools are free to integrate standards from across the social sciences domain to create new subjects, such as 'New Zealand studies'.

1.3 Outcomes across the social sciences domain

The focus of this synthesis is student outcomes, and particularly, evidence about ways in which pedagogical practices can improve outcomes for diverse learners. An important first question is, therefore, 'What is the nature of intended learning in the social sciences?' Each of the curricula cited in the previous section outlines, with varying degrees of specificity, intended student outcomes. In order to synthesise evidence about 'what works' for students across *Te Whāriki*, tikanga ā iwi, social studies, and the senior social sciences, a classification of outcomes was developed to capture the shared intentions of these documents. The classification was initially derived from an analysis of the content of the curriculum documents. It was then refined following discussion with teachers working in each of the sectors (early childhood, primary, and secondary). See appendix A for a discussion of the significance of the different kinds of outcomes.

Before describing the classification, it is important to acknowledge that the different sectors view the relationship between pedagogy and outcomes in different ways. The early childhood sector views the dispositions of the child as paramount in curriculum decision-making. Learning experiences are not set up with a predetermined outcome in sight; they are provided in response to children's dispositions and interests. Only after a child has completed a learning experience are outcomes mapped back to the experience. Although this approach also characterises the planning and teaching of some primary and secondary teachers, the strong outcomes focus of the national curriculum and senior school assessment typically leads to a reversal of the pedagogy–outcomes relationship. In other words, primary and secondary teachers tend to design a learning experience with a specific learning intention in mind (though that intention is often specific to the student). The pedagogical approach is selected, therefore, with the aim of achieving a particular outcome. In seeking to explain 'what works', this synthesis does not assume a particular direction in the pedagogy–outcomes relationship. Instead, it attempts to establish the nature, context, and strength of that relationship.

Establishing the outcomes

To ensure that the synthesis was firmly situated in the social sciences domain, the first step was to develop a classification of outcomes. The initial framework was arrived at as a result of a systematic analysis of the content of the relevant curriculum documents. This tentative classification was then evaluated against commonly used general classifications of learning outcomes, in particular, those developed by Gagne[27], Good and Brophy[28], and Gronlund and Linn[29]. These frameworks were used to provide assurance that important sets of outcomes

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[27] Gagne, R. (1984). Learning outcomes and their effects: Useful categories of human performance. *American Psychologist, 39*(4).

[28] Good, T. & Brophy, J. (2003). *Looking in classrooms* (9th ed.). Boston: Allyn and Bacon.

[29] Gronlund, N. E. & Linn, R. L. (1990). *Measurement and evaluation in teaching.* New York: Macmillan.

were not overlooked. By integrating these classifications with the outcomes in the various curriculum documents, a framework of outcomes was derived, which was then refined in discussion with practitioners. The final framework, therefore, synthesises curriculum intention, the general literature on educational outcomes, and teacher experience. It sought to make sense of the diversity that exists within the various disciplines that collectively make up this complex domain as well as to respond to the diversity of learners. This was the framework that guided the search process and informed subsequent evaluation and analysis of the research literature. The content of each element of the outcomes set is outlined in the table.

Table 1: Tikanga ā iwi / social studies / social sciences outcomes

Cultural identity	Outcomes related to students' understanding and awareness of personal identity and layered/multiple identities.
Knowledge	Outcomes related to students' understanding of concepts or ideas central to the social sciences domain.
Skills	Outcomes related to students' use of methods (for example, the planning of inquiry) and techniques (for example, graphing, mapping, reading) central to the development of social science understandings and to their expression of those understandings (in, for example, writing, drawing, speaking).
Participatory	Outcomes related to students' ability to participate, contribute, become involved, interact, and engage in dialogue. These outcomes included both inclusive personal behaviour (such as non-racist and non-sexist interactions with peers) and negative participation (such as the development of destructive or resistant responses).
Affective	Outcomes related to students' dispositions and emotional responses to learning, to their ability to explore and analyse their own and others' values, and to the development of a commitment to such values as social justice and equity.
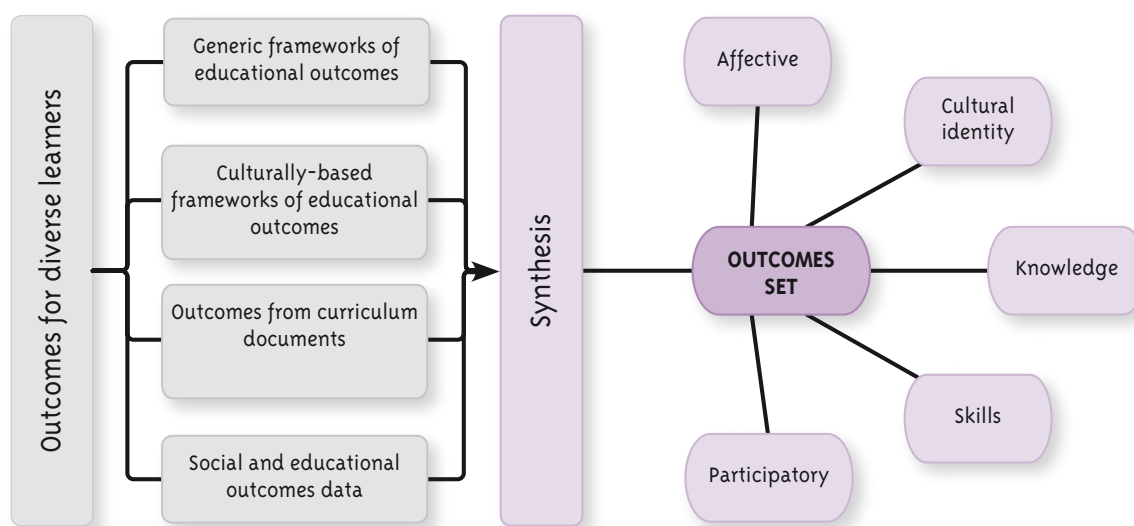
Figure 1: Establishing the outcomes

Figure 1 illustrates the approach used to ground the research in the social sciences. It also illustrates the complexity of outcomes that characterise this curriculum domain and shows that the search for evidence went beyond conventional and easily measurable outcomes – such as test scores based on knowledge recall and discrete skills performance – into the more complex

areas of conceptual understanding, cultural identity, and affective learning. As Bereiter[30] has argued, "to draw politicians and business people away from their fixation on achievement test gains one must offer them the vision of a superior kind of outcome. The failure to do that is, I believe, the most profound failure of educational thought in our epoch" (p. 490).

For the purposes of orientating the subsequent search for evidence, outcomes were represented in separate categories (Figure 1). It is not intended, however, that these categories should be understood as mutually exclusive: just as there is interaction between the outcomes within a category, there is significant interaction between the categories. For example, an understanding of cultural identity draws on many outcomes. For students to understand their own multiple cultural identities (gender, ethnic heritages, location, and so on), they need to understand: the concept of identity; the implications the concept has for their participation, behaviour, and sense of worth; and the affective influence that identity has on them. The studies that informed this synthesis typically reported on outcomes that related to several of the categories in the above framework.

1.4   Social studies pedagogy in New Zealand

Pedagogical approaches in the social sciences have been the subject of a number of national surveys in New Zealand[31].

While a survey of 853 teachers in 2002 found that social studies teachers were generally very satisfied with the curriculum[32], the Education Review Office (ERO)[33] expressed concern that:

> students often experience 'hit and miss' social studies programmes that can result in shallow learning. It is rare for students to be engaged in a sequence of activities that have a purpose (p. 3).

In 2005, ERO carried out a follow-up survey of years 4 and 8 social studies teaching in 153 schools. Teaching was assessed against six criteria:

- The content of the learning programmes reflects *Social Studies in the New Zealand Curriculum*.
- Resources and technology are used effectively in the teaching of social studies in the classroom.
- Teachers have the subject and pedagogical knowledge to provide effective social studies programmes.
- Teachers have appropriate teaching strategies in place to assess and meet the needs of diverse groups of students.
- Teachers effectively assess student achievement in social studies.

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[30]   Bereiter, C. (2002). *Education and mind in a knowledge society*. Mahwah, NJ: Lawrence Erlbaum.

[31]   Department of Education (1987). *Report on the Social Studies Subjects Survey*. Wellington: Department of Education.
McGee, C., Hill, M., Cowie, B., Miller, T., Lee, P., Milne, L., et al. (2004). Curriculum Stocktake: National school sampling study. *Case studies: Implementation of national curriculum*. Wellington: Ministry of Education.
McGee, C., Jones, A., Bishop, R., Cowie, B., Hill, M., & Miller, T. (2003). Teachers' experiences in curriculum implementation: English, languages, science and social studies. *National school sampling study report No. 2*. Hamilton: University of Waikato.
Education Review Office (2001). *The New Zealand Curriculum: An ERO perspective (Part 4: Technology and social studies)*. Wellington: Education Review Office.
Education Review Office (2006). *The quality of teaching in years 4 and 8: Social studies*. Wellington: Education Review Office.
Education Review Office (2007). *The teaching of social studies: Good practice*. Wellington: Education Review Office.

[32]   McGee et al. (2003), op. cit.

[33]   Education Review Office (2001), op. cit.

- Teachers effectively motivate and engage students so they achieve highly in social studies.

On the basis of their observations, ERO concluded[34] that:

> 21 percent of teachers … were effective in all six areas of quality of teaching. A further 63 percent of teachers were effective in some areas but less effective in other areas of quality teaching. Sixteen percent of the teachers reviewed were less effective in all aspects of the quality of teaching of social studies … In addition to this, assessment practices in social studies were poor, directly influencing how well teachers were able to meet the needs of all students and report student progress to parents (p. 1).

The teachers surveyed typically taught 10–15 hours of social studies per term, often as part of 'topic time'. The fact that social studies teaching was integrated with other subjects tended to magnify the difficulty of aligning what was taught with curriculum objectives. Significantly for this BES, only 38% of teachers were identified as effective or highly effective for diverse learners – largely because so many failed to make use of assessment to adapt learning programmes to the needs of their students. ERO assessed teaching to be most effective in the areas of student engagement (71% effective or highly effective), resource use (70%), subject and pedagogical knowledge (64%), and design and implementation (61%). A follow-up investigation[35] examined the practices of three schools with high-quality teaching programmes, with the aim of identifying characteristics that contributed to quality social studies. While the schools were quite different, their pedagogies had much in common. Each school:

- had designed and implemented a school-wide social studies programme that was sequential and showed a coherent progression through the year levels;
- provided interesting and varied programmes of learning, based on students' interests and abilities;
- provided opportunities for students to study local and national contexts and themes;
- arranged for social studies staff to meet on a regular basis to plan together and share ideas;
- supported the social studies programme with teaching resources and by funding teacher release time;
- used a wide variety of activities and resources in the programmes, with a focus on local resources and people from the community;
- made use of a variety of ICT (information and communication technology) tools;
- gave extra support to students with special learning needs and special abilities;
- collected and analysed student achievement information in social studies at both class- and school-wide levels;
- encouraged students to review their own learning;
- communicated high expectations for student achievement in social studies.

(p. 15)

While these reports are indicative of the general state of pedagogy in social studies classrooms, they do not systematically address the evidence of what works – and why and how it works – to enhance outcomes for diverse learners. It is a systematic search for evidence of pedagogy–outcome links in the social sciences that is the focus of this synthesis.

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34 Education Review Office (2006), op. cit.
35 Education Review Office (2007), op. cit.

1.5 Methodology

This BES iteration aims to identify and explain pedagogical approaches that enable diverse students to achieve the desired outcomes of *Te Whāriki*, tikanga ā iwi, social studies, and senior school subjects including history, geography, economics, classical studies, psychology, sociology, and legal studies. The evidence it synthesises is drawn from and relevant to early childhood, kōhanga reo, kura kaupapa Māori, primary and secondary settings, and both English- and Māori-medium contexts.

Searching for evidence

Given that the objective of this synthesis was greater understanding of the relationship between pedagogy and outcomes, the search for evidence focused on the intersection of disciplines, outcomes, and pedagogy (represented in Figure 2 by the region labelled X).
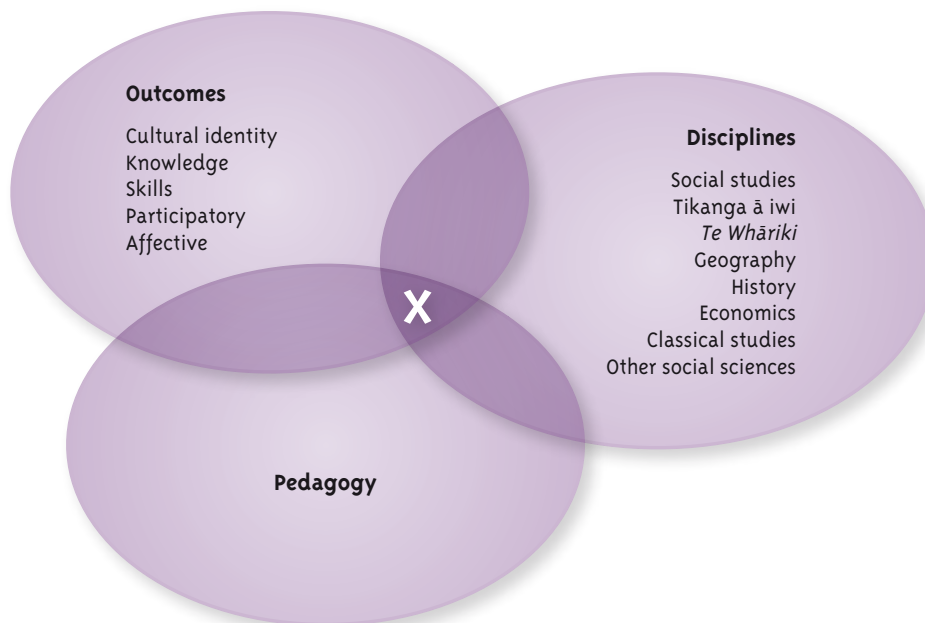
Figure 2: Scope of the Social Sciences BES

Sources of evidence pertinent to region X were identified using an approach that combined knowledgeable and systematic search strategies with network or snowball sampling based on the results of these searches. The *knowledgeable* search drew on the researchers' own experience and the experience of their advisors to identify key researchers, fields (for example, questioning or cooperative learning), and journals relevant to the social sciences domain. Learner diversity (for example, in terms of gender, ethnicity, and special needs) was a priority, and the search for evidence as inclusive as possible of students and learning contexts. While we wanted to avoid making unwarranted generalisations about the particular pedagogical treatment of different groups of students, we needed to ensure that subsequent analysis and synthesis would draw from an evidence base that considered the experiences of all learners.

The *systematic* search extended well beyond the limits of the researchers' own knowledge and experience through the use of keyword searches, journal alerts, and the issue-by-issue browsing of journals that we had established as relevant. Sources uncovered by these means were then further searched, and snowball sampling was used to follow up those sources that were relevant to the pedagogy–outcomes focus of this research.
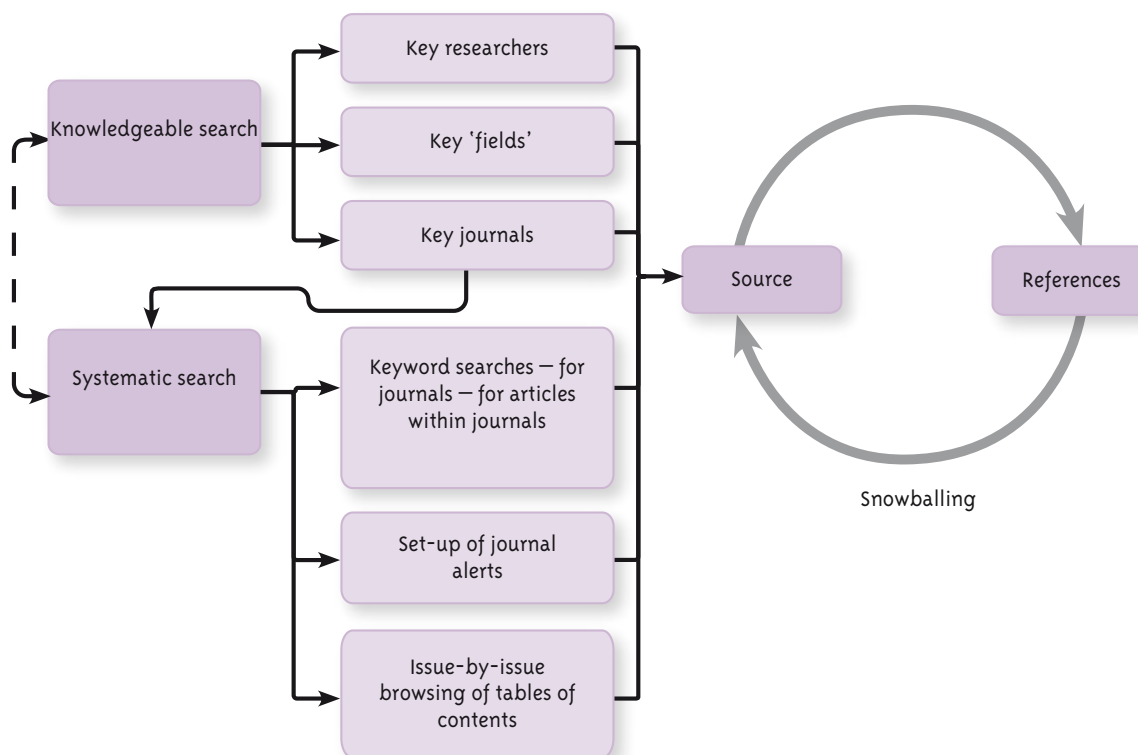
Figure 3: Identification of sources of evidence for the Social Sciences BES

Each source was analysed systematically, using a series of filters. First, it was checked to determine whether it reported on outcomes that were relevant to the social sciences. Second, where information on outcomes was provided, the quality of the evidence was assessed, paying particular attention to the relationship established between outcome and pedagogy (region X in Figure 2). This relationship was then interrogated to determine as precisely as possible the nature of the connections between pedagogy and outcome. Details of the relationships were recorded in research item records, as EndNote™ entries, or in note summaries. To assist subsequent cross-referencing and synthesising, each study was classified according to subject, level, outcomes, setting, and learner characteristics. To ensure coherence with the Quality Teaching BES[36] and identify gaps, an initial sample of studies was also classified against the 10 characteristics of quality teaching.

Analysing the evidence

The quality of evidence connecting the pedagogy and outcomes was variable, often limited by the generality with which the pedagogy was described (making it difficult to determine which element actually made the difference) or, in otherwise detailed descriptions of pedagogy, by a failure to identify its most influential aspects. Because the research aimed to explain – not just identify – these relationships, a classification system was devised to summarise the explanatory power of the different studies. To avoid narrow, linear conceptions of causality, the 'warrant' for the claims made by researchers was evaluated against this classification[37]. The system did not, therefore, relate to the methodology of the research (for example, whether

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36 Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis*. Wellington: Ministry of Education.

37 Dewey, J. (1938/1966). *Logic: The theory of inquiry*. New York: Holt, Rinehart & Winston.
   Phillips, D. C. (2006). A guide for the perplexed: Scientific educational research, methodolatry, and the gold versus platinum standards. *Educational Research Review, 1*(1), pp. 15–26.
   Phillips, D. C. & Burbules, N. C. (2000). *Postpositivism and educational research*. Maryland: Rowman & Littlefield Publishers.

it was qualitative or quantitative, a case study or an experimental control study) but to whether the claims made by the researcher warranted tentative acceptance[38]. Table 2 shows the classification system developed.

Table 2: Evaluating the quality of evidence

	Description of pedagogy		Description of outcome		Causal description
A	**Detailed, particular** The full implementation details of specific strategy or strategies are described so that replication is possible.	A	**Detailed, particular** The outcomes for particular students or sub-groups of students are described in detail.	A	**Strong** The evidence provided relates particular elements of the pedagogy to particular outcomes for students.
B	**Detailed** Strategies are described in sufficient detail to disclose their nature but with some of the specific implementation detail not included.	B	**Detailed** Details of the nature of the outcome/s are provided but are generalised for the whole group.	B	**Moderate** The evidence provided identifies generalised relationships between the pedagogy and outcomes.
C	**General** Broad strategy/ies or approach/es is/are stated.	C	**General** The nature of the outcome is stated but not elaborated.	C	**Weak** A relationship between pedagogy and outcomes is implied or logically derived or is briefly summarised but not interrogated.
D	Not stated	D	Not stated	D	None

The pedagogy section of this classification sought to distinguish between studies that gave specific details about the strategies used in the intervention (A or B in column 1) and those that were more general (C). This distinction was important because, as Nuthall has explained[39], a general description of the pedagogy obscures particular cause. Only when it is clear what a pedagogy involves is it possible to understand the mechanisms by which particular outcomes eventuate. The outcome section of the table (column 2) was similarly important; not even a rich description of pedagogy can advance the understanding of cause unless the particular nature of the outcome and its impact on particular learners is clear. Once again, the more richly descriptive studies were classified as A or B and the more general ('the students enjoyed the activity') were classified as C. Studies that made no reference to pedagogy or outcomes (category D in columns 1 and 2) were put aside at this point. These studies were generally advocatory or polemic in nature, discussing particular approaches without specific reference to the learning that resulted for particular groups of students. That such studies were excluded from the synthesis is not a criticism of the studies themselves; it simply recognises that they were written for other purposes.

The interactions between pedagogy and outcomes are central to this research and give rise to the third, most important column in the classification table: quality of causal description. Some studies (especially those in practitioner publications) are rich in their description of pedagogy (A for pedagogy) but rather weak in their description of outcomes (C for outcomes). These were typically classified as C in column 3 because interpretation of the nature of the relationship

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38 Phillips (2006), op. cit.
39 Nuthall, G. (2004). Relating classroom teaching to student learning: A critical analysis of why research has failed to bridge the theory–practice gap. *Harvard Educational Review, 74*(3), pp. 273–306.

was largely left to the reader. Likewise, studies that described outcomes in very specific, often quantitative terms for particular students or sub-groups of students (A for outcomes) sometimes did so on the basis of very general descriptions of pedagogy ('a cooperative learning approach' [C for pedagogy]). These studies were also classified as C in column 3 because, given the limited description of the pedagogy, it was not possible to attribute cause with any degree of certainty.

There are 383 studies included in the synthesis. Table 3 shows the distribution of the 242 studies that offered either a causal explanation or information from which a causal explanation could be derived. The most common patterns found in this classification were AAA (55), CCC (38), AAB (30), ABB (27), and BBB (19).

Table 3: Classification of studies according to quality of evidence

Description of pedagogy		Description of outcome		Causal explanation	
A	125	A	100	A	59
B	43	B	75	B	104
C	61	C	52	C	67
D	13	D	15	D	12

A further 92 studies were included because they shed light on particular contextual features (provided background on curriculum, outcomes, or methodology, or evidence by way of comment or argument), and another 62 because they provided evidence on student learning trajectories in the social sciences (see appendix C)[40].

Synthesising the evidence

Given the scope of this search, a narrative report of strategies that 'worked' would have overwhelmed the reader. Worse, such an approach would have underestimated the role of context in the pedagogy–outcomes relationship; it would, therefore, have oversimplified the findings. For this reason, the synthesis follows two related approaches: identification of mechanisms, and cases.

The development of mechanisms

Given that the focus of this work is on explanation, the research sought to identify the underlying causal mechanisms[41,42] that suggest the processes by which learning is occurring. This focus on mechanisms acknowledges the context-dependent nature of pedagogy–outcomes links and avoids the suggestion that the findings are prescriptive and certain. Understanding of causal mechanisms has the added benefit of transferability to other contexts: its focus is on how the learning occurs rather than on particular techniques or strategies that may or may not be effective elsewhere. Figure 4, for example, shows how three studies – on the surface, quite different in content and context – share a common underlying explanation for the learning. In each case, the learning can be explained by recurrent and aligned access to the content of new learning (Mechanism 2).

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40 The three totals of 242, 92, and 62 do not add to 383 because a small number of studies were included in more than one category.

41 Maxwell, J. A. (2004). Causal explanation, qualitative research, and scientific inquiry in education. *Educational Researcher, 33*(2), pp. 3–11.

42 Pawson, R. (2002). Evidence-based policy: The promise of 'Realist Synthesis'. *Evaluation, 8*(3), pp. 340–358.

**ALIGN EXPERIENCES
TO IMPORTANT
OUTCOMES**

Provide opportunities to revisit
concepts and learning processes.

Gersten et al. (2006)

Middle school, history,
learning-disabled children

Carefully structured activities,
intentionally repeated
information
from different sources

Improved conceptual
understandings.

Duke & Kays (1998)

Five-year-olds

Regular exposure to non-
fiction books

Increase in children's
expression of
generalisations.

Kohlmeier (2006)

Grade 9 history

Consistent practice with
Socratic seminar, interpreting source
documents

Shifts in students'
empathetic thinking.

Figure 4: Identifying common themes and mechanisms in studies from different contexts[43]

The mechanisms were established progressively as common themes were identified (in the above example, 'provide opportunities to revisit concepts and learning processes') across studies and then as common explanatory connections were made between themes (see Figure 5 for a schema of this process). The process was inductive and iterative: as new evidence was found, new themes and mechanisms emerged, and themes and previously established mechanisms were collapsed or divided. Summaries of studies were held in EndNote™, and searches across these assisted with the initial stages of the synthesis.

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[43] Gersten, R., Baker, S., Smith-Johnson, J., Dimino, J., & Peterson, A. (2006). Eyes on the prize: Teaching complex historical content to middle school students with learning disabilities. *Exceptional Children, 72*(3), pp. 264–280.
Duke, N. K. & Kays, J. (1998). "Can I say 'once upon a time'?": Kindergarten children developing knowledge of information book language. *Early Childhood Research Quarterly, 13*(2), pp. 295–318.
Kohlmeier, J. (2006). "Couldn't she just leave?": The relationship between consistently using class discussions and the development of historical empathy in a 9th grade world history course". *Theory and Research in Social Education, 34*(1), pp. 34–57.
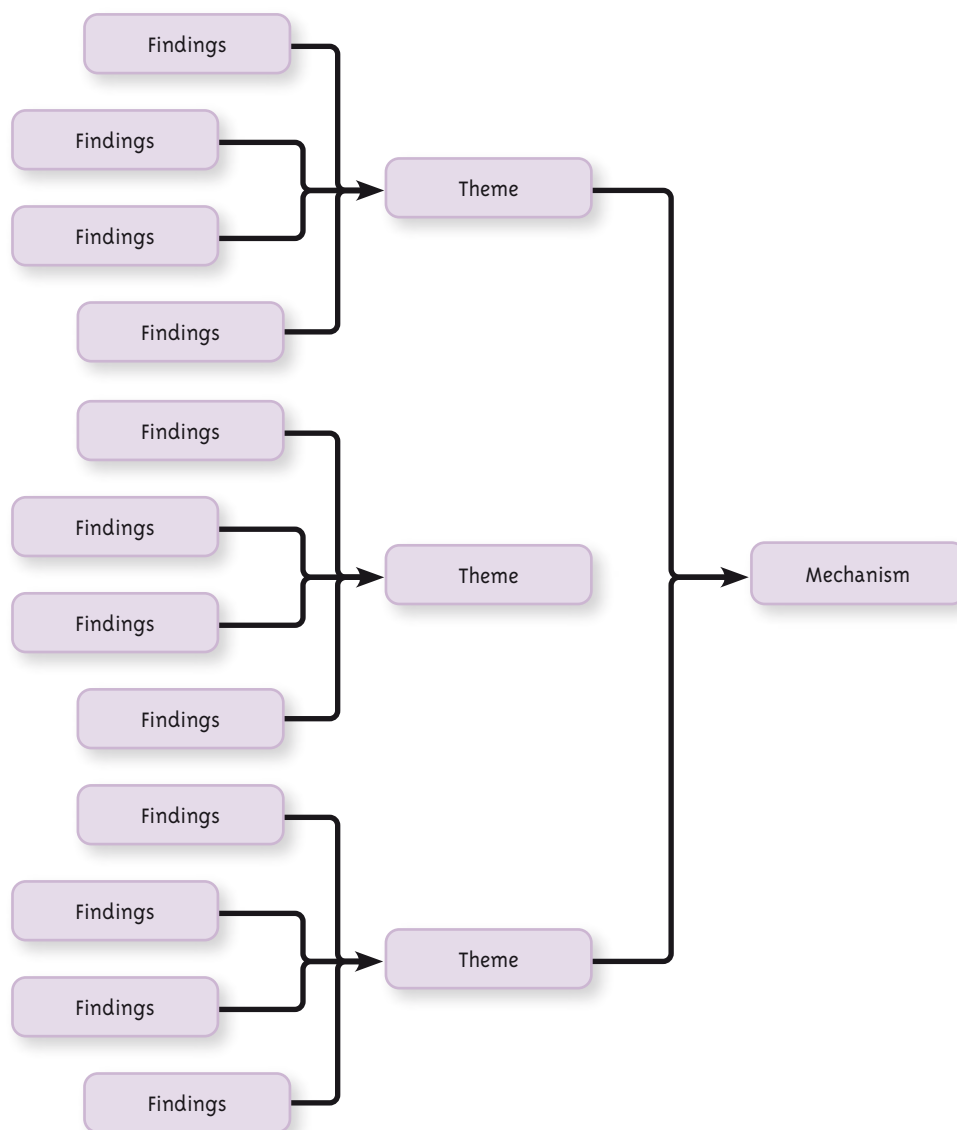
Figure 5: Synthesising the evidence

The analysis revealed four main mechanisms that explain what works for diverse learners in the social sciences. The mechanisms, with the appropriate teacher actions, are:

1. Connection: Make connections to students' lives
2. Alignment: Align experiences to important outcomes
3. Community: Build and sustain a learning community
4. Interest: Design experiences that interest students.

Each of the mechanisms is paired with a teacher action, beginning with a verb. The first, for example, begins with 'make', underscoring the teacher's responsibility for activating the ('connecting to students' lives') mechanism. In this way, we link the often-separated activities of teaching and learning and reference the Māori concept *ako*.

The use and development of cases

It is fundamental to the BES programme that its findings should be accessible to multiple audiences. These include policy makers, researchers, teacher educators, and – most importantly – teachers. Making the findings of a complex synthesis accessible to such diverse audiences poses significant challenges. Foremost among these is how to represent complex research findings in ways that are accessible to busy teachers while keeping faith with the researchers

whose work is being summarised and reported. Desforges[44] argues that research best meets teachers' needs when it is "coherent, organised, [based on] well-established findings … [and provides] vibrant working examples of success" (pp. 3–4). Cases provide one means of achieving this because they bring to life the stories of real teachers and learners. Feedback sought during the development of this BES made it clear that practitioners from all sectors wanted cases included.

Cases present evidence in a way that reveals the complexity and integrated functioning of the mechanisms, which almost always work in combination with each other. For example, 'making connections to students' lives' provides a basis for 'designing experiences that interest learners'.

The development of the cases was also crucial methodologically. Evidence was not always presented in ways that made the connection between pedagogy and outcomes immediately apparent (such evidence fell into categories B or C in the classification in Table 2). The development of the cases helped tease out and uncover the ways in which particular pedagogical approaches were working, for whom, and in what circumstances. As such, the cases became a key tool for synthesising a diverse range of evidence.

The power of cases to communicate research to teachers carries with it a risk. This risk is that a case may portray a piece of research in a way that is not faithful to the researcher's work. To reduce the risk of this error, an intensive, iterative case development process was established that, where possible, directly involved the researchers whose work forms the basis of the cases.

By way of example, the first step in developing the case 'Facilitative inclusion for Ian and his peers' was to contact the source author, Dr Christine Rietveld, and explain the intention to include a case based on her research[45]. She was willing to be involved and to provide relevant additional references. The writers then developed the first draft of the case, sent it to the source author for feedback, and substantially revised it as a result of her comments. Feedback and suggestions were also sought from other advisors familiar with the source author's work. This iterative process involved numerous cycles of feedback and revision, resulting in a significantly strengthened case.

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[44] Desforges, C. (2000). *Familiar challenges and new approaches: Necessary advances in theory and methods in research on teaching and learning.* Paper presented at the British Educational Research Association, Cardiff.

[45] Rietveld, C. (2002). *The transition from preschool to school for children with Down syndrome: A challenge to regular education?* Unpublished doctoral thesis University of Canterbury.
Rietveld, C. (2003). *Parents, preschools/schools and professionals: Impact of relationships on children's inclusion.* Paper presented at the Child and Family Policy Conference, Dunedin, Otago.
Rietveld, C. (2004). *Contextual factors affecting inclusion during children's transitions from preschool to school.* Paper presented at the CHILDforum 8th annual New Zealand Early Childhood Research Symposium, Wellington.
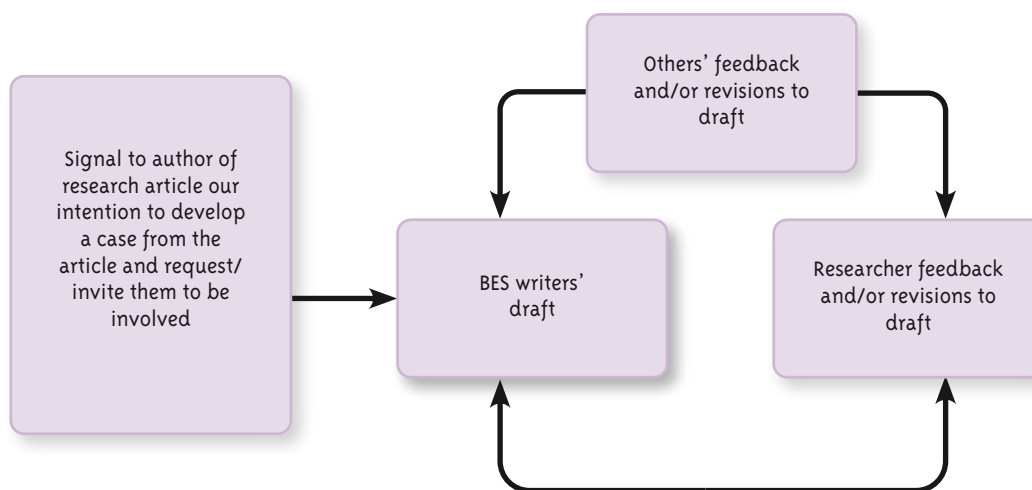
Figure 6: The iterative case development process

This iterative process allowed for interpretations of the original research to be checked and for the research to be integrated with the mechanisms. Importantly, it also gave opportunity for shifts in the source authors' thinking to be acknowledged. It was possible, for example, to include Rietveld's recent findings[46] concerning the interplay between biological and contextual factors that facilitate the inclusion of learners with impairments.

The iterative process was also important in the case 'Making links between cultures: ancient Roman and contemporary Sāmoan', which was drawn from Christine McNeight's action research[47]. In this instance, the source author was able to elaborate the pedagogy, providing the detail needed for a better understanding of the teaching–learning connection and allowing stronger causal claims.

1.6   Gaps in pedagogy–outcomes research evidence

While there is a considerable research literature (both theoretical and practitioner) in the social sciences, not all of it is concerned with the pedagogy–outcomes relationship. A large practitioner literature describes approaches to teaching, often in sufficient detail to make replication possible. But frequently less clear are the outcomes for students: positive outcomes may be implied rather than stated, and where stated, there may be little in the way of supporting evidence. Such literature is understandable, given that the sharing of ideas is a rich and valued tradition in teaching, but what is really needed is action-research studies that examine the impact of teaching on students.

Another gap relates more to the research literature than the practitioner literature. Studies often describe interventions that comprise multiple strategies but do not distinguish between those strategies that are more influential and those that are less influential in helping students achieve the reported outcomes. The issue is not a lack of attention to the impact on students but a lack of specificity about what made the difference. Also, the literature has paid more attention to pedagogy–outcomes connections in social studies and history than in geography and economics, or in early childhood education (where most outcomes are skills-based or participatory rather than conceptual).

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46   Rietveld, C. (Personal communication, 12 October, 2005).

47   McNeight, C. (1998). *"Wow! These sorts of things are similar to our culture!": Becoming culturally inclusive within the senior secondary school curriculum.* Unpublished graduate research report, Department of Teacher Education, Victoria University of Wellington.

A third gap in the literature relates to the experiences of particular groups of students. While there exist major national reports on the achievement of Māori and Pasifika students, they contain few details that relate to Māori and Pasifika achievement in social sciences contexts. Much further research is needed into the social sciences learning experience of diverse students. US research into the experience of minority groups could offer guidance in this area.

New Zealand also has a relatively limited research literature profiling student conceptual development in the social sciences. Appendix C shows that there is considerable international research in this area that could be replicated in New Zealand and the findings used to inform teaching programmes and curriculum development.

There are areas where the general evidence for pedagogy–outcomes links is strong but where there appear to be few social sciences examples. This is particularly true of studies investigating the effects of promoting metacognition. A small number of studies do specifically target metacognition, and others use what were interpreted as metacognitive strategies, but the evidence particular to social sciences is not as strong as for other domains.

Other areas where the social sciences research evidence is relatively thin include:

- Special needs. While there are studies relating to some physical disabilities, autism, and Down syndrome, there is little evidence relating to other disabilities.
- Teacher content knowledge and pedagogical knowledge. A number of studies relate to teacher content knowledge and how it is reflected in or responsible for particular teacher actions; an even larger number describe and compare teacher pedagogies. What is lacking are studies that examine the relationship between content knowledge and pedagogical knowledge and learning outcomes for students.
- Online distance learning. There is much more research into the impact of online learning on student achievement at tertiary level than at school level.
- Addressing stereotypes. While there is considerable evidence on approaches to reducing prejudice and stereotyping, much of it relates to non-school contexts or is found in whole-school studies. Few studies specifically concern social sciences; when the issue is student learning about diverse groups, the evidence is contradictory.
- Commonly used generic strategies. Many studies describe the effects of strategies such as concept maps, multimedia resources, and simulation games. While it seems likely that findings from these studies would be transferable to the social sciences, little has been done to test this hypothesis. Likewise, the extensive, growing work on cognitive load in science and mathematics is likely to have parallels in the social sciences, but with the exception of a few studies in geography, such parallels have not yet been researched.

Finally, there are strategies popular in the social sciences for which there is limited or contradictory evidence concerning efficacy. These include project work, processes such as values exploration and social decision-making, and service learning (learning in which students participate in the community for an authentic purpose).

2. Overview of Findings

The detailed findings of this synthesis are reported in the four following chapters, which are organised by mechanism. This chapter summarises the key findings, identifies gaps in the evidence, and proposes a model of pedagogy that supports learning for diverse students in the social sciences.

2.1 Mechanisms: the underlying explanations for learning in the social sciences

Mechanism 1: Connection

Make connections to students' lives

Mechanism 2: Alignment

Align experiences to important outcomes

Mechanism 3: Community

Build and sustain a learning community

Mechanism 4: Interest

Design experiences that interest students
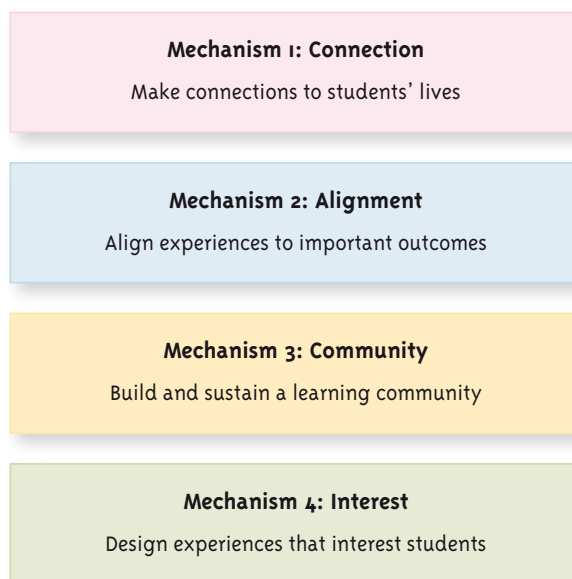
Figure 7: The four mechanisms

This best evidence synthesis identifies and explains four mechanisms that facilitate learning for diverse students in tikanga ā iwi/social studies/social sciences:

Connection

This mechanism explains how students' participation and understanding is enhanced when their teachers connect the content of learning to their lives. By making such connections, teachers increase the relevance of the learning for their students and encourage them to find parallels between new learning and their own experiences. Students' own experiences become a point of comparison from which they can learn about other people's experiences in different times, places, and cultures. This continuity between home and school supports learning. It is enhanced by the use of language that is inclusive of all learners and their experiences and by the selection of resources that make diversity visible, avoiding biased, stereotypical representations.

Alignment

This mechanism explains how learning experiences work (or do not work) to fix learning in students' memories. Simply put, valued learning will not occur unless learners have sufficient opportunities to engage in learning experiences aligned to that learning (that is, experiences specifically designed to achieve the valued/desired outcomes). Alignment begins with identifying what students already know, using approaches that are appropriate for the kind of knowledge sought. This identification helps the teacher prioritise important

outcomes by distinguishing new learning from existing knowledge. It also alerts the teacher to understandings and misunderstandings that may inhibit new learning. The achievement of important outcomes depends on activities and resources being aligned for the purpose; the likelihood of achieving them is heightened when the teacher makes this alignment transparent to learners by modelling, by making learning purposes explicit, and by matching assessment to teaching. Teachers can enhance the effects of alignment by creating carefully sequenced learning opportunities in which the students revisit important content and processes.

Community

This mechanism has particular significance in the social sciences because – with its focus on belonging, dialogue, and collaboration – it is a valued outcome as well as an explanation for learning. Learning communities do not happen automatically. They are built around respectful relationships that establish a foundation for learning, create a climate of collaboration and mutual endeavour, and model inclusion and learning. In effective learning communities, the teacher promotes dialogue and contribution by involving students in developing group norms, by explicitly teaching necessary preparatory skills, and by modelling the skills of dialogue. Teachers can encourage dialogue in small groups by creating complex, cooperative tasks that draw on the multiple, diverse abilities of group members, and they can encourage whole-class discussion by using statements instead of questions. By delegating greater responsibility to learners for making decisions that relate to their learning, and by making learning processes transparent by encouraging metacognition, teachers facilitate the development of effective learning communities that support student participation and autonomy.

Interest

This mechanism is about making learning memorable for students by designing learning experiences that stimulate their interest in the important content of learning and by providing a variety of experiences. Activities that are interesting build and sustain motivation for learning. Learners are not, however, all motivated in the same way, and their interests do not necessarily coincide with those of the teacher. For this reason, stimulating interest involves deliberate design that is sensitive to different learner motivations and responses. Variety also enhances memorability because learners tend to attach their memory of content to the circumstances in which that content was developed. If the learning activities are all very similar in nature, the benefits of such connections are lost because the activities blur into one another. A variety of activities provides more anchors for learning and subsequent recall.

BUILD AND SUSTAIN A LEARNING COMMUNITY

by

- sharing power
  - through
    - making learning and thinking transparent
    - delegating authority
- promoting whole-class discussion
  - enhanced by
    - teacher statements
- promoting dialogue
  - through
    - establishing group norms
    - explicit skills development
    - teacher modelling
    - complex tasks
      - embedded in learning
- establishing productive relationships
  - that
    - are inclusive — and — embedded in learning
    - help create a sense of community
    - provide the basis for learning

ALIGN EXPERIENCES TO IMPORTANT OUTCOMES

by

- prioritise outcomes
  - to which
    - resources
    - multiple experiences
      - are transparently aligned
  - to
- identifying prior knowledge
  - to alert teachers to
    - misunderstandings
    - existing understandings
      - that may inhibit learning
  - to distinguish
    - new learning

MAKE CONNECTIONS TO STUDENTS' LIVES

by

- ensuring inclusive content
  - that makes diversity visible
    - through
      - resources
      - language and content
- drawing on relevant content
  - that makes students' own lives a point of comparison
  - that embeds cultural knowledge and experiences

DESIGN EXPERIENCES THAT INTEREST LEARNERS

by

- using a variety of activities
  - to help make content more memorable
- maximising interest
  - through
    - resource design
    - narratives
      - that have emotional appeal
    - first-hand experiences
      - that make learning real
- meeting diverse motivational needs

Figure 8: What explains *effective* teaching in social sciences?

2.2   A model of pedagogy for the social sciences

Given their emphasis on diversity and explanation, the questions pursued in this synthesis implicitly acknowledge that there is no easy 'what works' answer for teachers: 'what works' depends on the context. This means that it is important to also understand *why, for whom, and in what circumstances* a particular teaching approach is effective. For this reason, this research supports a model of pedagogy based on teacher inquiry: a model in which teachers inquire into the impact of their actions on their students and into interventions that might enhance student outcomes. It distinguishes three phases of inquiry: a focusing inquiry, a teaching inquiry, and a learning inquiry.

The *focusing inquiry* helps determine direction. Given that time is limited and that students need multiple opportunities to engage with the content of new learning, priorities need to be established; this is the purpose of this phase of the cycle. The focusing inquiry is termed an 'inquiry' because the prioritising process draws from a variety of sources: curriculum requirements, community expectations, and, most importantly, the learning needs, interests, and experiences of the learners.

The focus of the *teaching inquiry* is on identifying strategies that are most likely to help the students achieve the selected outcomes. Central to this inquiry are the questions 'What could I try?' and 'How good is the evidence?' These questions imply a considered and reflective approach to practice and research that requires the ability not only to locate the evidence but also to evaluate its quality. In determining what to try, teachers are exposed to different sources of evidence, including their own experience as teacher and learner, the experiences of colleagues, prescriptive sources, such as curriculum documents and textbooks; and systematic sources, such as professional development and research. This does not mean that one idea is as good as another. Some are better supported by evidence, and the questions that guide the teaching inquiry are aimed at seeking these out. The mechanisms, developed as they were from a wide base of evidence across the social sciences, are key informants. Based on this inquiry, teachers design teaching actions (learning experiences) for their students.

The focus of the *learning inquiry* is on the impact of teaching actions on student outcomes. Central to this inquiry is the collection and analysis of quality evidence based on the questions 'What is happening for students in my classroom?' and 'Why might this be happening?' Pursuing answers to the first question, teachers may find, for example, that some students are not interested in the content or that some have contributed little to teacher-led discussion or that some have difficulty working together and learning in groups. To determine what future action is appropriate, the teacher then needs to find out why students are responding in such ways. Hence the second question, 'Why might this be happening?' The mechanisms offer a framework that can help teachers answer this question. Are the students uninterested because the content does not connect to their experience (Mechanism 1) or because too much material is being covered to allow them to engage with the new learning and embed it in their memory (Mechanism 2) or because their own questions do not form the basis of their studies and so they have little interest in them (Mechanism 4)? None of these questions is likely to lead to a single, clear answer, but by posing them within the broad framework of the four explanatory mechanisms, a set of possibilities is suggested. These possibilities can then inform the design of future teaching actions.
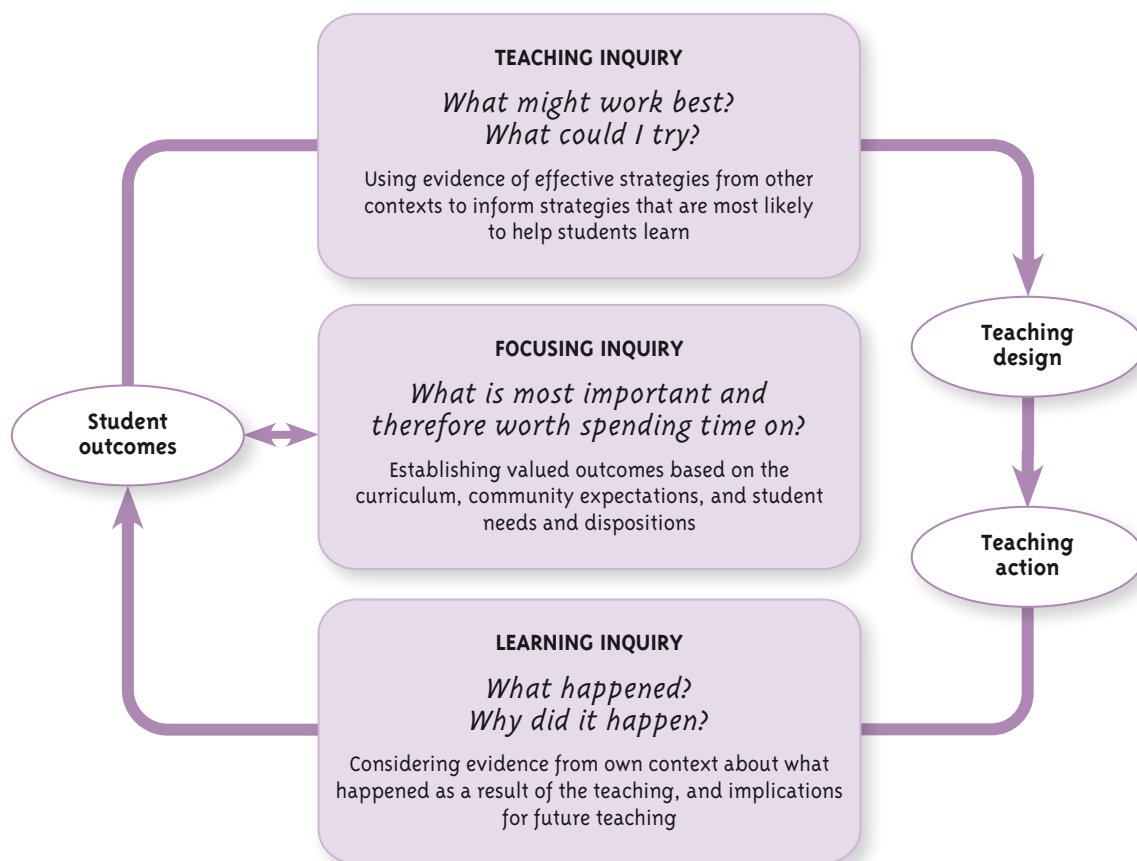
Figure 9: Teaching as Inquiry: a model of evidence-informed pedagogy

This model of pedagogy does not simply describe actions; it is underpinned by a set of attitudes towards teaching and learning. Foremost among these are open-mindedness, fallibility, and persistence. *Open-mindedness* refers to a willingness to consider teaching approaches that may be unfamiliar or that may challenge one's beliefs about the best ways to teach. It refers also to being open to what the evidence shows about the effects of teaching on student learning. *Fallibility* refers to the lively realisation that however strong the evidence may be, educational research findings are always conjectural because they are context-bound. Fallibility involves accepting the possibility that what was, or what has been, successful with one group of learners may not be successful for another and that, for this reason, well-designed intentions might fail to generate the desired response. The need for *persistence* directly follows from fallibility, as teachers must inquire again into the focus of future learning and into the possibilities for future, more effective action. In much the same way as Cochran-Smith and Lytle[48] suggest, this model describes a process of teacher learning that is "associated more with uncertainty than certainty, more with posing problems and dilemmas than solving them, and also with the recognition that inquiry stems from and generates questions" (p. 294).

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48 Cochran-Smith, M. & Lytle, S. L. (1999). Relationships of knowledge and practice: Teacher learning in communities. *Review of Research in Education, 24*, pp. 249–305.

Table 4: Overview of findings

Mechanisms What works?	Advice So what should I do?	Reasons Why should I do it? *Because there is outcomes-linked evidence that …*
Connection Make connections to students' lives	Draw on relevant content	Embedding students' cultural knowledge and experiences in content enables cultural continuity. Making students' own lives a point of comparison supports access to new learning.
	Ensure inclusive content	Language can either make diversity visible or bias student understandings. Resources can either make diversity visible or bias student understandings.
Alignment Align experiences to important outcomes	Identify prior knowledge	Identifying student prior knowledge: – helps set the direction for learning by distinguishing 'new' learning from that which is already known; – alerts teachers to the transfer of existing understandings that may inhibit new learning; – alerts teachers to student misunderstandings that may inhibit new learning. Research-based trajectories of students' conceptual and skills development alert teachers to the possible nature of students' prior knowledge. Techniques for accessing prior knowledge need to be aligned to the type of prior knowledge sought. Teachers' prior knowledge impacts on the extent to which they can support student learning.
	Align activities and resources to intended outcomes	Purposefully aligning activities to desired outcomes supports students in achieving those outcomes. Aligning resources to the purpose of a task supports students in achieving outcomes related to that task. Modelling of intended outcomes makes alignment transparent to students. Making the purpose of tasks clear to students reduces ambiguity and helps them to focus on important learning. Aligning assessment with teaching helps communicate what is important.
	Provide opportunities to revisit concepts and learning processes	Students need three to five aligned experiences not more than two days apart. Providing multiple learning opportunities supports concept development. Providing opportunities for repeated practice supports skills development. Reducing coverage enables students to focus on important ideas and processes.
	Attend to the learning of individual students	Differing levels of engagement with relevant ideas lead to differences in outcomes for students. Differences in interests, involvement, and background knowledge influence students' engagement. The sequence in which different activity types occur can influence what students learn from each activity.

Mechanisms	Advice	Reasons
What works?	So what should I do?	Why should I do it?
		Because there is outcomes-linked evidence that ...

Community

Build and sustain a learning community

Establish productive teacher–student relationships

Building respectful relationships with students:
- establishes a basis for learning;
- helps create a sense of community.

Inclusive relationships increase the involvement of diverse students.

Modelling learning behaviours in relationships helps embed a focus on learning.

Promote dialogue

Students learn content when they talk together about that content.

Involving students in developing groupwork norms improves group functioning and increases contribution.

Explicit skills teaching develops cooperation and dialogue.

Teacher modelling during groupwork helps students develop dialogue skills.

Dialogue is encouraged by complex tasks.

Whole-class discussion enables students to experience social sciences in action.

Discussion is enhanced by teacher statements rather than questions.

Share power with students

Delegating authority to students enhances participatory outcomes.

Making learning and thinking processes transparent reduces reliance on the teacher.

Interest

Design experiences that interest students

Meet diverse motivational needs

Students are not all motivated by the same activities.

What teachers envisage as motivating may not prove motivating for students.

Allowing students to make their own learning choices can motivate them to engage.

Maximise student interest

First-hand experience of social, cultural, economic, and political situations makes learning real.

Narratives have emotional appeal that engages students.

The design and selection of resources impacts on interest.

Use a variety of activities

Using a variety of activity types helps students recall the content embedded in those experiences.

3. Connection (Mechanism 1)
Make connections to students' lives

3.1 Why making connections to students' lives matters

> "I'm a Māori, they should ask me about Māori things … I've got the goods on this but they never ask me …" (p. 49)[49].

This comment from a year 10 Māori student captures the importance that learners attach to connections to their lives and experiences. In the absence of such connections, they understand that their cultural knowledge is neither valued nor relevant[50].

Mechanism 1 explains how students' participation and understanding in the social sciences is enhanced when the teacher connects the content of learning to their lives. This is not the same as determining and then building on prior knowledge (see Mechanism 2 in chapter 4) in that the underlying explanation for learning in Mechanism 1 is that *what learners experience is relevant to them.* This mechanism explains how 'putting students' lives in the centre of learning' supports achievement in relation to a range of social sciences outcomes.

Teachers can explicitly connect learning to the lives of students by using content that is relevant to their cultural knowledge and experience and by drawing their attention to parallels between new learning and their own experience. Such content also helps provide continuity between the home and school lives of students, which is critical for effective learning. Students' own experience becomes a point of reference with which to compare other people's experiences in different times, places, and cultures. In a meta-analysis aimed at identifying research-based strategies for increasing student achievement, Marzano et al.[51] found that the single most powerful strategy was identifying similarities and differences through comparison, classification, metaphor, and analogy. While it was not suggested that these strategies should be limited to similarities and differences in relation to personal experience, the power of such connections is clearly pertinent to the operation of this mechanism. Indeed, as Marzano et al. assert, this "might be considered the 'core' of all learning" (p. 14).

In seeking to make connections, the teacher must also pay attention to the extent to which content is inclusive of the voices, experiences, and perspectives of diverse people. A focus on similarities and differences can be severely undermined if the comparisons are based on limited or stereotypical information[52]. The inclusiveness of the learning environment is a powerful influence on what students learn in the social sciences, impacting not only on whether students can recognise themselves in the content but also on whether learning is balanced and equitable or biased and distorted.

So what should I do?
- Draw on relevant content.
- Ensure inclusive content.

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[49] Bishop, R., Berryman, M., Tiakiwai, S., & Richardson, C. (2003). *Te Kotahitanga: The experiences of year 9 and 10 Māori students in mainstream classrooms.* Wellington: Ministry of Education.

[50] ibid.

[51] Marzano, R. (2004). *Building background knowledge for academic achievement: Research on what works in schools.* Alexandria: Association for Supervision and Curriculum Development.

[52] Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis.* Wellington: Ministry of Education.

3.2 Draw on relevant content

Continuity between the school experience and the home context is important for learning. Such continuity is strengthened when learning is based on content that is relevant to students and when there is a focus on their families' experiences, expertise, and interests[53]. As Gay[54] has argued, culturally responsive teaching is teaching that:

- acknowledges the legitimacy of the cultural heritages of different ethnic groups, both as legacies that affect students' dispositions, attitudes, and approaches to learning and as worthy content to be taught in the formal curriculum;
- builds bridges of meaningfulness between home and school experiences as well as between academic abstractions and lived sociocultural realities;
- uses a wide variety of instructional strategies that are connected to different learning styles;
- teaches students to know and praise their own and each other's cultural heritages;
- incorporates multicultural information, resources, and materials in all the subjects and skills routinely taught in schools (p. 29).

Embedding students' cultural knowledge and experiences in content enables cultural continuity

The level 1 tikanga ā iwi exemplar Tutāmure shows how the embedding of Hamiora's cultural knowledge (regarding his ancestor Tutāmure) helped him to learn how to hold on to stories of the past[55]. This student was encouraged to go home and ask questions and to listen to stories and kōrero at the marae. Hamiora went on to represent this connection to his past by drawing Tutāmure in the sand.

Figure 10: Hamiora draws his ancestor

[53] Arthur, L., Beecher, B., Harrison, C., & Morandini, C. (2003). Sharing the lived experiences of children. *Australian Journal of Early Childhood, 28*(2), pp. 8–14.

[54] Gay, G. (2000). *Culturally responsive teaching: Theory, research, & practice.* New York: Teachers College Press.

[55] Te Tāhuhu o te Mātauranga (2006). *Ngā Tauaromahi Marautanga o Aotearoa: Tikanga ā Iwi.* Wellington: Learning Media and the Learning Centre Trust of New Zealand.

A Canadian study by Kanu[56] investigated two grade 9 social studies classes over the course of a year, comparing a 'culturally responsive' teaching approach with a 'traditional' approach. In the first class, the 'experimental' teacher explicitly integrated Aboriginal knowledge and perspectives into the content, resources, teaching, and assessment strategies. In the second, the 'control' teacher did not integrate Aboriginal knowledge and perspectives in a deliberate and consistent way. Kanu found that the integration of Aboriginal cultural knowledge/perspectives had the effect of improving learning for all students but particularly that of Aboriginal students. The classes concerned were of a similar composition, and the two teachers were well matched for the purposes of this comparative study.

Both groups of students:

• were at the same inner-city school in Canada, which had a mix of Aboriginal (33%) and non-Aboriginal (mainly Anglo- and Euro-Canadian) students;

• were assigned heterogeneously (in terms of academic ability) to the social studies class;

• were from similar low socio-economic backgrounds;

• were the same size (15 students in each).

Both teachers:

• were from the dominant culture (Anglo-Canadian);

• had similar qualifications;

• had similar lengths of service (more than 15 years of teaching social studies to grade 9 students);

• believed that Aboriginal perspectives should be integrated into their programmes;

• reported similar goals for their teaching of social studies, namely, developing students' conceptual understanding of topics/ideas/concepts and their ability to apply learning beyond the lesson;

• used the same social studies textbook, *Canada Today* (an interdisciplinary social studies text), and the same units;

• taught social studies twice a week.

But the teachers took quite different approaches.

The control teacher:

• believed integration meant the occasional use of Aboriginal content/perspectives;

• taught a curriculum that remained largely Eurocentric;

• did not consistently use integration in the planning or teaching of units.

The experimental teacher:

• placed the integration of Aboriginal cultural perspectives at the centre of his teaching – such perspectives were "deliberately and consistently integrated into the planning and teaching of the units";

• believed that Aboriginal cultural perspectives were a philosophical underpinning of the curriculum;

• thought that "… integrating Native perspectives may promote student learning, positive inter-group relationships, and, overall, an enhanced multicultural climate".

(p. 10)

Over the course of the year, the experimental teacher was observed 63 times and the control teacher 34 times. The experimental teacher used a variety of strategies for integrating

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56   Kanu, Y. (2002). In their own voices: First Nations students identify some cultural mediators of their learning in the formal school system. *Alberta Journal of Educational Research, XLV111*(2), pp. 98–121.

Aboriginal perspectives, and the many observations confirmed that the strategies were implemented as reported by the teacher.

One strategy used by the experimental teacher involved targeting both Aboriginal and non-Aboriginal perspectives when planning learning outcomes. For instance, he incorporated values and issues reported to be of particular relevance to the Aboriginal community. These included "understanding the importance of respect in Aboriginal cultures, the vital role of elders, the importance of family and community to Aboriginal identity, the importance of spirituality in learning/education and in the lives of many Aboriginal peoples, the various effects of European contact and settlement on Aboriginal peoples, and Aboriginal contributions to Canadian society" (p. 11).

A second strategy was to integrate the use of Aboriginal learning resources into learning programmes. This involved searching for Native literature that complemented the social studies units: "First Nations origin/creation stories, stories describing Native ceremonies, and stories depicting the holistic and interconnected nature of Aboriginal identity were integrated into the grade 9 unit on Canadian identity" (p. 11). The search for resources extended to those with a focus on Native issues and perspectives, such as "videos on the various ways in which European contact impacted on Aboriginal lives and print materials on the Indian Acts and how they violated the human rights of Aboriginal peoples" (p. 11). Importantly, the teacher also included resources that provided counterstories to the stories presented in the textbook: "Aboriginal governing structures prior to European contact were incorporated into the unit on Government and Federalism to counter the myth that Aboriginals had no organised form of government before the arrival of Europeans" (p. 11). The purpose of this strategy was to expose, challenge, and critique normalised, privileged discourses.

A third approach was to integrate pedagogical strategies documented as effective for the teaching and learning of Aboriginal students[57]. These strategies included: the use of stories; sharing circles in which there was equal, respectful, and non-threatening discussion; illustrations as scaffolds; field trips (for example, to a pow-wow); community support; knowledgeable guest speakers from Native communities; a variety of activity types; and a mix of individual and collaborative work. The teacher ensured that the language used in assessment tasks was carefully considered, to ensure that the tasks assessed understanding of social studies concepts rather than the ability to interpret complex English language.

The fourth strategy was to use journals, portfolios for reflection, and artefacts for assessment purposes. Students' written work, presentations of research, and performances of stories/dramas were also used for this purpose, as well as traditional-style tests. Where tests were used, the teacher reviewed the content and skills involved with the class prior to the test and gave the students more time than the control teacher to read the tasks and write their responses.

A fifth element identified by Kanu as important was the experimental teacher's belief that integration should be a philosophical underpinning of the curriculum. He believed that Aboriginal perspectives should be central to curriculum, not an 'add-on'. He believed, further, that such integration has transformative power and that enhancing students' understanding of Aboriginal culture and issues can "increase the self-esteem and pride of Aboriginal students and alleviate ignorance and racism among dominant cultural groups" (p. 14).

The data gathered in Kanu's study included: field notes; audiotapes; video recordings; semi-structured interviews with the students; classroom scores on social studies tests; two end-of-term exams; two class assignments/projects; samples of Native students' written work; and exit slips and records of student attendance, class participation, and school retention. Kanu used this data to examine what impact the integration of Aboriginal perspectives had on academic

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[57] ibid.

achievement, class attendance and participation, and school retention. The findings show that the students in the class whose teacher integrated Aboriginal perspectives into the programme performed significantly better in terms of conceptual understanding and high-level thinking than those in the control class. The impact of such integration was particularly marked for the Aboriginal students who regularly attended class, as can be seen from the table:

Table 5: Social studies achievement of regularly attending Aboriginal students

	The 'integrated cultural knowledge' (experimental) class	The 'regular' (control) class
Pass rate	88.2%	44%
Average score	72%	48%
Score range	61–83%	40–60%

As well as the difference in assessment results, Kanu noted an increase in the self-confidence of the students in the experimental class over the course of the year. Although the study found no correlation between student attrition and the integration of Native perspectives and no significant difference in attendance/regularity in the two classes, the reasons that regular attenders in gave for their regularity were quite different depending on which group they were in. Those in the control class typically emphasised compliance:

> "If I don't get my attendance slip signed by Mr H. I will lose the government financial assistance I am getting for attending classes."

Those in the experimental class typically offered learning-related explanations:

> "I look forward to this class every week. You learn something new about Native issues, like successful Native professionals, politicians, and businesses, and this whole idea of urban reserves in Winnipeg … suddenly you don't feel that bad about yourself any more."

> "We are learning a lot about Native issues in this class, and about other indigenous cultures. For example, I enjoyed the video *Whale Rider*, which was about Māori culture in New Zealand. It has some similarities with Cree culture."

The evidence from this research shows that, in order to promote academic engagement and achievement, the content and processes of teaching/learning need to be compatible with students' cultural identities and experience. This parallels the findings of Lipka et al.[58] in Western Alaska. These researchers carried out extensive studies into the integration of Yup'ik culture and language into science, mathematics, and literacy programmes and found that the integration of culturally relevant content and practices resulted in significant shifts in the achievement of Native students.

The findings from Kanu's study, which is firmly situated in a social studies context, also resonate with recent across-the-curriculum research in New Zealand. In a study designed to identify teaching and learning strategies that promote literacy skills for learners in a year 1–5 Māori-medium environment, Bishop et al.[59] found that a culturally appropriate and responsive context was crucial. Teachers were able to create such a context by recognising children's prior experience and knowledge and by using materials that related to their Māori world view

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[58] Lipka, J., Sharp, N., Brenner, B., Yanez, E., & Sharp, F. (2005). The relevance of culturally based curriculum and instruction: The case of Nancy Sharp. *Journal of American Indian Education, 44*(3), pp. 31–54.

[59] Bishop, R., Berryman, M., & Richardson, C. (2002). Te Toi Huarewa: Effective teaching and learning in total immersion Māori language educational settings. *Canadian Journal of Native Education, 26*(1), pp. 44–61.

and experiences and had cultural legitimacy. While this study related particularly to the teaching of reading and writing, the 13 teachers identified by informants as effective were also considered effective across the curriculum.

The findings of the Te Kotahitanga project[60], which are based on interviews with teachers and Māori students from New Zealand secondary schools and with the students' parents, emphasise the importance of a "culturally appropriate and responsive context for learning in classrooms" (p. 31). In part, such responsiveness consists of recognising, using, and building on the prior learning and experience of Māori students in order to promote tino rangatiratanga. To be more effective in teaching Māori students in the mainstream, teachers need, above all else, to "care for their students as culturally located human beings". This point was highlighted by the student quoted at the start of this chapter, who felt that his learning was inhibited because his cultural knowledge was not valued. He went on to say:

> "I'm a dumb Māori I suppose. Yeah they asked the Asian girl about her culture. They never ask us about ours" (p. 49).

The researchers argue that students can better make sense of classroom materials and strategies if they are encouraged to "bring who they are to the classroom … in ways that affirm their own emerging identities".

Bevan-Brown[61] also highlights the impact that culturally responsive teaching has on Māori learners. In a culturally responsive environment:

> learners' culture is valued, affirmed and developed … learning is facilitated because their educational and home environments are culturally compatible. They are able to utilise familiar learning strategies and to relate new information to prior knowledge. In a culturally responsive environment students are more motivated to learn, they feel psychologically secure and thus are able to concentrate fully on required academic tasks (pp. 152–153).

Bevan-Brown's research shows that gifted Māori learners are more likely to develop their gifted potential and to resist anti-achievement pressure from peers when they experience a culturally responsive environment that supports them knowing about, and having pride in, their Māori culture[62]. Similarly, Hohepa et al.[63] explain why cultural context is so important in kōhanga reo and why it is important that they reflect and construct "the concepts, values and beliefs of the language learners".

The use of relevant concepts, values, and beliefs was exemplified in the content and resources employed in Kaser and Short's study[64]. As part of a literature-based family studies inquiry, students were encouraged to explore their experiences and roots and to understand themselves (cultural identity): "The students themselves were the curriculum" (p. 186). The teacher in this study provided books that were likely to contextualise the diverse perspectives of the students in the class. The students participated in literature circles (small groups engaging in dialogue about books), in which they compared their own family groups with those in the literature and compared traditions, establishing what they would like to know more about. The literature circles also provided:

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[60] Bishop, R., Berryman, M., Tiakiwai, S., & Richardson, C. (2003). *Te Kotahitanga: The experiences of year 9 and 10 Māori students in mainstream classrooms.* Wellington: Ministry of Education.

[61] Bevan-Brown, J. (2005). Providing a culturally responsive environment for gifted Māori learners. *International Education Journal, 6*(2), pp. 150–155.

[62] Bevan-Brown, J. (1993). *Special abilities: A Māori perspective.* Palmerston North: Massey University.

[63] Hohepa, M., Smith, G. H., Smith, L., & McNaughton, S. (1992). Te kōhanga reo hei tikanga ako i te reo Māori: Te kōhanga reo as a context for language learning. *Educational Psychology, 12*(3/4).

[64] Kaser, S. & Short, K. G. (1998). Exploring culture through children's connections. *Language Arts, 75*(3), pp. 185–192.

- a space for the 'kid culture' aspect of learners' identities;
- a space for children to talk openly with each other;
- a place for teachers to really listen to students and to reply to their comments in ways that showed that they were sincerely wanting to understand them;
- a sense of community for students, in which they were comfortable having dialogue together;
- multicultural perspectives;
- opportunities for students to focus on what was important to them, through inquiries into topics of relevance.

Rather than impose topics on them, the teacher in this study found ways to connect the requirements of the curriculum to children's interests and questions: "Their interest in timelines and family histories led them to the realisation that their own family members had participated in significant events in American and Mexican history" (p. 190). The impact of this approach, and its emphasis on connecting to students' own lives, can be found in the kinds of inquiries carried out by three focus children:

Table 6: Same class, different inquiries

Joe	Brad	Rosanna
Joe focused on *ethnicity* and used the family studies contexts as a place to articulate his concerns and understandings. He took on the stance of an authority since he was the only American Indian in the group, and he became increasingly aware of how those around him viewed their *ethnic heritage*. He particularly related to the Indian characters in the literature and "expressed disappointment that his family seemed to place more importance on becoming part of mainstream society than on developing their own ethnic uniqueness" (p. 188).	Brad focused on family and *generational cultures*. He shared stories and encouraged others to share stories, which developed the whole class's understanding of *cultural diversity* … He became more respectful of others' viewpoints.	Rosanna focused on connections to *family*. Through her inquiry into *diverse family grouping*, the class all moved to consider and respect difference. "The whole class gained a rich sense of her values as a Mexican American" (p. 187).

There was evidence that this approach supported the development of learners' cultural identities: "It was apparent throughout the year that Joe was thinking through what being Indian meant to him" (p. 188). It also supported students' understandings of how culture and heritage are passed on and sustained, as is shown by the discussion below, which followed the reading of a story about a Navajo elder who returned to a reservation to die (p. 188).

Brad: Well, anyway, I think the book is about how to take on the new ways without having to give up the old.

Joe: You shouldn't give up on your heritage.

Brad: Yeah, but, sometimes people aren't proud of heritage because traditions seem silly.

Randy: It doesn't seem up-to-date. He even calls it "the old ways".

Brad: I think the father was just trying to get away from the stereotyping of Indians – riding horses, shooting arrows.

> Joe: Yeah, well, I still think people should stay in their heritage, but no one in my family is into it. Like that guy in the story, they want to go on with life and pretend they are not Indian. I feel more like Brandon. I'm interested.
>
> Marcus: I'm like Brandon, too. I want to remember.

Interestingly, Joe and Brad had both chosen to read the same text but had done so for different reasons. It was relevant to Joe because it had Navajo characters. It was relevant to Brad because he was interested in grandparents. The opportunity for them both to explore content and resources that connected to their lives helped them develop understandings of the same curriculum ideas. But because they were allowed to explore questions and resources that were of particular relevance to them, the route to those understandings was different. The researchers report that the approach the teacher took, weaving Joe's findings about ethnicity into class discussions about culture, together with the support he was given to further his inquiry, helped to bring him closer to his peers rather than set him apart (p. 188).

Social stories

Social stories are stories written from the perspective of an individual child about a social situation they are finding difficult or confusing. They embed the student's own knowledge and experience at the centre of a story designed specifically to support their participation in social situations. Social stories follow a particular pattern and include the use of:

- descriptive sentences about what happens in the problematic situation;
- perspective statements that express the emotions and thoughts of the focus child and others involved;
- affirmative statements that praise the actions of the child;
- directive sentences that signal appropriate responses from the child.

Research into the use of social stories in early childhood settings illustrates the value of developing and using resources specifically designed to reflect the experiences and perspective of a particular child. Briody and McGarry[65] researched how social story books, made by the teacher and particular to a specific child, facilitate transition to school. The authors give the example of a social story prepared to support a child named Patrick. The social story was a resource that he could use to review the morning routine of being dropped off at school. It featured photographs of his morning routine, organised in chronological order (getting out of the car, going into school, hanging his coat up, settling into the classroom, hugging his father 'goodbye', waving to daddy at the door, and then beginning his work). The pictures were accompanied by descriptive statements (for example, "Patrick's daddy is taking Patrick from the car"), perspective statements (for example, "Patrick's daddy says goodbye with a hug. *He will miss Patrick today, but he will see him again at home tonight*"), affirmative statements (for example, "Next, Patrick hangs up his coat. *That is a good idea*"), and directive statements (literal behavioural choices). Patrick used the book throughout the day, sharing it with his teachers and his peers. The reinforcing of the predictable nature of the morning routine helped reduce Patrick's anxiety. The social story "facilitated Patrick's membership in his new social group – his class – as he became included within the community" (p. 40).

Although social stories show evidence of strong alignment and personal connection, Toplis and Hadwin[66] found that they are not always effective for all students in the same way. They researched the impact of social stories in terms of increasing the independent behaviour of five children at lunchtimes. They found that the stories were effective for the children who

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[65] Briody, J. & McGarry, K. (2005). Using social stories to ease children's transitions. *Young Children,* September.

[66] Toplis, R. & Hadwin, J. A. (2006). Using social stories to change problematic lunchtime behaviour in school. *Educational Psychology in Practice, 22(*1), pp. 53–67.

had trouble seeing things from others' perspectives but had little impact on the two who were already able to do this.

There is some evidence that social stories may be effective in supporting the participation of learners with autism spectrum disorder. In a review of 16 empirical studies of social stories, all from the period 1994–2004, Ali and Frederickson[67] found that every study reported positive impacts and commended the usefulness of social stories. They did note, however, that nearly all concerned single case designs rather than experimental studies, and the reported impacts were often modest.

Cultural universals as a basis for connecting to students' lives

Brophy and Alleman[68] suggest that focusing on cultural universals in social studies provides a means of keeping content "close to students' life experiences", with the result that content is "meaningful to them" (p. 219). Alleman et al.[69] explain that:

> Cultural universals are domains of human experience that have existed in all cultures, past and present. They include activities related to meeting basic needs for food, clothing, and shelter, as well as family structures, government, communication, transportation, money or other forms of economic exchange, religion, occupations, recreation, and perhaps other factors as well. The term implies that activities relating to each cultural universal can be identified in all societies, but not that these activities necessarily have the same form or meaning in each (p. 168).

Cultural universals are, say the authors, useful as emphases in social studies learning, given that all children have knowledge and experience from their own lives relating to such universals:

> Children begin accumulating direct personal experiences with most cultural universals right from birth, and they can draw on these experiences as they construct understandings of social education concepts and principles in the early grades. This is true for all children, regardless of their family's ethnicity or socioeconomic status. If cultural universals are taught with appropriate focus on powerful ideas and their potential life applications, students should develop basic sets of connected understandings about how our social system works (with respect to each cultural universal), how and why it got to be that way over time, how and why related practices vary across locations and cultures, and what all of this might mean for personal, social, and civic decision making (p. 169)[70].

Alleman et al.[71] report that cultural universals are a useful means of promoting understanding of diversity, tolerance, and empathy and that they have "observed very positive responses with special needs children in particular" (p. 169).

Life–world probing and intrusion

While claims for the benefits of embedding students' cultural knowledge and experience are convincing, such an approach is not simple, nor is it certain to impact on learning in the positive ways that teachers intend. Lipka[72] warns that "the connection of local knowledge to schooling is not an easy process … The challenge is to adapt local culture and knowledge

[67] Ali, S. & Frederickson, N. (2006). Investigating the evidence base of social stories. *Educational Psychology in Practice, 22*(4), pp. 355–377.

[68] Brophy, J. & Alleman, J. (2005). Primary-grade students' knowledge and thinking about transportation. *Theory and Research in Social Education, 33(*2), pp. 218–243.

[69] Alleman, J., Knighton, B., & Brophy, J. (2007). Social studies: Incorporating all children using community and cultural universals as the centerpiece. *Journal of Learning Disabilities, 40*(2), pp. 166–173.

[70] ibid.

[71] ibid.

[72] Lipka, J. (2002). Schooling for self-determination: Research on the effects of including Native language and culture in the schools. *ERIC Document Reproduction Service No. ED459989.*

to Western schooling without trivialising or stereotyping" (p. 2). How teachers manage this challenge is one of the themes of a study by Chan[73] that examined how students' experience of a culturally sensitive curriculum contributes to their sense of ethnic identity. She presents stories from culturally diverse school communities, in which students engage in activities such as story writing based on interviews with their parents about their culture and their childhood, preparing ethnic food with their parents to share at a food fair, participating in a multicultural night, and participating in a grade 8 graduation designed to be a celebration of cultures. Chan's narrative inquiry (during which she took part in all aspects of classroom and school life with two cohorts of students) revealed that:

> Many activities in and out of classrooms were designed to acknowledge ethnic communities and strengthen cultural awareness of others and pride in each student's culture. However well-intentioned, some of these events evoked complicated, even conflicting, responses from students and their peers (p. 184).

There were, for example, culturally-bound dilemmas around a post-graduation party. Fatima, a first-generation Somalian Muslim student, was "caught in the middle, wanting to participate in what her non-Muslim peers were doing while at the same time needing to adhere to her mother's beliefs about activities she viewed as appropriate" (p. 184). The story reveals how curriculum events (in this case a graduation) "may contribute to the ethnic identity-formation of students of ethnic-minority backgrounds in ways not anticipated by their teachers" (p. 184).

Another story in Chan's study relates to an activity in which culturally diverse students were asked to share with the class what foods they ate at home and to describe the preparation techniques involved. The teacher, William, found that his students did not initially offer examples that reflected the cultural diversity of the classroom. So he planned a subsequent activity, using carefully chosen, culturally diverse small groups, to learn about the history and culture of a country of their choice and to prepare a dish from that culture for a food fair. This approach was more successful in developing students' appreciation of cultural difference:

> William's initial attempt to engage his students in discussion about cultural differences was met with non-participation. Not knowing specific reasons for the students' reluctance, he explored possibilities for following up on the lesson, and decided to include a cultural activity that might expose them to diversity in a way more compatible with their interests … students' responses to their teacher's attempt to diversify the curriculum led their teacher to explore alternative means of encouraging them to share their culture.

Eriksson and Aronsson[74] also caution that not all students are comfortable with 'life–world probing'. Students may interpret as intrusive their teacher's well-intentioned attempts to have them make their world public. For example, in a booktalk session (one of 24 recorded by the researcher with students aged 10–14), the teacher encouraged the students to visualise their own lives from the perspective of specific other people. She asked them to compare their lives (thinking particularly of their helping roles in the family) with those of refugee girls in Mozambique and to try and adopt the perspective of the Mozambican girls. She found that "the students reacted with resistance to questions about their private life worlds" (pp. 523–524). All four students in the group displayed resistance of various kinds: evading the question, not responding at all, providing minimal and non-committal responses, or avoiding the underlying question ('Would they like to work before school?'). The researchers suggest that:

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[73] Chan, E. (2007). Student experiences of a culturally-sensitive curriculum: Ethnic identity development amid conflicting stories to live by. *Journal of Curriculum Studies, 39*(2), pp. 177–194.

[74] Eriksson, K. & Aronsson, K. (2004). Building life world connections during school booktalk. *Scandinavian Journal of Educational Research, 48*(5), pp. 511–528.

their resistance most likely … has to do with their notions of what is private or public in their life worlds. From the teacher's perspective the text apparently offers a handy occasion to discuss the privileged position of Western children, who, largely, do not have to work. Yet, from the pupils' perspective, information about helping out at home can probably be seen as a type of highly private and extremely sensitive information.

Teachers need, therefore, to be alert to the possibility that students may consider requests to share their lives intrusive. Teachers should seek strategies that give students positive experiences of making connections to their own lives, since there is a strong likelihood that doing so will improve the quantity and quality of learning in tikanga ā iwi / social sciences.

Making students' own lives a point of comparison supports access to new learning

Marzano, Pickering, and Pollock's meta-analysis[75] of more than 100 studies on the effect of instructional strategies found that, of all the effective strategies, similarities-and-differences strategies had the greatest impact on learning. The average effect size for studies in which such strategies were used was 1.61. These researchers identify four kinds of activity that involve similarities and differences:

- comparisons
- classifying
- metaphors
- analogies.

Illustrating the power of analogy, the authors describe how a history teacher, Mrs Jackson, has her students read and listen to Martin Luther King Jr's "I Have a Dream" speech (p. 13). To shift their understanding of the significance of the speech to a deeper level, the teacher asked the students to work in groups to complete the analogy "'I Have a Dream' was to the Civil Rights Movement as _____ was to _____." The authors explain that the process of completing the analogy (by first stating a historical event or document and then a movement or event) led students to a complex and abstract area of similarities and differences and on into a deeper understanding of both the speech and the civil rights movement.

Similarly, the following exchange[76] between teachers and children in an early childhood setting reveals how young children can use analogies to make sense of concepts (in this case, political leadership):

> J: John Howard's the boss of Australia.
>
> M: Yeah, well he's not the boss of me.
>
> Teacher: That's right, he's not the boss of you. When John Howard makes his decisions, first he needs to listen to lots of people's ideas, so really it's not just his decision, it's lots of people's.
>
> M: It's a bit like Trish, she's the boss of crèche (para. 6).

The power of comparisons is evident in a New Zealand study by Skerrett White[77], situated in a kōhanga reo. Students' interests and experiences were the stimulus for a project about

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[75] Marzano, R., Pickering, D., & Pollock, J. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement.* Virginia: Association for Supervision and Curriculum Development.

[76] Waniganayake, M. & Donegan, B. (1999). Political socialisation during early childhood. *Australian Journal of Early Childhood, 24*(1), p. 34.

[77] Skerrett White, M. N. (2003). *Kia mate ra ano a Tama-nui-te-ra: Reversing language shift in kohanga reo.* Unpublished doctoral thesis, University of Waikato, Hamilton.

Hatupatu. The kaiako[78] searched out "every version of the story of Hatupatu that we could lay our hands on in children's books. We found four varied accounts of the story." By comparing the different accounts, and through other, related learning experiences, the children gained deep understandings of how stories, sourced in te ao Māori, expressed Māori reality. This experience put one of the children, Hinepau, in a position where she was able to transition between language domains and cultural perspectives as she told the story of Hatupatu, first in English to an older child in a context outside the kōhanga reo, and then in Māori at the kōhanga reo. The first situation arose when the older child asked Hinepau, "Are there monsters in this world?" She replied:

"I'll tell you a story. It's about killing somebody. It's a real story. There was this boy and his name was Hatupatu and he was being chased by Kurungaituku, and Hatupatu came to a rock. And he said, 'Rock, rock open up, open up.' And he went inside and Kurungaituku was scratching the rock and the rock opened up and Hatupatu ran and ran and then he came to a hot pool and he jumped over it and Kurungaituku fell into the hot water and she died. And I've been to the rock and it's still open and I've seen the mud pools and they're round [demonstrates] and they go bloop [demonstrating]" (p. 239).

Hinepau later retold the story in Māori at the kōhanga reo, showing her bicultural development:

"Kātahi ke kōrero 'Ko wai a koe?' 'Ko Kurungaituku au'. Ka kōrero a Kurungaituku 'I te hiahia he kai'. Kātahi ka kōrero i a ia 'I te hiahia au he tangata'. I oma a Hatupatu. Kātahi ka kōrero a Kurungaituku 'Ka kai au koe mō tōku kai' te kōrero o Hatu- aaaa Kurungaituku. Kātahi ka oma a Hatupatu. I tae mai a ia ki tētahi toka. Kātahi ka kōrero a ia, 'E toka, e toka, huakina, huakina!' Kātahi ka huakina te toka. Kātahi ka huna te toka i a ia. Kātahi ka haere mai a Kurungaituku ki te rapirapi i te toka. Kātahi ka haere – Kātahi ka huakina anō, ka oma a Hatupatu. Kua pau tōna hau ināianei. Kātahi ka kōrero ki te papa, 'E papa, e papa, huakina, huakina!' Kātahi ka huakina te papa. Kātahi ka kite ia, kātahi ka rapirapi anō. Kātahi ka puta mai a Hatupatu. Tahi ka haere mai ki ētahi wai e koropūpū ana. I peke a Hatupatu i te tuatahi, ēngari i peke a Kurungaituku, i tae a ia i roto i te wai. Ko tēnā te mutunga o Hatu- aaaa Kurungaituku. Kua mutu au … anā tana kai!" (p. 239).

By retelling the Hatupatu story in two contexts and in both English and Māori, and by positioning Hatupatu as a powerful bird woman (not as a dragon, as some may have done), Hinepau showed that she was developing in terms of two central aims for Māori educational achievement: (1) to live as Māori and (2) to actively participate as citizens of the world[79]. Durie states that "Māori children will live in a variety of contexts and should be able to move from one to the other with relative ease" (p. 11). Hinepau showed that she could do just that.

Not surprisingly, a number of the social sciences studies that reported gains in student learning also reported tasks that involved attending to similarities and differences. In particular, there is evidence that learning tasks that involve students comparing their own and others' cultures or communities can contribute to student success.

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78 Teachers at the kōhanga reo

79 Durie, M. (2001 February). Hui Taumata Mātauranga: A framework for considering Māori educational advancement. Retrieved January, 2005, from www.moe.govt.nz/index.cfm?layout=document&documentid=61 13&indexid=6506&indexparentid=8734

The effectiveness of having students compare their lives with the lives of others is evidenced by an action-research study undertaken by McNeight[80]. The researcher details the outcomes of an approach she developed in her year 13 classical studies class, in which Pasifika girls were required to investigate possible parallels between their own cultural practices and those of the people that they were learning about in their studies of Roman Religion and *The Aeneid*[81].

McNeight describes the motivation behind her planning:

> I understood that Pacific Island students who participated in the project would have had restricted access to the prior knowledge of the roots of European culture which enables some palagi students to make the associative links that allow learning to occur. Nevertheless I wanted to demonstrate that it would be possible for Pasifika students to generate associative linkages, just as effectively as palagi students, and thus be enabled to share in the potentially enriching experiences this might entail (p. 5).

McNeight scaffolded the learning process by giving the students opportunities to practise their interviewing skills before the interviews took place at home. Following the interviews, the students took part in focus-group discussions, in which they discussed what they had learned. Two of the girls, Miʻi and Helen, observed similarities in the patriarchal natures of ancient Roman society and present-day Sāmoan culture:

Miʻi: First we started off like we wanted to contrast similarities and differences and women, the roles of women were not so important like men were … men were like the dominant sex and that was similar thing with Sāmoans. The role of women were just to have babies and clean house and wait for husband to come and … yeah … it's like that now.

Helen: We talked about differences between Roman life and Sāmoan way of life – that was the big thing.

Interviewer: Did you talk about families?

Helen: We talked about families and well with Roman religion they had those parents ... the heads of the family, which were the … pater familias? He was the father – usually the father was the head of the family. We thought that was quite like our Sāmoan way of life because fathers are the head of the family and everyone has to obey him and do what he says.

Similarities and differences relating to festivals, religion, feasts, and rituals of speech were also discussed.

Comparing the students' achievement on this unit with their achievement on earlier units, the teacher/researcher found that each had more than doubled her mark. The girls reported a greater sense of cultural inclusion and empowerment, and increased engagement with learning. There was also evidence that the process, by creating a space away from the cultural norms and evaluative environment of the classroom, gave students the opportunity to express thoughts about aspects of the course that perplexed them. It allowed them to raise issues that touched on their own culture but were too sensitive to be dealt with in a large-group situation. The formal teaching environment provided few opportunities for this.

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[80]   McNeight, C. (1998). *"Wow! These sorts of things are similar to our culture!": Becoming culturally inclusive within the senior secondary school curriculum.* Unpublished graduate research report, Department of Teacher Education, Victoria University of Wellington.

[81]   See Case 2: Making links between cultures: ancient Roman and contemporary Sāmoan.

While McNeight's approach involved making links between the lives of her students and the lives of those from an earlier era, Schnell and Brodsky-Schur's approach[82] involved comparisons between the lives of their students and those of a group of same-age students living far distant. They describe how children from Mamaku, New Zealand and from New York City were connected via technology and able to learn about their own and others' cultures. Exchanges by video, fax, email, and letters enabled them to share information about their community and their families:

> We paired our students into letter-writing partners, beginning a process we would repeat with any materials we received from one another. We saw that children started to compare themselves to their partners and ask questions, such as, "What do my writing partner and I have in common?" and "How are we different?" We would then share all the letters received by reading them out loud or putting them on display, and asking, "What are the patterns that we see in their lives?", "How is life in New Zealand different from and the same as life in New York?", and vice versa.

The students: exchanged photographs and writing about places in their community; compared their lives to their partners' lives; asked questions about others that led to understandings of identity, place, culture, and history; exchanged stories about family history, treasures, and holidays; and exchanged recipes.

The teachers involved in this cross-cultural exchange said that their students developed an intense motivation to learn about others' cultures and histories once they had a real audience to exchange ideas with. They suggest that the strategy was successful in generating learning because:

- it began with children learning and writing about themselves;
- children were more willing to share personal information when the primary audience was far away;
- students learned more about themselves when they opened up for others;
- abstract information became meaningful when embedded in the personal.

The Schnell and Brodsky-Schur study[83] describes a similarities-and-differences strategy in action in a social studies context. The comparing of their own lives with those of others was successful both in terms of motivating students to participate in social studies and in developing conceptual understandings. By asking questions about the (Eastern European) origin of some of the New York children's names, for example, the New Zealand students gained historical understandings and made the discovery that both groups contained students with ancestors who had fled Ireland during the 1840s famine. This discovery generated understandings about how the peoples of different countries are interconnected through patterns of immigration.

As a means of engaging students with two year 11 history topics, Hunter and Farthing[84] developed a pedagogical approach that was designed to connect them with their own pasts. In the first of a series of teaching episodes, students discussed connections between the topics they were going to be learning about in history and the stories of their own families. They were asked to prepare for the next lesson by selecting a single object/taonga/item that had some special connection to their own past, discussing it with their family, and bringing it to class with them. At the start of the next learning episode, the students displayed the items on their desks and spoke briefly about their sources. They were then questioned orally about their objects. This was followed by a series of written tasks in which the students had to describe

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[82] Schnell, C. & Brodsky-Schur, J. (1999). Learning across cultures: From New York City to Rotorua. *Social Education, 63*(2), p. 75.

[83] ibid.

[84] Hunter, P., & Farthing, B. (2007). Connecting learners with their pasts as a way into history. *SET: Research Information for Teachers, 1*, pp. 21–26.

their object and then say who used it in the past, and for what purpose, why they chose it, and what else they would like to know about it. Finally, they were asked to reflect on what they could learn about the past from their object. During this time, the researchers conversed with each of the students, and the students were encouraged to converse with each other about their family histories. The activity concluded with students sharing their ideas about identity formation and sharing questions about the past.

Hunter and Farthing comment that this relatively simple pedagogical enhancement of a widely taught history topic revealed "rich evidence of learners' interest in their families' histories and their connections with historical agency" (p. 25). They maintain that it was important, however, to closely integrate student experience and the introduction of abstract ideas. Prior to the object-sharing, students were introduced to and able to discuss such concepts as cultural values, social organisation, and gendered experiences of history. Many of the students applied these ideas to their commentaries on their objects. In their discussions, they also showed understanding of important historical ideas and relationships such as "change and continuity, cause and effect, power and powerlessness, social stratification, private and public roles and expectations, gendered and cultural roles, and values in time and place" (p. 25). In their presentations and discussions, students used such terminology as:

> generations, ancestors, remembered, memories, most historical, family, meaning and memory, our family's history, his connection with, connected me with her, in his life, after his time.

They made connections to wider historical contexts using words and phrases such as:

> it must have a past, to remember times in that period, of the past, turn of the century, timeframe, significant era of time, at that time, anniversary (p. 24).

By engaging with and sharing their families' experiences and histories, the students gained greater understanding of historical concepts – and developed greater respect for each other.

The importance of making links to students' lives was also a theme in a study by Grant[85]. He observed two teachers teaching about civil rights and compared the impact of their different approaches on their students' historical thinking. A key point of difference was the extent to which the teachers made connections between the civil rights context that prevailed in the United States in the 1950s and 60s and students' lives in the present. One of the teachers, Linda, gave her students many opportunities to juxtapose their own experiences with those of people who had been involved in civil rights issues 40 or 50 years earlier. Via interviews, she found that her students saw themselves as "actors in their community" who "see the impact civil rights battles have had on how they and others view the world today" (p. 91). In the other teacher's class, opportunities to make such connections were not offered. The students from this class acquired a very different view of the value of studying history; they "see the study of history as irrelevant to the way they live their lives". For learning to be relevant to and significant for students, it needs to connect with their lives.

Learning circles, described by Riel[86], are a powerful tool that also requires students to make comparisons between their own lives and those of others. Attention to similarities and differences is just one of the elements of this successful approach (see Mechanism 4 in chapter 6 for further detail):

[85] Grant, S. G. (2001). It's just the facts, or is it? The relationship between teachers' practices and students' understandings of history. *Theory and Research in Social Education, 29*(1), pp. 65–108.

[86] Riel, M. (2000). Learning circles: Virtual communities for elementary and secondary schools. Retrieved May, 2006, from http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/10/e8/d1.pdf

> Learning Circles enable students from different cultures, regions, religions, ages, perspectives, and with a range of physical and mental strengths to work together in a medium that treats diversity as a resource.

One of the activities in the learning circle approach, exchanging welcome packs between schools, "encourages students to … show or illustrate who they are and how their social and physical world is similar and different from that of their distant partners" (p. 3). The following profile, which one school included in the welcome pack that it sent to another school, provided a basis for comparison:

> "Sheldon Point School (Alaska) has 5 classrooms, with a total of 45 students in grades 1–12, most of whom are Yupik Eskimos. We live in a small village of less than 300 people on an area of about one square mile isolated from other locations by the rugged terrain. We drive snowmobiles to school. The school is the chief source of jobs in the community and families hunt, trap, and fish" (p. 3).

The studies outlined above reveal the learning potential of making connections between the lives and experiences of people in different contexts. Such connections can also support learning about concepts that are more abstract and less familiar to students. In Bickmore's study[87] of a diverse group of grade 4 and 5 students who were learning about 'conflict', the students were initially unfamiliar with the concept of conflict. They had, however, *experienced* conflict (whether personal or interpersonal) and were familiar with a current local issue in which conflict had led to work stoppages and protests. The teacher connected the learning with these experiences, both in the initial session and throughout the unit. For instance, working in small groups, the students brainstormed and then developed drama presentations that centred on conflicts caused by people trying to meet their needs. The subjects chosen for the presentations show how the students were able to connect the learning with their experience: a driver who caused an accident because, with very limited education, he was unable to read a stop sign; two families, one homeless and with no money for rent, and the other living in a comfortable home; a hospital funding issue seen from the perspectives of a patient receiving good-quality medical care and a politician wanting to cut funding. By connecting with local, interpersonal, and intrapersonal experiences such as these, students established the basis for connecting to other, initially unfamiliar ideas about larger-scale conflict in distant settings. By the end of the unit, most of the group had developed their conceptual understanding of conflict and – more importantly – their capacity to use those understandings.

As a result of being put in the middle of the learning, the students in Bickmore's study came to understand the concept of conflict in a way that had meaning for them. By contrast, the learning in a study reported by VanSledright[88] lacked connection to students' lives and experience, involving instead "a host of details, events, and terms, drawn from the ostensibly large historical fact archive" (p. 335). This resulted in students learning a largely "inert and lifeless" version of colonial American history. VanSledright describes this as the "'too many details' phenomenon" and suggests that students should be "more in the middle of … unfolding history" (p. 337). Nasman and Gerber[89] highlight the potential for young children to be in the middle of learning about economic concepts. They argue that economic concepts and understandings, often perceived by teachers to be unfamiliar to and distant from young children, are actually

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[87] Bickmore, K. (1999). Elementary curriculum about conflict resolution: Can children handle global politics? *Theory and Research in Social Education, 27*(1), pp. 45–69.
Bickmore, K. (2001). Student conflict resolution, power "sharing" in schools, and citizenship education. *Curriculum Inquiry, 31*(2), pp. 137–162.

[88] VanSledright, B. (1995). 'I don't remember – the ideas are all jumbled in my head': Eighth graders' reconstructions of colonial American history. *Journal of Curriculum and Supervision, 10*(4), pp. 317–345.

[89] Nasman, E. & von Gerber, C. (2002). Pocket money, spending and sharing: Young children's economic understanding in their everyday lives. In M. Hutchings, M. Fulop, & A. M. Van den Dries (Eds.), *Young people's understanding of economic issues in Europe* (pp. 79–104). Stoke on Trent: Trentham Books.

an important part of their culture. They say that teachers underestimate the richness and complexity of students' ideas, which are based on such experiences as trading Pokemon cards and pocket money exchanges. They suggest that teachers need to be alert to opportunities to draw on the everyday lives of children for connections to economic understandings.

The potential for similarities-and-differences strategies to have unintended outcomes

While similarities-and-differences strategies have the potential to impact on learning in positive ways, teachers should be alert to the possibility that they might influence learning in undesirable ways. Johnstone[90], for example, warns that binary thinking can result from similarities-and-differences strategies when teachers ask formulaic questions such as "How are people in Nigeria similar to and different from us?" A similarities-and-differences strategy presented in this way could result in students adopting an 'us–other' or 'them–us' dichotomy. These strategies need to be used in ways that support students to value diversity, rather than entrench racism or promote a 'tourist curriculum'.

Kaomea[91] presents a cautionary example of a pedagogical approach that led to outcomes contrary to curriculum. During a unit on early Hawaiian life, the teacher attempted to make the learning relevant by asking the students to compare the kapu system of old Hawaii and the daily rules of the school. They brainstormed a chart that outlined features of the early Hawaiian kapu system and their own school's 'kapu system':

Table 7: The kapu system

Kapu in old Hawaii	Kapu in school
– no men and women eating together	– no running in the hallways
– no eating certain foods (women)	– no fighting
– no touching anything that belonged to the aliʻi	– no talking back to the teacher
– no standing in front of the aliʻi	– no shooting spitball

Kaomea describes how, "after asking the students about the consequences they would face for breaking each of the rules in school (which varied from getting a warning from the teacher to having to see the principal, to suspension, depending on the rule broken), the teacher explained that in school the punishment fits the crime, but in old Hawaii, there was just one punishment: 'you break the kapu, you die'. It did not matter how serious the crime was, the teacher continued, the consequence was still the same. If you ate a food that you were not supposed to eat or if your shadow fell on an aliʻi, then you were put to death" (p. 32). This simplistic view of the kapu system entirely overlooked beneficial aspects of helpful kapu and did not attend to how aliʻi were also subjected to kapu and inconvenienced by them. The comparison was both mismatched and unfair. "By placing the early Hawaiian penal system side by side with the benign rules and consequences of a contemporary elementary school, the teacher has created a situation in which precontact Hawaii will inevitably appear frightening and oppressive in comparison" (p. 32). Kaomea suggests that comparisons could have been made, instead, with contexts such as the US penal system.

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[90] Johnstone, R. (1987). 'They don't eat like us': Prejudice and a social studies unit. *SET: Research Information for Teachers, 1*(7).

[91] Kaomea, J. (2005). Indigenous studies in the elementary curriculum: A cautionary Hawaiian example. *Anthropology and Education Quarterly, 36*(1), pp. 24–42.

Negative impacts on learning following the use of a comparison strategy are also described by Wills[92]. The well-intentioned teaching in this study was an attempt to include Native Americans and African Americans in the history curriculum. In the absence of resources, particularly resources relating to Native Americans, the teacher selected a novel about True Son, a white child abducted in a raid, raised by the Delaware Indians, and later forced to return to his white family. The class discussions and activities that followed the reading of this novel emphasised cultural differences between Whites and Native Americans. For example, the teacher asked the students to discuss how True Son would see Fort Pitt, compared with how a white settler might see it. The students used the words 'ugly', 'treeless', and 'prison' to describe the fort from True Son's perspective and 'home' and 'safe' to describe it from the settlers' perspective. The teacher also asked the students to imagine what they would do if they were in True Son's position. This led students to make further distinctions, with Native Americans being characterised as 'better people', 'religious', and 'sacred' and Whites as 'kind of jerks' who 'take over' and 'control the land'. Wills comments that in these activities, interactions between Whites and Native Americans were invisible. Differences between Whites and Native Americans were positioned as cultural conflict, and power relations between the two groups went unexplored. Wills argues that "the primary focus should be on social interaction, on society, and not on the cultures of distinct groups" (p. 54).

Draw on relevant content

Summary of findings

- Embedding students' cultural knowledge and experiences in content enables cultural continuity.
- Making students' own lives a point of comparison supports access to new learning.

3.3   Ensure inclusive content

While strategies aimed at encouraging students to make comparisons with their own experiences can support new learning, it is important that teachers attend to the use of language and to content and resource selection to ensure that diversity is not unwittingly excluded.

Language can either make diversity visible or bias student understandings

Alton-Lee et al.[93] gathered continuous audio and video data of children's public and private interactions for two entire year 7 social studies units: 'The English Middle Ages' and 'New York City: A study of cultural differences'. They then examined how many of the people mentioned or depicted were women. This analysis revealed that women were largely invisible: over 10,000 mentions were made of men but only 507 (3.9% of the total) of women. 12.4% of the mentions of women were pejorative, and 42.2% located women in subordinate roles. As a result, students had difficulty remembering anything about women, used the term 'people' to refer to men only, developed understandings of women as devalued people, and attributed women's achievements to men.

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[92] Wills, J. S. (2001). Missing in interaction: Diversity, narrative, and critical multicultural social studies. *Theory and Research in Social Education, 29*(1), pp. 43–64.

[93] Alton-Lee, A., Nuthall, G., & Patrick, J. (2000). Reframing classroom research: A lesson from the private world of children. In B. M. Brizuela, J. Pearson Stewart, R. G. Carrillo, & J. Garvey Berger (Eds.), *Acts of inquiry in qualitative research.* Massachusetts: Harvard Educational Review.
Alton-Lee, A. & Densem, P. (1992). Towards a gender-inclusive school curriculum: Changing educational practice. In S. Middleton & A. Jones (Eds.), *Women and education in Aotearoa.* Wellington: Bridget Williams Books.

While most students learned about William the Conqueror, none remembered what they had learned about Joan of Arc; some actually attributed her accomplishments to men. The authors coined the term 'William of Arc' effect to describe how students are apt to recall female agency in spheres of activity that have traditionally been dominated by male discourses[94]. This invisibility of women in students' writing, drawing, and thinking about the Middle Ages in this study clearly resulted from the teachers' lack of mention of women in the course of the units. The atypical response of one student (obtained in an interview) reveals the difference that can be made when teachers connect to learners' lives: Kim understood about the spinning and weaving work of village women because he was able to make connections between the spinning wheel that a visitor had brought to the class and his own experience of using a spinning wheel with his stepmother, whom he admired. This connection enabled Kim to learn something positive about medieval women.

The low status accorded to women in the New York and Middle Ages studies contributed to a class climate in which boys were using sexual innuendo and were allowed to verbally harass one of the girls (p. 256)[95]. Another student's developing identity as a white female was affected because she adopted the teacher's practice of including white males in her meaning when using the pronoun 'we'. When the interviewer asked Mia who she was thinking of when she spoke of 'us', Mia said: "I only think of the men … I don't think of the women."

In the following example, the negative impact of the teacher's language was more immediate. The transcript reveals how a racist peer exchange transpired when a teacher inadvertently positioned himself and the European students in the class as part of the 'we' in his statement about Europeans. The exchange took place near the beginning of a social studies unit with a New York City theme, aimed at helping the students value diversity and racial difference:

[94] ibid.
[95] Alton-Lee, Nuthall, & Patrick (2000), op. cit..

Table 8: A negative exchange provoked by teacher language

T:	Because white people,	
Joe:	(talking to Ricky) Honkies.	
Ricky:	(talking to Joe) Shut up!	
T:	Europeans, we were,	'we' positions those of non-European descent as excluded from the class community.
Joe:	(talking to Ricky) Nigger!	Racist remark, and kicking follows
T:	Watch this way please, Ricky! – were often wanting to get things …	
Joe:	(talking to Ricky) Black man! Samoan!	
(a few minutes later)		
Ricky:	(talking to Joe) Idiot! You get out!	
Joe:	(talking to Ricky) You kicked me first, you nigger!	
Ricky:	(talking to Joe) Did not, you honkie honk. I'm not a nigger, you flippin' honkie honk!	
(a few more minutes later)		
Joe:	(talking to Ricky) Shut up!	
T:	Ricky, could you try and watch here please?	Ricky, *not Joe*, was admonished for causing a disturbance through misbehaviour (p. 254).

The positioning of the teacher and the European students in the class in the 'we' led to Ricky, a Māori student, finding himself excluded from the class community, kicked, and the recipient of racist remarks from Joe, a student of European descent. The teacher involved, reflecting on the incident, expressed surprise and disappointment that the exchange had taken place, given his desire to deal effectively with race and gender issues in the classroom.

Just as the teacher's 'we' included only Europeans, it included only males. Mia, as a European, was nevertheless able to identify with 'we' when it referenced white males: she said that the early settlers of New York were 'like us' and that they were 'there before us'. Ricky, on the other hand, was excluded by the teacher's 'we' and located among the 'they'. The teacher had inadvertently positioned him as 'other' in the class community.

Levstik[96] compared how grade 5–8 students viewed matters of historical significance with how 20 preservice and 12 inservice teachers viewed them. She noticed that the students – like the teacher in the New York and Middle Ages studies mentioned above – tended to use the first person plural in their explanations. Students and teachers were given captioned historical pictures and asked to select those they thought were important enough to be included on a timeline of the past 500 years. As they talked about American history, "the first person plural came naturally … 'We' fought the revolution, 'We' discovered a cure for polio … historical

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[96] Levstik, L. S. (2000). Articulating the silences: Teachers' and adolescents' conceptions of historical significance. In P. N. Stearns, P. Seixas, & S. Wineburg (Eds.), *Knowing teaching and learning history: National and international perspectives* (pp. 284–305). New York: New York University Press.

events took on significance when they formed 'us', changed 'us', or made 'us' a nation" (p. 287). This tendency to assume a single shared story is problematic in that it positions the activities of other cultural groups as 'sidebars to the main events' (p. 298); it is also problematic from the point of view of the students' experience. When students use pronouns such as 'we' and 'other' in ways that imply that only certain students belong to the 'we', others may experience exclusion and drop out of the discussion. By way of illustration, Levstik reports the following interaction:

> Robert, a European American, remarked that one of the results of racism was that 'most black people are poor and on free or reduced lunches like 93% or so'. Derek, his African American classmate, looked at him in surprise, pointing a finger at his own chest and shaking his head. He stayed silent, however, until the conversation shifted to Native Americans. When Robert said that Columbus discovered America, Derek leaned forward and asked 'How did he discover America? There were already people here!'. Oliver, a European American, intervened, saying 'They didn't know where the US was; since they didn't know it, it was a discovery [for them] but not for the Indians'. Again, Derek withdrew, shaking his head in disagreement (p. 291).

Resources can either make diversity visible or bias student understandings

Students in any group are diverse – in terms of gender, ethnicity, culture, disability, age, sexuality, and the like – so if learning is to connect to their lives, resource and content selection needs to reflect this diversity. Where resources fail to make diversity visible, students have fewer opportunities to make connections and create meaning.

Negative impacts of invisibility

Alton-Lee et al.[97] discovered that not only were women rarely mentioned during social studies but they were also largely invisible in the resources used, or found in subordinate roles. The result was the so-called 'William of Arc' effect, described on pages 73–74.

In a study by Town[98] of 10 young gay men, all the participants spoke of the need to reduce the invisibility of (homo)sexualities in schools and to break the silence. The researcher reported that "for seven of the participants, schooling was dominated by a pervasive official silence about sexuality in general and (homo)sexuality in particular" (p. 200). When the participants were asked to imagine how they would like *their* children to be educated, should they be gay or lesbian, they identified the social sciences as one learning area in which same sex desire(s) could be framed more positively, through material that represented the diversity of gay communities:

> James suggested that his school needed to provide positive rather than negative images and information about (homo)sexuality … discussion of AIDS and (homo)sexuality within the school curriculum had contributed to James's feelings of dis-ease and pathologisation of his same sex desire/s (p. 206).

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[97] Alton-Lee, A., Densem, P., & Nuthall, G. (1990). 'I only think of the men … I don't think of the women'. *SET: Research Information for Teachers, 2*, pp. 1–8.

[98] Town, S. J. H. (1998). *Is it safe to come out now? Sexuality and the education of ten young gay men.* Unpublished doctoral thesis, Victoria University of Wellington.

Andrew, another student in the study, agreed:

> "Just make homosexuality and homosexual lifestyles, culture and society more visible … I don't see why it isn't" (p. 207).

Town suggests the use of resources and activities "which enable young males to explore subject positions other than the 'single' heroic" position and recommends that schools "identify silences and disrupt certainties of gender and sexuality" (p. 230).

Similar suggestions were made by Renold[99] in her study concerning the difficulties faced by boys who adopted non-hegemonic masculinities. She studied 59 year 6 children in two semi-rural English primary schools, focusing on the construction of gender and sexual identity. Through ongoing participant observation and unstructured, exploratory interviews in friendship groups, Renold found that two-thirds of the boys "went to great lengths to avoid studious behaviours, particularly boys who were deemed high achievers … some boys deployed humorous techniques (including the teasing and ridiculing of others) and some boys engaged in disruptive, 'rule-breaking' behaviours. Others played down their achievements. Each strategy was a means of concealing conformist attitudes to schooling and to avoid being positioned as studious" (p. 373). While the study was not designed to reveal the nature of pedagogies that support such occurrences, the authors found that the "conflation of non-hegemonic forms of masculinity, femininity, and 'studiousness' makes academic study problematic for all boys, but particularly difficult for boys (high and low achievers) who would like to, or choose to, invest in and take up alternative masculinities" (p. 382). Pedagogies that promote such conflation are, therefore, likely to be unhelpful in promoting desired learning goals for diverse male learners.

Two students in Town's study had shifted from a school with a culture that had left them feeling isolated and 'at risk' (like the schools described by Macgillivray[100], which are permeated by homophobic and heterosexist attitudes that leave LGBTIQ[101] students vulnerable) to one where "issues of sexuality in general and (homo)sexuality in particular were more visible" (p. 202)[102]. They mentioned, for instance, that in their new school they found information about support groups for gay/lesbian youth on the noticeboards. The provision of such support and information contributed to another student's positive feelings about learning, something that he had not experienced at another school, where such information was not visible. As a consequence, "he attended more frequently, was aware of the attendance and assessment requirements and felt more able to believe in himself and his achievements" (p. 204). This feedback aligns with the theoretical argument put forward by Rogow and Haberland[103], who advocate grounding sexuality and relationships education within a social studies framework that emphasises gender and social context. They suggest that there is value in a stronger and earlier emphasis "on the social context in which sexual attitudes form, sexual decisions are made and sexual scripts enacted" (p. 335). The arguments they put forward for including such a focus in social sciences education include:

- social studies has analytical thinking and critical reflection components, which have typically been applied to themes relating to "social movements, communities, government, culture and contemporary social issues" (p. 337);
- sexuality-related issues are fundamentally social matters;

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99 Renold, E. (2001). Learning the 'hard' way: Boys, hegemonic masculinity and the negotiation of learner identities in the primary school. *British Journal of Sociology of Education, 22*(3), p. 369.

100 Macgillivray, I. K. (2004). *Sexual orientation & school policy: A practical guide for teachers, administrators, and community activists.* New York: Rowman & Littlefield Publishers.

101 Lesbian, gay, bisexual, transgender, intersex, and queer.

102 Town (1998), op. cit.

103 Rogow, D. & Haberland, N. (2006). Sexuality and relationships education: Toward a social studies approach. *Sex Education, 5*(4), pp. 333–344.

- the issues that underlie discussion about gender and sexuality "parallel and reinforce critical thinking about human rights and democracy, and equality in general" (p. 338).

In another study, Wills[104] reported on the efforts of three teachers to implement a multicultural curriculum and highlighted how a well-intentioned curriculum that aimed to make slavery experiences of African Americans visible had unintended negative consequences. In the classroom that he studied, the teacher intentionally focused on the experiences of slaves during the Civil War. While the pedagogical approach taken did make *those* experiences visible, it failed to make visible African Americans' *continuing* experience of racism, discrimination, and injustice in the United States. By limiting to slavery the context in which students learned about issues of racism, discrimination, and injustice, their understandings of those issues became anchored in slavery; they came to understand, incorrectly, that because slavery and the Civil War had ended, injustices had ended. These findings are a reminder of the need to attend not only to what is made visible in curriculum content but also to what is not being made visible (in this case, race relations beyond the end of the Civil War).

Wills[105] made a similar finding in a later study: what is made visible in historical resources and teaching activities is not sufficient. He argues for a critical, multicultural social studies that makes visible "power relations grounded in social structure and institutional practices" (p. 60). Wills used three classroom-based examples to illustrate how well-intentioned teaching may not have the desired effect of helping a majority (in this case, white students) see how they can actively work for social change. He argued, on the basis of the following examples, that what is missing in historical resources and activities is a focus on the interactions between diverse groups.

His first example was set in a primary school classroom where the students were using a book called *Young Martin's Promise*[106]. The teacher used discussion of a section of the story to help students understand and identify with the thoughts and feelings of young Martin Luther King:

> Martin ran over to the shoe store where he saw a pair he liked. They went inside and sat in the first empty seats they saw. The seats were near the front window, and Martin could see the shoes he wanted. A young clerk came up to them.
>
> "I'll be happy to wait on you if you'll just move to those seats in the rear," the clerk said in a low voice.
>
> "There's nothing wrong with these seats," Martin's father said. "We are quite comfortable here."
>
> "Sorry," said the clerk, "but you will have to move to the rear of the store."
>
> "We'll either buy shoes sitting here," Martin's father said, "or we won't buy shoes at all."
>
> "Stop being so high and mighty!" the clerk said angrily. "That is the only place we serve black people."

After reading the passage, the teacher asked, "How do you think Martin and his father felt?" The students responded variously with words such as 'annoyed', 'discouraged', 'sad', and 'cruel'. The teacher summarised their responses by saying that the treatment meted out to Martin and his father 'didn't seem fair'. The nature of the task restricted students' opportunities to discuss the understandable black opposition to segregation or to discuss white investment in segregation.

Wills critiques the above activity: although intended to relate to how conflicts can be resolved, it omits the white voice. By focusing almost entirely on the thoughts and feelings of young Martin as he experiences discrimination in a segregated society, the curriculum in use

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[104] Wills, J. S. (1996). Who needs multicultural education? White students, U.S. history, and the construction of a usable past. *Anthropology and Education Quarterly, 27*(3), pp. 365–389.

[105] Wills, J. S. (2001). Missing in interaction: Diversity, narrative, and critical multicultural social studies. *Theory and Research in Social Education, 29*(1), pp. 43–64.

[106] Myers, W. D. (1992). Austin, TX: Raintree Steck-Vaughn.

"silences the perspectives of whites, fails to interrogate the meanings behind their actions, and obscures white agency in structuring and maintaining a system of privilege and power" (p. 51). For Wills, this is an example of whites "missing in interaction", and he recommends two alternative ways of dealing with the passage that would explore the meanings of the clerk's actions. It would be consistent with his recommendations to also explore the meanings of Martin's father's actions.

If it is important to understand diverse groups as agents in history, argues Wills, then teachers need to focus on the "face-to-face interactions between diverse groups but do so in ways that situate these interactions within cultural systems and social, economic and political structures" (p. 55). Wills' alternative approaches would position Martin's father and the clerk as participants within a social system.

In a further example from the same study, the teacher assigned students roles as one of six different participants in the Boston Tea Party and then posed the question: "From your perspective, how do you feel about what's happening?" (p. 54). Wills says that this question encouraged students to think about reactions rather than actions and set up cultural differences as the primary focus. Again, this activity failed to focus on the interactions.

Given the resource they had been given, the students could only imagine how the people involved might have reacted. Also, by including only one African American role and only one Native American role, students were given the implicit message that there was a single reaction from each people. The alternative that Wills proposes is to structure conversations that include more than one perspective from any one cultural group. He suggests that a better strategy for making African Americans visible in the curriculum would have been to use a dialogue between a radical white patriot (Samuel Adams), an African American who supported the colony's break with England, and an African American who sided with the British. He suggests using questions such as: "What is in the best interests of African Americans?", "Who should African Americans align themselves with?", and "Which side represents liberty and equality for African Americans?"

Comments from social studies learners reported in a study by Mangat[107] highlight the need for teachers to be critical when selecting resource material and to examine ways in which it may promote stereotypes. Ten students from grades 11 and 12 in Canadian high schools were given a short story on the impact of the Air India bombing on Toronto's Indian community. The central character and narrator of the story was an Indian woman. Interviews with Meena and Simi, two of the five Indian students in the group, showed that while the girls liked the story and were happy to read a resource that made non-dominant mainstream perspectives visible, they were concerned that their classmates would see those representations as fixed and 'true' and would have cultural stereotypes reinforced. On first reading the story, Meena asked, "Why did it have to be a story about an *Indian* person instead of just a *person*?" (para. 11). Simi said, "There were a lot of cultural references to Indian culture and Indian way of life. And I think that if other people read the story they're going to think that Indian culture is a certain way. People already have lots of stereotypes about Asia and the East and the Orient and I think that this story just further implements these stereotypes" (para. 12). Meena commented, "Like you never hear 'a typical American tradition is …' – there's no such thing as 'typical'. It's actually making a generalisation … If people see an Indian person generalising about their culture other people think they can too" (para. 16). Simi added that the story "makes it seem like all Indians are that way" (para. 16). The five European Canadians were asked to comment on the possibility that the story might confirm stereotypes. The researcher reports that "they appeared unconcerned with the notion that readers might walk away from the story with unsubstantiated beliefs about India" (para. 17).

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107 Mangat, J. (2002, Spring). Culture, gender, representation and response: High school students interacting with texts. *Canadian Social Studies.* Retrieved from www.quasar.ualberta.ca/css

Gordy et al.[108] remind us that it is important to consider not only whether particular groups are included or visible in learning resources but also the quality of the inclusion. In their analysis of textbook depictions of women's World War II experiences, the authors found that experiences in which women had agency, and the experiences of African American women, were not included. The experiences that *were* made visible were exclusive and distorted, with the result that the depictions were exclusive and distorted. Kaomea[109] makes a similar critique of Hawaii's elementary textbooks.

Positive impacts of visibility

Nairn[110] described the impact of a women-focused resource on the participation of quiet female students in a year 11 geography lesson. The lesson concerned was developed around a video[111] about Daslima from Bangladesh and her decision about marrying. As a result of "women-focused content that was interesting and relevant to talk and think about, female students talked more, watched more, and wanted more" (p. 113). The same researcher reported on strategies that were effective in involving quiet students in geography classes[112]. She argued that the quietness of so many female students in geography classes can be explained by a male bias in instruction. She reported that when examples and issues involving women were used, girls showed greater interest and response.

Two studies in the Understanding Learning and Teaching Project[113] involved teachers participating in collaborative action research in which they sought (in response to earlier findings about gender bias) to develop a gender-inclusive curriculum. They began with audits of their schools' social studies resources, examining both the *visibility* of women ('Do the resources include women?') and their *positioning* ('In what kinds of roles are they positioned?')[114]. Like the teacher in Nairn's study, these teachers selected and rejected resources for an Antarctica unit, depending on whether they were gender-inclusive. They also planned for two visiting speakers, both women, to visit and talk to the students about their experiences. One was a geologist and experienced mountaineer who had led a mapping expedition; the other had been through a survival training course and had worked for a summer in Antarctica. The teachers did not make specific reference to the use of female (as opposed to male) examples but treated their inclusion implicitly. This implicit use of women-focused resources and examples conveyed a 'taken-for-grantedness' about women's involvement, experiences, and contributions. The teachers were careful to avoid presenting such examples as exceptions because to do so would have risked perpetuating the prevailing male-only discourse they were trying to disrupt.

[108] Gordy, L. L., Hogan, J., & Pritchard, A. (2004). Assessing "herstory" of WWII: Content analysis of high school history textbooks. *Equity & Excellence in Education, 37*(2), pp. 80–91.

[109] Kaomea, J. (2000). A curriculum of aloha? Colonialism and tourism in Hawai'i's elementary textbooks. *Curriculum Inquiry, 30*(3), pp. 319–345.

[110] Nairn, K. (1997). Hearing from quiet students: The politics of silence and voice in geography classrooms. In J. P. Jones, H. Nast & S. Roberts (Eds.), *Thresholds in feminist geography* (pp. 93–115). Lanham: Rowman & Littlefield Publishers.

[111] New Internationalist (circa 1986). *A women's world series: The price of marriage and the struggle for land.* (Video)

[112] Nairn, K. (1995). Quiet students in geography classrooms: Some strategies for inclusion. *New Zealand Journal of Geography,* October, pp. 24–31.

[113] Alton-Lee, A. G., McBride, T., Greenslade, M., & Nuthall, G. (1997). *Gendered discourses in social studies: Intermediate students' learning and participation during studies of Antarctic work and survival focused on women.* Report to the Ministry of Education: Understanding Learning and Teaching Project 3. Wellington: Ministry of Education.

[114] McBride, T. (1997). *Planning, preparing and teaching gender-inclusive curriculum: Evaluation and implications from a teacher's perspective.* Report to the Ministry of Education: Understanding Learning and Teaching Project 3. Wellington: Ministry of Education.

The authors[115] found that women speaking about their Antarctic experiences had a greater impact on students than written accounts. When interviewed a year later, none of the five case study students explicitly mentioned any of the women they had read about. They did, however, have vivid memories of the women who had visited their classrooms. When asked in a post-test to name one of the visiting speakers, all the students in the class were able to name one of the visiting speakers, and a year later, all still recalled the visits.

> The impact of the direct encounter with the women who had been to Antarctica was sufficiently strong to challenge the male-only / male norm implicit schemata the students brought to the unit. There are multiple reasons for the impact of the visitors. For example: the vividness of the experience of the visitors, the greater time afforded to the visitors in the unit programme, the accompanying slides and artifacts (clothing) and the pedagogical quality of the intensive series of tasks associated with their visits: class discussion, question generation, question asking … note taking, peer discussion and report writing (p. 41).

The authors also found that "although the boys were participating more frequently than girls in public discussion at the outset of the units, as the focus on women increased, the girls participated on average more frequently in public discussion in both classes" (p. 2). The prevalence (not mere inclusion) of images and instances of women with Antarctic experience facilitated greater participation from the girls.

The McBride[116] and Alton-Lee et al.[117] research shows the impact that deliberate alignment of resources can have in shifting student understandings. In unit pretesting and brainstorming on the subject 'People living and working in Antarctica', the students did not think to mention women: they "knew nothing of the research work or explorations carried out by women" in Antarctica (p. 9). At the end of the four-day unit, when asked to name people who had been to Antarctica, the five case study students remembered nine women and 13 men. This result was attributed, at least in part, to the careful analysis of resources in terms of their gender inclusiveness. It was this analysis that enabled the teacher to select resources that were aligned with the gender-inclusive goal of the unit – and to reject those that weren't. In the view of the researchers, those resources – particularly the women who came and shared their experiences – were responsible for disrupting the implicit male-only discourse.

Kaser and Short[118] also noted increased participation stemming from the use of resources that feature people with whom children can connect. Investigating the use of literature in a family studies unit, they found that Joe, an American Indian student, "felt a sense of identity with the Indian characters in the books he read, and was more participatory in discussion about these books".

Similarly, Levstik and Groth[119] reported the importance of treating gender as a 'fundamental point of analysis', not an 'add-on', and of giving adolescents opportunities to "build a vocabulary for discussing human rights issues and engage in critiquing current practices in regard to gender and sexuality" (p. 233). Their study concerned students who were carrying out inquiries into, for instance, women's involvement in the US reform movement and industrialisation. By making gender visible as a key focus for the analysis, students were encouraged to engage in discussion about current gender and sexuality issues. Students in the study reported positively on their learning in social studies, saying that it helped them to be 'open-minded' and to refine their views on different issues. They also commented that they "felt safe to explore ideas and opinions in their social studies class". They knew their peers well and felt reasonably

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[115] Alton-Lee, McBride, Greenslade, & Nuthall (1997), op. cit.

[116] McBride (1997), op. cit.

[117] Alton-Lee, A. G., McBride, T., Greenslade, M. and Nuthall, G. (1997), op. cit.

[118] Kaser, S. & Short, K. G. (1998). Exploring culture through children's connections. *Language Arts, 75*(3), pp. 185–192.

[119] Levstik, L. S. & Groth, J. (2002). "Scary thing, being an eighth grader": Exploring gender and sexuality in a middle school US history unit. *Theory and Research in Social Education, 30*(2), pp. 233–254.

comfortable speaking in front of them: "[They] … were able to explore their ideas about gender and sexuality in a comparatively safe atmosphere" (pp. 239–240).

Laney et al.[120] found that the careful selection of images and stories with older adults as their subjects was able to promote positive attitudes towards aging. Such visibility "served to reinforce students' learning by allowing them to experience vicariously the process of aging. These images and stories helped students shape and retain desirable ideas" (p. 545).

Ensure inclusive content
Summary of findings
• Language can either make diversity visible or bias student understandings.
• Resources can either make diversity visible or bias student understandings.

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[120] Laney, J. D., Wimsatt, T. J., Moseley, P. A., & Laney, J. L. (1999). Children's ideas about aging before and after an integrated unit of instruction. *Educational Gerontology, 25*, pp. 531–547.

4. Alignment (Mechanism 2)
Align experiences to important outcomes

4.1 Why aligning related experiences to important outcomes matters

> "… yet you can work for ages and write out stuff and do all this kind of stuff without learning."
>
> Jim, an 11-year-old student in a New Zealand classroom (p. 3)[121].

> "'Cause it was so much stuff that I learned and I would learn more stuff and … I know it's there, but there's just so much stuff."
>
> Randy, a grade 8 student in a US history classroom (p. 317)[122].

These remarkably similar quotations from students half a world apart confirm that giving students work to do does not necessarily mean that they will learn. The sheer quantity of information experienced by Randy and his classmates not only clouded the purpose of their learning (as Justine explained it, "… it's good to know just in case. Like, say on *Jeopardy* – and they ask you a question and you'll know the answer" [p. 335]123) but also left them with limited understandings and partially formed ideas. Van Sledright concluded, "Encountering a host of details, events, and terms drawn from the ostensibly large historical fact archive provided no guarantee of increasing this understanding" (p. 335).

This mechanism explains how learning experiences work (and do not work) to fix learning in students' memories. Put simply, *valued learning will not occur unless learners have sufficient opportunities to engage in learning experiences aligned to that learning:* the students in Van Sledright's study were unable to develop the desired conceptual understandings about US history because their learning experiences were aligned to the myriad of detail, not to significant ideas and concepts.

Learners make sense of new information by relating it to concepts and ideas in their long-term memory, but the processes of selecting, sorting, and integrating that are central to this sense-making are complex. They are linked to the *prior knowledge* of the learner, the relationship between the learning experience and the purpose of the learning (*alignment*), the number of times the student engages with learning experiences related to the purpose (*multiple opportunities*), and the nature of and relationships between the various learning experiences (*sequencing*).

So what should I do?

- Identify prior knowledge.
- Align activities and resources to intended outcomes.
- Provide opportunities to revisit concepts and learning processes.
- Attend to the learning of individual students.

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121 Alton-Lee, A. & Nuthall, G. (1998). *Inclusive instructional design: Theoretical principles emerging from the Understanding Learning and Teaching Project.* Wellington: Ministry of Education.

122 VanSledright, B. (1995). 'I don't remember – the ideas are all jumbled in my head': Eighth graders' reconstructions of colonial American history. *Journal of Curriculum and Supervision, 10*(4), pp. 317–345.

123 ibid.

4.2 Identify prior knowledge

> If I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him [sic] accordingly (p. 18)[124].

If the use of learning time is to be maximised, it is important to attend to what individual students and groups of students already know and understand. After reviewing a range of studies, Marzano[125] reported an average correlation of 0.66 between a student's prior knowledge of a topic and the extent to which that student learns new, related information. This is compelling evidence that "what students already know about the content is one of the strongest indicators of how well they will learn new information relative to the content" (p. 1).

Identifying student prior knowledge helps set the direction for learning by distinguishing 'new' learning from that which is already known

Using a comprehensive pretest containing over 200 items designed to cover almost everything the teachers wanted the students to learn in the Antarctic unit, Nuthall and Alton-Lee[126] found that year 7 and 8 students typically already knew about 45% of the intended content. Without careful pre-assessment, the risk of duplication in such a situation is high. The complexity of pre-assessment was illustrated in this case by the fact that different students knew different content, so the 'average' of 45% masked the considerable variation that existed within the class's prior knowledge profile. Table 9 below shows the percentage of post-test items known by the five named students at the outset[127].

Table 9: Percentage of post-test items already known at the start of the Antarctica unit

Teine	Jane	Joy	Jim	Paul
38.7	44.3	45.3	46.3	50.7

Teine started with considerably less topic-relevant knowledge than Paul. The significance of this for his learning can be seen by the fact that, on completion of the unit, Teine had either not learned, or had mislearned, 35.8% of the content; the corresponding figure for Paul was 20%.

Table 10: Percentage of post-test items not learned or mislearned during the Antarctica unit

Teine	Jane	Joy	Jim	Paul
35.8	24.7	25.5	31.3	20.0

The task of uncovering prior knowledge and then designing learning experiences to help move all students towards the same end point was complicated by the limited overlap in the prior knowledge of different students. As Table 11 shows, 15–20% of prior knowledge was unique or nearly so in that it was shared by no more than one other student.

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[124] Ausubel (1968). *Educational psychology: A cognitive view.* New York: Holt, Rinehart & Winston.

[125] Marzano, R. (2004). *Building background knowledge for academic achievement: Research on what works in schools.* Alexandria: Association for Supervision and Curriculum Development.

[126] Nuthall, G. & Alton-Lee, A. (1997). *Student learning in the classroom.* Report to the Ministry of Education: Understanding Learning and Teaching Project 3. Wellington: Ministry of Education.

[127] Nuthall, G. (2007). *The hidden lives of learners.* Wellington: NZCER.

Table 11: Percentage of Antarctica unit pre-test items known by not more than one other student

Teine	Jane	Joy	Jim	Paul
16.3	17.5	16.8	15.4	19.7

The uniqueness of prior knowledge is not always this extreme (in another social studies unit, the equivalent percentages for four students ranged from 38.1% to 62.1%). Nevertheless, these findings are clear: prior knowledge influences performance in end-of-topic assessments; a relatively high proportion of the content to be learned is already known at the beginning; what is known differs from student to student. These findings collectively reinforce the importance of identifying the nature of student knowledge prior to and during teaching so that learning experiences can be aligned not only to the intent of new learning but also to the existing knowledge of individual students.

Identifying student prior knowledge alerts teachers to the transfer of existing understandings that may inhibit new learning

As students participate in learning experiences, they interact with new information and attempt to make sense of it by making connections between it and existing knowledge structures or schema[128]. These schema may contain understandings that inhibit the acquisition of new knowledge.

Nuthall and Alton-Lee[129] describe how a student's understanding of the concept of 'village', developed in one context (the student's own experience), influenced her understanding of a new concept: 'Greenwich Village' in New York.

> Interviewer: What sort of picture do you have of Greenwich Village?
>
> Mia: Um, I have, um, a picture, something like Arrowtown [a small New Zealand country town], but we didn't see any pictures … so I just sort of imagined it.

The process that Mia used to construct her new understanding depended on an understanding that was fine in the original context but which inhibited development of the different understanding required by the new context. That is, her construction of an accurate, new understanding was subverted by prior knowledge (p. 833). Had the teacher known that when Mia heard the name Greenwich Village, she was picturing the kind of place she thought of as a village, Mia's misconceptions could have been avoided or addressed.

Alton-Lee et al.[130] explain how schema influence what students remember about female agency in activities traditionally dominated by male discourses. Just as schema influenced what students remembered about females and males in the Middle Ages (the 'William of Arc' effect described on pages 73–74), schema also influenced what students learned in a unit about living in Antarctica. In the course unit, Jane, a year 7 student, studied the story of Irene Peden in two different texts but could not recall her. Another student confused Peden's contribution with

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[128] The term 'schema' is used to refer to the knowledge structures in long-term memory. They are organised hierarchically, with more generalised ideas at higher levels and specific details at lower levels. (See Nuthall, G., The anatomy of memory in the classroom: Understanding how students acquire memory processes from classroom activities in science and social studies units. *American Educational Research Journal,* 1999, *36*(2)).

[129] Nuthall, G. & Alton-Lee, A. (1993). Predicting learning from student experience of teaching: A theory of student knowledge construction in classrooms. *American Educational Research Journal, 30(*4), pp. 799–840.

[130] Alton-Lee, A. G., McBride, T., Greenslade, M., & Nuthall, G. (1997). *Gendered discourses in social studies: Intermediate students' learning and participation during studies of Antarctic work and survival focused on women.* Report to the Ministry of Education: Understanding Learning and Teaching Project 3. Wellington: Ministry of Education.

that of Robert Scott, in spite of the fact that he had just read about her and had listened to an article about her on a listening post. These examples illustrate the power of existing schema to inhibit development of new understandings and, therefore, the importance of teachers identifying prior knowledge and recognising its potential to distort new learning.

In a study of 32 grade 4–6 Catholic and Jewish students' knowledge about Catholic and Jewish cultural events, Lipson[131] found that the students performed well on factual and inferential questions relating to the familiar culture but poorly on questions about the less familiar culture. Both groups took less time to read a passage that was culturally familiar to them, and their recall, whether free or probed, was superior for a culturally familiar passage. The difference was particularly marked for concepts that were more abstract. The authors put this down to 'cultural interference' preventing students from accurately recalling text content. For example, the students from Catholic backgrounds, who thought in terms of 'receiving' communion, discussed the Bar Mitzvah in terms of 'receiving' the ceremony and of 'receiving' the Tallit (prayer shawl); none of the Jewish children made this error – all interpreted the Bar Mitzvah in terms of 'taking responsibility'.

While Lipson's study illustrates the benefits of prior knowledge when interpreting familiar text (and, conversely, the inhibiting effect of prior knowledge when interpreting the unfamiliar), Hammann and Stevens[132] explain how superior prior knowledge may inhibit the learning of skills. They carried out a quasi-experimental study involving 63 grade 8 students who were writing compare-and-contrast essays about two topics: ruins and deserts. They found that the deliberate teaching of a compare-and-contrast text structure had greater impact on the students with less prior knowledge of the content. They speculate that this latter group may rely more on the approach they have been taught, while those with prior knowledge "may not perceive a need to utilise a strategy if they think they already understand the material" (p. 746). Students who knew more about deserts than ruins used "existing conceptual schema to generate and organise ideas instead of using the instructional strategies in this study" (p. 746).

Harnett[133] showed how students may embellish their interpretations of pictures, based on what they think should be in them instead of what actually is. In this study, four groups of six children, aged five, seven, nine, and 11, were shown sets of postcards depicting historical scenes and then asked to comment on them. As a result of over-connection to prior knowledge, students made inaccurate comments about the pictures – some even remarking on features that weren't there. This was often because they were drawing on their knowledge of the present-day world instead of using the details in the pictures to add to their store of historical knowledge and understandings. Nine-year-old Kate, for example, when describing a farm cottage built 1825–41, referred to people being dressed in 'old' clothes and to the absence of features she could reasonably have expected in a contemporary context: "They don't have a tractor and use wheelbarrows. The house doesn't have a door."

[131] Lipson, M. (1983). The influence of religious affiliation on children's memory for text information. *Reading Research Quarterly, 18*, pp. 448–457.

[132] Hammann, L. A. & Stevens, R. J. (2003). Instructional approaches to improving students' writing of compare–contrast essays: An experimental study. *Journal of Literacy Research, 35*(2), p. 731.

[133] Harnett, P. (1993). Identifying progression in children's understanding: The use of visual materials to assess primary school children's learning in history. *Cambridge Journal of Education, 23*(2), p. 137.

Identifying student prior knowledge alerts teachers to student misunderstandings that may inhibit new learning

Brophy and Alleman[134] warn that students today receive much of their social studies content in a fragmented manner, which, when combined with the general fuzziness of social studies concepts, increases the potential for misconceptions. As they explain:

> … contemporary children are exposed to a greater variety of verbally and visually mediated input than ever before, but most of it is too incoherent to be retained as anything but disconnected fragments and images and much of it is fictional content of dubious value. Stereotypes and other distortions abound (p. 223).

Brophy and Alleman's 2006 research into children's understanding of cultural universals revealed the following types of misunderstandings among K–3 children:

- Presentism: ascribing negative views to people in the past on the basis of present-day knowledge and experiences ('they weren't as smart', 'they didn't have scientists').
- Chauvinism: depicting the customs of other cultures as 'weird' and 'funny'.
- Stereotypes: some have a basis in fact ('the English ride subways'), others are misconceptions ('there are no schools in Africa', 'the Egyptians live in pyramids').
- Limited awareness of the relationship that exists between people's lives and the surrounding physical environment. The following response from a grade 1 student, illustrates, for example, an explanation based on personal preference rather than geography:

> Q: American people eat a lot of beef but Chinese people eat a lot of chicken. Why is that? American people eat a lot of bread but Chinese people eat a lot of rice. Why is that?
>
> A: 'Cause they like chicken more than beef, and we like beef more than chicken. Because rice is better for the chopsticks to pick up. And bread they can't pick up very good with chopsticks, and they don't have bread where China is (p. 42)[135].

If teachers are aware of such misunderstandings, they can be alert to the importance of planning to address them. Kaomea[136], for example, showed how an independent inquiry pedagogy and an outdated resource did not challenge grade 4 students to deal explicitly with the misconceptions embedded in their prior knowledge of early Hawaiian life. As a consequence, students' final presentations exaggerated sadism and violence and misrepresented the *kapu* system. In New Zealand, Knight's research (cited in Smythe[137]) revealed that year 12 students who had studied African geography appeared to be more prejudiced towards Africans than those who had not, suggesting that the teaching they had received had affirmed rather than addressed their misconceptions.

[134] Brophy, J. & Alleman, J. (2005). Primary-grade students' knowledge and thinking about transportation. *Theory and Research in Social Education, 33*(2), pp. 218–243.
Brophy, J. & Alleman, J. (2006). *Children's thinking about cultural universals.* Mahwah: Lawrence Erlbaum Associates.

[135] Brophy & Alleman (2006), op. cit.

[136] Kaomea, J. (2005). Indigenous studies in the elementary curriculum: A cautionary Hawaiian example. *Anthropology and Education Quarterly, 36*(1), pp. 24–42.

[137] Smythe, K. (1992). The social concepts of children. In R. Openshaw (Ed.), *New Zealand social studies: Past, present and future.* Palmerston North: The Dunmore Press.

Research-based trajectories of conceptual and skills development alert teachers to the possible nature of students' prior knowledge

There has been considerable research into students' conceptual knowledge and skills in the social sciences domain. While this research does not explain how teaching approaches might improve knowledge or skills, it informs pedagogy through its documentation of the nature and trajectory of students' conceptual knowledge and skills. A list of studies that are relevant to the purposes of this BES, together with brief notes on their methodologies and findings, can be found in appendix C. The studies in this list concern students' knowledge, understandings, skills, participation, or attitudes. Some provide a snapshot in time of a particular group of students. Others compare students of different ages or in different grades. By drawing attention to this research, particularly to the trajectories of knowledge and skills development, it is not being suggested that development is sequential or fixed; rather, that research-based trajectories offer points of reference that teachers can use to anticipate and plan for difficulties that their students may face and to help them determine their students' next steps.

As a knowledge source for teachers, research studies are not without their problems because findings about conceptual understandings and skills development may or may not be transferable to other contexts. As Osborne and Freyberg[138] explain, "Even where research has something to tell us (about conceptual understanding), it is always about other children, not our own" (p. 151). Although the transferability of general research findings may be limited, this does not undermine their value as generalised informants of planning or as alerts to potential misconceptions. But "wherever possible, we should check our assumptions about children's prior knowledge with the situation in our own schools" (p. 151).

Techniques for accessing prior knowledge need to be aligned to the type of prior knowledge sought

If teachers are to take account of the prior knowledge of learners, they need valid and reliable ways of accessing that knowledge. Considering the widespread use of strategies such as brainstorming and KWL (Know, Want to Know, Learn), there has been surprisingly little research into their effectiveness in uncovering knowledge that can help teachers with their planning – and little research into how teachers have used what is uncovered to improve outcomes for diverse learners.

Some New Zealand research has actually questioned the value of brainstorming as used in social studies classrooms. Barr (2002)[139] observed that, at least in primary school classrooms in New Zealand, brainstorming is often used as an endpoint activity rather than as a means of determining the direction of teaching and learning. While this diminishes the value of brainstorming for planning purposes, it also risks making the subject "superficial, trivial and meaningless" because it does not require students to substantiate their initial responses with evidence and thought (p. 21). Gawith[140] questions the extent to which brainstorming actually reveals the prior knowledge that is most useful for teachers. She writes:

> Somewhere along the line, brainstorming ideas has become the way to start 'inquiry' because, I'm told, we 'share' background knowledge. We're brainstorming frogs. Hemi says 'tadpoles', Jo, 'cane toads', Sue, 'YUK!' and Annie, 'prince'. I write up 'cane toads', 'tadpoles' and 'prince if kissed' on the board. Does it represent the background knowledge needed to ask relevant inquiry questions? NO! … ideas are not knowledge (p. 1).

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138 Osborne, R. & Freyberg, P. (1985). Children's science. In R. Osborne & P. Freyberg (Eds.), *Learning in science: The implications of children's science* (pp. 5–14). Auckland: Heinemann Education.

139 Barr, H. (2002). There's too much B.S. in New Zealand social studies. *The Journal of the Aotearoa New Zealand Federation of Social Studies Associations, 10(2)*, pp. 21–22.

140 Gawith, G. (2005). 'Enquiring' into inquiry pedagogy. *Good Teacher Magazine,* Term 4.

The preceding example relates to science content, but the caution about relying on brainstorms when you really need to access substantial information about prior knowledge is also relevant to the social sciences. While acknowledging the importance of "grounding learning in prior knowledge", Gawith claims brainstorming is only of value if you are "doing an ideas-based topic and you want to know students' thoughts and opinions" (p. 1).

Valencia et al.[141] argue that caution needs to be exercised when selecting the means for assessing prior knowledge. They present a continuum of approaches, from recognition through to recall. In a research study involving 31 grade 9 students and 34 grade 3 and 4 students, they compared the type of content knowledge accessed by recognition measures with the information accessed by a recall measure. The recognition measures were a multichoice vocabulary test, semantic mapping, and text prediction. The recall measure consisted of an open-ended question that asked students what they knew about a situation, followed, where necessary, by increasingly specific personal experience prompts designed to encourage them to talk. The researchers did not find a strong correlation between the knowledge assessed by the recognition measures and that accessed by the recall measure. They concluded that the two approaches revealed quite different aspects of students' prior knowledge and, therefore, that there was no single, ideal measure for diagnosing prior knowledge. In their words:

> Recognition measures serve the function of reminding students of information that they know about the topic. Interviews (recall measures) give them the opportunity to share knowledge they have that is relevant to them personally but not necessarily widely shared (p. 231).

Harwood and Jackson[142] evaluated three approaches to assessing 9- to 11-year-old students' conceptual understanding of the landscape: oral interview, picture recognition, and picture drawing. When the researchers compared students' responses to the oral interview with their responses to the picture recognition test, they found that only one of the nine had consistent results across the two approaches; one student was consistent only for one concept. Pictures revealed what the oral test failed to reveal, and vice versa. They concluded (p. 78) that there were "significant dangers in using a single, narrowly-focused" diagnostic strategy because a single approach risked underestimating children's comprehension and overlooking their misconceptions.

Appendix B outlines strategies that researchers have used to access prior knowledge related to social science outcomes.

Teachers' prior knowledge impacts on the extent to which they can support student learning

The research described thus far demonstrates that teachers' awareness of student prior knowledge impacts on their ability to effectively plan for learning and to respond to learners. There is also a considerable body of research that indicates that the prior knowledge of teachers is also an important factor in student learning.

Kunowski[143], for example, found that teachers who had not mastered the content of a Treaty of Waitangi unit made errors of information, were less able to illustrate and explain ideas and events using stories and examples, and attempted to simplify material in ways that led sometimes to misinterpretation and superficial student responses. These teachers were also

[141] Valencia, S., Stalman, A., Commeyras, M., Pearson, D., & Hartman, D. K. (1991). Four measures of topical knowledge: A study of construct validity. *Reading Research Quarterly, 26*(3), pp. 204–233.

[142] Harwood, D. & Jackson, P. (1993). 'Why did they build this hill so steep?': Problems of assessing primary children's understanding of physical landscape features in the context of the UK national curriculum. *Geographic and Environmental Education, 2*(2), pp. 64–79.

[143] Kunowski, M. A. (2005). *Teaching about the Treaty of Waitangi: Examining the nature of teacher knowledge and classroom practice.* Queensland: Griffith University.

less confident in dealing with the contentious nature of the subject, expressing the desire to avoid 'becoming too controversial' or 'politicising the topic' (p. 139).

Kaomea[144] partly attributed students' enduring stereotypes about early Hawaiian life to a lack of teacher knowledge. This lack meant that teachers felt unable to challenge the stereotypes expressed by the students. After interviewing 18 social studies teachers about their concepts of justice, Makler[145] expressed disappointment that, due to their "lack of political theory" (p. 275), the teachers appeared to accept student views even when they were "flawed or inconsonant with their values" (p. 266) and to be unwilling to "present criteria for judging the merits of different cultural conceptions of justice" (p. 275). In Gutmann's view[146], this lack of challenge has serious consequences for democratic understanding:

> Treating every moral opinion as equally worthy encourages children in the false subjectivism that 'I have my opinion and you have yours and who's to say who's right?' This moral understanding does not take the demands of democratic justice seriously … (pp. 56–58).

Seixas[147] also argued that, in the absence of skilled teacher direction, there is a risk that too much interpretive leeway in discussions may result in the construction and reinforcement of "untenable views of the past and of their place in historical time" (p. 320).

Other researchers have noted that content and resource selection requires judgment, and that such judgment is impaired when disciplinary knowledge is lacking. As Wineburg[148] (1998) commented, with reference to the teaching of history, "teachers cannot teach what they do not know. They cannot choose that of which they are ignorant" (p. 237). If we want children to develop historical empathy, "we must give them teachers who understand the subjects they intend to teach … teachers who haven't understood a subject cannot hope to teach that subject with any deep understanding – or sophistication – to their students" (p. 241).

On a related theme, and in the context of daycare centres in Sweden, Nasman and von Gerber[149] expressed concern that teachers' lack of knowledge about the application of economic concepts to everyday life, combined with their generally negative attitude towards consumer culture, impacts on their ability to recognise the teachable moment and on their ability to draw out the conceptual, as distinct from the moral, understanding of economic issues in everyday life.

Lee-Thomas et al.[150] described how the attempts of four early childhood teachers to facilitate gender equity were unsuccessful, since their children "continued to engage in gender-stereotyped play" (p. 22). The researchers' explanation for this failure was that the teachers concerned placed heavy emphasis on socialisation theory to explain gender construction. In other words, they believed that children's gender construction is a result of their exposure to models in the social context (parents, peers, media personalities, siblings, and others with whom the child has regular contact), which informs their understanding of how to think, feel,

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[144] Kaomea, J. (2005). Indigenous studies in the elementary curriculum: A cautionary Hawaiian example. *Anthropology and Education Quarterly, 36*(1), pp. 24–42.

[145] Makler, A. (1994). Social studies teachers' conceptions of justice. *Theory and Research in Social Studies 22*(3), pp. 249–280.

[146] Gutmann, A. (1987). *Democratic Education*. Princeton, N.J.: Princeton University Press.

[147] Seixas, P. (1993). The community of inquiry as a basis for knowledge and learning: The case of history. *American Educational Research Journal, 30*(2), pp. 305–324.

[148] Wineburg, S. (1998). A partial history. *Teaching and Teacher Education, 14*(2), pp. 233–243.

[149] Nasman, E. & von Gerber, C. (2002). Pocket money, spending and sharing: Young children's economic understanding in their everyday lives. In M. Hutchings, M. Fulop, & A. M. Van den Dries (Eds.), *Young people's understanding of economic issues in Europe* (pp. 79–104). Stoke on Trent: Trentham Books.

[150] Lee-Thomas, K., Sumsion, J., & Roberts, S. (2005). Teacher understandings of and commitment to gender equity in the early childhood setting. *Australian Journal of Early Childhood, 30*(1), pp. 21–28.

and act[151]. This view was apparent in the teachers' pedagogy. They believed, for example, that disrupting dominant gender discourses was 'fighting a losing battle', and they were fatalistic about their potential to 'intervene and disrupt traditional gender patterns'. This pessimistic view was well summed up by one of the teachers: "I think we can just do all we can do in early childhood and that's just to keep on, keep on plugging away …" (p. 4). This illustrates how teachers' prior knowledge can influence their sense of agency when it comes to disrupting a dominant discourse.

The Understanding Learning and Teaching Project

The Understanding Learning and Teaching Project (ULTP), carried out at the University of Canterbury in the 1980s and 1990s, co-directed by Graham Nuthall and Adrienne Alton-Lee, offers detailed insights into student learning processes. The researchers in this project conducted five replications of Alton-Lee's doctoral study[152] in which they tracked, at quarter-minute intervals, the learning of between three and six students as they participated in social studies and science units. 25 case study students and 36,000 quarter- or half-minute intervals of class time were involved, and 3442 item files were created[153]. For data gathering, the studies employed a number of methods: continuous observation of case study student engagement, audio recording of public talk, video recording, and audio recording of case study students' private conversation.

The researchers analysed the relationship between the classroom experiences of the case study students and changes in their knowledge and attitudes, as revealed by pre- and post-unit testing and in interviews carried out at the ends of units and a year later. For each student, the records of all the experiences in which they may have been able to learn about a particular concept or idea were collated into a single item file. For each student, all of the items were classified, following an analysis of pre-test, immediate post-test, and long-term post-test data, as:

- *already known* (at pre-test) *or*
- *not learned* (wrong on pre-test and immediate post-test) *or*
- *learned and forgotten* (wrong on pre-test, correct on immediate post-test, wrong on long-term post-test) *or*
- *learned and remembered* (wrong on pre-test, correct on immediate and long-term post-tests) (p. 804)[154].

The item files also contained information about the behaviours that the students engaged in: number of teacher/peer interactions, lesson activities, critical incidents from observations or recordings, and relevant transcripts. Item files detailed:

- the content (how explicit it was, or how aligned to the concept);
- the source (teacher, book, other student, and so on);

[151] Yelland, N. & Grieshaber, S. (1998). Blurring the edges. In N. Yelland (Ed.), *Gender in early childhood.* London: Routledge.

[152] Alton-Lee, A. (1984). *Understanding learning and teaching: An investigation of pupil experience of content in relation to immediate and long-term learning.* Unpublished doctoral dissertation, University of Canterbury, Christchurch.
Alton-Lee, A. & Nuthall, G. (1990). Pupil experiences and pupil learning in the elementary classroom: An illustration of a generative methodology. *Teaching & teacher education: An international journal of research and studies, 6*(1), pp. 27–45.
Nuthall, G. & Alton-Lee, A. G. (1990). Research on teaching and learning: Thirty years of change. *Elementary School Journal, 90*(5), pp. 547–570.

[153] Alton-Lee, A. (2006). How teaching influences learning: Implications for educational researchers, teachers, teacher educators and policy makers. *Teaching and Teacher Education, 22*(5), pp. 612–626.

[154] Nuthall, G. & Alton-Lee, A. (1993). Predicting learning from student experience of teaching: A theory of student knowledge construction in classrooms. *American Educational Research Journal, 30(*4), pp. 799–840.

- the medium (spoken, heard, read, seen, and so on);
- the function (asks questions, responds to question, makes joke, and so on);
- context (whole-class, small-group, individual).

The significance of this work lies in the close attention it pays to diversity, because, through the students' public contributions, conversations with peers, and self-talk, it reveals the detail of individual student engagement with classroom experiences, and the resulting learning. As Brophy[155] has commented, not only did Nuthall and Alton-Lee draw on a "uniquely rich corpus of data", they also mined it successfully, "using unique analysis strategies to produce unique findings" (p. 529). This research tells us a great deal about how students learn, and about why different students learn different things from what might appear to be the same experience.

The discussion of this mechanism is organised around the key findings to come out of this work. Each section begins with an introduction based on the ULTP studies, followed by supporting evidence from the wider social studies literature.

Identify prior knowledge

Summary of findings

- Identifying student prior knowledge:
  - *helps set the direction for learning by distinguishing 'new' learning from that which is already known;*
  - *alerts teachers to the transfer of existing understandings that may inhibit new learning;*
  - *alerts teachers to student misunderstandings that may inhibit new learning.*
- Research-based trajectories of students' conceptual and skills development alert teachers to the possible nature of students' prior knowledge.
- Techniques for accessing prior knowledge need to be aligned to the type of prior knowledge sought.
- Teachers' prior knowledge impacts on the extent to which they can support student learning.

4.3 Align activities and resources to intended outcomes

In what may seem a counter-intuitive finding, Nuthall[156], reviewing the classroom learning histories of high, average, and low achievers from five detailed studies, concluded:

> There is no evidence that some students need more relevant learning experiences than other students in order to learn … If the appropriate number of learning experiences occur, without significant gaps between them, learning occurs regardless of the ability level of the student (p. 33).

The comparative experiences of Kim and Mia (see Figure 16 on page 114) provide important insights into the nature of learning. Kim did *not* learn why charters were important in the Middle Ages; Mia *did* learn about the crime rate in New York. How were these learners' experiences different?

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155 Brophy, J. (2006). Graham Nuthall and social constructivist teaching: Research based cautions and qualifications. *Teaching & Teacher Education, 22*, pp. 529–537.

156 Nuthall, G. (1996). *What role does ability play in classroom learning?* Paper presented at the New Zealand Association for Research in Education, Nelson.

At the start of the units, neither student understood the concept that they were meant to be learning. Kim went on to encounter the idea of a 'charter' on five occasions; Mia, the idea of 'crime in New York' on eight occasions. It was the content of those occasions that was critical. In Kim's case, two of the occasions *defined* 'charter' but did not *explain* why charters were important. On the other occasions, the references to 'charter' were incidental. In Mia's case, each of the eight occasions dealt explicitly with crime and violence. In other words, the content of new learning was closely aligned to the intended understanding that New York had a higher crime rate than Christchurch[157].

In their work on the ULTP, Nuthall and Alton-Lee developed a series of content codes that were then used to classify learning experiences according to their alignment with the intended outcome:

1. The intended understanding is *explicitly included* in the learning experience. (For example, the teacher makes the statement 'New York has a high crime rate.')

2. The intended understanding is *implicit or partially embedded* in the learning experience. (For example, describing the Magna Carta as 'a great charter that sets out the rights of free men' partially addresses the intended learning about why charters were important; significant parts of the intended learning are included in, or can be logically inferred from, this statement.)

3. The learning experience incorporates additional information, explanation, and examples (for example, definitions and descriptions of key elements; background and related information; reasons and explanations; analogies and synonyms for key elements; examples, instances, or subsets; negative examples and instances; students' own experience related to the answer).

4. Preparatory activity or discussion, and contextual information describing the focus or purpose of the activity, are included.

5. Keywords (spoken, read, written, or included in a picture or diagram) are mentioned.

6. Activities and procedures (for example, carrying out a procedure that produces an answer, or making a model or representation of a key concept).

7. Instructions for relevant activities are included.

8. Visual resources are visible and available in the room but not the focus of activity or discussion.

(p. 339)[158]

Using this classification, the researchers were able to determine from student's responses the level of alignment necessary to generate student learning. This is illustrated in Figure 11 below. Only learning experiences classified as content codes 1–4 generated the intended learning but, significantly, content code 1 (explicitly aligned) experiences were pivotal. Students could learn without a content code 1 experience but, to do so, they needed more frequent opportunities to engage.

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[157] While the New York example illustrates how alignment operates, the content of that process may be open to question given that Mia has moved from one incomplete generalisation (New York is 'posh') to another ('New York has gangs'). One stereotype has been broken but another has been acquired.

[158] Nuthall, G. (1999). The way students learn: Acquiring knowledge from an integrated science and social studies unit. *The Elementary School Journal, 99*(4), pp. 303–341.
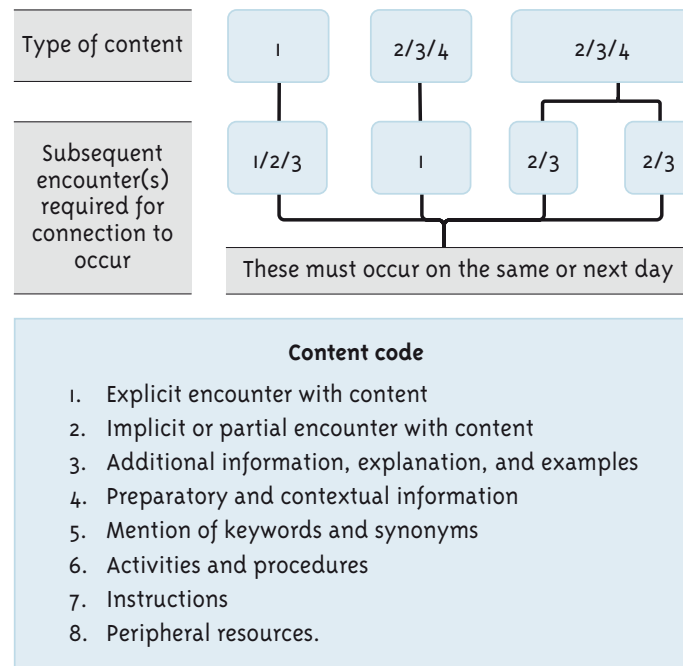
Figure 11: Relationship between type of content and requirements for connecting representations

The diagram shows "Type of content" with boxes labelled 1, 2/3/4, 2/3/4 and "Subsequent encounter(s) required for connection to occur" with boxes labelled 1/2/3, 1, 2/3, 2/3. A note reads "These must occur on the same or next day".

Content code

1. Explicit encounter with content
2. Implicit or partial encounter with content
3. Additional information, explanation, and examples
4. Preparatory and contextual information
5. Mention of keywords and synonyms
6. Activities and procedures
7. Instructions
8. Peripheral resources.

Purposefully aligning activities to desired outcomes supports students in achieving those outcomes

'Alignment of activities' refers to the deliberate structuring of activities to help students achieve the intended learning purpose. The evidence in this section is organised by learning purpose.

Alignment to enhance student use of strategies

In a study located in New York, Williams et al.[159] examined the impact on grade 2 students of explicitly teaching cause-and-effect text structures. Here is one example of the type of text structure used in this research:

Colonists and Their Schools

The first school that colonial children went to was called Dame School. Children had to read books written for grown-ups because there were no story books for kids. In school, there were no pencils; therefore, children wrote with a piece of lead. Girls needed to learn how to spin, cook and clean a house; thus they stayed home until after they finished Dame School. After Dame School, most boys continued to go to school, since the law said they had to go (p. 113).

The 243 students in the study were all from three Title 1 schools. The students were predominantly Hispanic (76.5%) and African American (22%); 93% were recipients of state aid. The content was based on the themes: homes, school, and jobs, in three historical communities. Students were assigned to one of three conditions:

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[159] Williams, J. P., Nubla-King, A. M., Pollini, S., Brooke Stafford, K., Garcia, A., & Snyder, A. E. (2007). Teaching cause and effect text structure through social studies content to at-risk second graders. *Journal of Learning Disabilities*, *40*(2), pp. 111–120.

- explicit teaching of cause–effect text structure;
- content-only teaching (focused on content rather than structure);
- no instruction (that is, the control group, which was pre-tested and post-tested without any teaching related to either content or structure).

A comparison of the types of activities for the explicit-teaching and content-only groups is given in the table below. The words in red identify matching activities, but in some cases, the focus was different (for example, both groups prepared a graphic organiser, but in one group, the focus was on structure; in the other, it was on content).

Table 12: Activities for the explicit-teaching and content-only groups compared

Explicit-teaching group	Content-only group
Definition of cause and effect	KWL chart
Clue words	
Vocabulary	Vocabulary
Read-aloud and discussion	Read-aloud and discussion
Community chart	Community chart
Cause–effect questions	
Read-aloud and class analysis of cause–effect (colour-coding paragraph)	Read-aloud
Graphic organiser (using cause–effect structure)	Graphic organiser (content)
Comprehension questions (including cause and effect)	Comprehension questions (non-causal and content-only)
	Journal entry – picture of key content and paragraph
Lesson review of strategies	Lesson review of content

The effects of the different approaches were analysed in terms of strategy use, content recall, and comprehension. The following three tables summarise the results:

Table 13: Outcomes – post-test strategy use (percentage correct)

Measure	Explicit teaching	Content only	No instruction
Locating clue words	86	21	16
Underlying causes	70	4	2
Completing cause–effect graphic	11	2	1
Recalling cause–effect questions	4	0	0

Table 14: Outcomes – post-test content (percentage correct)

Measure	Explicit teaching	Content only	No instruction
Feature questions (key information from paragraphs)	41	45	8
Non-feature questions (other information from paragraphs)	41	47	5
Vocabulary definitions	48	56	13

Table 15: Outcomes – post-test comprehension (percentage correct)

Measure	Explicit teaching	Content only	No instruction
Non-causal question	77	76	42
Cause question	61	46	38
Effect question	30	8	5

The tables illustrate the effect of alignment. Firstly, both the taught groups did better than the no-instruction group on all 10 measures. In other words, instruction aligned to either the structure or content of the resources was more effective than no instruction. More importantly, the explicit-teaching group performed significantly better on the strategy and comprehension (especially comprehension of effect) measures than the group that received content-only instruction. While the content-only group performed slightly better on the content recall items than the explicit-teaching group (reinforcing the effectiveness of alignment), it appears that strategy instruction also had a positive impact on content recall – rather more, in fact, than the impact that content-only instruction had on strategy understanding. The implication of this finding for teachers is that strategy instruction appears to offer the dual benefits of reinforcing content and enhancing comprehension of cause and effect. When the researchers tested for transfer of the cause–effect strategy to other resources, they found that the explicit-teaching group generally outperformed the content-only group, especially in their understanding of effect in one-cause–multiple-effects contexts.

Hammann and Stevens' experimental study[160] involving grade 8 students illustrates two different dimensions of alignment. The first is the importance of directly aligning strategy instruction with intended strategy performance. Students who were taught summarising skills based on a single text performed less well on compare–contrast writing tasks than students who had been taught using two texts. In other words, the *general* alignment of summarising to compare–contrast was not as effective as the *specific* alignment. These researchers also found that the compare–contrast instruction was more effective when students had less prior knowledge of the text. They speculated that if students think they already understand the material, they may not see the need for a strategy, and in such situations, they may organise their writing using their existing conceptual schema rather than the strategy they have been taught. This speculative finding suggests that it may be necessary to align not only the instruction and the intended outcome but also the instruction and learner prior knowledge.

Similarly, Kellett et al.[161] describe a study in which a group of 10-year-olds participated in a programme aimed at equipping them, through the deliberate teaching of research knowledge and skills, to design their own research. This process empowered the students to

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160 Hammann, L. A. & Stevens, R. J. (2003). Instructional approaches to improving students' writing of compare–contrast essays: An experimental study. *Journal of Literacy Research, 35*(2), p. 731.

161 Kellett, M., Forrest, R., Dent, N., & Ward, S. (2004). Just teach us the skills please, we'll do the rest: Empowering ten-year-olds as active researchers. *Children and Society, 18*(5).

design, undertake, and report on research projects of their own choosing. Reflecting on the importance of avoiding assumptions about what students might be expected to learn naturally, the researchers concluded with a strong plea for teachers to be deliberate about developing research skills:

> Reflecting on the skills needed to undertake research it soon becomes apparent that these attributes are not necessarily synonymous with being an adult, they are synonymous with being a researcher, and most researchers have undergone formal training programmes. Many, perhaps most adults would not be able to undertake research without training. It would appear, therefore, that a barrier to empowering children as researchers is not their lack of adult status but their lack of research skills. So why not teach them? (p. 332).

Moore (1995)[162], on the basis of her study of the cognitive and metacognitive demands that fall on students when they set out to gather information for research, echoes this comment. She found that the Dewey system was not well understood, and that the complexities and problem-solving nature of searching for relevant information needed to be made explicit to learners:

> In the real world, information seeking takes a long time. It is characterised by blind alleys and false scents and answers need to be constructed following critical consideration of the available information (p. 28).

She found that few students were prepared for this reality:

> It seemed that students had a simple rule for finding information – think of a question, identify its keywords, look up the subject index for a Dewey number, go to the shelves and find the answer in the exact form it is wanted. If any part of that sequence failed they often seemed surprised and confused (p. 28).

This reinforces the need for alignment that extends beyond skills teaching – for alignment of the teaching method to the problem-solving, multi-solution nature of the task.

Wall and Higgins[163] developed a research instrument designed to encourage children to talk about their learning. They found that this tool also had pedagogical benefits, because, by having children complete the thought bubbles and speech bubbles on pictures relating to the learning context, it provided scaffolding for their thinking and speaking. In other words, the bubbles were directly aligned to the processes that the students were being encouraged to use. The researchers commented:

> We believe that the thought and speech bubble combination supports or scaffolds responses where the pupils' thinking about their learning, or their metacognitive thinking, is brought out. This may be because the template encourages them to distinguish between what they might say (to someone else) about their learning and what they themselves think about it (using the cartoon convention of a thought bubble) (p. 45).

The researchers also found that the sequence of speech and thought bubbles mattered:

> Where learners were not familiar with a vocabulary about learning, it was found that by starting with the speech bubble, the more easily attributable aspects of the learning process, and then moving on to the thought bubble, a 'scaffold' was provided for the children in moving from the concrete to the more abstract aspects of learning. Thus even children less accustomed to talking about their learning could be supported by the structure of the template to begin to engage with and reflect on their learning (p. 50).

Alignment to enhance the development of conceptual knowledge

Twyman et al.[164] report on the impact of specific, concept-based instruction on the learning of one student, RM. RM was an 'at-risk' student who had performed poorly in social studies and was described by his teachers as unmotivated and having low skills. The intervention involved explicitly teaching the class the concept of 'civilization' and its four attributes: religion, social groups, support, and writing. A graphic organiser was developed to support understanding of the concept. The students read a textbook passage and then did a cloze activity, choosing words from a word bank to complete ideas about the four attribute groups. They then completed a writing activity. The researchers report that having experienced this form of concept teaching, intentionally aligned to curriculum requirements, RM's scores "were exceptional relative to his previous work on more traditional classroom and statewide assessment measures" and that he "showed tremendous growth by the end of the intervention" (p. 262).

The value of explicitly teaching concepts was also clear in a more recent study by Twyman et al.[165] The researchers were concerned about the mismatch between history textbook presentations of material (with their often shallow, factual focus and presumption of high levels of prior knowledge) and the skills needed for historical thinking, such as "the ability to analyse problems … and generalise interpretations by articulating patterns of similarities and differences as well as cause and effect" (p. 332). They studied the impact of two kinds of teaching, using the same chapters of a textbook with 54 middle school students: 26 in the experimental condition and 28 in the control condition. Those in the experimental group were explicitly taught content and practical problem solving, using concepts as a framework. After each instructional activity, students filled in examples of the concepts and concept attributes that had been addressed in the activity. At the end of each lesson, the teacher reviewed the concepts and their attributes in a question-and-answer session. In terms of factual knowledge (assessed using 10 multichoice and 10 matching items), the experimental and control groups achieved similar results. In terms of vocabulary (assessed using a task that required the students to match definitions to concepts), the performance of the experimental group was superior to that of the control group. After chapter one, the mean for the experimental group was 16.15 out of 20 (15.65 on the pre-test), and the mean for the control group was 14.77 out of 20 (15.19 on the pre-test). After chapter two, the mean for the experimental group was 18.55 out of 20, and the mean for the control group was 14.19. The researchers concluded that although the vocabulary performance for the experimental group was superior, the reasonably high performance for both groups indicated that "even a minimal use of well-organised concepts (without explicit attributes) within an instructional format can provide an accessible framework of information" (p. 345).

Each group was also assessed on five problem-solving scenarios. The experimental group demonstrated significant improvement in their ability to transfer conceptual knowledge to problem-solving scenarios as well as superior ability to the control group (Figure 12). Only 13% of the responses of the control group included conceptually focused supporting details, compared with nearly 83% of the responses of the experimental group (p. 345). This illustrates the power of instructional strategies to help students make specific connections between the learning resources – in this case a textbook – and the goals of learning, especially where the inherent alignment is not obvious.

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[164] Twyman, T., Ketterlin-Geller, L. R., McCoy, J. D., & Tindal, G. (2003). Effects of concept-based instruction on an English language learner in a rural school: A descriptive case study. *Bilingual Research Journal, 27*(2), pp. 259–274.

[165] Twyman, T., McCleery, J., & Tindal, G. (2006). Using concepts to frame history content. *The Journal of Experimental Education, 74*(4), pp. 331–349.
Figure 12 on the following page is reprinted with the permission of the Helen Dwight Reid Educational Foundation. Published by Heldref Publications, 1319 Eighteenth Street, NW, Washington DC 20036-1802.
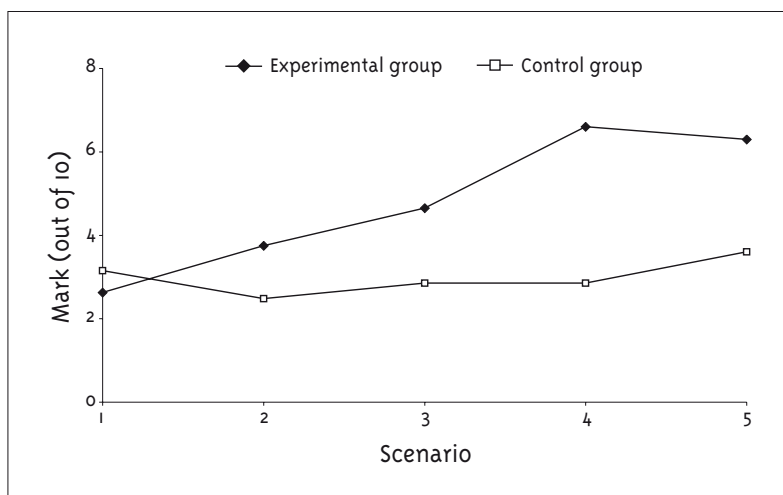
Figure 12: Problem-solving task trend data

Alignment to support attitude and behaviour change

Stephan and Stephan[166] and Banks[167], working in the context of race relations, argue that human cognitive structures and processing biases create such enormous inertia that "interventions designed to reduce prejudice among students should be institutional and comprehensive in scope". Banks' summary of the research literature on reducing prejudice in the classroom establishes that a comprehensive strategy is required and that deliberate design is needed rather than incidental learning experiences. He finds that:

- incidental teaching about race relations and one-shot treatments are not usually effective;
- contact with minority groups does not in itself significantly change racial attitudes;
- the attitudes and dispositions of the classroom teacher are important variables;
- cooperative rather than competitive cross-ethnic situations should be fostered.

Banks concludes that racial attitudes can be modified when specific objectives and aligned strategies are aimed at increasing students' 'cognitive sophistication' – in other words, their ability to "think clearly about prejudice, to reason logically about it, and to ask probing questions" (p. 300).

Other research has shown that prejudice *can* be reduced by teaching strategies that deliberately challenge subtyping. Giving students highly discrepant information about members of outgroups can reinforce prejudice by encouraging subtyping. Giving them information that to some extent matches but in other ways is discrepant with the stereotype produces a more differentiated view of the outgroup and tends to reduce stereotyping[168].

Hahn and Avery[169] report modest effects for a values analysis programme involving the political confidence, political interest, and social integration of students in grades 10–12. The students in this study were assigned to one of three conditions: two experimental and one control. For one day per week over a 10-week period, the students in the experimental conditions read editorials about controversial issues. Those in the 'values analysis' condition were required to identify the problem or issue, identify alternative solutions or positions, hypothesise about the consequences of alternatives, and decide what they would do if faced with the dilemma. Those

[166] Stephan, W. G. & Stephan, C. W. (1985). Inter group anxiety. *Journal of Social Issues, 41*, pp. 157–175.

[167] Banks, J. A. (2006). *Cultural diversity and education* (5th ed.). Boston: Pearson Education.

[168] Richards, Z. & Hewstone, M. (2001). Subtyping and subgrouping: Processes for the prevention and promotion of stereotype change. *Personality and Social Psychology Review, 5*(1), pp. 52–73.

[169] Hahn, C. & Avery, P. G. (1985). Effect of value analysis discussions on students' political attitudes and reading comprehension. *Theory and Research in Social Education, 8*(2), pp. 47–60.

in the 'reading-only' group discussed the articles but were not given a particular analytical structure to use. Those in the control group were not assigned any readings and did not participate in any discussions about controversial issues. The students' political attitudes were assessed using a 31-item pre- and post-test. The post-test revealed that, of the three groups, those in the values analysis group had slightly more positive attitudes towards social integration (the belief that one is connected to one's social environment), political confidence (the belief that one's actions can have an effect on political activities), and political interest (beliefs that predispose one to respond positively towards political situations). The researchers caution, however, that any conclusions based on this result should be treated as tentative because "the differences were minimal" (p. 52). In part, they attribute the smallness of the difference to the fact that two of the four teachers of the values analysis group experienced difficulty with the approach and it wasn't until the fifth week that they were using it successfully. The reading-only group performed the worst of the three groups on social integration and political interest, which suggests a further tentative conclusion. The teachers of this group tended to ask literal (Who? What? Where?) questions in discussions, and it may be that such an approach has a negative impact on political attitudes. Again, the authors caution that further research is required.

Connelly and Hoskin[170] examined the general and specific effects of educational programmes for young children that aimed to promote awareness of and respect for diversity. They researched the impact of an intervention that aimed at increasing children's understanding of and respect for differences between themselves and others, and at increasing their "awareness and understanding of emotions and how it feels when people are acting positively and negatively towards them." Eight classes of six- to seven-year-olds (201 children in total) were involved: 94 in the intervention group and 107 in the control group. The intervention involved a presentation of three five-minute plays by a theatre company. One character in each play was different from the others and was excluded. The characters then learned that it was better to be inclusive. Each play ended with everyone playing together. At the conclusion, the children were able to ask the hot-seated character (the excluded character) questions about how s/he felt. Circle-time discussions, drama improvisations, art-based activities, and teacher-led classroom activities followed over the next four weeks.

The researchers measured the children's ability to recognise, without prompting, issues of social exclusion. Following the programme, the intervention group was found to be four times more likely than before to recognise active exclusion. The researchers also measured the children's awareness of the many different things that they had in common with each other. There was a small positive effect for the intervention group on this measure. The researchers noted, however, that although the intervention had increased the children's awareness of diversity and their ability to recognise instances of exclusion, "… these general effects did not appear to translate into specific effects in terms of changing children's attitudes towards particular differences, in this case racial differences" (p. 120). The authors acknowledge that the intervention had a general focus and was not specifically directed at issues of racial diversity. This study further demonstrates that, where specific outcomes are desired (such as shifts in attitudes to racial diversity), it is important to explicitly and directly align learning opportunities with those specific outcomes. In the intervention just discussed, the rationale for the approach was to avoid provoking strong emotional reactions to racial issues but, as the study shows, the the issues were not successfully addressed.

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[170] Connelly, P. & Hoskin, K. (2006). The general and specific effects of educational programmes aimed at promoting awareness of and respect for diversity among young children. *International Journal of Early Years Education, 14*(2), pp. 107–126.

Two interventions aimed at reducing student gender stereotyping were reported by Bigler and Liben[171]. They involved 75 children aged five to 10, who participated in one of four conditions. Those in a control group learned about occupations in the community and were asked to colour pictures of people in different occupations. A second group participated in multiple classification training, using pictures of men and women in 10 different occupations. These students learned to classify individuals as members of multiple categories. A third group participated in rule-based training, in which the students were taught that gender was irrelevant to occupational classification and that people chose jobs based on satisfaction and skills. A fourth group participated in both the multiple classification training and the rule-based training. The students who participated in the various forms of training showed more egalitarian understandings than those in the control group:

Table 16: Cognitive instruction and gender stereotyping

Group	Mean number of non-stereotypical responses (number of items = 24)
Control group	9.8
Classification training with pictures of people in occupations	14.1
Rule-based training	14.8
Classification and rule-based training	16.8

In this intervention, the classification training and the rule-based training were specifically aligned to breaking down gender stereotypes, while in the control group, learning about gender stereotypes was incidental. Commenting on the rule-based training, Bigler and Liben argue that it illustrates the value of "directly teaching children non-sexist criteria for determining who can perform various occupations, and in giving children practice in simultaneously attending to both the gender and occupational roles of individuals" (p. 1361). Interestingly, the study also found that stereotypical responses were less influenced by general classification training, which involved sorting objects by shape and colour (rather than people and occupations). This reinforces the importance of direct – rather than general, incidental, and, in this case, abstract – alignment on student learning.

Alignment to support the development of social skills

In an Australian study, Buford and Stegelin[172] show how the direct targeting (alignment) of activities and desired behaviours can have positive outcomes for children. They report on a teacher who created a 'social blueprint' that enabled at-risk learners (categorised mainly on the basis of social factors) to negotiate social situations in the complex setting of an early childhood centre. The teacher identified expectations in relation to: beginning/arriving at the centre routines, social behaviour in large groups, social behaviour in small groups, behaviour when engaged in independent and child-initiated activities, and the transition between activities and routines. Specific lessons in the social skills required in each of the five situations were then taught directly and systematically during the beginning weeks of the year. This involved, for example, devoting 10 minutes of circle time each morning specifically to teaching turn taking. The teacher also established social goals for individual children and the whole group, which addressed social difficulties typical of at-risk children.

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[171] Bigler, R. S. & Liben, L. S. (1992). Cognitive mechanisms in children's gender stereotyping: Theoretical and educational implications of a cognitive-based intervention. *Child Development, 63*(6), pp. 1351–1363.

[172] Buford, R. & Stegelin, D. (2003). An integrated approach to teaching social skills to preschoolers at risk. *Australian Journal of Early Childhood Education, 28*(4), pp. 22–28.

The researchers report that, by the end of the term: the at-risk students were demonstrating the social behaviours typical of children without disabilities or serious risk factors; the entire group was performing many tasks independently; and the children were taking turns with only minimal prompting. They attributed the positive outcomes in terms of the children's participation and social skills to the teacher: systematically and directly teaching social skills, flooding the environment with natural opportunities for the practice of those skills, and using child-appropriate reinforcement for children who demonstrated them. The researchers comment:

> To be effective, opportunities for practising the skills must be embedded throughout the day, and developmentally appropriate rewards for correct performance of skills are necessary to ensure that the children can use them on an ongoing basis and generalise them to various contexts (p. 28)[173].

Denham et al.[174] also found that the deliberate teaching of social skills in a training intervention had positive effects on social skills and inclusion. This study involved 68 students (45 male and 23 female) aged 7–11 who had been identified by their schools as lacking in social skills and confidence. The students were assigned to one of two conditions and worked in small groups, out of their regular classrooms, for 12 weekly, 30-minute sessions. The first condition involved peer mentoring and was based around small-group problem-solving activities featuring social situations that required students to handle peer pressure, empathise with others' perspectives, and so on. The students also participated in discussion and role play based around cards outlining social problems and feelings in pictures and writing. The second condition involved skills training in which the students were deliberately "taught specific social skills such as turn taking, managing emotions, communication and cooperation through play-based activities, such as circle games, board games and role play" (p. 38). Ratings by students and teachers, using standardised questionnaires, showed a clear post-intervention pattern of improved social skills. When interviewed, it was also clear the students believed that the intervention had had a positive effect on them. Sixty-five percent answered 'yes' to the question, 'since you were in the group, do you feel any differences in you?' Describing the intervention's positive effects, the students spoke of improved problem solving, better friendships and confidence, greater ability to work with others, and learning about behaviour. Similarly, 82% of the teachers reported a positive difference that they attributed to the intervention.

Aligning resources to the purpose of a task supports students in achieving outcomes related to that task

Resource alignment refers to the match of resources (spoken, written, visual, and experiential) that contribute content to the learning experiences and those (for example, the graphic organiser used by Twyman et al.[175]) that scaffold students' understanding of tasks.

Resource revision to increase alignment with intended learning purposes

Beck et al.[176] researched the impact that revisions to a text had on grade 4 and 5 history students' comprehension of the causal sequences of events. The text was revised to make more

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173 ibid.

174 Denham, A., Hatfield, S., Smethurst, N., Tan, E., & Tribe, C. (2006). The effect of social skills interventions in the primary school. *Educational Psychology in Practice, 22*(1), pp. 33–51.

175 Twyman, T., Ketterlin-Geller, L. R., McCoy, J. D., & Tindal, G. (2003). Effects of concept-based instruction on an English language learner in a rural school: A descriptive case study. *Bilingual Research Journal, 27*(2), pp. 259–274.

176 Beck, I. L., McKeown, M. G., Sinatra, G. M., & Loxterman, J. (1991). Revising social studies text from a text-processing perspective: Evidence of improved comprehensibility. *Reading Research Quarterly, 26*(3), pp. 251–276.

obvious the reasoning that connected cause to event and event to consequence. The following extract illustrates the nature of the revisions:

Original text (O):

(O2) As a result of this war France was driven out of North America. (O3) Britain would now rule Canada and other lands that had belonged to France.

Revised text (R):

(R8) Britain won the war. (R9) Now Britain had control of North America including Canada. (R10) The French had to leave North America.

The revised text reduces the cognitive load[177] on readers because they no longer have to use working memory capacity to search through the text to make sense of the content. In the original, students had to read and infer from sentence O2 that Britain won the war. In the revised text, this is not necessary. As Beck et al.[178] point out, this particular revision also has the effect of presenting the content in a way that is more consistent with most students' schema for war (it begins by naming the winner). In the original version, students had to hold onto the idea (O2) that 'France was driven out of North America' and connect it with the idea (O3) that 'Britain would now rule Canada'. To make this connection, they would have had to have known that Canada was part of North America. By providing this information in the narrative (R9), the revised version removes this potential stumbling block.

To test the effects of revisions such as this, the researchers compared the comprehension of a group of students who read the original text with a group who read the revised text. They reported that recall was reliably higher for the students who read the revised text. But the amount recalled was only part of the story: there was also a difference in the nature of what was recalled. Those who read the revised text were more able to explain "the actions of the text and to move the chain of events forward … it wasn't just that they would understand 'the events themselves' but also why the events occurred and how events and ideas were related to one another" (p. 272). That is, they were better able to establish the 'causal-connective' information necessary for fuller comprehension. A logical inference is that if teachers are seeking causal historical thinking from their students, there is benefit in aligning the organisation of text to this purpose. The researchers point out, however, that fewer than half of the the students who used the revised text demonstrated improved comprehension. It may be that, in spite of this deliberate attempt to reduce the cognitive load, the inherent difficulty of the content was such that the overall load remained high.

Notwithstanding this latter qualification, McKeown et al.[179] found in a related study that without text revision students were less able to bring to the text whatever background knowledge they had in their possession. Two groups of grade 5 students were given 35 minutes of identical background information prior to reading the text. One group of 24 students then read the original text; another group of 24 read the revised text. The authors found that those who read the revised text were more able to "focus on and remember the most important information from the text" (p. 91), especially in relation to the principal motivating actions. Significantly, they also found that:

students who read the original text, although they received the same background information, were less likely to exploit the advantage provided by that information. It seems that the

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[177] Cooper, G. (1998). Research into Cognitive Load Theory and Instructional Design at UNSW. Retrieved from http://education.arts.unsw.edu.au/CLT_NET_Aug_97.html
Sweller, J. (1994). Cognitive load theory, learning difficulty and instructional design. *Learning and Instruction, 4*, pp. 295–312.

[178] Beck et al. (1991), op. cit.

[179] McKeown, M. G., Beck, I. L., Sinatra, G. M., & Loxterman, J. A. (1992). The contribution of prior knowledge and coherent text to comprehension. *Reading Research Quarterly, 27*(1), pp. 78–93.

nature of the original text prevented students from bringing their knowledge to bear in constructing meaning from the text (p. 91).

Attempts at alignment need to be continually checked against intended outcomes

The two studies cited provide further support for enhancing written resources to align them with particular conceptual understandings, but McNamara et al.[180] caution against generalising this finding to all students. Although their work was in a science context, these researchers observed that:

> readers who know little about the domain of the text benefit from a coherent text, whereas high-knowledge readers benefit from a minimally coherent text … Poorly written text forces the knowledgeable readers to engage in compensatory processing to infer unstated relations in the text (p. 1).

This finding relates to inferential and problem-solving tasks, not superficial recall. The researchers report some value in adjusting text as long as it recognises students' differing levels of prior knowledge. In this way, "reading becomes challenging enough to stimulate active processing but not so difficult as to break down comprehension" (p. 36).

In a different context, Rubin[181] has shown how a teacher, intending to bridge gaps between students of different academic, social, and ethnic status, moved a student into a heterogeneous group, with the result that she felt even more excluded. Likewise, Nystrand et al.[182] report that a claim by social studies teachers that they split their time equally between an emphasis on facts and an emphasis on deeper learning was not borne out by the work they gave their students – there was little requirement for students to use critical-thinking skills to build arguments.

Modelling of intended outcomes makes alignment transparent to students

Discussing the importance of dispositions in early childhood education, Katz[183] remarked that:

> many dispositions that most adults want children to acquire or to strengthen … are learned primarily from being around people who exhibit them: they are strengthened by being used effectively and by being appreciated rather than rewarded (p. 2).

She suggests that, to encourage curiosity in their students, teachers should make curiosity a focus of their language, using, for example, learning goals ('see how much you can find out about something') instead of performance goals ('I want to see how well you can do'). Sewell[184] noted that when the teacher stopped talking about 'doing' work and started using the word 'learning', so did the children.

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[180] McNamara, D. S., Kintsch, E., Songer, N. B., & Kintsch, W. (1996). Are good texts always better? Interactions of text coherence, background knowledge and levels of understanding in learning from text. *Cognition and Instruction, 14*(1), pp. 1–43.

[181] Rubin, B. (2003). Unpacking detracking: When progressive pedagogy meets students' social worlds. *American Educational Research Journal, 40*(2), p. 539.

[182] Nystrand, M., Gamoran, A., & Carbonaro, W. (2001). On the ecology of classroom instruction: The case of writing in high school English and social studies. In P. Tynjala, L. Mason, & K. Lonka (Eds.), *Writing as a learning tool: Integrating theory and practice* (pp. 57–82). Dordrecht: Kluwer Academic Publishers.

[183] Katz, L. G. (2001). Another look at what young children should be learning. *The Spectrum,* Fall.

[184] Sewell, A. (2006a). *Teachers and children learning together: Developing a community of learners in a primary classroom.* Draft doctoral thesis, Massey University, Palmerston North.

Levstik and Smith[185], in their study of a teacher working with 23 grade 3 (year 7–9) students, drew attention to how she modelled the process of notemaking, both in terms of her positioning in the classroom and her comments to students. During oral presentations or videos, when the students were required to take notes, the teacher would stand to the side, clipboard in hand, conspicuously taking notes. As students shared what they had written down, she would say, "Oh, yes, yes. I wrote that down, too", or "Oh, I missed that. I think I'll add that to my notes too" (p. 97). To encourage students to use substantial rather than trivial questions, she responded to the question "How many windows are downtown?" with a question of her own: "I was wondering why is there a downtown?" The researchers observed that, in response to this and other similar exchanges, the students began to ask more searching questions, such as: "Why don't we get many tornadoes here?" and "Is there more crime now than in the past?" (p. 103). Similarly, Leinhardt[186] argued that when teachers repeatedly modelled explanations orally and insisted that students reason, grade 11 students became more skilled at forming discipline-based explanations.

In a detailed study involving two teachers teaching grade 8 history, Aulls[187] showed how each teacher's preferred pattern of discourse shaped the learning. Although both had similar goals and used the same texts and learning experiences, their forms of discourse were different, and this difference significantly influenced their students' experience of history. Mark's discourse was predominately routine and declarative (content focused). David used a much wider range of discourse, but it was predominately collaborative and it integrated declarative and procedural knowledge (skills and procedures). As a result, students in Mark's class came to experience an 'accommodation approach' to history, which was largely teacher-led, while David's students experienced an integrated content and strategy-instruction approach that developed not only their knowledge of history but their understanding of how to learn in history. As Aulls[188] commented, "When the form of activity and classroom discourse are mismatched, the intended learning goals are not likely to be supported during a learning event" (p. 522).

In a similar study, Grant[189] described the contrasting approaches of two teachers when teaching a unit on the US civil rights movement. He also contrasted the students' historical understanding in terms of how they viewed historical knowledge and significance, and in terms of their historical empathy. The first teacher, referred to as George Blair, used a narrative instructional style. In his class, the emphasis was on lectures and extensive recounting of factual detail. He focused on "individuals' actions and experiences, including his own [and] the facts serve as threads with which he weaves a dramatic account" (p. 75). His students were mainly engaged in copying notes and asked few questions. They came to see history primarily as immutable facts. They did not recognise the impact of the past on their present lives, and their responses were not empathetic. By contrast, the teacher referred to as Linda Strait drew from a range of sources and provided "various instructional activities and experiences designed to provide multiple opportunities for students to engage the ideas and emotions of the times" (p. 75). These included watching video material, participating in small-group discussions and activities, doing simulations, and writing reviews and essays. The author describes, for example, a powerful simulation activity in which students took on roles relating

[185] Levstik, L. S. & Smith, D. B. (1996). "I've never done this before": Building a community of historical inquiry in a third grade classroom. In J. Brophy (Ed.), *Advances in research on teaching, Volume 6* (pp. 85–114). Greenwich, CT: JAI Press Inc.

[186] Leinhardt, G. (1993). Weaving instructional explanations in history. *British Journal of Educational Psychology, 63*, pp. 46–74.

[187] Aulls, M. W. (1998). The contributions of classroom discourse to what content students learn during curriculum enactment. *Journal of Educational Psychology, 90*(1), p. 56.
Aulls, M. W. (2002). The contributions of co-occurring forms of classroom discourse and academic activities to curriculum events and instruction. *Journal of Educational Psychology, 94*(3), pp. 520–538.

[188] ibid.

[189] Grant, S. G. (2001). It's just the facts, or is it? The relationship between teachers' practices and students' understandings of history. *Theory and Research in Social Education, 29*(1), pp. 65–108.

to a 1950s civil rights issue. Strait's students came to see history not just as a series of facts but as complex, tentative, and ambiguous. Her students were much more likely than Blair's to see connections between the past and their own lives, and they developed greater ability to see multiple perspectives and feel empathy. Grant cautioned that although the data suggest a correlation between the teachers' approaches and student learning outcomes, the evidence was not strong enough to support a claim that the approaches *caused* the outcomes.

Making the purpose of tasks clear to students reduces ambiguity and helps them to focus on important learning

The teacher can make the purpose of tasks clear by being explicit about task expectations and requirements or by using supporting resources that scaffold students through the tasks.

Assist students' understanding of task purposes by being explicit about those purposes

Nuthall[190] found that describing tasks briefly or vaguely, or leaving instructions implicit, make it difficult for students to determine their academic or intellectual purpose. Students often attend to the surface features of a task, especially when these are appealingly presented. Nuthall showed, for example, that while a task sheet on how people lived and worked in Antarctica prompted students to complete particular tasks ('title page', 'maps', 'picture interpretation', 'extra work'), the teacher was not explicit about the purpose of the tasks. When asked at the end of the unit why she thought the teacher had wanted her to study the topic, one student wrote nine large question marks in the space provided.

The purpose of a task is communicated to students not only by the statement of requirements but also by the way the task is assessed. Abram et al.[191] tested the assumption that one reason why teachers often express disappointment with the products of groupwork is that students do not understand what an exemplary product looks like. They examined whether clearly articulated evaluation criteria would influence group discussion and, as a result, lead to improved student learning. They found that groups that knew the evaluation criteria spent more time evaluating their products, discussing the content of the unit, and discussing the task. The researchers also examined how group evaluative and task-focused talk related to the subsequent scores of individuals on an essay task at the end of the unit. They found small but statistically significant correlations, leading them to suggest that "the presence of clear and accessible criteria for evaluation can improve the academic nature of group discussions and individual learning gains" (p. 16).

Assist students' understanding of purpose by using resources that scaffold them through the task

Britt and Aglinskas[192] showed how a relatively simple intervention was able to improve students' ability to identify and use source information. They examined the impact of a computer-based tutorial and practice environment, *Sourcer's Apprentice*, which was designed to support students' reading of structured sets of documents about such contentious historical events as the Vietnam War and the Homestead Steel Strike. In particular, the resource aimed to assist students to "notice features of a source, use source information to evaluate content and place

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[190] Nuthall, G. (1996). *What role does ability play in classroom learning?* Paper presented at the New Zealand Association for Research in Education, Nelson.

[191] Abram, P. L., Scarloss, B. A., Holthuis, N. C., Cohen, E. G., Lotan, R. A., & Schultz, S. E. (2001). The use of evaluation criteria to improve academic discussion in cooperative groups. *Asia Journal of Education, 22*, pp. 16–27.

[192] Britt, A. & Aglinskas, C. (2002). Improving students' ability to identify and use source information. *Cognition and Instruction, 20*(4), pp. 485–522.

events in a correct temporal context, and finally to compare information across documents" (p. 486). The impact of the computer tutorial was compared with the impact of regular classroom activities and textbook-based approaches involving the same content.

Sourcer's Apprentice presents students with a 'shelf' from which they can select books that relate to a particular problem, and 'note cards' to be used for noting sources and features of the documents. When students click on a book, it opens to reveal a title page, an author page (which gives the author's credentials and possible motives), a document page (which states the document type, publisher, and publication date), and a contents page.

Figure 13: Sourcer's Apprentice[193]

As they read the pages, students complete the note card at the bottom of the screen, which prompts them to consider not only content but also information about the source (the writer, their position, how they are known, possible motives for writing, and date). Students either type the information directly into the spaces provided or drag and drop it into 'buckets'. The tutorial allocates points to the student for correctly placing material on the note card or, for incorrect entries, provides increasingly specific hints. When they press the 'done' button, students are asked a series of questions about sources and content, and then required to write an on-screen essay on the topic, supported by the note cards completed earlier.

In a series of three experiments, this intervention was found to significantly improve students' ability to attend to source information when studying historical documents. The first two experiments found that, "after the *Sourcer's Apprentice* training, students mentioned more source features in their notes and answered more source questions correctly on a transfer test relative to students not given the *Sourcer's Apprentice* training" (p. 511). This was the case for two different modules, on the Vietnam War and Homestead, and for students from both rural and urban settings. The group exposed to the tutorial also did better on the essay writing task, because they were able to draw on more content and to explicitly refer to sources. The essays of those in the tutorial group were also better connected than those of the students who had read the source material in textbook format.

While the researchers suggest that multiple factors are likely to have influenced the success of this intervention, for example, the problem-solving context and the game environment,

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[193] ibid. Figure 13 is reprinted with the permission of Taylor & Francis.

the alignment of student ability and supporting resource appears to have had a significant impact.

Using teacher action research to investigate a New Zealand project targeting effective teaching and learning in senior social studies classrooms, Wood[194] found that the provision of templates, planning/writing guides, and structured overviews was helpful in developing students' understanding of topics and their ability to communicate knowledge in written form. Student comments affirmed that the provision of a writing frame helped them meet the requirements of an assessment: "It was set out in a way we couldn't miss out any important parts of the assessment", "We were less confused about the outline of the assessment." All those in the study passed the assessment. This outcome reinforces the merit of developing formal scaffolds to help students understand task requirements and structure their learning accordingly. The researcher noted that the templates were most effective when students were directly involved in their development and when requirements were reinforced by peer marking. The study also found that student comprehension and achievement were enhanced when the teacher explicitly named the required social studies understandings (values positions, perspectives, concepts, and so on).

Katims and Harmon[195] investigated the impact of a strategy aimed at stimulating students to engage in internal dialogues and cognitive processing when interacting with social studies texts. Using this strategy, students internalise whether the material they are about to read concerns a person, event, or place (PEP). They then use 'who, what, when, and why' questions to focus their thinking. For example, if the text is about a person, they are prompted to answer the question 'What did he/she do?'; if it is about an event, the question becomes 'What happened?' As they read social studies texts, using the PEP questions as a guide, they take notes on stickies and use them to develop questions designed to help their peers read the same passage. The acronym PEP TALK is used to help students remember the process: PEP (Person, Event, Place), T (Think), A (Ask questions), L (Look for answers), K (Keep notes). Students also use a 'road map' template, on which they record the location and nature of important text and the questions they have developed based on their stickies. This partially completed template is then used by their peers to assist them as they read the material.

The researchers examined how effective the above strategy was when implemented over five weeks by middle-school social studies teachers in history and geography classes. The students involved were from a range of ethnic backgrounds and from low- and middle-income homes. The researchers found that by the end of the five weeks, students had made significant gains in comprehension. More than this, they noted improvement in the students' strategic thinking and learning processes:

> Note-taking behaviours across students in the classes changed as students engaged in strategic thinking to monitor comprehension of the passage being read. Their notes became more focused, more detailed, and more apt to include relevant text-based information. In general, students increased the quality and quantity of notes they took by using organised, strategic note taking. Students also improved their cognitive ability to organise and ask themselves questions as they worked their way through text-based information (p. 287).

[194] Wood, B. (2005). *Beacon schools for senior programmes in social studies: Final report.* Wellington: Ministry of Education.

[195] Katims, D. S. & Harmon, J. M. (2000). Strategic instruction in middle school social studies: Enhancing academic and literacy outcomes for at-risk students. *Intervention in School and Clinic, 35*(5), pp. 280–289.

Aligning assessment with teaching helps communicate what is important

Newmann[196] has long argued for a focus on higher-order thinking and greater thoughtfulness in social studies classrooms. By this he means teaching that "challenges or expands use of the mind" (p. 325)[197] through problem solving and through interpreting, analysising, and manipulating information. Along with colleagues, he developed a model of 'authentic instruction' that promotes real intellectual accomplishment in work that is significant and meaningful[198]. The model proposes a number of standards for instruction, performance, and assessment. See Figure 14 for a representation of these ideas.

[196] Newmann, F. M. (1990). A test of higher-order thinking in social studies: Persuasive writing on constitutional issues using the NAEP approach. *Social Education, 54*(6), pp. 369–373.

Newmann, F. M. (1990). Qualities of thoughtful social studies classes: An empirical profile. *Journal of Curriculum Studies, 22*(3), pp. 253–275.

Newmann, F. M. (1991). Promoting higher order thinking in social studies: Overview of a study of 16 high school departments. *Theory and Research in Social Education, 14*(1), pp. 324–340.

Newmann, F. M. & Wehlage, G. G. (1993). Five standards of authentic instruction. *Educational Leadership, 50*(7), pp. 8–12.

Newmann, F. M., Marks, H. M., & Gamoran, A. (1996). Authentic pedagogy and student performance. *American Journal of Education, 104*(4), pp. 280–312.

Scheurman, G. & Newmann, F. M. (1998). Authentic intellectual work in social studies: Putting performance before pedagogy. *Social Education, 62*(10), pp. 23–25.

[197] Newmann (1991), op. cit.

[198] Newmann, Marks, & Gamoran (1996), op. cit.

Standards for instruction

| Promotion of higher-order thinking that involves students in constructing and producing | Development of deep knowledge as a result of disciplined inquiry | Establishment of connections to the world beyond the classroom through work that has wider personal, aesthetic, or utilitarian value | Promotion of substantive conversation and elaborated communication to express conclusions | Social support for student achievement through high expectations, respect, and inclusion |

Standards for student performance

Student performance demonstrates

Analysis

Higher-order thinking with social studies content by organising, synthesising, interpreting, evaluating, and hypothesising to produce comparisons, contrasts, arguments, applications to new contexts, and consideration of different ideas or points of view

Disciplinary concepts

An understanding of ideas, concepts, theories, and principles from the social sciences and civic life by using them to interpret and explain specific, concrete information or events

Elaborated written communication

An elaborated account that is clear and coherent and provides richness in details, qualifications, and argument

Standards for assessment

Tasks ask the student to

| organise, synthesise, interpret, explain, or evaluate complex information in addressing a concept, problem, or issue | consider alternative solutions, strategies, perspectives, or points of view so they address a concept, problem, or issue | show understanding and/or use of ideas, theories, or perspectives considered central to an academic or professional discipline | use methods of inquiry, research, or communication characteristic of an academic or professional discipline | elaborate their understanding, explanations, or conclusions through extended writing | address a concept, problem, or issue that is similar to one they have encountered or are likely to encounter in life beyond the classroom | communicate their knowledge, present a product or performance, or take some action for an audience beyond the teacher, classroom, and school building |

| **Organisation of information** | **Consideration of alternatives** | **Disciplinary content** | **Disciplinary process** | **Elaborated written communication** | **Problem connected to the world** | **Audience beyond the school** |

Figure 14: Authentic instruction criteria[199]

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[199] This figure is a visual representation of the ideas presented on pages 288–290 of Newmann, F. M., Marks, H. M., & Gamoran, A. (1996). Authentic pedagogy and student performance. *American Journal of Education, 104*(4), pp. 280–312.

This model exemplifies the alignment of assessment with teaching, with the aim of enhancing the intellectual quality of student work.

The effects of this instructional alignment have been investigated in a number of studies. In a US study, Avery[200] measured the extent to which five teachers in 12 history classes in a high school provided authentic instruction. Every teacher taught the same month-long unit on immigration and gave their students the same intellectually challenging assessment task. Two observers visited each teacher's class twice in the month and rated the authenticity of the instruction using Newmann and Wehlage's criteria (see Figure 14).

The 116 grade 9–12, ethnically diverse students, 62% of whom received reduced-cost or free lunches, were all given the same assessment task. Their essays were rated by two researchers according to Newmann, Secada, and Wehlage's[201] criteria for authentic student performance (again, see Figure 14). Data were analysed to establish correlations between gender, ethnicity, socio-economic status, engagement, authenticity of instruction, and authenticity of student performance.

The quality of teachers' instruction (in other words, the extent to which teachers met the authentic instruction criteria) had a much stronger influence on student performance than gender, ethnicity, or socio-economic status, providing evidence that the model improves the academic performance of all students. Newmann et al.[202] have noted elsewhere that while the model does not eliminate inequalities between groups of students, "it does not seem to exacerbate the problem", and, in the case of African American students, the spread of achievement is significantly less than the spread found for traditional tests.

The strongest correlation (r = 0.686) reported in the Avery[203] study was between authentic instruction and authentic student performance. In other words:

> the more instruction and assessment tasks focus on constructing knowledge using *disciplined inquiry* to explore issues that have *value beyond the classroom*, the more student performance is likely to reflect a high level of thinking and the use of significant disciplinary concepts and methods[204].

In a second study, of 45 teachers who participated in a four-day training seminar on authentic instruction, the researchers observed[205], on the basis of comparisons of student work at the beginning and end of the project, that the instruction did lead to improved disciplinary understanding and communication but that the degree of improvement was modest. There were only small improvements in students' enjoyment of social studies. What this may indicate is that while the training the teachers received improved their ability to engage students in higher-order thinking and deep knowledge (thereby improving their overall 'authentic instruction' scores), there was no similar shift in assessment practice. In other words, teaching and assessment were not strongly aligned, potentially undermining the intended effects of the teaching and, perhaps, communicating to students the idea that traditional test knowledge was still the most valuable. The researchers reported that although the emphasis on 'remembering information' was reduced as a result of the project, a majority of the students (51.7%) still had a recall emphasis. The extent to which the assessment encouraged students to consider alternatives and use elaborated written communication actually declined, and there was no change in students' 'connectedness to the world beyond the classroom'. The

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[200] Avery, P. G. (1999). Authentic assessment and instruction. *Social Education, 63*(6), p. 368.

[201] Newmann, Secada, & Wehlage (1995), op. cit.

[202] Newmann, Marks, & Gamoran (1996), op. cit.

[203] Avery (1999), op. cit.

[204] Avery, P. G. & Freeman, C. (2001). *Linking authentic instruction to students' achievement using peer coaching.* Minnesota: University of Minnesota College of Education and Human Development: Center for Applied Research and Educational Improvement.

[205] ibid.

researchers attributed the poorer quality of the assessment tasks to the focus of the training project: "Substantial time was devoted to improving instruction and little time was allocated to improving assessment tasks" (p. 25). This has implications for alignment.

Align activities and resources to intended outcomes

Summary of findings

- Purposefully aligning activities to desired outcomes supports students in achieving those outcomes.
- Aligning resources to the purpose of a task supports students in achieving outcomes related to that task.
- Modelling of intended outcomes makes alignment transparent to students.
- Making the purpose of tasks clear to students reduces ambiguity and helps them to focus on important learning.
- Aligning assessment with teaching helps communicate what is important.

4.4 Provide opportunities to revisit concepts and learning processes

While alignment is a powerful mechanism supporting student learning, the Understanding Learning and Teaching Project (ULTP) and many of the other studies cited above suggest that, on its own, alignment is insufficient. What students need in addition to alignment are related opportunities to revisit initial learning so that it becomes embedded in their memories.

Students need three to five aligned experiences not more than two days apart

The ULTP researchers determined that the number and timing of learning experiences is critical to student learning. As the contrasting examples of Kim and Mia[206] (see p. 107) illustrate, "a student needs a succession of encounters with specific information in order for processes to take place in working memory that result in long-term learning" (p. 306)[207]. Mia engaged on multiple, close-in-time occasions with the idea that there was a high crime rate in New York. She was successful in her learning even though her prior understandings ('New York is posh') were quite different. Kim, however, marked the wrong answer on the immediate post-test, and, when faced with the long-term post-test, had no idea what the answer might be. Kim's understanding was 'muddled' because he hadn't engaged with relevant content on enough occasions. On the basis of such findings from a range of studies in social studies and science, the researchers generated two rules for learning[208]:

- For a pupil to learn and remember an idea or concept, there need to be three to five different occasions when the student engages with that idea in some way. The type of content or information affects *how many* and *what type* of subsequent encounters are required. For example, Figure 11 shows that when the relevant information encountered is type 2, 3 or 4, it needs to be connected to information of type 1, or alternatively, to two encounters with information of types 2 or 3.

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[206] Based on Nuthall, G. & Alton-Lee, A. (1993). Predicting learning from student experience of teaching: A theory of student knowledge construction in classrooms. *American Educational Research Journal, 30*(4), pp. 799–840.

[207] Nuthall, G. (1999). The way students learn: Acquiring knowledge from an integrated science and social studies unit. *The Elementary School Journal, 99*(4), pp. 303–341.

[208] Nuthall, G. & Alton-Lee, A. (1994). How pupils learn. *SET: Research Information for Teachers, 2*(3), pp. 1–8.

- Each new occasion should not be separated from the previous occasion by more than two days. In Figure 16 (relating to Mia and Kim), the solid blue lines show where representations were able to be connected and therefore support long-term learning. The dashes show where representations could not be connected because of the gap in timing.

When students engage in the required number of experiences within the required time frame, they learn: their experiences "become integrated as a new knowledge construct" (p. 305)[209]. By examining the item files for particular students to see if they had experienced the requisite three to five encounters with relevant information within the requisite time frame (gaps of no more than two days), the researchers were able to predict whether that student would or would not learn that item. The predictions were accurate approximately 80% of the time.

According to Nuthall and Alton-Lee[210], the reasons why these rules for learning work can largely be found in information-processing and schema theory. A student encounters topic-relevant information and from it creates a representation that is stored in the working memory for a limited time. This representation is connected with other semantically-related representations in the working memory. If no such connections are made, it is lost from the working memory. Once a sufficient number of representations (three to five) are connected in the working memory, the construct becomes established in the general (long-term) memory and available as background knowledge (p. 813). Figure 15 outlines this learning process:
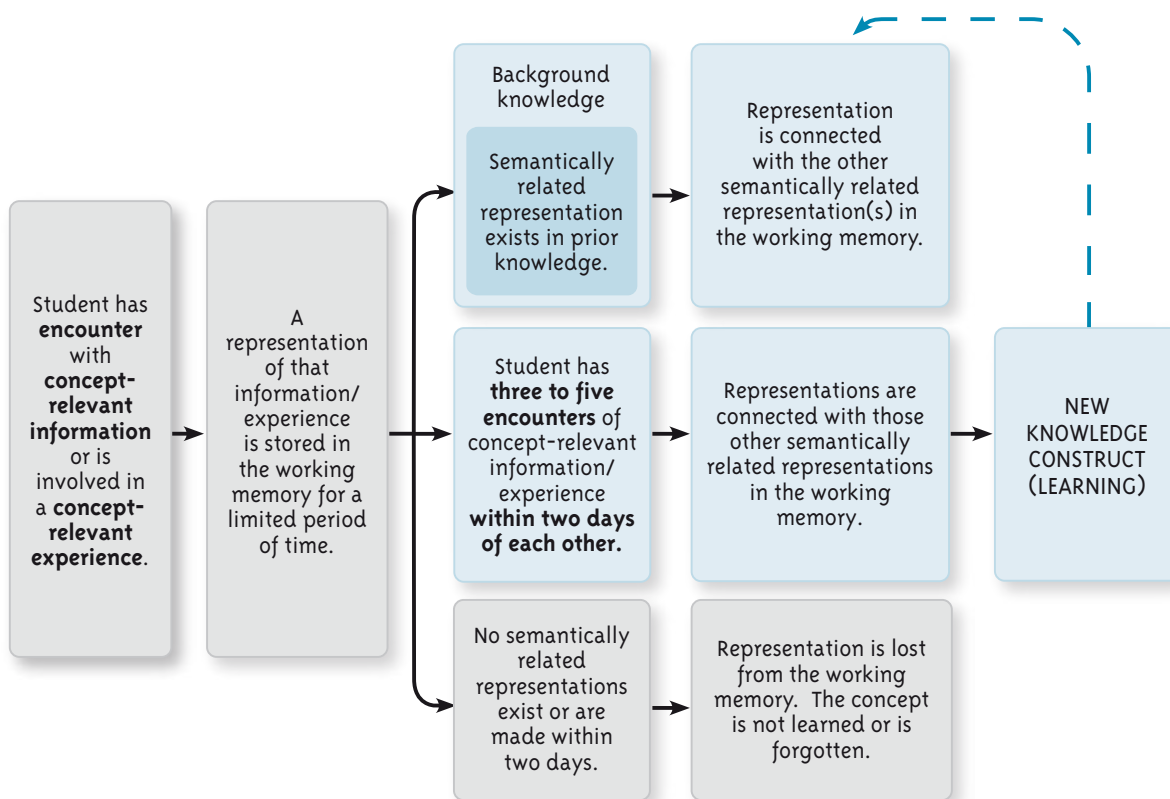
Figure 15: Summary of the Learning Process Model[211]

[209] Nuthall (1999), op. cit.

[210] Nuthall, G. & Alton-Lee, A. (1993). Predicting learning from student experience of teaching: A theory of student knowledge construction in classrooms. *American Educational Research Journal, 30*(4), pp. 799–840.

[211] Figure developed to represent the model of the learning process outlined by Nuthall, G. & Alton-Lee, A. (1993). Predicting learning from student experience of teaching: A theory of student knowledge construction in classrooms. *American Educational Research Journal, 30*(4), p. 813.

Alignment

Kim NOT learning about the Magna Carta	**Mia LEARNING about crime in New York**

Before the unit …

Asked in a multichoice test why charters were important in the Middle Ages, Kim marked [e] for 'don't know'.

Before the unit …

Asked in a multichoice test whether New York had a low/average or high crime rate, Mia marked [e] for 'don't know'. Asked in an interview to recall what she thought about New York before the unit, she said "[it] was like, um, on *Diff'rent Strokes* [on TV]. I thought it was all very posh and things."

Day 15 — Reading and answering questions on worksheet that described the Magna Carta as a 'great charter' that 'sets out the rights of free men'

Day 16–17

Day 18 — Marketplace picture — colouring

Day 19 — Copied sentences about medieval towns, including: 'A charter was a written promise giving the town its freedom.'

Day 20–23

Day 24 — Copied a sentence and filled the gap with 'charter' | Heard discussion of the 'charter' sentence and heard the teacher mention 'the charter' to the person who delivered lunches (note lunch interruption)

Day 1 — Brainstormed crime — suggestions recorded on overheads | Brainstormed violence, mugging | Group overheads shared, including two with 'crime', 'gangs', 'violence'

Day 2

Day 3 — Class listed words for poem — including: 'muggers', 'shooters', 'violence'. Mia looked at these several times while writing her own poem. | Listened to a poem being shared, which included, for example: "violence-arrest-gun-cannons-dynamite-shooting-massacre-gang-killings".

Day 4 — Read a story with group about gang violence and was seen to react to the content. | Mia responded to a teacher question about the story.

Day 5 — Completed a true/false task that included items about 'violence by gangs' and 'gang warfare'

After the unit …

In the immediate post-test, Kim marked the wrong answer to the question, 'Why were charters important in the Middle Ages?' and to the same question in the 12-month post-test, he marked [e] for don't know'.

Immediate post-test

"Charters, I think it was, showed people directions for moving about the towns, 'cause there was charters in the middle where the market was, I think … um, I can remember a person in the middle of the road with a scroll … um, and reading things. Yes, Ms A. was telling us about it. I hope I haven't muddled."

Twelve months later

"I think, ah, no, um, there's this thing I can remember. Well, there's, something, in the picture was a crossroad, well, lots of roads joining into it and there was the stocks and people were throwing eggs at this person in the stocks, and then I think I heard something about a man stands in the middle there, and if someone wants to go somewhere, they go and ask him where to go."
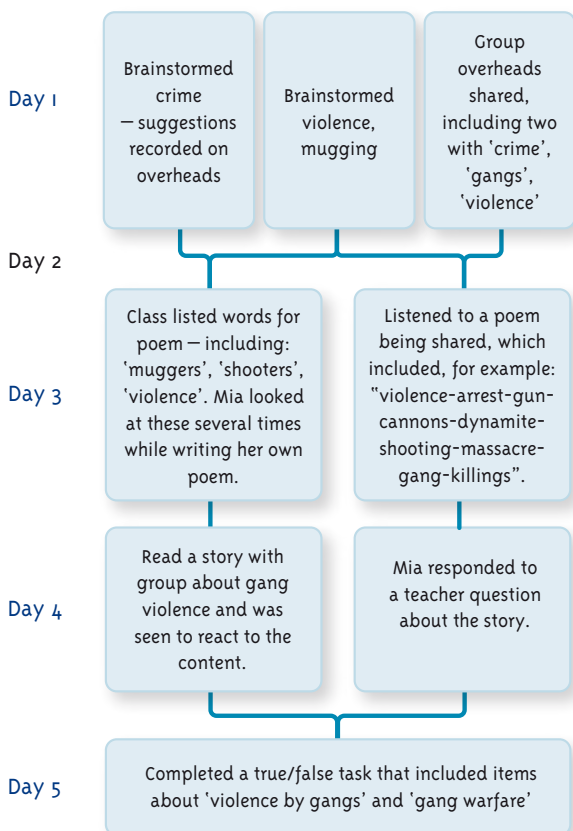
After the unit …

In the immediate post-test, Mia marked the correct answer to the question asking whether New York had a low/average or high crime rate.

Post-test

Mia: [New York has] a higher crime rate, with all the gangs and things happening, 'cause people don't have anything else to do.

Interviewer: Did that come up in the unit?

Mia: Yes, a lot. Well, I think at one stage, which got me a bit confused, someone said that it had been in the paper that Christchurch had a bigger, higher crime rate than New York, and I thought, 'Oh, no, that can't be right' … Mm. Because you don't see gangs around, well, people don't carry knives around in Christchurch. I wouldn't think so.

―――――――――――――――――

Nuthall and Alton-Lee note that "Mia's prior belief that New York was 'very posh' had been replaced by her generalisation from the many references to crime in New York" (p. 823).

Figure 16: Not learning about the Magna Carta; learning about crime in New York

Providing multiple learning opportunities supports concept development

Case 4, based on the work of Gersten et al.[212], clearly illustrates the value of repeated engagement with important ideas. The most successful teaching was characterised by: carefully structured activities that allowed for sustained interactions between partners of differing levels of ability; intentional repetition of the same information from different sources (video and magazine); use of empathy questions (such as 'How would you feel if …?') to help students personalise historical events; use of brief discussion (questions asked during the video showing, which appear not to have interrupted the flow of content); and the opportunity for students to demonstrate understanding through oral interviews.

In a quasi-experimental, multi-method study, Hodkinson[213] found that the development of students' understanding of historical time could be accelerated through a special teaching method (STM). This method involved consistently chronological (from time present to time past) presentation of historical material, consistent use of timelines in every lesson, specific skills-based activities, and opportunities in each lesson for open-ended discussion using time-related vocabulary. The STM, therefore, was characterised by strong alignment between the learning activities and the intention (to develop understanding of chronology) and by repeated and differentiated opportunities for students to engage with the idea of chronology.

Hodkinson used the pre- and post-test results of five class groups (two experimental and three control) to assess the impact of multiple, aligned learning experiences on the development of the desired conceptual understandings. He found that, compared with those who received the regular teaching, those who experienced the STM improved markedly in their ability to correctly use AD and BC notation with dates. The value of repetition is underscored by the finding that the group that experienced the STM for three terms increased its mean score and outperformed the group that had experienced it for only one term as well as the two control groups.

The following exchange is representative of those who had not experienced the STM. It was prompted by the two questions: 'Who came first, the Romans or the Vikings?' and 'How long ago did the Vikings arrive in Britain?'

> S1:   I can't give an answer on that.
>
> S2:   Ehm … did the Vikings come before the Romans?
>
> T: What do you think?
>
> S2:   I'm a bit stuck on that, about ehm … 240 years ago.
>
> S3:   Ehm … about 5000 years ago.
>
> S4:   1500 years ago.
>
> S5:   I don't know. [asked to make a guess] 2222 years ago.
>
> (p. 110)

By contrast, when asked when the Romans left Britain, the students who had experienced the STM for three terms gave responses of which the following is representative:

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[212] Gersten, R., Baker, S., Smith-Johnson, J., Dimino, J., & Peterson, A. (2006). Eyes on the prize: Teaching complex historical content to middle school students with learning disabilities. *Exceptional Children, 72*(3), pp. 264–280.

[213] Hodkinson, A. (2004). Does the English curriculum for history and its schemes of work effectively promote primary-aged children's assimilation of the concepts of historical time? Some observations based on current research. *Educational Research, 46*(2), p. 99.

S6:   Around 500AD, 1501 years ago.

S7:   500AD, 1501 years ago.

T: How do you know the Romans left?

S7:   Because that's what we learnt in our history lessons.

S8:   500AD, 1501 years ago, 'cause I worked it out the way you told us.

S9:   … Ehm 500AD, I remember you always used to put that thing up.

T: The timeline.

S9:   Yeh …

The authors also found that the STM students made much less use than the other students of vague and subjective references when expressing their understanding of history. The researchers concluded that "it appears that whereas … children [who had not received the STM] are prone to this subjectivity, [those who had] … have referenced history to either a numerical expression of years or to a distinctive historical period … the STM has enabled the children to better comprehend how the past can be differentiated into a numerical continuum or definitive historical periods" (p. 112).

In a study of a grade 4–5 class of 33 learners from diverse cultural backgrounds and with diverse language abilities, Bickmore[214] examined how children can develop their capacity to handle social and interpersonal conflict at the same time as they pursue social studies (and language) objectives. In this intervention, the aim was to develop this capacity by focusing on 'conflict' in a unit ('Conflicts in school, Ontario, and the world') that explored both interpersonal and global issues. The learning sequence was developed around three themes aligned to the broader concept of 'conflict': 1. What is conflict? 2. Sources of conflict: how do conflicts reflect different human needs and perspectives? and 3. Managing conflict: what are the consequences of different choices? The teacher took a non-linear approach rather than an expanding horizons approach, which meant that politically controversial and complex international material was included early and frequently in the unit. As the theme was developed over an eight-month period, the students consistently experienced multiple representations of the concept. They were also offered many entry points to understanding by the wide range of learning activities employed: brainstorms, dramas, drawing, tableaux, reading, describing, sharing and summarising points of view, and 'in-role' writing – all focused on various kinds of conflict.

This approach resulted in positive outcomes for the learners in terms of conceptual understandings and capacity to participate. At the beginning of the unit, only 11 out of 33 students raised their hands when asked to indicate if they 'knew' the term 'conflict', and only about half of those were able to give examples of conflict. Eight months later, "most of this class of 9 and 10 year old children had developed a remarkable familiarity with and capacity to use some major concepts and generalisations associated with conflict, conflict resolution, alternatives to violence, and the social contexts that give rise to particular kinds of conflicts" (p. 66). The findings of this study point to the value of sustained engagement with a major idea on multiple levels (local, national, global), via multiple learning experiences that draw on different perceptual modes (visual, oral, written, kinaesthetic).

Berti[215] researched the impact of a particular pedagogical approach to the teaching of political concepts on the understanding of 30 students from two grade 4 classes in a school in a small

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214 Bickmore, K. (1999). Elementary curriculum about conflict resolution: Can children handle global politics? *Theory and Research in Social Education, 27*(1), pp. 45–69.

215 Berti, A. E. & Benesso, C. (1998). The concept of nation-state in Italian elementary school children: Spontaneous concepts and effects of teaching. *Genetic, Social, and General Psychology Monographs, 120*(2), pp. 121–143.

town in northeastern Italy. The approach, which was characterised by repeated engagement with concepts relating to state, region, province, border, and capital city, succeeded in improving the students' understandings. Pre-test results indicated that nearly half the students had erroneous conceptions of the concepts. These misconceptions were nearly all remedied by the end of the teaching, which involved explicitly addressing the erroneous understandings, stimulating active participation, and systematically supplying relevant information. The range of activities used included whole-class discussion, attending lectures, examining geographical maps, reading and comparing, worksheet completion, and role playing. This suggests that the learners had multiple opportunities to engage with the concepts concerned, but the study doesn't discuss the relative effectiveness of the various activities.

Yoho[216] looked at the impact of different teaching approaches on the understanding of 190 grade 9 students who were studying the concepts of direct democracy, indirect democracy, oligarchy, and dictatorship. This research focused on whether the concepts were more effectively learned by direct reading of the text, by a strategy that concentrated on critical attributes, or by a strategy that stressed the use of exemplars. The study found that a structured, sequenced approach to the teaching of concepts was superior to a reading-only approach in which the nature of the concepts to be learned was not made explicit. It also found that the exemplar approach was superior to the attribute approach. In the researcher's view, when students were given a clear exemplar and expected to compare newly encountered examples with it, this assisted 'prototype formation' (p. 221) in their memories. The author argued that, because the attribute approach requires students to commit lists of attributes to long-term memory, it is more difficult for students than the exemplar approach, which treats the concepts in a more holistic way.

McKinney et al.[217] also examined the effectiveness of three different approaches to teaching social studies concepts. In their study, grade 4 students were taught the three concepts arable farming, tertiary production, and cultural diffusion. The first approach involved presenting students with examples and non-examples of the concepts (in random order), asking them to decide whether each was or was not an example of the concept, and then asking them to explain why. This approach was found to be superior to the second approach, in which students read text that included examples and definitions, and superior also to the third approach, in which students were simply presented with examples and non-examples.

Laney and Laney et al.[218] examined the role of multiple learning experiences – and the role of the teacher – in helping to shape student understanding of basic economic concepts such as resource, product, scarcity, and opportunity cost. In this study, which involved 120 grade 1 and 2 students, the authors compared the impact of a cooperative learning approach with the impact of an approach that combined cooperative learning with mastery learning. Eight teachers were given training in the economic concepts and the instructional methods to be used. They then taught 18 45-minute lessons over a period of six weeks. The teachers and their students were assigned to one of four conditions: cooperative learning, mastery learning, cooperative and mastery learning, or control.

[216] Yoho, R. F. (1986). Effectiveness of four concept teaching strategies on social studies concept acquisition and retention. *Theory and Research in Social Education, 14*(3), pp. 211–223.

[217] McKinney, C. W., Larkins, A. G., Ford, M. J., & Davis, J. C. (1983). The effectiveness of three methods of teaching social studies concepts to fourth grade students: An aptitude-treatment interaction study. *American Educational Research Journal, 20*(4), pp. 663–670.

[218] Laney, J. D. (1989). Experience- and concept-label-type effects on first-graders' learning, retention of economic concepts. *Journal of Educational Research, 82*(4), pp. 231–236.
Laney, J. D., Frerichs, D. K., Frerichs, L. P., & Pak, L. K. (1995). *The effect of cooperative and mastery learning methods on primary-grade students learning and retention of economic concepts.* Paper presented at the annual meeting of the National Council for the Social Studies, Chicago.

In the cooperative condition, students listened to a fable that revolved around an economic concept and then engaged in group activities and games. Groups were deliberately structured, with an emphasis on common goals, positive interdependence, and individual accountability. Students were told that everyone in a group must agree on a single set of answers, be able to give those answers, and be able to explain them. Each group was given a single set of materials: one pencil, one sheet of paper, and one game. Students were told that they must share ideas within their group, say what they thought the answers were and why, and be able to give both answers and reasons. Teachers monitored groups and reminded them to exercise such social skills as recognising and praising each other's contributions. The students were also specifically taught how to give and receive help. Those in the mastery condition used the same fable and engaged in the same activities and games, but their teachers reviewed each student's work and provided feedback correctives. Each sub-unit concluded with a five-item mastery test that was followed up, if necessary, by teacher remediation and a re-sit. The cooperative and mastery group combined the two approaches outlined above, but any remediation following the mastery tests was peer provided. The control group also used the same fable. In this condition, the teacher identified examples of the economic concept concerned; the students then practised identifying examples on their own before participating in activities and games and sitting tests.

All the students involved in this project were given a pre-test, a post-test, and a delayed post-test to assess their ability to put economic ideas into their own words and to apply these ideas to new situations. Half of the students were also interviewed to gauge their understanding. The tables summarise the results:

Table 17: Percentage of students scoring at mastery level (80% correct)

Test	Treatment condition			
	Control	Cooperative learning	Mastery learning	Cooperative and mastery learning
Written UEC (pre-test)	0	0	0	0
Written UEC (delayed post-test)	10	20	27	50
Oral UEC (pre-test)	0	0	0	0
Oral UEC (delayed post-test)	0	0	13	50

UEC = Understanding of Economics Concepts

Table 18: Mean scores of written and oral tests on economics concepts

Test	Treatment condition			
	Control	Cooperative learning	Mastery learning	Cooperative and mastery learning
Written UEC (pre-test)	13.92	17.4	13.43	14.06
Written UEC (delayed post-test)	17.12	18.47	20.47	22.28
Oral UEC (pre-test)	4.56	4.44	4.69	4.63
Oral UEC (delayed post-test)	9.06	8.72	10.06	13.06

These results show that while the results for the cooperative and mastery learning approaches were generally superior to those for the control, neither cooperative learning nor mastery learning was able, on its own, to achieve as much as the two approaches working together.

Cooperative learning appeared to foster motivation by providing students with the opportunity to participate actively in a social context and develop conceptual understanding through student–student talk. What it was unable to provide, however, was a systematic diagnosis of each student's understanding and corrective feedback. In the researcher's view – consistent with Vygotsky's observation that language development lags behind conceptual development – the mastery approach, with its one-to-one conversations with an adult, exposed students to important modelling of economic vocabulary and syntax. In other words, those conversations helped students develop the language they required to articulate the economics concepts that they had in their heads. This is consistent also with Hedges'[219] finding that, because four-year-old children are not yet able to access written material available in cultural tools such as books, postcards, and the Internet, they require the mediation of an older, more skilled peer.

Laney et al.[220] concluded their report with a comment on the need to give further consideration to the nature of multiple learning opportunities experienced by students. They noted that even though the most effective treatment in this study (cooperative *and* mastery) was significantly more effective than the other treatments, it resulted in only 50% of the students achieving mastery. The authors suggested that vicarious experiences (for example, fables, activities, and games) may in themselves be insufficient and better used for reinforcing prior, real-life experiences. In other words – and this is consistent with Laney's 1993 study[221] – direct experience offers an initial, potentially more powerful way of engaging understanding.

Kohlmeier[222] sought to increase the historical empathy of her 52 grade 9 students. She used an action-research methodology to determine whether giving students consistent practice with group discussion would increase their motivation and their ability to empathise with the authors of historical texts. Using a Socratic seminar approach, the students worked through three cycles of interpreting primary source documents written by women: one each from the Renaissance, Russia under Stalin, and China's Cultural Revolution. The teacher/researcher based her assessment of her students' developing historical empathy on transcripts of the three Socratic seminars, on the debriefing sessions that followed them, and on an end-of-semester interview with a sample of students.

Prior to each seminar, the students read the historical texts and constructed a reading web in response to three focus questions: 'What is the document describing?', 'How was the document written?', and 'Why was the document written?' When participating in the seminars, all but four of the students sat in a circle with their names displayed. Four volunteer observers sat outside the circle, noting the number of times each person spoke and watching for the use of three target behaviours: referencing the text, addressing others by name, and asking QEU ('Questions that Expand Our Understanding') questions. The teacher, sitting in the circle, started each seminar with a question designed to encourage empathetic thought: 'Was Magdalena happy?', 'What would Irina consider the greatest contributing factor to her suffering?', 'Will Ji Li be a true revolutionary?'.

Kohlmeier compared the responses of a sample of 10 students to the three different Socratic seminars (which were spaced across the semester) and, by doing this, was able to observe shifts in their thinking. With increasing sophistication, they were able to recognise difference between the historical period and the present, distinguish between different perspectives, and defend their own analysis of the author's perspective (using evidence). The two excerpts that

[219] Hedges, H. (2002). *Subject content knowledge in early childhood curriculum and pedagogy.* Unpublished master's thesis, Massey University, Palmerston North.

[220] Laney et al. (1995), op. cit.

[221] Laney, J. D. (1993). Experiential versus experience-based learning and instruction. *Journal of Educational Research, 86*(4), pp. 228–236.

[222] Kohlmeier, J. (2006). "Couldn't she just leave?": The relationship between consistently using class discussions and the development of historical empathy in a 9th grade world history course. *Theory and Research in Social Education, 34*(1), pp. 34–57.

follow illustrate the development in student thinking that took place between first and third discussion cycles.

Teacher:	When we're talking about her responsibilities, are we clear on how this business is arranged and who is doing what? What information are we lacking in order to understand her situation more accurately?
Zach:	What a normal woman did during that time.
Jordan:	Whether it was common for husbands to be away and the wife doing all this, or if more husbands were home to do the yard work and stuff.
Teacher:	OK, what would we assume are her responsibilities?
Several students:	Taking care of the house and the kids.
Jordan:	Is her work with the wine her home job or a different job?
Teacher:	Well, where do you get the sense that that shop is located?
Jordan:	In town.
Erica:	Some town, I don't know where.
Teacher:	Balthasar goes to other towns to buy and sell stuff, and he would set up a booth at the market. So where do you suppose most of the shipments are coming, and where is the stuff he buys coming?
Someone:	To her house?
Teacher:	That's right; it's coming to their home. They run the businesses from their home.

First discussion cycle: Magdalena, Renaissance Germany, 1500s (p. 44)

Notice the guidance that the teacher is giving to encourage the students to check their historical assumptions ("What information are we lacking …?", "What would we assume are her responsibilities?", "Where do you get the sense …?"). Not only is she helping build empathy, she is scaffolding the need to go back to the source document for evidence. In the third discussion cycle, later in the semester, the teacher's guidance role was much diminished. By this stage, her students were successfully expressing historical empathy and questioning each other's perspectives.

Liz:	I think that what this all has to do with is money. The people who are poor are turning on the people who are rich.
Teacher:	But I'm not sure that Ji Li would think that would be bad. I mean I think that she says she was supportive of the revolution, the idea of equality … If we go back to the 'four olds' chapter she was right there with the breaking of the sign, and there wouldn't have been these distinctions between rich and poor.
Jordan:	Don't you think with the breaking of the signs, I remember when I was twelve I liked to break things, so that's really the point, a twelve year old is getting to go around and do things they weren't allowed to do. We like to drive over the speed limit just because we know we're not supposed to, so I think she just wanted to break the signs just because it was fun.
Teacher:	So you're saying she didn't really understand the political significance of what she was doing, she was more caught up in the vandalism.
Whitney:	I disagree because when they were going home they were naming all sorts of other signs that could be renamed and were giving them new names that fit

with the revolutionary ideas. She understands what she's doing; she's not just doing it to be a kid.

Jordan: But does she agree with it?

Whitney: I think so.

Zach: She's going to support it because it's not hurting her right now; in fact she's having fun doing it. But as soon as it starts hurting her, with her aunt and then finally herself, she's not supporting it anymore, then it's not so funny anymore.

Whitney: What's she going to do about it?

Zach: She can't do anything about it. She would have to find others to join up with her, but if it's not hurting you you're not going to risk that.

Whitney: But it's not like she can go up to people and ask them do you agree with this stuff, because they might have a big mouth and then they'll just keep doing stuff to her.

Jordan: She could have started something back with the part about the teachers … Instead of writing something, she could have stood up and said I'm not going to write anything about the teachers, she psychologically could have started that, she just didn't.

Brandon: She's twelve years old and maybe she doesn't know … If Chairman Mao says it's right, then everyone says it's right. When you're young you believe things are right because your parents tell you it's right. The majority, when you grow up, whatever your politics, if you're Republican or Democrat, or your religion, if you're Christian or whatever else, you're going to be that because your parents were. She's doing this because she's growing up around it and everyone else is believing it. She's not going to say, that's not right, because she doesn't know what else to think. I think she's starting to get it.

Whitney: Yeah, she can't just be like I don't agree with this because it's not part of her religion … she's following Chairman Mao because everyone is doing it and that's what you're supposed to do.

Third discussion cycle: Ji Li, China's Cultural Revolution (p. 49)

While there were clearly other factors at work here (for example, the deliberate use of resources that were difficult to interpret but that told stories that students cared about, the differences between the source documents themselves, and the use of the pre-reading activity [the reading web – see page 119]), the teacher/researcher attributed much of this shift to the practice provided by the seminars.

Providing opportunities for repeated practice supports skills development

Not only does conceptual development benefit from the provision of multiple, aligned learning experiences; so does skills development.

In an early childhood setting, Duke and Kays[223] investigated the impact that regular exposure to non-fiction books had on five-year-olds' understanding of information book language. Because the study focused on developing children's language skills, including in constructing generalisations (timeless verbs), it was particularly significant for social studies teaching. Pre- and post-data concerning 20 children's understanding of non-fiction book language was gathered by asking the children to 'pretend to read' two books. One of the books was a fictional narrative, and the other was a non-fiction book with no words. The intervention that was the subject of this study ran from September to December; over this period, non-fiction books were read aloud three or four times a week, in the same way as fiction books. They were shared together, provided the basis for book-related discussions, were subject to disruptions, and were available at listening-posts and in book boxes. When the children were asked in December to pretend to read another wordless information book (featuring people who work and help in the community), they used markedly more information book language (see the two figures below) even though fictional narratives had also been read over the intervening period.
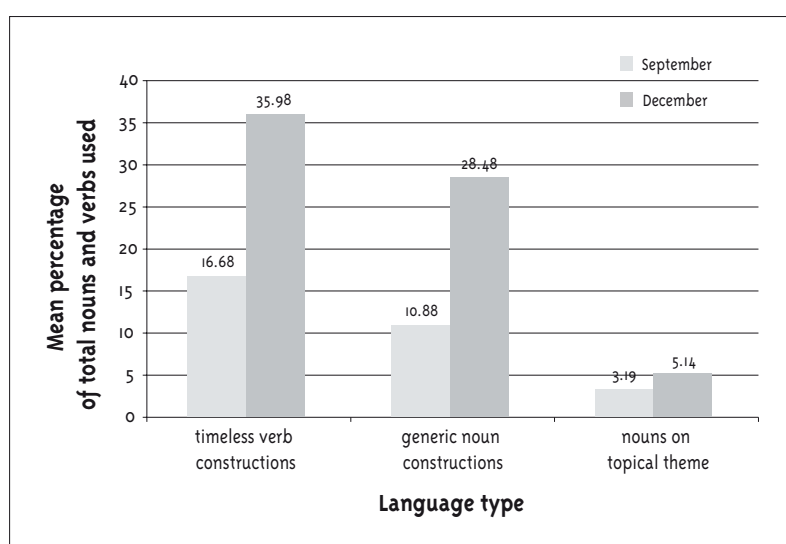
Figure 17: Shifts in percentage of information book language use

Figure 17 shows that children increasingly talked about 'what happens' (timeless verb constructions), instead of 'what happened' and increasingly used generalised language, such as 'operators' (generic noun constructions), instead of 'the operator'; these constructions made it clear how a concept could be related to other contexts, settings, and times.

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223 Duke, N. K. & Kays, J. (1998). "Can I say 'once upon a time'?": Kindergarten children developing knowledge of information book language. *Early Childhood Research Quarterly, 13*(2), pp. 295–318.
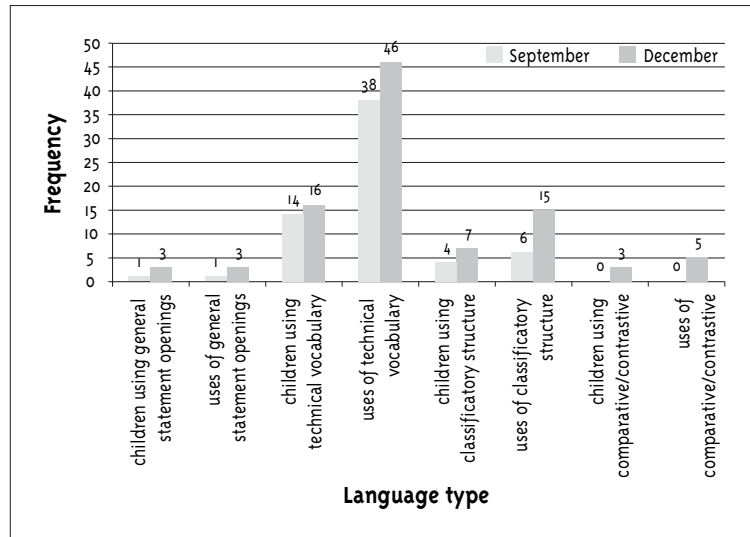
Figure 18: Shifts in frequency of using information book language

Figure 18 shows the increased number of children using, and uses of, generalised statements, such as 'firefighters put out fires and save people' – language that identifies a main idea. The children were also increasingly able to describe, classify, compare, and contrast information.

These shifts in language use meant that the children were able to express their understandings in ways that are consistent with the aims of social studies. To be able to examine and communicate significant ideas about society, students need to be able to express generalisations, summarise important ideas, and classify information about groups of people. They also need to understand social science ideas that are expressed in language of these kinds and to explore the expository texts that are essential to the developing of conceptual ideas.

Duke and Kays[224] suggested that the shifts they found were unlikely to be attributable entirely to maturation and familiarity with the researcher. Given the short period involved, the magnitude of the shifts suggests that the increased engagement with information books was responsible. This hypothesis is supported by the fact that shifts in the children's pretend readings of fictional narratives did not parallel those for non-fiction books.

An intervention designed to develop the communication, conversation, and social interaction skills of a grade 3 student with Pervasive Developmental Disorder (autism/Asperger's syndrome) illustrates the value of repeated opportunities to learn[225]. The student, Terry, was given a folder with pockets containing pictures or symbols of the daily curriculum and special events: one side for morning, the other for afternoon. He learned and rehearsed the meaning of each card – sometimes in a game situation – several times a day, for at least a week. Once it was clear that he understood the cards, the planner was implemented with direct assistance, simultaneously with the class also using their planners. After much repetition of the process, Terry became quicker and more involved in choosing and placing the cards. After two months of use, observers noted that Terry was more comfortable in using the planner, was better organised (for example, getting the appropriate books out), had a clearer sense of class routine, and was off-task less. The researcher concluded that the slow and methodical implementation of the cards and planner was important to the success of the intervention.

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[224] Duke & Kays (1998), op. cit.

[225] Pardo, C. (n.d.). Developing and using a daily organizer to assist an autistic student relieve stress and anxiety related to transition times in the classroom. Retrieved March 2005, from www.oecta.on.ca/pdfs/organizer.pdf

Vine[226] reported an intervention designed to enable Faʻafetai, a five-year-old Sāmoan boy for whom English was a second language, to participate in the classroom community (see Case 5). In each of eight social studies sessions, Faʻafetai's teacher gave the class repeated opportunities to engage in partnering activities, such as peer modelling, sharing ideas with a partner, and discussing a video with a partner. As a result of such opportunities, Faʻafetai made significant strides: in session 1 he had no idea how to be a partner; by session 8 he was initiating partner selection. In this intervention, not only was Faʻafetai given many opportunities to learn, but those opportunities were aligned to goals that related to both curriculum learning and classroom participation. Similarly, a study involving 19 five- to seven-year-olds[227] showed that, after they had participated consistently in a wide range of questioning activities, the number of students able to ask a question when prompted went up from two to fifteen.

As well as highlighting that scaffolds are valuable for aligning student learning processes with instructional intentions, the studies on the impact of PEPTALK[228] and the *Sourcer's Apprentice*[229] (both discussed earlier) also illustrate the value of repeated practice. The PEPTALK strategy was repeatedly modelled over the five-week period of the intervention and repeatedly elaborated and rehearsed by the students, who had multiple opportunities for independent practice as well as completing weekly roadmaps. The *Sourcer's Apprentice* provided multiple, self-paced opportunities for practice.

Reducing coverage enables learners to focus on important ideas and processes

Teachers, and especially social studies teachers, are always working within the constraint of limited time[230]. This constraint, combined with the need to provide students with multiple opportunities to engage, means that the content of new learning must be carefully selected. There is a great deal that is important and that students could learn. What is critical from a pedagogical perspective is to distinguish that which is more important from that which is less so. In other words, alignment not only requires making judgments about importance but also about relative importance. In a concluding comment on his research, Nuthall[231] was clear about his position on this matter: teachers would most enhance student learning in the classroom by selecting the most important ideas and concepts in a learning area and then spending time developing their students' understanding of them. Many others writing in the social studies field have advanced similar arguments. A focus on important ideas will direct the selection of the details and guide judgments about relative importance. As Taba[232] explained:

226 Vine, E. W. (2003). "My partner": A five-year-old Samoan boy learns how to participate in class through interactions with his English-speaking peers. *Linguistics and Education, 14*(1), pp. 99–121.
Alton-Lee, A., Diggins, C., Klenner, L., Vine, E., & Dalton, N. (2001). Teacher management of the learning environment during a social studies discussion in a new-entrant classroom in New Zealand. *The Elementary School Journal, 101*(5), pp. 549–566.

227 Kelley, L. (2006). Learning to question in kindergarten. *Social Studies Research and Practice, 1*(1), pp. 45–54.

228 Katims, D. S. & Harmon, J. M. (2000). Strategic instruction in middle school social studies: Enhancing academic and literacy outcomes for at-risk students. *Intervention in School and Clinic, 35*(5), pp. 280–289.

229 Britt, A. & Aglinskas, C. (2002). Improving students' ability to identify and use source information. *Cognition and Instruction, 20*(4), pp. 485–522.

230 Berliner, D. (1987). "Simple views of effective teaching and a simple theory of classroom instruction". In D. Berliner & B. Rosenshine, *Talks To Teachers*. New York: Random House.
Berliner, D. (1990). "What's all the fuss about instructional time?" Retrieved from http://courses.ed.asu.edu/berliner/readings/fuss/fuss.htm

231 Nuthall, G. (2004, 21 February). Interview with Kim Hill on National Radio.

232 Taba, H. (1962). *Curriculum development: Theory and practice*. New York: Harcourt, Brace and World, Inc.

When content is viewed exclusively as an assemblage of information there is no criterion to distinguish the relevant from the irrelevant material. Hence all facts and information seem to have the same significance. For this reason there always seems to be too much to cover … [however], if the content fields are viewed not as treasures of knowledge to be transmitted but as a way of understanding a limited number of basic ideas, the problem of scope acquires a different meaning. One does not ask, for example, what array of particular … facts could be packed into students, but what basic ideas need to be clearly understood … Only after basic ideas are determined does the question emerge as to what specific facts are necessary … (pp. 186–87).

In a three-year longitudinal study of grade 5 students' knowledge of US government before and after they received traditional text-based instruction, Sinatra et al.[233] noted that "the most striking pattern revealed is one of limited change". Students possessed the "seeds of conceptual understanding", but the researchers saw a need for their teachers to refocus instruction and move beyond the simplistic explanations typical of textbooks to the fundamental ideas, principles, and issues that underlie disciplines such as history and political science.

These comments could give rise to two misunderstandings: one, that it is the teacher alone who decides relative importance and selects the content of new learning, and two, that alignment is unidirectional – from intended purpose to learning experience. First, it is critical that students are actively involved in decisions about their learning. A focus on important ideas does not necessarily imply teacher direction. In fact, such a focus leaves a lot of scope for selecting content to illustrate ideas and for students to derive their own ideas – potentially increasing student control. Second, many teachers do not plan linear paths from intention to experience. This is especially true in early childhood contexts, where teachers typically create the experience and then derive the learning from it. In this case, selection (of the learning experience) is still based on relative importance, as is the derived learning (for the individual child).

> ### *Provide opportunities to revisit concepts and learning processes*
>
> #### *Summary of findings*
>
> - Students need three to five aligned experiences not more than two days apart.
> - Providing multiple learning opportunities supports concept development.
> - Providing opportunities for repeated practice supports skills development.
> - Reducing coverage enables students to focus on important ideas and processes.

4.5 Attend to the learning of individual students

Differing levels of engagement with relevant ideas lead to differences in outcomes for students

Through their detailed recording of students' classroom experiences, the Understanding Learning and Teaching Project researchers have demonstrated the uniqueness of each student's learning. As they explain[234], "although the students in each class were exposed to much the same content and engaged in the same activities and task they learned and failed to learn different outcome test items" (p. 807). The overwhelming conclusion was that prior knowledge and learning are unique to each student, as shown in the following table:

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[233] Sinatra, G. M., Beck, I. L., & McKeown, M. G. (1992). A longitudinal characterization of young students' knowledge of their country's government. *American Educational Research Journal, 29*(3), pp. 633–661.

[234] Nuthall, G. & Alton-Lee, A. (1993). Predicting learning from student experience of teaching: A theory of student knowledge construction in classrooms. *American Educational Research Journal, 30*(4), pp. 799–840.

Table 19: Five students' classroom experience and learning about Mt Erebus[235]

	Opportunities	Jane	Joy	Jim	Paul	Teine
	Individual's choices of activities, task completion, and involvement (engaged with relevant content / disengaged from relevant content)					
	Brainstorm session: students were asked to write down their knowledge of Antarctica and report their ideas to the class.					
	Class talked about people they knew who had been to Antarctica.					
Day 2	Develop questions.	Worked with Joy and prepared a question about mountains.	Worked with Jane but did not prepare a question.			
Day 3	Read a set of articles about women scientists working in Antarctica.	Read an article about a woman scientist.	Read a Mt Erebus article.	Read an article about a woman scientist.		Read an article about a woman scientist.
	Summarise the article.	Member of fragmented group, but focused on producing the summary.		Member of a group supposed to be summarising article, but group fragmented until the end of the time; fooled around and joked about lava. Teacher gave Jim the task of listing interesting facts.		Member of a group supposed to be summarising article, but group fragmented until the end of the time. Wrote a heading and drew a decorative border. Rejoined Jane and others to produce the summary. Read out group's summary to class. Dispute with Jane about who was to control the written summary. Teine gave up and returned to heading, not listening to the rest of the class discussion, which focused on Erebus as an active volcano.
Day 4	Questions to prepare for visiting speakers	Reported liking the view of Erebus.			Read an article about a woman scientist. Responded to Ben's statement: "I was going to ask her that. Nah!"	
Day 5	First visiting speaker, re her work as a youth worker on an Antarctic conservation project. Discussed Mt Erebus and showed a coloured slide.					
	Discussion about most interesting aspects in visiting speaker's talk					Was initially distracted, playing with the microphone, not listening. Rejoined to respond to a question about Erebus being an *active* volcano.

Day 6	Second visiting speaker. Mentioned Mt Erebus.				
Additional activities	Completed additional activities, including Mt Erebus information.			Completed additional activities, including Mt Erebus information.	
Homework mapping task	Completed a blank map of Antarctica for homework. Included mountain symbols and identified Mt Erebus on the map.	Completed a blank map of Antarctica for homework.		Completed a blank map of Antarctica for homework. Included mountain symbols and identified Mt Erebus on the map.	
End of unit — Report about Antarctica learning	No references to Mt Erebus in report	No references to Mt Erebus in report	No references to Mt Erebus in report	Included two references to Erebus in report.	No references to Mt Erebus in report
Frequency of experiences (talking/listening/reading/map/writing) about Erebus being a mountain in Antarctica.	27	16	25	26	19
Aspect of assessment	Pattern of responses to questions				
Placing Mt Erebus on a map	Learned→Forgotten	Not Learned	Not Learned	Learned→Remembered	Not Learned
Writing Mt Erebus' name	Learned→Remembered	Not Learned	Learned→Forgotten	Learned→Forgotten	Learned→Forgotten
Circling Mt Erebus' name	Learned→Remembered	Already Known	Learned→Remembered	Learned→Remembered	Learned→Remembered
Site of air crash	Already Known	Already Known	Learned→Remembered	Already Known	Not Learned
Volcanoes in Antarctica	Already Known	Learned→Remembered	Learned→Remembered	Learned→Remembered	Not Learned
Lava in crater	Learned→Remembered	Learned→Forgotten	Learned→Remembered	Already Known	Already Known
Summary of learning outcomes	Well informed, knew location and included Erebus among significant places in Antarctica.	Well informed, but didn't know Erebus location.	Well informed, included Erebus among significant places in Antarctica but didn't know its location.	Well informed, knew location and included Erebus among significant places in Antarctica.	Learned little about Mt Erebus. Included Erebus among significant places on short-term test but not 12 months later.

Alignment

235 Based on Nuthall (1999), op. cit.

The above table illustrates the uniqueness of students' classroom learning. It details the number, timing, and sequence of the learning experiences of five students doing a unit on Antarctica. The tasks in blue are those in which the individual student engaged with relevant content; those in orange are where the student experienced but did not engage with relevant content. Notable contrasts are the experiences of Jane and Paul, and those of Teine. Each of the students participated on day 2 in an initial brainstorm session and a class talk about people they knew who had been to Antarctica. Each listened to two visiting speakers on days 5 and 6. Jane experienced six other occasions when she engaged with relevant content, and Paul, four other occasions. By contrast, Teine was disengaged from three of the learning experiences, spending her time writing headings, drawing borders, and playing with a microphone. As a consequence, she learned little about Mt Erebus, while Jane and Paul learned and remembered most of what they experienced. These comparisons illustrate that it is not only the alignment of learning experiences and intended outcomes that matters but also the extent to which students actually engage with those experiences – and, where there is disengagement, the gaps that develop between one content-relevant learning experience and the next.

The significance of prior knowledge is also illustrated by the following example. The teacher is speaking to students who are expected to understand who owned the land in England following the Battle of Hastings:

> "Remember when we talked about the feudal system, about the king owning the land and giving some of the land to his loyal barons. The barons couldn't use it all, so they gave some to their knights. Um, these overlords had promised protection of the people who, um, [were] in their care, and the people in their care had to promise they would be loyal to their overlord" (p. 809).

Students would only have been able to connect this information to the expected understanding if they already knew (or found out subsequently) that the teacher was referring to the period after the Battle of Hastings. In the absence of prior knowledge or subsequent learning, the intended learning from this particular experience would have been lost.

Differences in interests, involvement, and background knowledge influence students' engagement

The differing levels of engagement with relevant ideas, which led in turn to differing outcomes, were the product of individual differences in interests, involvement, and background knowledge[236]:

> Students' interests and background knowledge affected which activities they chose, and served to increase or reduce the likelihood that they would learn. Similarly, those with more relevant background knowledge were more likely to choose relevant activities. There was, then, a cumulative affect – "individual differences in students' interests, involvement, and background knowledge determined what they learned, which in turn determined the background knowledge they could use to learn from new experiences (p. 335).

Social and cultural influences were also identified as vital[237]:

> The specific social and cultural position that a student holds within the wider society and within the 'lived culture' of the classroom affects the student's cognitive processing in the following ways. It determines the range and availability of background knowledge and experience the student can use to interpret and elaborate classroom experience. It determines the ways in which a student can share and obtain relevant experience and knowledge within the classroom (p. 39).

The relevance of this to teachers lies in the power they have to connect learning to prior knowledge, to relate content to students' interests, and to promote students' involvement and participation (as well as their engagement with relevant, aligned content) in relevant activities. Teachers support learning by attending to the social and cognitive aspects of the learning process when making teaching decisions. Wilkinson and Anderson (p. 162)[238] acknowledge that this monitoring of individual engagement and learning is demanding in the context of classes of more than 30 students but claim that it is "the only form of assessment that can do justice to the individual differences among students and to the dynamic change process that is learning".

As a consequence of such findings, the ULTP researchers recommend that teachers[239]:

- design tasks that engage students' interest and focus their mind on relevant content (tasks that are both motivating and aligned);
- make connections with the realities of students' lives;
- minimise peripheral activities, such as drawing margins, pasting, and colouring headings;
- constantly monitor pupil involvement and avoid and correct misunderstandings;
- attend to the social interactions that take place in learning experiences, recognising how social dominance, status, ability, and knowledge collectively impact on students' learning about their abilities as well as their learning of the content;
- structure tasks that enable students to think seriously about content for sufficient time.

[236] Nuthall, G. (1999). The way students learn: Acquiring knowledge from an integrated science and social studies unit. *The Elementary School Journal, 99*(4), pp. 303–341.

[237] Alton-Lee, A. & Nuthall, G. (1992). *Students' learning in classrooms: Curricular, instructional and sociocultural processes influencing student interaction with curriculum.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

[238] Wilkinson, I. & Anderson, R. (2007). Teaching for learning: A summary. In G. Nuthall (Ed.), *The hidden lives of learners.* Wellington: NZCER.

[239] Brophy, J. (2006). Graham Nuthall and social constructivist teaching: Research based cautions and qualifications. *Teaching & Teacher Education, 22*, pp. 529–537.

The sequencing of activities can influence student understanding

When researching interventions that involve multiple activities, it is often difficult to establish which of the activities made a difference to student learning and, even more difficult, whether the order in which the activities were completed made a difference. A small number of studies have examined the issue of sequencing.

The Wall and Higgins[240] study investigating the use of speech and thought bubbles to foster metacognitive talk (reported earlier) found not only that these devices were valuable for their scaffolding functions but also that the order in which they were presented made a difference:

> Where learners were not familiar with a vocabulary about learning, it was found that by starting with the speech bubble, the more easily attributable aspects of the learning process, and then moving on to the thought bubble, a 'scaffold' was provided for the children in moving from the concrete to the more abstract aspects of learning. Thus even children less accustomed to talking about their learning could be supported by the structure of the template to begin to engage with and reflect on their learning (p. 50).

In a study that compared different techniques for teaching concepts, Crisman and Mackey[241] found that the sequencing of the instructional approach resulted in some differences in student learning, especially where the concept was more complex. The use of examples was sufficient to develop student understanding of the relatively simple concept 'sovereignty'. But in the case of the more complex relational concept 'comparative advantage', the students were unable to establish its attributes from the examples alone. First, they needed a definition to give meaning to the examples. (Indeed, for this concept, the research found that the students did almost as well without the examples.)

Kourilsky and Wittrock[242] carried out an experimental study to test the hypothesis that teaching economics concepts to high school students, first in a familiar mode, then in a less familiar mode, facilitated learning. Eighty-three students were each assigned to one of three experimental conditions:

1. Verbal–graphical. In this condition, the students discussed the concept of 'demand', its nature and its causes. The teacher then drew graphs and had the students contribute data for a visual construction. The teacher (on the board) and students (on their own paper) created graphs from the data. The students used their graphs to demonstrate the concepts they had discussed. This process was repeated for the concept 'supply'.

2. Graphical–verbal. In this condition, the teacher drew graphs on the board, based on student data. The students copied them.

3. Verbal. In this condition, the students talked about examples of supply and demand in a range of contexts that were relevant to them (superbowl tickets, rock concert tickets) but did not draw graphs.

The researchers found that the students in the verbal–graphical and graphical–verbal conditions both produced better results than those in the verbal condition, but it was the verbal–graphical sequence that produced the greatest understanding.

[240] Wall, K. & Higgins, K. (2006). Facilitating metacognitive talk: A research and learning tool. *International Journal of Research and Method in Education, 29*(1), pp. 39–53.

[241] Crisman, F. & Mackey, J. (1990). A comparison of oral and written techniques of concept instruction. *Theory and Research in Social Education, 18*(2), pp. 139–155.

[242] Kourilsky, M. & Wittrock, M. C. (1987). Verbal and graphical strategies in the teaching of Economics. *Teaching & Teacher Education, 3*(1), pp. 1–12.

Alton-Lee and Nuthall[243] suggest that there may be benefit in offering students field experiences early in the course of a unit rather than (as is traditional) at the end. In this way, they argue, all students are better able to access the experience and to subsequently engage with the related content.

Sequencing whole-class discussions before small-group or individual work can help students access necessary content

In an ethnographic study involving two teachers who were committed to reducing educational inequalities and breaking down social and racial divisions in their grade 9 classrooms through the use of small-group work, Rubin[244] found that this pedagogy actually worked against the teachers' intentions. In particular, she observed the pervasive power of peer interactions and the failure of the small-group approach to address the academic gap between high- and low-status students. She attributed this not to a failure to implement the pedagogy (it was, in her words, "faithfully applied") but to the inappropriateness of groupwork as a dominant pedagogy. It "failed to provide the concrete instructional support that struggling students needed to meet the higher academic expectations of the detracked (destreamed) classroom" (p. 567). The researcher observed that these students "need more than their peers to raise their academic skills. Indeed it does not seem realistic to expect that students in small groups will put their peers' learning above their own desires for a good product or a good grade" (p. 568). Nuthall[245] likewise observed the self-fulfilling nature of this problem:

> Students who, for reasons of cultural and ethnic difference, may have difficulty participating in a learning activity, not only fail to acquire the knowledge they need to understand and acquire further knowledge; they 'learn' that their ability to acquire knowledge is inferior. In this way differential participation in classroom activities becomes the basis for acquired differences in memory and learning processes (p. 133).

Drawing on the experience of a cluster of studies in New Zealand classrooms, Alton-Lee and Nuthall[246] discussed how student access to meaning may be inhibited by an over-reliance on group (and individual) work. They draw attention to the role that skilful, whole-class teaching can play in addressing 'critical points of vulnerability' in the learning process. Teachers need, for example, to draw explicit attention to what counts as a resource (and what, therefore, contributes relevant information) as well as alerting students to the value of sharing each other's resources. This is especially important for disabusing them of the notion that learning is 'magical', and, therefore, out of their reach. This brief exchange illustrates the point:

> Teine: How come you know so much?
>
> Ben: Oh I read a lot of books (p. 13).

Ben's reply, later reinforced by the loan of one of his books, alerts Teine to the possibility that the resource – and the learning – is also available to her.

Rubin[247] describes how Tiffany, an African American student, missed out on reading and writing opportunities because she was assigned by her group to a drawing role. Alton-Lee and Nuthall[248] also explain the vulnerability of students if they do not have access to

[243] Alton-Lee, A. & Nuthall, G. (1998). *Inclusive instructional design: Theoretical principles emerging from the Understanding Learning and Teaching Project.* Wellington: Ministry of Education.

[244] Rubin, B. (2003). Unpacking detracking: When progressive pedagogy meets students' social worlds. *American Educational Research Journal, 40*(2), p. 539.

[245] Nuthall, G. (2000). The role of memory in the acquisition and retention of knowledge in science and social studies units. *Cognition and Instruction, 18*(1), pp. 83–139.

[246] Alton-Lee & Nuthall (1998), op. cit.

[247] Rubin (2003), op. cit.

[248] Alton-Lee & Nuthall (1998), op. cit.

Alignment

resources that put high literacy demands on them. Allocating 'simpler', non-literacy tasks to these students deprives them of the opportunity to benefit from the content of resources that are available to their more literate peers. The teacher, therefore, has a crucial role to play in whole-class discussion and planning (for example, by using listening posts and inviting guest speakers) to ensure that such students can access the content of literary resources. A loss of such opportunities is critical because the cumulative nature of learning means that a student's understanding of a particular experience is directly informed by learning from the previous and prior experiences. Whole-class contexts, therefore, "not only provide access to curricular content ... they also provide the critical phase of task instruction to equip students to understand and manage their individual and small-group tasks" (p. 22).

Attend to the learning of individual students

Summary of findings

- Differing levels of engagement with relevant ideas lead to differences in outcomes for students.
- Differences in interests, involvement, and background knowledge influence students' engagement.
- The sequence in which different activity types occur can influence what students learn from each activity.

5. Community (Mechanism 3)
Build and sustain a learning community
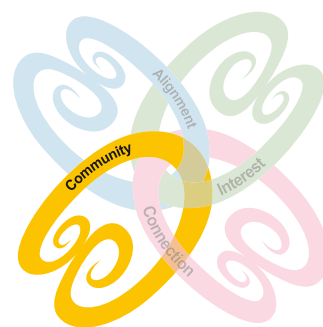
5.1   Why building and sustaining a learning community matters

Chris, a grade 9 history student, describes his experience of a discussion:

> "The observations and insights of others showed me points I had not thought about before. For example, the questions about religion: Were her beliefs the causes of lots of grief? Or the question that Jordan asked about if the children were the cause of her grief. These things made me think about what Irina had been going through, and how hard it would have been to be her. How I would have thought or felt in her shoes. Also it revealed a lot of information I hadn't really noticed before" (p. 48)[249].

Chris's comments capture the essence of this mechanism: Jordan was learning (by finding an answer to the question she raised), but Chris *was also learning through Jordan's question* because it raised something new that required his consideration. In learning communities, students learn with and from each other – through discussion, the co-construction of ideas, and the sharing of responsibility and power (p. 36)[250]. Learning communities are not be confused with social interaction. As Reitveld[251] explains, learning communities are not "just nice fuzzy stuff about all being happily social together", they are about intertwining cognitive and social learning through including students in "a facilitative, authentic way". This mechanism has particular significance in the social sciences because it explains learning at the same times as it is a valued outcome of learning.

Peterson[252] sees the pervasive influence of learning communities as an explanation of learning, arguing that:

> Community in itself is more important to learning than any method or technique. When community exists, learning is strengthened – everyone is smarter, more ambitious, and productive. Well-formed ideas and intentions amount to little without a community to bring them to life (p. 2).

The particular importance of learning communities in the social sciences is a reflection of the domain's commitment to the rights of children and young people. Shier[253], mindful of the priority that the United Nations Convention on the Rights of the Child gives to the participation of children, argues for their participation at five levels. These levels mirror the characteristics of learning communities: children are listened to, are supported in expressing their views, have their views taken into account, are involved in decision-making processes, and share power and responsibility for decision making. *The New Zealand Curriculum*[254] states that the social sciences learning area is about "how people can participate as critical, active, informed,

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[249] Kohlmeier, J. (2006). "Couldn't she just leave?": The relationship between consistently using class discussions and the development of historical empathy in a 9th grade world history course. *Theory and Research in Social Education, 34*(1), pp. 34–57.

[250] Scardamalia, M. & Bereiter, C. (1996). Student communities for the advancement of knowledge. *Communications of the ACM, 39*(4), pp. 36–37.

[251] Rietveld, C. (Personal communication, 12 October, 2005).

[252] Peterson, R. (1992). *Life in a crowded place: Making a learning community.* Portsmouth, NH: Heinemann.

[253] Shier, H. (2001). Pathways to participation: Openings, opportunities and obligations. *Children and Society, 15*, pp. 107–117.

[254] Ministry of Education (2007). *The New Zealand Curriculum.* Wellington: Learning Media.

and responsible citizens". It goes on to explain that through the social sciences, students will "develop the knowledge and skills to enable them to: better understand, participate in, and contribute to the local, national, and global communities in which they live and work" (p. 30). This participatory, community focus is even more strongly reflected in Te Whāriki[255], the early childhood curriculum. As Smith[256] explains,

> *Te Whāriki* … is conceived of as communicative interactions amongst teachers and students. Instead of being oriented toward instilling specific skills in children, *Te Whāriki* encourages children's autonomy, exploration, commitment and aspirations through relationships with people, places and things (p. 9).

Considering these aspirations, we see that this third mechanism not only contributes to our understanding of pedagogy–outcomes connections in the social sciences but also simultaneously reinforces those valued social science outcomes that relate to understanding of, and participation in, communities.

Learning communities do not develop naturally. Peer interaction is an inescapable element of classroom life. As the ULTP researchers have consistently observed, students learn with and from each other, sometimes in ways intended by the teacher and sometimes not. In reviewing the learning of the five case study students in a unit on Antarctica, Nuthall[257] found that 7–27% of the concepts that the students learned were learned through spontaneous peer talk (p. 87). He also found that while peer relationships helped some students learn, such relationships could also be characterised by put-downs and uneven access to information. So, while peer interaction is inevitable, it is not necessarily in the nature of a learning community. Learning communities capitalise on peer interaction in productive ways and do not exclude any individuals (including the teacher) from collaborative participation.

This chapter reports evidence from the social sciences domain relating to:

- the importance of building productive relationships with and between learners as a prerequisite for learning;
- the promotion of dialogue as a means of learning with and from each;
- the sharing of power as a means of shifting the balance of responsibility for learning from the teacher (as the sole source of knowledge and authority) to the learners themselves.

So what should I do?

- Establish productive teacher–student relationships.
- Promote dialogue.
- Share power with students.

[255] Ministry of Education (1996). *Te Whāriki: He whāriki mātauranga mō ngā mokopuna o Aotearoa / Early childhood curriculum.* Wellington: Learning Media.

[256] Smith, A. (2005). *Children and young people's participation rights in education.* Paper presented at the New Zealand Association for Research in Education, Dunedin.

[257] Nuthall, G. (2007). *The hidden lives of learners.* Wellington: NZCER.

5.2 Establish productive teacher–student relationships

Productive teacher–student relationships are those that result in mutually positive outcomes. These outcomes may be:

- motivational, establishing a basis for learning (students *want* to learn);
- affective, establishing a community context for learning (students gain a sense of affiliation, belonging, and inclusion);
- cognitive, establishing norms for learning;
- participatory, establishing learners as active participants in a community.

Building respectful relationships with students establishes a basis for learning

Sewell[258] draws on the example of Rhys, a teacher of year 3 and 4 students, and explains how the closer connections he sought to make with his students had both affective and participatory benefits (see Case 6). At the beginning of this study, Rhys felt that his role was to transmit information and the students' role was to receive it. He made all the important decisions about learning. There were no specific opportunities for the students to raise emotional issues, and Rhys sat apart from them. By the end of the year, this teacher had established much closer working relationships with his students. These relationships were characterised by:

- stronger cognitive connections (for example, responding to ideas in ways that generated new understandings);
- stronger social connections (for example, sharing responsibility for learning decisions);
- stronger emotional connections (for example, allowing the students to know something about other roles in his life and being open and honest about the emotions involved);
- spatial connections (for example, sitting with the students, at their level).

The students noticed these changes and regarded them positively. They began to feel more comfortable with Rhys and viewed him as less of an authority figure:

Era:	Well, it just feels like he is not the head any more.
Ikani:	It feels like he is one of us … we feel comfortable.
Sakura:	He cares about us when we are sick or we done wrong.
Caleb:	When he sits down with us …
Era:	… we are the feet and he is the ankle.
Caleb:	It's like he's more part of the class.

Hill and Hawk's[259] study of 89 teachers in low-decile, multicultural schools provides evidence, from secondary school contexts, that relationships are significant for learning. Following lesson observations in a broad range of year 7–13 subjects (including social science subjects) as well as interviews with teachers and discussions with students, Hill and Hawk concluded:

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[258] Sewell, A. (2006a). *Teachers and children learning together: Developing a community of learners in a primary classroom.* Draft doctoral thesis, Massey University, Palmerston North.

[259] Hill, J. & Hawk, K. (2000). Making a difference in the classroom: Effective teaching practice in low decile, multicultural schools. Retrieved May, 2005, from www.minedu.govt.nz/index.dfm?layout=document&documentid=6135&data=l

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The relationship that students in these schools form with their teachers is crucial. While the *relationship that forms between a student and a teacher* in any school is important, the data in this study show that it is not only important to these students but is a *prerequisite for learning*. If a teacher has not been able to form a positive relationship of reciprocal respect the students in that class will find it very, very difficult to be motivated to learn (p. 7).

They noted that such relationships were especially important in low-decile schools:

It is our opinion, from work we have done in a wide range of school types, that students in higher-decile schools will generally learn from teachers they don't like and are likely to achieve regardless of the relationships they have with their teachers. In contrast, the students in this sample described how critical it is for their motivation, to work with a teacher with whom they have established a special relationship (p. 27).

Students in the aforementioned Sewell study captured this idea:

Sakura: If you don't know people you can't really cooperate with them.

Caleb: You have to know a teacher real well to learn … (p. 119)

Just as the students in Sewell's study responded positively to this greater sense of connection with their teacher, the students in Hawk and Hill's study appreciated their teacher putting them on the same level as himself:

"He communicates well. He talks like us and makes it easy for us to know he respects us. He laughs with us and teases us like we tease him" (student, p. 28).

"I tell them about me first, before I expect them to open up to me. I start with myself, my husband and children. I talk about my interests outside of school. They are very impressed at my frankness. Otherwise, why should I expect them to be?" (teacher, p. 30).

"At the beginning of the year, she told us about her life and her family. We ask her about herself and she tells us about her holidays and weekends" (student, p. 30).

One teacher was observed saying to a class:

"I want to apologise for yesterday's lesson because I did it the wrong way around. Some of you have talked to me about it. So today I need you to be patient with me this period while we sort it out" (p. 28).

The researchers commented, "Such behaviours make the teacher vulnerable and human, and students can relate to those positions. It makes the teacher a person of equal worth and gives students personal worth and confidence" (p. 30).

Students in the Hawk and Hill study commented on relationships in personal and human terms – and on the preparedness of teachers to be patient and to persist, and they spoke about the impact that this had on their effort and motivation:

> "He (the teacher) says I *can* do it and he will keep waiting until I do. I know I have to keep on trying even when I don't feel like it" (student, p. 32).

> "When I know she has done all that work for us, I want to work hard for her" (student, p. 34).

> "He really cares about us and does lots of extra things for us. He's the man" (student, p. 34).

The importance of establishing emotional connections with students as a basis for learning is consistent with the findings from Wendt Samu's[260] and Silipa's[261] work with Pacific Islands students. Wendt Samu sought to understand more about the underachievement of Pacific Islands students. Like the students in the Hawk and Hill study, those in her study spoke of the value they placed on the teacher–student relationship:

> "We prefer the teachers that can 'relate to you'."

> "[The good teachers were those that] mingled with us, they wanted to know us outside the classrooms."

Wendt Samu emphasised that students need to know that their teachers are sincerely interested in them and have an understanding of who they are. This means, she says, "making use of instructional language that does not make students feel incompetent about their own abilities" (p. 18).

Silipa likewise drew attention to the value of strong teacher–student relationships and of opportunities for students to hear from teachers about their own lives:

> "Man! Sometimes the teacher shares with us her own story about her family and where they spent Christmas or the weekend and stuff like that. It kinda makes you feel confident to share your own story and stuff. Cus, it's like saying your story aloud before writing it down. Doing this in a group is choice, better than saying it in front of the whole class. The teacher is just choice. (Ata, year 11)

In a study of storytelling practices, Rex et al.[262] cite a teacher comment to illustrate the reciprocal effects of sharing:

> "When I am willing to share things that have happened to me in my life, my students begin to share as well. I know that this approach is working when even the most quiet and reticent students begin to speak up. Some students will not share, and they know that's okay in our class …" (p. 788).

That final caveat is important. As Nuthall[263] suggests, teachers need to consider the importance of protecting the rights of students who do not want to share:

> Getting closer to students and their hidden peer culture raises ethical as well as teaching concerns. Elementary teachers who stay with the same class of students through most of the school day are in a much better position to understand the peer culture than are high

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[260] Wendt Samu, T. (1995). *An accidentally ethnographic exploration of a Pacific Island liaison role, and Pacific Islands underachievement in an Auckland suburban secondary school.* Unpublished masters course project report.

[261] Silipa, S. R. (2004). *Nurturing coolness and dignity in Samoan students' secondary school learning in Aotearoa/ New Zealand.* Unpublished doctoral thesis. University of Canterbury, Christchurch.

[262] Rex, L. A., Murnen, T. J., Hobbs, J., & McEachen, D. (2002). Teachers' pedagogical stories and the shaping of classroom participation: "The dancer" and "Graveyard shift at the 7–11". *American Educational Research Journal, 39*(3), pp. 765–796.

[263] Nuthall, G. (2007). *The hidden lives of learners.* Wellington: NZCER.

school teachers who work with several classes in any one school day. But how far should the elementary teacher go? Students surely have a right to self-protection, which includes the right to an alternative culture within which they are safe from the teacher (p. 106).

An extensive long-term study of Māori student achievement reinforces the significance of relationship-building. The researchers on Te Kotahitanga research project[264] spoke with 70 Māori students in years 9 and 10 about what it was like to be Māori in a mainstream secondary school. Half the students were identified by their school as 'engaged'; the other half, 'not engaged'. The researchers also interviewed whānau, principals, and a cross-section of 80 teachers about their experience of assisting in the education of Māori students. One of the important findings of the study was that there was a marked difference between student and teacher explanations of achievement. Students and teachers were asked to pinpoint what hindered and what promoted educational achievement (p. 1). Responses were classified according to whether they attributed achievement to the students and the home (i.e., the student), to teacher–student relationships, or to structural issues within and beyond the school. Figures 19 and 20 show that while teachers attributed achievement (or lack of it) primarily to the child or their family/whānau, the students attributed it primarily to the teacher–student relationship.
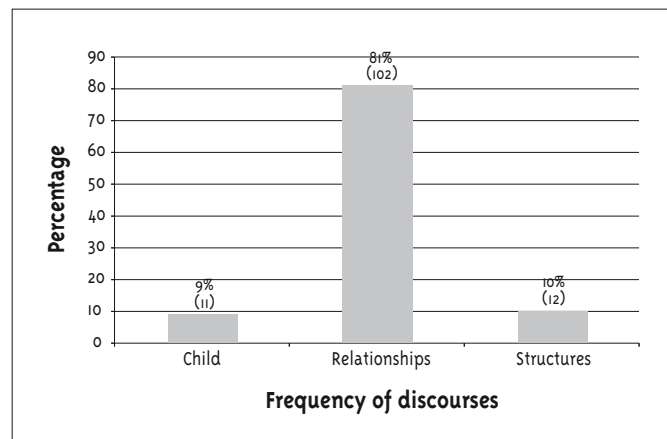
Figure 19: Influences on Māori achievement as identified in students' discourses[265]

[264] Bishop, R., Berryman, M., Cavanagh, T., Teddy, L., Clapham, S., & Walker, R. (2006). *Te Kotahitanga. Whanaungatanga: Addressing the problem of improving Māori student achievement.* Paper presented at the Annual Meeting of the New Zealand Association for Research in Education.

[265] Bishop, R., Berryman, M., Tiakiwai, S., & Richardson, C. (2003). *Te Kotahitanga: The experiences of year 9 and 10 Māori students in mainstream classrooms.* Wellington: Ministry of Education (p. 44).
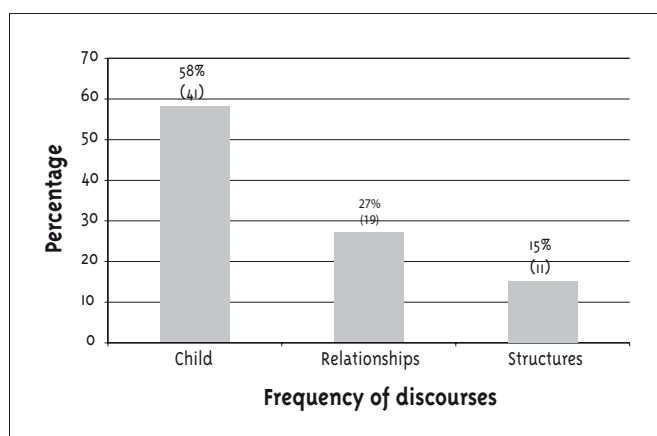
Figure 20: Influences on Māori achievement as identified in teachers' discourses[266]

The researchers noted that the majority of students did not blame teachers or absolve themselves; "rather they saw that problems and solutions lay between people, in the way that they and their teachers related and interacted" (p. 44). The following comments capture the essence of good teacher–student interaction, according to one student. They sound remarkably similar to the student comments already quoted from the Hawk and Hill study:

> "Have a smile on your face. Look pleased to see us. Treat us respectfully. Look like you want to be here. Say 'hi' to us as we come in. Have a joke with us. Don't bawl us out. If you don't like something we're doing, tell us quietly.
>
> Just 'cause we're a C class don't expect us to be dumb. We might be there because we were naughty at Intermediate. Don't have us writing all the time and being quiet. Let us talk quietly to each other about what we're doing. We know we have to be quiet sometimes – like tests.
>
> Give us fun things to do like quizzes in groups, discussions, debates, art activities, practical maths, solving problems in groups with things like Lego. We won't nick [steal] it if you don't think we will.
>
> Be keen about your subject so we want to come. Loosen up. We are all on the same planet. Let us cooperate about the work. Yeah we have good ideas, good, sensible ideas about how to do things. Just ask us. Mark our work often. Tell us when we're doing good. Better still, tell our family.
>
> They have gotta want to be with us and they have gotta be enthusiastic and they've gotta be not boring and they've gotta talk with us about the stuff in the lesson – like what we already know or how we might have a go at things" (pp. 240–241)[267].

On the basis of their interviews with students, whānau, principals, and teachers, the researchers developed an 'Effective Teaching Profile' that consisted of six dimensions; caring and relationships figure prominently:

1. Manaakitanga: teachers care for the students as culturally located human beings.
2. Mana motuhake: teachers care for the performance of students.
3. Ngā whakapiringatanga: teachers create a secure, well-managed learning environment.
4. Wānanga: teachers engage in effective teaching interactions.

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[266] ibid., p. 81.
[267] ibid.

5. Ako: teachers use strategies to promote change.

6. Kotahitanga: student outcomes inform teachers' and students' critical reflection.

This profile formed the basis of teacher professional development. The achievement of students in the classes of teachers who had completed the professional development (target classes) was compared with the achievement of students in the other classes. While achievement improved in only 6 of the 10 target classes, the data from the one school for which it was possible to compare the same students in both target and non-target classrooms showed that the students did not make comparable gains in their non-target classes. Table 20 contains social studies-specific achievement data for one class in school 3. It shows that while the achievement of Māori in the target class was slightly below that of non-Māori, Māori did achieve better than non-Māori on the module 2 test, and they achieved better than non-Māori from other similar-band classes. While it would be unwise to presume the extent, these results suggest that greater teacher care and better relationships helped raise social studies achievement for Māori (and for non-Māori). Findings from other contexts reinforce the likelihood that this is the case. Improved relationships have been shown, for example, to improve boys' educational outcomes[268] and the transition from Sāmoan early-childhood immersion settings to primary school[269].

Table 20: Sample of year 9 social studies scores across the school

Target class				
	Module 1		Module 2	
	Classwork	Test	Classwork	Test
Māori students	63	60	58	54
Non-Māori students	68	61	66	50

Two non-target, similar-band classes				
	Module 1		Module 2	
	Classwork	Test	Classwork	Test
Class 1 (non-Māori students)	61	56	60	46
Class 2 (non-Māori students)	62	34	61	46

(pp. 240–241)[270]

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[268] Keddie, A. (2004). Research with young children: The use of an affinity group approach to explore the social dynamics of peer culture. *British Journal of Sociology of Education, 25*(1), p. 35.

[269] Airini (2004). What helps effective transition in early childhood education: Perceptions of good practice in Samoan ECE. In V. N. Podmore (Ed.), *Progress and milestone report to the Ministry of Education* (pp. 1–17). Wellington: Ministry of Education.
Podmore, V. N. (2005). *Further update report on action research at the Aʻoga Faʻa Samoa: Progress report for the Ministry of Education.* Wellington: Aʻoga Faʻa Samoa.

[270] Bishop, R., Berryman, M., Tiakiwai, S., & Richardson, C. (2003). *Te Kotahitanga: The experiences of year 9 and 10 Māori students in mainstream classrooms.* Wellington: Ministry of Education.

Building respectful relationships with students helps create a sense of community

Respectful relationships are not only important for the influence they have on motivation; they are also vital for creating a sense of affiliation and belonging – to the class and the school community. This outcome is particularly important in the social sciences, where community needs not only to be experienced but also to be understood. Sewell[271], for example, reported that while the shift in relationship between Rhys and his learners was a positive outcome in itself, it also supported the children in their social studies learning about the roles and responsibilities that people have in communities. As a consequence of the changes that Rhys made to his practice, the classroom became a context in which his students could learn what it meant to belong to and participate in a community. Sewell reported on four focus students who showed by their talk and their actions that they had greater understanding of the concept of 'community'.

Class climate

Byer[272] asked 185 grade 8 US social studies students to respond to 20 statements in a 'classroom climate' questionnaire. The first 10 statements related to classroom involvement; the remainder, to classroom affiliation. The questionnaire asked, for example:

- how often students daydream, clockwatch, pay attention (indicators of involvement);
- how many students take part, doodle, are only half-awake, do extra work (indicators of involvement);
- to what extent students enjoy the class, get to know each other, show interest in each other, form friendships, help each other with homework, not get along (indicators of affiliation);
- how easy it is for students to get a group together (indicator of affiliation).

Self-concept was assessed by asking students to respond to the following statements, using a six-point continuum:

1. Compared to others my age I am good at social studies.
2. I get good marks in social studies.
3. Work in social studies is easy for me.
4. I'm hopeless when it comes to social studies.
5. I learn things quickly in social studies.

Byers found a statistically positive relationship between classroom climate (based on student perceptions of involvement and affiliation) and academic self-concept in social studies. The researchers recommend that teachers use the same or similar tools in their own classrooms, noting the items for which their students have a poor perception, discussing ideas for improvement with students, and intervening to improve perceptions.

In a study of English classrooms in three New Zealand schools, Anderson et al.[273] found that classroom climate was significantly related to participation, engagement, and task completion. They reported that "classrooms high in levels of affiliation are also higher on all levels of motivated behaviour used in this study: teacher-reported levels of participation in class, self-reported engagement and task completion" (p. 220). They also noted that the effects associated

[271] Sewell, A. (2006b). *Teachers and children learning together: Developing a community of learners in a primary classroom.* Unpublished doctoral thesis, Massey University, Palmerson North.

[272] Byer, J. L. (2000). Measuring the positive effects of students' perceptions of classroom social climate on academic self-concept. *Journal of Social Studies Research, 24*(1), pp. 25–34.

[273] Anderson, A., Hamilton, R., & Hattie, J. (2004). Classroom climate and motivated behaviour in secondary schools. *Learning Environments Research, 7*.

with affiliation were not confined to particular students but applied to all students, regardless of gender.

A valuable strategy for developing affiliation is described in Sewell's study[274]. The strategy, 'What's on top?', was a daily ritual for Rhys and his students. It began with Rhys saying, 'Let's catch up on each other':

> [Rhys] sat with the children in a circle on the mat. A child … began talking about an event or issue beyond the classroom. Going round in the circle, each child had the opportunity to share something that was on their mind without the use of visual aids. This became a safe space in the classroom for each child to be vulnerable and to talk from the heart, with Rhys just another member of the group. Even if they chose not to contribute, non-verbal joint participation was happening, both in their presence in the circle, and through their gesturing and body language … they shared slices of their lives, such as a sibling starting school, being punished, playing netball, Mum yelling, Dad drinking or Nanna crying … It is not show and tell, nor is it time to show off, tell tales or tune out … it was a genuine and honest sharing of their minds and hearts in their responses to tragedy, to joy or to mundane events.

> … Rhys regarded What's on Top as a way to bridge the gap between home and school, to bring outside issues into the classroom and to "create spaces to validate feelings, park issues and feel safe [so they] can move on ready to learn". He also saw What's on Top as a way to value the individual and to build a sense of belonging to the group: "they connect with me and I connect with them". What's on Top also enabled Rhys to show himself as someone other than a teacher, and by so doing validated the act of sharing, caring and trusting.

This strategy helped students get to know each other and understand each other's cultural knowledge and out-of-school lives – prerequisites to developing the emotional connections required for shared participation in a learning community. It had a marked impact, not only on the students' academic self-concepts but also on their involvement and on their achievement of social studies objectives.

Huber et al[275] describes another storytelling strategy with a similar purpose. This time, researchers participated with teacher-researchers in two classrooms. These teachers made regular use of 'peace candle gatherings' to create a curriculum of diversity. During peace candle times, students and teachers would gather around a candle and tell family stories, language stories, and stories about relationships. The objective was to strengthen connections between class members and to make visible who they were. The peace candle time allowed for all the participants' stories to be connected; it created a space for the students to talk about issues that were relevant to them and about issues and experiences at school. These times offered "a curriculum of diversity between and among ourselves and diverse children and families and helped us to see moments of bumping up among the dominant stories of school and the diverse stories we and children were living, telling, retelling, and reliving" (p. 347).

The following is an excerpt from a letter from a researcher to one of the teachers. It suggests the nature of the peace candle gatherings and the role they had in connecting children's classroom experience to their wider social and cultural selves.

> "I loved being part of the peace candle conversation this morning … I felt a strong sense of 'knowing one another' and of 'connections' as our conversation unfolded … Even for those children who were just coming to the conversation this morning, many shared stories of themselves … I wonder what Azim experienced when you responded to his stories by letting him know that you knew of his Kokoom [Cree word for Grandmother] and of the significance

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[274] Sewell, A. (2006b), op. cit.

[275] Huber, J., Murphy, M. S., & Clandinin, J. (2003). Creating communities of cultural imagination: Negotiating a curriculum of diversity. *Curriculum Inquiry, 33*(4), pp. 343–360.

of the place he and his larger family continue to return to … Karen, did you see Tommy when you shared your story about getting engaged! He seemed excited about your news but at the same time, he also seemed as though you had just told them a secret … like something highly confidential … There is something profoundly amazing that happens in peace candle spaces … a different kind of knowing that emerges and is shaped in these spaces than the knowledge our mandated curriculum documents are built around" (p. 348).

This teacher had an impact on her students by sharing personal plans during peace candle gatherings, just as Rhys strengthened trust and relationships in his classroom by openly sharing stories from his life. Although a favourite time of day for students, peace candle sessions were not without their tensions. The teacher was conscious of the complexity of negotiating meaning in these settings: "Children became passionate about the conversation, they could barely wait for their turn, they interrupted each other, they got mad when the time was over. Emotions ran high" (p. 354). Nevertheless, these gatherings created a space for attending to the diverse stories of both students and teacher.

In a longitudinal study of 111 children in kōhanga reo and kura kaupapa Māori, Cooper et al. (p. 149)[276] observed the impact that a sense of community (that is, a sense of engagement and reciprocal relationships) had on their performance on a tikanga-related task. The children were asked to define or explain terms relating to specific practices on the marae, or abstract concepts such as 'tapu', 'tikanga', and 'kawa'. They were also asked to suggest correct practices, and things to be careful about, in the context of pōwhiri. Their responses were analysed, together with data about the language opportunities provided by the kura. They found that children in one of the three age groups studied (the 8–8.5-year olds, or taiohi) were "more likely to perform at or above the median [for the tikanga task] if they reported that they sometimes or always had relatives visit at home; they always enjoyed themselves at kura; they always got all the help they need at kura; the kaiako judged that they had a reasonable understanding of Māori; and their kaiako was fluent in Māori" (p. 149). While the latter two factors are less directly related to the establishment of community, this comment generally reinforces the significance of whānau – and enjoying being part of the school community.

Inclusive relationships increase the involvement of diverse students

As the peace candle strategy illustrates, diversity needs to be valued if all students are to feel accepted and supported. An inclusive community treats its members equally and values diversity of colour, gender, socio-economic status, religion, capability, sexual orientation, ethnicity, culture, and looks[277].

Rietveld (p. 5)[278] contrasted the experiences of different learners with Down syndrome and highlighted how the model of disability that informed their teachers' pedagogical approach impacted on them. Where pedagogy was underpinned by a social constructivist model of disability, teachers treated all students as of equal status, relationships were reciprocal, and children engaged in the full range of roles pertinent to the setting. This model of 'facilitative inclusion' resulted in the Down syndrome students gaining culturally valued social skills. Peers treated diversity with respect, and Down syndrome students participated more fully in wider social contexts (for example, were invited to visit friends after school and were chosen by peers for particular activities). In classrooms characterised by facilitative inclusion, there were positive outcomes for all those in the class. In other instances, (typically well-intentioned)

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[276] Cooper, G., Arago-Kemp, V., Wylie, C., & Hodgen, E. (2004). *Te rerenga a te pirere: A longitudinal study of kōhanga reo and kura kaupapa Māori students*. Purongo tuatahi phase 1 report. Wellington: New Zealand Council for Educational Research.

[277] Bevan-Brown, J. (2006). Beyond policy and good intentions. *International Journal of Inclusive Education, 10*(2–3), pp. 221–234.

[278] Rietveld, C. (2003). *Parents, preschools/schools and professional: Impact of relationships on children's inclusion.* Paper presented at the Child and Family Policy Conference, Dunedin.

teachers and support people followed pedagogical approaches that were underpinned by deficit or medical models of disability or by views that positioned disability as 'personal tragedy'. As a consequence, Down syndrome students experienced either exclusion or illusory inclusion:

Table 21: Students with disabilities — exclusion vs inclusion

Exclusion	Ineffective or illusory inclusion	Facilitative inclusion
Student is actively excluded. Student is passively excluded/ignored. Student is teased.	Student assigned to inferior roles, such as baby, pet, subordinate, or object. Student included so that they can be induced to take risks for the benefit of the group (for example, steal something). Student engages only in a narrow range of roles (for example, in polite interchanges, with an occasional playmate). (Note: the above three types of ineffective/illusory inclusion were the most common of eight types observed.)	Student participates in equal-status, reciprocal relationships. Student engages in the full range of roles pertinent for that setting (from politeness to friendships).

(p. 5)[279]

See Case 1, based on five-year-old Ian, one of the learners in Rietveld's research. This case highlights how social and cognitive learning are intertwined, and the interplay between biological and contextual factors.

De Groot Kim's research[280] reveals how practices intended to support the inclusion of children with special needs may in fact limit their opportunities to engage with their peers in ways that support their learning. The author described Kevin, a three-year-old boy with motor difficulties, who required the help of a walker or adults when moving from one place to another. He was assigned an assistant, Katie, who was with him for all but the last half-hour of each of his sessions at the early childhood centre. For five months, de Groot Kim made weekly observations of Kevin. The first 18 observations were made in the mornings, and during these times, he was not seen to engage with other children in meaningful ways. When Katie was with him, he communicated almost exclusively with her. It was a comment from the teacher that "Kevin's like a totally different child" when Katie wasn't present (p. 165) that prompted the researcher to do afternoon observations. What she saw at these times was a three-year-old initiating social play with other children. When he said that he had to "get to the market", he was supported by the teacher to get to the play area and then left with the other children. Kevin joined in play based around the themes of shopping, cooking dinner, and going to bed. In the play area – unlike at table activities where he was constantly 'supported' by Katie – Ken and the other children were able to "create elaborate, meaningful, pretend play themes with others, communicate verbally and nonverbally, negotiate and reconcile differences of opinions, and as a result develop social competence, including the development of friendships" (p. 167). The dramatic play area provided Kevin with a context in which he, too, could bring his own representations of social and cultural experiences. The study reveals how 'support' can actually constrain access to learning opportunities in which those with special needs could communicate meaningfully with peers.

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[279] ibid.

[280] de Groot Kim, S. (2005). Kevin: "I gotta get to the market": The development of peer relationships in inclusive early childhood settings. *Early Childhood Education Journal, 33*(3), pp. 163–169.

While de Groot Kim's study warns about the potential for support to have negative impacts, it is not support per se that is the problem. Schuler[281] explains, for example, how adult-facilitated dramatic peer play supported a nine-year-old girl with autism to meet the social norms of her peer group and how this led in turn to a breakthrough in terms of her symbolic behaviours and language development. What is significant is the inclusivity of the support. Causton-Theoharis and Malmgren[282] examined the impact of a training programme aimed at strengthening the inclusive practices of paraprofessionals working in classrooms with severely disabled students. They found that changing the nature of the support offered had a positive impact on the students' interactions with their peers and on their participation in the classroom community.

Like de Groot Kim and Rietveld, Causton-Theoharis and Malmgren observed that, despite their best intentions, paraprofessionals can unwittingly exacerbate the social isolation typically experienced by students with special needs. They developed a training programme designed to promote inclusion and then investigated its impact on the ways in which the paraprofessionals supported their students and the ways in which the students interacted with their peers. The training programme involved four one-hour sessions in which a facilitator worked one-on-one with the paraprofessionals. The facilitator aimed to:

- enhance perspective – through a task that required the paraprofessionals to compare their own visual representations of interactions with family/close friends, good/occasional friends, and people in paid roles, with their disabled student's visual representations of the same interactions;
- establish the importance of peer interaction – by asking the paraprofessional the question 'Why are social interactions and relationships important?' and then providing information and prompts designed to get the paraprofessional to add to their initial response;
- clarify the paraprofessional's role in facilitating interactions – by asking them how they could act as a bridge, rather than a barrier, to the student's interactions with their peers;
- increase the paraprofessional's repertoire of strategies that facilitate interactions by teaching them strategies they could use in the classroom with their student;
- model ways to interact – highlighting similarities between students, identifying the strengths of the target student, teaching interaction skills, interpreting behaviours, and actively partnering students.

Strategies and behaviours promoted by the facilitators and subsequently displayed by the paraprofessionals included:

- situating the target student physically closer to peers;
- structuring the target student's 'break time' to minimise time out of the classroom;
- redirecting verbal queries about the target student to the student;
- 'fading' assistance to allow opportunities for more natural peer interactions;
- partnering the target student with peers during academic tasks;
- arranging for the target student to use technology in the classroom instead of in a separate setting;
- verbally highlighting similarities between the target student and peers;
- creating communication cards for use by the target student and focused on social exchanges;

[281] Schuler, A. L. (2003). Beyond echoplaylia: promoting language in children with autism. *Autism, 7*(4), pp. 455–469.

[282] Causton-Theoharis, J. N. & Malmgren, K. W. (2005). Increasing peer interactions for students with severe disabilities via paraprofessional training. *Exceptional Children, 71*(4), pp. 431–444.
Malmgren, K. W., & Causton-Theoharis, J. N. (2006). Boy in the bubble: Effects of paraprofessional proximity and other pedagogical decisions on the interactions of a student with behavioral disorders. *Journal of Research in Childhood Education, 20*(4), pp. 301–312.

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- integrating the target student's home experiences into classroom conversations;
- teaching peers how to communicate with the target student (e.g., using selected sign language);
- directly teaching peers and the target student how to interact with one another;
- utilising interactive technology (e.g., a computer with two input devices, a tape player with two headsets);
- utilising rewards that are interactive in nature (e.g., lunch with a friend, puzzle time with a peer);
- giving the target student classroom responsibilities that encourage interaction (e.g., handing out papers)[283].

On average, the paraprofessionals engaged in twice as many facilitative behaviours in the post-intervention phase as before. This increase led, in turn, to immediate and significant increases in the number of interactions that the four severely disabled students had with their peers: on average, 25 times the number they were having before the intervention. Figure 21 shows how increased facilitative behaviours by paraprofessionals (PP) impacted on the number of interactions the four students (S) had with their peers.
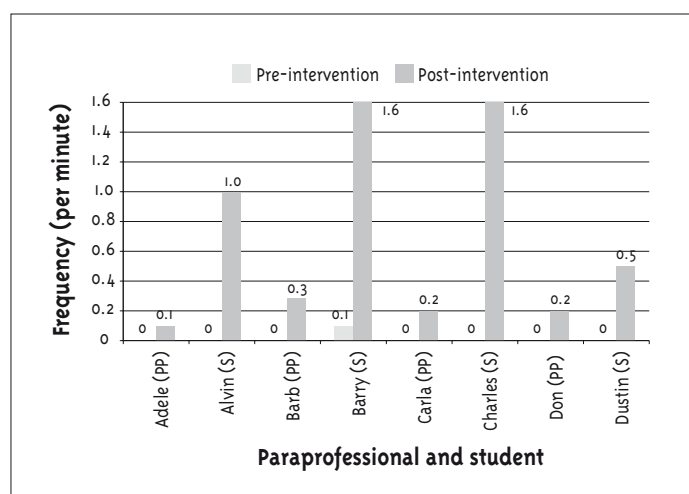
Figure 21: Facilitative behaviours for four paraprofessionals and their severely disabled students

(figure created from data described on pp. 437–439)[284]

This positive outcome for the severely disabled students had benefits for the other students in their classes. Because the paraprofessionals moved away from strategies that required them to be always in close proximity to the disabled student and interacting with them, they were able to assist more widely in the classroom.

A compelling aspect of these findings is that the paraprofessionals were able to acquire the necessary knowledge and strategies relatively easily and within a relatively short time frame, yet the gains for the disabled students were considerable.

The perspective- and strategy-acquisition approach that characterised the professional development intervention just discussed is not so different from the 'circle of friends' (CoF) approach investigated by Frederickson et al.[285] – except that, in this case, it is the classmates of special needs students who discover a new perspective and learn new strategies. This

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[283] ibid.

[284] ibid.

[285] Frederickson, N., Warren, L., & Turner, J. (2005). "Circle of friends" – An exploration of impact over time. *Educational Psychology in Practice, 21*(3), pp. 197–217.

approach aims to increase the social inclusion of children experiencing peer relationship problems by two principal means: an initial class discussion (which the focus student does not attend) and weekly 'circle of friends' meetings (consisting of the focus student and a support group of peers). The class discussion works in this way:

> The focus child consents to be absent from the initial discussion, to enable the class members to speak freely. Ground rules for the discussion … are established, such as listening, speaking in turn, confidentiality. The class is asked about the focus child's strengths, before being asked to identify difficulties. The facilitator then talks with the class about friendships and the feelings and behaviours that may be engendered by a lack of friendship and support. Links with the focus child's behaviour are drawn and suggestions generated for assisting him/her and improving the situation. Finally volunteers are sought to be part of a support group, (CoF [Circle of Friends]), for the focus child. Six to eight pupils are selected to form the CoF and the other pupils are thanked for their contribution and reminded that they also can continue to be involved in helping the focus child in the ways that have been discussed (p. 199).

The researchers investigated the impact of both the initial class discussion and the weekly small-group meetings on 14 children aged 6.8–11.3 years. Peer ratings for the focus student ('cooperates', 'disrupts', 'seeks help', 'starts fights', 'bully', 'victim', 'leader') were used to establish 'rejection' and 'acceptance' scores for each of the 14 children. Scores before the intervention (T1) were compared with scores immediately following the whole-class meeting (T2), after six weeks of CoF meetings (T3), and after 18 weeks' follow-up. The researchers found that the class discussion part of the intervention had the greatest impact on ratings and was most effective in increasing the social inclusion of the focus children. The weekly CoF meetings produced no further, measurable improvements.

Table 22: Mean social inclusion proportion scores of 14 focus students

	T1 (before the intervention)	T2 (immediately after the whole-class meeting)	T3 (after six weeks of CoF meetings)
	Mean	Mean	Mean
Whole-class acceptance	0.22	0.32	0.26
Whole-class rejection	0.50	0.35	0.38
Circle members' acceptance	0.24	0.45	0.36
Circle members' rejection	0.35	0.11	0.14
Other classmates' acceptance	0.22	0.29	0.24
Other classmates' rejection	0.53	0.41	0.44

(p. 206)[286]

The researchers reported that the impact of the intervention was positive not only for the focus child but for their peers, since their attitudes towards the focus child changed. For most of the sample of 14 students, an initial significant increase in acceptance (and decrease in rejection) had been replaced by the time of the 18-week post-test by reduced acceptance

[286] ibid.

(and increased rejection) (graph p. 208)[287]. One child, however (Child F), "showed much better maintenance of positive changes in acceptance and rejection … the main behavioural problems identified by peers – bullying, starting fights and disruptiveness all improved substantially over time" (p. 212). Before the intervention and after the whole-class meeting, 70% of his peers had identified him as a bully. Six weeks later, it was 48%, and after a further 18 weeks, only 32% identified him as a bully.

Frederickson et al. explain the shift in social acceptance in terms of 'attribution retraining' and 'empathy induction':

> Essentially the whole-class meeting seeks to remind children of positive behaviours exhibited by the focus child and then seeks to reattribute negative behaviours to an external and unstable cause, their lack of friends. Empathy induction centres around asking the children to consider how they would feel and might behave if they had no friends (p. 213).

In a study of geography fieldwork, Nairn[288] found that disabled students can be excluded from field trips due to the presumption that all students are physically able. The pedagogical approaches in this study focused on action: walking, climbing, and observing. Nairn investigated seven field trips (of which three involved senior secondary students), using as data a pre-trip exercise that probed participant expectations, participant observations of the field trip experience (written up as soon as possible after the event), and interviews (carried out as late as possible in the academic year concerned). In spite of the popular perception that field trips are positive experiences for students and that "being there and seeing it guarantees full knowledge (or at least better knowledge)" (p. 279), Nairn found that they privilege the physically able and exclude others – especially those with non-visible disabilities such as unfitness, asthma, a knee that dislocates, diabetes – from critical aspects of learning. For example, Cathy, who had an easily dislocated knee, did not go on the peninsula walk on the second day of her coastal field trip but stayed back at the field station and watched television. In missing the walk, she missed the geographical knowledge that other students were able to access. She also experienced a more subtle form of exclusion when she was made fun of by other students, who, perhaps jokingly, claimed that she should have prepared their lunches, and who "hassled me because I could not go on the long walk" (p. 278).

Nairn argues that incidents such as these, in which geographical understanding becomes contingent on physical ability, reiterate and reinforce able-bodied discourses and exclude disabled students from particular forms of geographical knowing. In the words of a teacher on one of the university field trips studied, "this thing about being physical … it's like you wouldn't be allowed to be fat and unfit on one of these field trips …" While arguing that alternatives need to be critically evaluated, Nairn advocates:

- processes in which students can convey (either in writing or orally, to allow for literacy and privacy issues) their expectations for upcoming field trips, their physical abilities and any special conditions, and their food and sleeping preferences;
- ongoing communication and reflection on the above during the field trip experience (perhaps via a journal);
- debriefing opportunities that invite feedback;
- sourcing geographical knowledge through sound, smell, taste, and touch – as well as sight.

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[287] ibid.
[288] Nairn, K. (1999). Embodied fieldwork. *Journal of Geography, 98*, pp. 272–282.
  Nairn, K. (2005). The problems of utilising 'direct experience' in geography education. *Journal of Geography and Higher Education, 29*(2), pp. 293–309.

Cohen et al.[289], investigating the impact of 'publicly assigning competence' to low-status learners, reinforces the need for teacher–student relationships that are not only caring but also inclusive and learning-focused. 'Publicly assigning competence' means publicly making a statement during group work that positively evaluates the contribution of an individual, particularly one who is considered 'low status'. For example:

> "Victor, you listened to the song carefully, and you clearly understood the deep message of the lyrics. This is important information for your group. What do you think your group's song should be about?"

Assigned competence has been found to impact on what students expect of themselves and also on relationships between low-status students and others in the group – in terms of both the social and the cognitive aspects of learning. The researchers are careful to distinguish between 'unconditional reinforcement', which is when a teacher gives praise for *any* contribution, and 'assigning competence', which is highly specific, valid, and reinforces only *actual* abilities. They also comment that the evidence for the impact of assigning competence is clearer at primary than secondary level, where status associated with peer popularity may be a complicating factor.

Modelling learning behaviours in relationships helps embed students' focus on learning

Caring and respectful relationships have a greater impact on cognitive outcomes when a focus on learning is embedded in those relationships. Sewell[290] reported distinct changes in students' identities as learners, and in their participation, when Rhys changed his style of interaction. There was less emphasis on behavioural compliance and task completion and more on learning; less on working alone and more on working together, creating ideas with others, and sharing expertise:

> [The teacher] realised that he had asked the children what they wanted to 'do' to take the next step in their transport theme. Not surprisingly, the children suggested craft type activities such as making clay models of animals used for transport or folding newspaper into cars. Some children did suggest activities to reinforce their learning, such as making a facts quiz or acting in a play, but no-one came up with an idea that would promote new learning (p. 110).

As the teacher and the researcher reflected, they noted a need to refocus the children on *learning* rather than *doing*, by using learning language. This resulted in the teacher setting new goals: 'to make learning more visible to the children' and 'to continue bringing learning to the surface' (p. 110).

> [The teacher] made a conscious effort to use words that reflected a learning ethos such as: "are you switched on for learning?" "you're here to learn" "what's the learning in that?" "let's do some learning". Later observations revealed language that emphasised learning together such as when Rhys said: "we need to work together" "nice support" "our community" "thanks for working with me" "it's our job to learn" "we're learning together". My final 35 minute observation, recorded 18 references to learning compared to only seven references in six hours of observations over Term One (p. 110)[291].

[289] Cohen, E. G., Lotan, R. A., Scarloss, B. A., & Arellano, A. R. (1999). Complex instruction: Equity in cooperative learning classrooms. *Theory into Practice, 38*(2), pp. 80–86.

[290] Sewell, A. (2006b). *Teachers and children learning together: Developing a community of learners in a primary classroom.* Unpublished doctoral thesis, Massey University, Palmerson North.

[291] Sewell, A. (2006a). *Teachers and children learning together: Developing a community of learners in a primary classroom.* Draft doctoral thesis, Massey University, Palmerston North.

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The centrality of learning in these comments demonstrates how a teacher, by modelling the behaviours they value and are seeking to develop, can impact on student thinking. As Katz explains,

> Many dispositions that most adults want children to acquire or to strengthen … are learned primarily from being around people who exhibit them: they are strengthened by being used effectively and by being appreciated rather than rewarded (p. 2)[292].

Katz also highlights how use of language can strengthen a learning disposition and suggests: "A teacher who says 'see how much you can find out about something' rather than 'I want to see how well you can do' encourages children to focus on what they are learning" (p. 2). Likewise, Nuthall comments on the pervasive influence of everyday classroom practices on the messages that students take from the classroom:

> The culture of the classroom needs to be seen as a mirror of the kinds of minds being acquired by the students. The roles they play in interaction with each other and with their teacher become the ways they understand and learn from their experiences (p. 134)[293].

Establish productive teacher–student relationships

Summary of findings

- Building respectful relationships with students:
  - *establishes a basis for learning*
  - *helps create a sense of community.*
- Inclusive relationships increase the involvement of diverse students.
- Modelling learning behaviours in relationships helps embed a focus on learning.

5.3   Promote dialogue

Dialogue refers to two-way communication: speaking and listening. It is fundamental to the participatory goals of the social sciences and, when directed towards other outcomes in the social sciences domain, strongly supports learning.

This section begins with a discussion of evidence relating to the promotion of dialogue in small-group situations. The importance of small-group work in New Zealand classrooms is clear from teacher responses to a survey relating to social studies curriculum implementation[294]. The most common answer to the question 'What teaching approaches would you say have been very effective in improving your students' learning in social studies?' was 'groupwork' – on the grounds that (as one respondent put it) "group activities got students to interact with each other to study topics" (p. 336). A third (33.8%) of the teachers who responded to the survey reported that they 'often' used group investigations and research for assessment; a further 54.6% reported using it 'sometimes'. Because groupwork is so prevalent, it is important to consider the evidence for its impact. In the context of this mechanism (community), the focus is on the processes required to maximise productive academic dialogue that is inclusive of students of different academic, ethnic, and social status.

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[292] Katz, L. G. (2001). Another look at what young children should be learning. *The Spectrum,* Fall.

[293] Nuthall, G. (2000). The role of memory in the acquisition and retention of knowledge in science and social studies units. *Cognition and Instruction, 18*(1), pp. 83–139.

[294] McGee, C., Jones, A., Cowie, B., Hill, M., Miller, T., Harlow, A., & McKenzie, K. (2003). Teachers' experiences in curriculum implementation: English, languages, science and social studies. *National school sampling study no. 2.* Hamilton: University of Waikato.

Opportunities for dialogue give students access to all the expertise, experiences, and perspectives to be found within the diverse class community. But such opportunities are not limited to groupwork, so any consideration of the impact of dialogue needs to extend to other forms of classroom organisation. For this reason, the second part of this section focuses on dialogue in whole-class situations, particularly in the context of teacher-facilitated discussion, but also in relation to encouraging students to talk publicly.

Students learn content when they talk together about that content

Boykin et al.[295] examined what effect of two different approaches had on the learning of 69 grade 4–5 African American geography students. The students were assigned to either 'communal learning' or 'individual learning' conditions. Over eight days, the 36 students in the communal learning condition worked in groups of three to learn material about Africa from a textbook. Those in the communal learning setting were instructed in this way:

> "I would like you to help each other learn this geography lesson I've placed on the table. You will be learning about the geography of Africa and will have 15 minutes to study the information with your group. At the end of the 15 minutes, you will be given a short quiz. It is important for each member of the group to do the best that they can so that the whole group will do well. You are encouraged to help each other learn the information. Your group is counting on you to do your best. You should be helpful and considerate and give for the good of the group. This should be easy because you all live in the same area, have similar friends and go to school together. Remember also that your group is working to get the most out of this time together. How well the group does depends on how much you all take part in the learning. Does everyone understand? I will remain in the room for the entire time if you should have any questions. I will tell you when to begin" (p. 233).

The 33 students in the individual learning condition worked with the same passages of text but were instructed in this way:

> "During this lesson, you are to work by yourselves and without help from any of your classmates. Each of you will receive your own reading and writing materials for you to use by yourself. The information you will be learning about is the geography of Africa. Just like in your classroom, you are not to work together and no-one else may help you read or learn the material. It is important to learn and work on this lesson by yourselves because your performance will be based on what you can do on your own. If you have any questions, quietly raise your hand and ask me, not your neighbor. You will have 15 minutes to study. There will be a short quiz after the 15 minutes, and so it is important that you work hard to do your best on the quiz. Remember to make the most out of your individual study time so that you can do well. Does everyone understand? I will remain in the room for the entire time if you have any questions. I will tell you when to begin" (p. 233).

Students in both conditions completed a quiz of nine information recall questions immediately after each session. At the end of the third week of the study, they all completed an end-of-unit exam consisting of 18 questions. Both the quizzes at the end of each session and the exam at the end of the third week revealed a significant effect for the communal learning condition. The means for the quizzes were significantly higher for the students in this group (7.60 vs 4.20). And in the end-of-unit exam, these students retained the information better than those in the individual learning condition (a mean of 15.47 vs 9.11). The authors put these marked differences down to opportunities for verbal interchange: participants who were encouraged to draw on each other in a social learning context were able to gain and retain information that those working by themselves were not.

[295] Boykin, A. W., Lilja, A. J., & Tyler, K. M. (2004). The influence of communal vs individual learning context on the academic performance in social studies of grade 4–5 African-Americans. *Learning Environments Research, 7*, pp. 227–244.

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In spite of the success of the approach reported in this study, it is unusual to observe such an effect based simply on a teacher's instructions to students. The complexities of group interaction and the beliefs and expectations of students about teaching and learning can get in the way of smooth collaboration. Kutnick et al.[296], for example, investigated naturally occurring, within-class groupings in 187 primary classrooms in the UK. They found that although small groups were the the most common seating arrangement, teachers rarely gave their students training for groupwork. So groups were created, but not in ways that facilitated shared knowledge building or utilised group learning skills. In a New Zealand primary school context, Baldwin[297] found that, in spite of the prevalence of groupwork, very little emphasis was placed on group processes as a means of improving achievement and social interaction. Implicit in such findings is the need to support groupwork with skill building. The ability to work productively in groups is a skill and, like any other skill, it needs to be learned. It is important, therefore, to prepare students for cooperation by encouraging them to internalise the norms needed for working together[298]. These norms include a recognition that all participants bring unique and necessary contributions to the accomplishment of valued tasks. Students also need to be deliberately trained to listen, speak, ask questions, recognise and praise each other's contributions, and give and receive help.

Involving students in developing groupwork norms improves group functioning and increases contribution

Working with Key Stage 2 students in the UK, Littleton et al.[299] researched what they called the 'Thinking Together' approach to establishing groupwork norms. Although demonstrated in the context of reasoning puzzles rather than a social sciences context, their findings suggest that Thinking Together is an effective framework for teaching talking and listening skills. Students participate in a series of Thinking Together lessons. At a whole-class introduction, the aims for group talk are made explicit. During plenary sessions, groups reflect on the quality of their talk. In the lessons, students are directly taught speaking and listening skills (such as challenging with respect, reasoning, and negotiating ideas) and then put into contexts in which they can apply such skills. Classes create and agree on a shared set of ground rules for exploratory talk, to be used when working in groups. These rules are based on the understanding that "high quality speaking and listening is of great value in class; high quality speaking and listening is inclusive and respectful of opinions and ideas; all information is shared; reasons are requested and given and the group seeks to reach agreement. The children's ownership of the rules helps the groups to implement them" (p. 11).

The outcomes for this deliberate teaching of communication skills are evident in a case study of Nuresha, who was working with two other students, Vijay and Kyle, on a reasoning problem. Before the Thinking Together intervention, Nuresha did not speak at all; she sat well back from the table, looked around the room, played with her ruler, and took no part in the task. When the teacher asked, 'Do you agree, Nuresha?', or 'What do your think?', she just nodded. She shook her head in response to a question from Kyle and, following this, the other two members of the group did not speak directly to her again. After the Thinking Together programme, Nuresha

296 Kutnick, P., Blatchford, P., & Baines, E. (2002). Pupil groupings in primary school classrooms: Sites for learning and social pedagogy? *British Educational Research Journal, 28*(2), pp. 187–206.

297 Baldwin, J. (2002). *A study of teachers' use of groupwork in New Zealand primary education.* Unpublished doctoral thesis, University of Tasmania.

298 Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research, 64*(1), pp. 1–35.
Cohen, E. G., & Lotan, R. A. (1995). Producing equal-status interaction in the heterogeneous classroom. *American Educational Research Journal, 32*(1), pp. 99–120.

299 Littleton, K., Mercer, N., Dawes, L., Wegerif, R., Rowe, R., & Sams, C. (2004). Talking and thinking together at key stage 1. *Early Years: An International Journal of Research and Development.* Retrieved 19 January, 2006, from http://anubis.open.ac.uk/thinking/publications.cfm?filter=2

was involved throughout and was encouraged by the others. She suggested an alternative that challenged Kyle and Vijay. She repeated answers aloud, affirming her participation. She spoke 26 times and, although this was less than Kyle (72 times) and Vijay (76 times), it was significantly more than in the pre-intervention session. She was involved in all decisions and was asked 21 questions. The group functioned more effectively. The members leaned forward over the table, looked at each other as they did the task, decided together how to take turns, and reminded each other of the ground rules. They demonstrated a readiness to work together and showed that they understood that each individual was an important contributor to the group.

Mercer et al.[300] reported on a series of nine structured lessons aimed at improving the quality of children's collaborative activity when solving reasoning puzzles. The study focused on helping 60 nine- and ten-year-old UK children to develop their use of exploratory talk. The researchers define 'exploratory talk' as talk

> in which partners engage critically but constructively with each other's ideas. Statements and suggestions are sought and offered for joint consideration. These may be challenged and counter-challenged, but challenges are justified and alternative hypotheses are offered. In exploratory talk, *knowledge is made publicly accountable and reasoning is visible in the talk* (p. 97).

Each lesson within the programme lasted for approximately an hour and focused on one or more of the seven rules of exploratory talk:

- All relevant information is shared.
- The group seeks to reach agreement.
- The group takes responsibility for decisions.
- Reasons are expected.
- Challenges are accepted.
- Alternatives are discussed before a decision is taken.
- All in the group are encouraged to speak by other group members.

During the lessons, each group was encouraged to develop its own user-friendly version of the ground rules. Class 5D, for example, came up with these guidelines: "1. Discuss things together – ask everyone for their opinion, ask for reasons why, listen to people; 2. Be prepared to change your mind; 3. Think before you speak; 4. Respect other people's ideas – don't just use your own; 5. Share all the ideas and information you have; 6. Make sure the group agrees after talking." Particular skills were named, modelled, and practised. Students were given tally sheets for recording the number of questions they asked. As a consequence of this deliberate skill building, the students in the intervention increased fourfold their use of the three key features of exploratory language:

- 'because' (indicative of reasoning);
- 'I think' (recognising the hypothetical nature of claims);
- 'Do you agree?' (agreement-seeking).

Student talk in the control groups was little changed.

300 Mercer, N., Wegerif, R., & Dawes, L. (1999). Children's talk and the development of reasoning in the classroom. *British Educational Research Journal, 25*(1), pp. 95–111.

Rojas-Drummond et al.[301], building on the work of Mercer et al.[302], examined the effects of an intervention aimed at increasing the use of exploratory talk by 84 ten- to twelve-year-olds in Mexico. These researchers distinguish between 'disputational', 'cumulative', and 'exploratory' talk. In disputational talk, students hold opposing opinions and ideas but do not engage in argument. Disputational exchanges typically consist of assertions and counter-assertions – students focus on keeping their own views intact rather than integrating them with the views of the others. The key feature of cumulative talk is that participants contribute different opinions and ideas without arguing and without explaining. In cumulative talk, students generally try to agree with each other or at least avoid confrontation. The emphasis is more on preserving the integration of the group than challenging the ideas. The result is that a perspective tends to be proposed and then maintained by the group. Exploratory talk, according to Mercer et al., is characterised by the social construction of ideas and an orientation towards task solution. Participants work together, explaining their reasoning for the others to consider. They change their minds if another member of the group comes up with a convincing argument. Together, they search for new and different solutions, and they support their ideas. The communicative intent is to explore different perspectives, negotiate, and eventually reach consensus. The researchers further differentiate between 'incipient' exploratory talk (where arguments are rudimentary, for example, '… because look', and where no more than two options are considered) and 'elaborate' exploratory talk (where arguments build on and are referenced to each other, multiple perspectives are considered, and opinions are questioned)[303].

The students in this intervention were randomly assigned to either an experimental (exploratory talk) condition or a control condition. The teachers involved in the exploratory talk condition encouraged their students to 'discover' and then practise the use of several ground rules for exploratory talk while solving a variety of problems in small teams. Observing these rules, the students learned:

1. to express and share their ideas;
2. to respect each other's points of view;
3. to argue and justify their viewpoints;
4. to constructively criticise and ask others to justify their opinions;
5. to try to reach joint conclusions.

During the experiment, the students worked initially as a whole group, then in small groups, and finally as a whole group again. They applied their learning about exploratory talk to a range of tasks in a range of contexts. An analysis of their talk revealed that those in the experimental condition reduced their cumulative talk and greatly increased their exploratory talk (see Table 23). Most importantly, their 'elaborate' exploratory talk increased to the extent that it was used for about 75% of the problems they worked on. By contrast, students in the control condition made little use of exploratory talk (around 30%), and this did not shift between the pre- and post-tests.

[301] Rojas-Drummond, S., Perez, V., Velz, M., Gomez, L., & Mendoza, A. (2003). Talking for reasoning among Mexican primary school children. *Learning and Instruction, 13*, pp. 653–670.

[302] Mercer, N., Wegerif, R., & Dawes, L. (1999). Children's talk and the development of reasoning in the classroom. *British Educational Research Journal, 25*(1), pp. 95–111.

[303] Rojas-Drummond et al. (2003), op. cit.

Table 23: Pre- and post-data for control and experimental groups

Condition	Test	Type of talk					
		Disputational		Cumulative		Exploratory	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Experimental	Pre	2	2.4	48	57.1	34	40.5
	Post	4	4.8	17	20.2	63	75
Control	Pre	8	9.5	49	58.3	27	32.1
	Post	4	4.8	54	64.3	26	31

(p. 663)[304]

Explicit skills teaching develops cooperation and dialogue

Pardy-Comber et al.[305] sought to find out whether explicit teaching of social and cooperative skills, supported by practice opportunities across the curriculum, increased social interaction between the students in a year 1 New Zealand classroom. The specific skills taught were listening, turn-taking, and encouraging. One skill was taught each week, supported every day by practice and feedback opportunities. Role play, involving either the teacher and a student or the teacher and the RTLB (resource teacher: learning and behaviour), was used to demonstrate appropriate ways of interacting. Following teacher–student discussion, a T-chart was developed to make explicit what the skill 'looks like' and 'sounds like'. This served as an ongoing reminder in the classroom. Feedback was provided by the teacher and student observers. Reminders were couched in the same language as the T-chart (for example, "I saw John looking with his eyes") and tallies were kept. Reflection was promoted through the use of a booklet in which performance against goals (for example, "I helped my partner by listening") was recorded in the form of smiley faces. Following initial skills practice, further practice opportunities were structured into the mathematics, oral language, and 'topics' curriculum, using a doughnut format (concentric circles and turn taking).

The researchers found that the specific teaching of skills, supported by structured practice opportunities integrated into the curriculum, can significantly increase and then maintain the skills of listening, turn taking, and encouraging. They also found that the whole-class intervention had greater benefits than would have been the case if the intervention had been implemented with individual students. The students got to know each other more quickly, and a better feel was generated in the classroom. As one teacher commented, "Everyone was included, and everyone was very accepting of one another."

The long-term effects of deliberate skill building are also illustrated in studies by Gillies[306,307]. In her 2000 study, Gillies compared the performance of two groups of grade 2 children in Australia. A group of 64 students had participated the previous year in two one-hour training sessions in cooperative behaviour skills, where they were taught, for example, how to break an activity into sub-tasks for which group members accepted personal responsibility, how to listen to others, how to share resources, and how to encourage and facilitate each other's learning. A second group had not received any such training. Both the trained and untrained

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[304] ibid.

[305] Pardy-Comber, C., Walker, J., & Moore, D. (2004). Learning social and co-operative skills in year 1 classrooms. *SET: Research Information for Teachers, 2*, p. 35.

[306] Gillies, R. M. (2000). The maintenance of cooperative and helping behaviours in cooperative groups. *British Journal of Educational Psychology, 70*, pp. 97–111.

[307] Gillies, R. M. (2002). The residual effects of cooperative-learning experiences: A two year follow up. *The Journal of Educational Research, 96*(1), p. 15.

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students worked as four-person, mixed ability, gender-balanced groups on a six-week social studies unit in each of three terms. The students in the trained condition exhibited more cooperative behaviour (for example, attending to others when speaking, sharing ideas and resources, and making helpful comments such as "Let her have a go") and they used more higher-level cognitive strategies (for example, using concrete examples to explain points, and supporting explanations with evidence) than those in the untrained condition. The researcher concluded that "young children who have been trained to cooperate and help each other are able to demonstrate these behaviours in reconstituted groups without additional training a year later" (p. 97).

Gillies carried out a similar study with different groups of grade 5 students two years after cooperative learning training and, consistent with her earlier study, she found that those who had received the training were more cooperative than their untrained peers[308]. Specifically, they were more task orientated, better at listening to each other, and better at sharing resources.

Consistent with the 'alignment' and 'multiple learning opportunities' dimensions of Mechanism 2, these studies show that there is compelling evidential support for skill-building interventions. In introducing the skill-building activities she used, Cohen[309] summarises the principles that should guide such interventions. Each principle is apparent in some way in the studies described above:

- The desired new behaviours must be labelled and discussed so that the behaviour is fixed in students' minds (for example, 'explaining by telling how').
- Students must learn to recognise when new behaviours occur (by, for example, discussing what the behaviours look like).
- Students must be able to use labels and discuss behaviour in an objective manner.
- Students must have opportunities to practise their new behaviours.
- New behaviours should be reinforced when they occur (pp. 48–50).

Teacher modelling during groupwork helps learners develop dialogue skills

While prior teaching of skills has considerable support, there is evidence that some skills can be taught concurrently with groupwork. Gillies and Boyle[310] researched the effect of teachers modelling interactional skills during cooperative learning. In a study involving 30 teachers of year 5–7 Brisbane students, the authors investigated links between types of teacher–child interaction during cooperative learning and children's thinking and problem solving. The effects of two different interventions were compared. One group of teachers was trained only in cooperative learning; the other, in cooperative learning and interactional processes (that is, specific communication skills). By analysing audiotapes of the teachers' lessons, the researchers found that those who had undergone the extra training in communication skills "engaged in mediated-learning interactions and asked questions nearly twice as frequently as their peers in the cooperative learning only cohort". The kinds of questions (categorised in Table 24) were not simply 'initiation–response–feedback' questions, but those that "encourage[d] children to make their understandings and reasoning more explicit in order contribute to the development of their own and others' learning" (pp. 247–248). Significantly, given the belief that cooperative learning can create management problems for teachers, the authors noted that the teachers who received the additional training "were also four times less likely to have to discipline their groups than their peers in the cooperative learning cohort" (p. 247).

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308 ibid.

309 Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research, 64*(1), pp. 1–35.

310 Gillies, R. M. & Boyle, M. (2005). Teachers' scaffolding behaviours during cooperative learning. *Asia-Pacific Journal of Teacher Education, 33*(3), pp. 243–259.

Table 24: Cooperative learning vs cooperative learning and communication skills

	Teachers trained to use specific communication skills during cooperative learning (%)	Teachers who implemented cooperative learning only (%)
Mediated learning: interactions designed to foster learning (prompts, scaffolds, paraphrases, and open, tentative questions)	12.0	7.6
Questioning that encourages children to make their understandings and reasoning more explicit in order to contribute to the development of their own and others' learning	41.1	21.6
Disciplining	1.3	5.7
Lecturing	16.8	22.8
Encouraging	15.1	18.4
Maintenance behaviours	13.7	23.9

The teachers' increased use of communications that challenged thinking served as a model for the children to use with each other. This is illustrated in the following extract, in which a cooperative group, with the help of teacher scaffolding, investigated the impact of people on the environment[311]:

> T: Where are we up to?
>
> S: Up to the solution.
>
> T: You've found the problem. So what have you decided the problem's going to be? [T is challenging the students to identify the problem.]
>
> S: People riding their bikes in Bargain Town Shopping Centre.
>
> T: It looks as if you've got a solution. Whose solution is that? Is it yours Matthew? And what is the solution you've got? Tell them why they shouldn't ride in Shopping Town. [T is seeking clarification on a possible solution.]
>
> T: Right now you all agree that's a good solution. OK the others thinking up another possible solution. You've got one ready, have you Nick? Have you discussed it with the rest of your group? [T is encouraging group discussion to reach consensus.]
>
> T: So what's yours Nick?
>
> S: Ask the police to patrol the shopping centre so the bike riders won't come through the shopping centre.
>
> T: More police patrols in that area? So do you think that … [T is probing the students to help them identify a possible solution.]
>
> S: Ask the centre management if it's all right.
>
> T: So approach the shopping centre management first. Why would you do that? [T is extending the children's thinking by asking them to provide additional reasons.]
>
> S: Because they might not approve of it.

[311] ibid.

T: So they might approve of the children riding through. OK, did you think that would be a solution to approach the management first or the police or both? [T is seeking clarification on the two potential solutions.]

S: Ask the management first.

T: What one do you want to put down, Nick?

S: The manager because they might not want the police outside the shopping centre.

T: Why do you think they might not want the police outside the shopping centre? [T is probing the children's thinking to see if they can provide reasons why a potential solution may not be possible.]

S: Might scare the customers.

T: Yes, it might possibly. Yes, people might think there's a lot of police around here, I might not bother going into the shopping centre. OK, so which one have you decided to agree upon? [Group response.] OK so what you've discussed should help you people come up with some more solutions. Ready to write yours in Nick. And are you two ladies thinking of what you're going to do. Ready to discuss it?

T: This looks really great. You've nearly finished. Has the group been on task the whole time? [T acknowledges and validates the effort that the children have put into working through their problem-solving task.]

S: Yes.

T: Who's the leader?

S: Jacob.

T: Has he been a good leader?

S: Yes.

T: How has he been a good leader? [T trying to get the children to identify the characteristics of a good leader to encouraging supportive behaviours in other group members.]

S: By doing a lot of the work. He's been helping us.

T: Right, well done. [T acknowledging effort.]

(pp. 249–250)

In the researchers' view, the model that the teacher provides in this exchange exemplifies for students "not only how to engage in problem-solving discourse or thinking about thinking … but also the behaviours that invite participation as partners in developing shared understandings of the issue at hand" (p. 256). The students responded to their teachers' explicit probing, challenging, confronting, and validating behaviours by using those strategies themselves in group interactions. The children encouraged others, challenged the thinking of others, asked for the opinions and ideas of others, and asked others for information. Gillies and Boyle conclude: "When teachers are explicit in the types of thinking they want children to engage in, it encourages children to be more focused and explicit in the types of help they provide" (p. 243)[312].

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[312] ibid.

Dialogue is encouraged by complex tasks

Group interaction is most strongly encouraged if it is actually vital for task completion. Routine tasks, or those where the work is apportioned out[313], do not require peer interaction because they can just as easily (often, more easily) be completed by students working on their own. As Cohen[314] explains:

> One may give a group a task, but, unless there is some reason for the group to interact students may well tackle the task as individual work. This is especially the case if each individual must turn out some kind of worksheet or report. This is also the case if the instructor divides the labor so that each person in the group does a different part of the task. The group has only to draw these pieces together in sequential fashion as the final product (pp. 11–12).

The following interaction reported by Bausmith and Leinhardt[315] illustrates this difficulty. The group of 12- to 13-year-old students are working on a map enlargement task in geography:

Ed: How are we going to do longitude? I hope you do [–]

Ramesh: You guys can figure that out. I did my part.

Nancy: Hey, that's your part Ed.

Ed: Well …

Nancy: My part is sketching in the lakes.

Ed: Then what does Susan have?

Nancy: She, she's doing the sketch of the thing and I'm doing the legend.

This dialogue illustrates what Cohen et al.[316] refer to as 'sequential' interaction, because the students contribute their bit one after the other without necessarily building on, or even engaging with, the previous student's ideas.

Laney et al.[317] note the importance of deliberately structuring tasks so that students cooperate. They suggest telling the students that everyone in a group must agree on one set of answers and be able to give and explain them; they also suggest providing each group with only one set of materials, one pencil, one sheet of paper, and one game. Cohen et al. argue, however, that more than this is required. They assert that, in order to facilitate *reciprocal* rather than sequential interactions, groupwork needs to be developed around complex tasks that *require* productive dialogue and collaboration, and the teacher needs to publicly reinforce the value of multiple abilities and assign competence to a range of requisite abilities.

Community

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[313] Anderson, J. R., Reder, L. M., & Simon, H. A. (1996). Situated learning and education. *Educational Researcher, 25*(4), pp. 5–11.

[314] Cohen (1994), op. cit.

[315] Bausmith, J. & Leinhardt, G. (1998). Middle school students' map construction: Understanding complex spatial displays. *Journal of Geography, 97*, pp. 93–107.

[316] Cohen, E. G., Lotan, R. A., & Holthuis, N. C. (1995). Talking and working together: Conditions for learning in complex instruction. In M. T. Hallinan (Ed.), *Restructuring schools: Promising practices and policies* (pp. 157–174). New York: Plenum Press.

[317] Laney, J. D., Frerichs, D. K., Frerichs, L. P., & Pak, L. K. (1995). *The effect of cooperative and mastery learning methods on primary-grade students' learning and retention of economic concepts.* Paper presented at the annual meeting of the National Council for the Social Studies, Chicago.

An emphasis on the nature of tasks does not imply that there is no place for direct instruction on the part of the teacher. As Cohen et al.[318] see it, students need help in developing relevant background knowledge before groupwork. When explaining the lower-than-expected achievement of a group of grade 7 students on complex tasks, the authors concluded that not only was one intervention per unit insufficient that but the teachers "did not take time to prepare the students for the historical period with readings, direct instruction, and/or lecture and discussion before they moved into the group activities" (p. 152)[319]. Alton-Lee and Nuthall[320] similarly found that successful achievement in individual or group tasks is best accompanied by skilful whole-class teaching. Without such teaching, students' access to resources is reduced.

The nature of complex tasks

Complex Instruction (CI) is the result of many years' programmatic research in heterogeneous classrooms at the elementary and middle school levels[321]. In CI, students are assigned open-ended, interdependent group tasks that draw on multiple abilities. The authors argue that tasks that best promote reciprocal interactions are developed around an important idea (in other words, they are worth spending time on) and are "inherently uncertain and open-ended, both in their solution and in the process by which students arrive at that solution" (p. 83)[322]. Such tasks, whether the construction of a model or the creation of a role play or multimedia presentation, require students to interact with each other because they are open to interpretation and, as such, have no one 'right' answer. By requiring groups to present information in multiple ways, such tasks encourage greater collaboration – thereby demonstrating that there are multiple ways of being 'smart'. This in turn affords teachers opportunities to give credit to students for a wide variety of intellectual achievements. When implementing CI, teachers take care to note patterns of unequal participation; they implement strategies designed to address status problems, publicly drawing attention to the multiple abilities required to complete the task and assigning competence to individuals as the groups go about their work.

The following example[323] illustrates the CI approach. The teacher is aiming to develop grade 7 students' understandings about migration. The key elements of the interaction are annotated; their significance is explained more fully in the text that follows.

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[318] Cohen, E. G., Lotan, R. A., & Holthuis, N. C. (1997). Organizing the classroom for learning. In E. G. Cohen & R. A. Lotan (Eds.), *Working for equity in heterogeneous classrooms: Sociological theory in practice* (pp. 31–43). New York: Teachers College Press.

Nairn, K. (2005). The problems of utilising 'direct experience' in geography education. *Journal of Geography and Higher Education, 29*(2), pp. 293–309.

[319] Cohen, E. G., Bianchini, J. A., Cossey, R., Holthuis, N. C., Morphew, C. C., & Whitcomb, J. A. (1997). What did students learn? 1982–1984. In E. G. Cohen & R. A. Lotan (Eds.), *Working for Equity in Heterogeneous Classrooms: Sociological Theory in Practice,* pp. 137–165. New York: Teachers College Press.

[320] Alton-Lee, A. & Nuthall, G. (1998). *Inclusive instructional design: Theoretical principles emerging from the Understanding Learning and Teaching Project.* Wellington: Ministry of Education.

[321] Cohen, E. (1994). *Designing groupwork* (2nd edition). Teachers College Press: New York.

Cohen, Lotan, & Holthuis (1997), op. cit.

Cohen, E. G., Lotan, R. A., Scarloss, B. A., & Arellano, A. R. (1999). Complex instruction: Equity in cooperative learning classrooms. *Theory into Practice, 38*(2), pp. 80–86.

[322] ibid.

[323] ibid.

Complex Instruction: a vignette

"Immigration – many of us know about it first hand," says Ms Garcia. "Yesterday, Victor spoke about his parents who immigrated to the US from Mexico. After living in a refugee camp in Thailand for two years, Kim's family immigrated here from Vietnam. Almost everyone in this classroom has family or friends who have moved from one country to another. Families or individuals have different reasons for moving, and they all have a different story to tell."

The group of seventh graders at Yosemite Middle School in California's Central Valley is listening attentively. Ms Garcia is talking about something close to their own experiences. "Why do people move?" she continues. "Studying the movement of people and the reasons behind it is central to the study of history. We will explore this question in the unit we begin today … Group 1 will listen to corridos [Mexican folk songs] to understand why some people moved here from Mexico. Listen carefully to the songs and the lyrics and discuss the questions on your activity card. When you write your own song, make sure you include the emotions people might feel when they decide to leave their home countries …"

The teacher designed the task to require multiple abilities.

The students seem anxious to start. But Ms Garcia wants to keep them focused for just a few more moments:

"You need to organize yourselves and be productive. During the wrap-up, you will present your products and explain them to the class. Let me remind you that for these activities you need many different abilities. You will read, write, and draw. You need to be able to analyse visuals and interpret songs. Finally, you will need to be creative and have the ability to visualize and build a three dimensional sculpture. Remember: No one of us has all these abilities, but each one of us has some of the abilities we will use today. Listen carefully to one another; you all are important resources for your group. You have 35 minutes. Check the role chart. You know what to do."

The teacher made the multiple abilities required explicit to the learners.

On this cue, the students turn to each other and begin to organize themselves. After checking the role chart, they put on their role badges. The 'materials managers' scurry about the classroom, picking up folders containing the activity card and the resource materials: audio tapes, colorful photos, maps, or charts. From the 'materials area' they grab markers, scissors, glue, colored paper, yarn, and other interesting-looking items.

As they settle into examining their materials, students focus on the reasons for immigration to the United States from a particular Latin American country. They discuss how political persecution, economic hardship, personal ambitions, and professional opportunities result in decisions to emigrate. They also consider the heavy costs of moving: breaking up families, leaving the only home people have ever known, and having to adjust to a new place.

In the group by the window, two boys and two girls listen intently to a corrido, a Mexican folk song. Swaying to the music and tapping their fingers, they follow the lyrics of the song, printed on the resource card.

"This guy sure got around. Traveled to lots of places all over the country. It must have been fun," says Carolina.

"I'd rather stay home and not have to wash dishes all day," Hector remarks.

Later, the students negotiate what details to include in their group project, a song reflecting why some Mexicans would move to the United States.

"Let's use a tune we all know," suggests Veronica.

"OK, but what will the song be about?" asks Hector. The group members fall silent for a moment. Carolina, recorder for the day, takes out a piece of paper and a pencil.

"Why don't we use some of the ideas from the song we heard," Carolina suggests. "How about if we make it about Jose, who wants to come to Hollywood to be a movie star?" Veronica and Hector nod their heads in agreement.

Victor, the fourth member of the group, shrugs his shoulder, looks away, and, as usual, mumbles something quietly. "I'm sure this guy didn't have too much fun. Sounds to me like he worked really hard. He fixed the rails and picked tomatoes and mixed cement. For only 50 cents an hour! I'd be tired and disappointed."

Carolina begins to write what she has decided will be the first line of their song. Ms Garcia, who has been watching the group from a discreet distance, interjects:

"Victor, you listened to the song carefully and you clearly understood the deep message of the lyrics. This is important information for your group. What do you think your group's song should be about?"

> The teacher publicly assigns competence to low-status students.

"I'm not sure," Victor answers hesitantly. "I just know that my family didn't come here because they wanted to be movie stars. They came because there were no jobs in Mexico. My father says he wanted to work so we could have a better life."

> Another student picks up on Victor's comment and suggests its inclusion.

"Maybe we can put those ideas in our song." Veronica is ready to compromise. As they offer examples of how they might do this, Ms Garcia moves away, now reassured that Victor's contribution will be heard by his group.

> The teacher doesn't 'hover'. Having assigned competence to a student whose contribution might otherwise have been ignored, she leaves so that the conversation remains centred on the students.

Ms Garcia is pleased as she looks over her classroom. The students are talking and working together; they are engaged and interested. They all make an effort to understand and contribute to their group's product. For their homework assignment, students will complete the individual reports and write about the discussion in their groups. Tomorrow and the next day the groups rotate so that each group will get to do two more tasks. Ms Garcia is looking forward to her students writing thoughtful essays and answering the questions in next week's test.

Publicly acknowledge multiple abilities

An important element of the task assigned by Ms Garcia (above), aside from its open-ended nature, is that it requires each *group* of students to demonstrate *between them* the ability to:

- create melodies and rhythmic patterns;
- analyse the relationship between melody, lyrics, mood, and purpose;
- understand sophisticated texts;
- detect sources of bias;
- empathise;
- relate a single piece of text to a larger scheme of events;
- translate the message of a text into non-verbal forms.[324]

The authors underscore the importance of accompanying such tasks with an explicit instruction ('Let me remind you …') that draws students' attention to the diversity of expertise required. Research into CI shows that this deliberate reminder cannot be omitted from initial teacher instructions because it reminds students that they must consider the balance of strengths and weaknesses within the group. As Cohen et al. explain, "Herein lies a central premise of complex instruction: each individual brings valuable and different abilities to the task. All contributions are needed for success" (p. 85).

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[324] ibid.

Working with grade 11 US history students studying social change in the 1920s, Bower[325] compared the effects of two treatments. The first involved traditional groupwork. The second also involved groupwork but with the difference that the teacher drew explicit public attention to the variety of intellectual contributions and multiple abilities required to complete the task:

> "No one is going to be good at all these abilities. Everyone is going to be good at at least one" (p. 123).

Students in this group were also given in writing a list of specific abilities (organisational skills, speaking ability, visual thinking, musical appreciation, teaching ability, reading comprehension, interpretation, and writing skills) that they would need to successfully complete a multimedia presentation on one of six topics.

Bower found that the amount of dialogue in the multiple ability group was greater than in the traditional group, for both high- and low-status students. The dominance of the high-status students was, however, clear in both groups. He also found that the gain scores of the low- and high-status students in the multiple ability group were greater than those of the students in the traditional group and that the achievement gap between the low- and high-status students was narrower in the multiple ability group. Bower did not claim that the treatment was a panacea – it did not, for example, lead to equal participation by low-status students, and teachers commented on the excessive amount of groupwork within the short timeframe. However, he did conclude that the intervention, by "successfully challenging students to use a far greater array of human abilities", could assist social studies educators committed to "equal participation and cooperation by diverse groups" (p. 133).

Rubin[326] draws attention to the possibility that multiple ability groupwork may, for some students, inhibit the learning of new abilities. She describes, for example, a 'preparing for a press conference' task in which a lower-achieving student, Frankie, was assigned the 'actor' role by his group while the higher achievers, Tommy and Sasha, became 'journalist' and 'press agent'. As a result, Tommy and Sasha were "sharpening their historical knowledge through reading and discussion, while Frankie took his instruction from his peers and was told only what they felt he needed to know to credibly fulfill his role" (p. 564). Rubin observed that:

> in many small group situations … the students who were deemed least skilled were given tasks with the least opportunity for gaining and practising skills, while the most academically competent students were given frequent opportunities to hone their already ample skills (p. 564).

A teacher in the same study also commented that it was difficult to convince the students that abilities other than reading and writing were valuable:

> "I think it's hard to undo the sense that the smart kids are the ones that can write and read well. To get students to understand on a simple level that somebody can represent something, say, visually in a really creative way and that's as much of a strength as the strength that another kid might be able to write really well. Not everybody will be good at all of these things, but everybody will be good at at least one of them. That kind of mantra. I think that's important definitely, but it only goes so far in the context where there's still for a lot of kids, strong internalized values built up over the years" (p. 552)[327].

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[325] Bower, B. (1997). Effects of the multiple-ability curriculum in secondary social studies classrooms. In E. G. Cohen & R. A. Lotan (Eds.), *Working for equity in heterogeneous classrooms: Sociological theory in practice* (pp. 117–133). New York: Teachers College Press.

[326] Rubin, B. (2003). Unpacking detracking: When progressive pedagogy meets students' social worlds. *American Educational Research Journal, 40*(2), p. 539.

[327] ibid.

This reflects the concerns expressed by Watson and Battistich[328] that:

> community building may not effectively promote the academic success of students who are economically disadvantaged. Of particular concern is that teachers, out of empathy for the unfortunate life circumstances of some students, may concentrate their attention on providing social support to these students, but at the same time, reduce their expectations for the students' academic performance (p. 272).

Publicly assigning status

While Bower showed how multiple ability tasks can increase the opportunities for low-status students to participate, he cautioned that status issues within a class can be deeply embedded and reduce the impact of interventions designed to equalise the participation of low- and high-status students. The teacher cited by Rubin in the previous section makes a related point about the ingrained nature of status, especially in secondary schools. Rubin[329] also describes how peer-assigned status can inhibit interaction. A well-intentioned teacher moved Tiffany, an African American student, out of a group of friends and into another group to increase interaction between students of different academic ability, ethnic background, and social status. But the power of school and community norms – and peer influence – was such that the intervention worked against Tiffany's inclusion. Rubin reports that "when she finally sat down with them, after clearly signalling her reluctance to do so, they made no attempt to involve her in the assigned task" (p. 556). Excluded from the group task, she experienced increasing isolation as the other members of the group interacted without her.

Cohen et al.[330] argue that, in addition to designing complex, multiple abilities tasks, a further intervention may be required to boost the participation of low-status students. This intervention, 'assigning competence', consists of a public statement made by the teacher during groupwork, which positively evaluates the contribution of a student (especially one who is low in status). The teacher comment about Victor's interpretation of the Mexican folk song (see page 162) exemplifies this approach. Publicly assigning status is a strategy aimed at changing a student's perception of their own competence and raising the group's expectations of that student. Cohen et al. observe that evidence for the power of this strategy is clearer for primary schools than secondary, where status derived from peer popularity (as reported by Bower and described by Rubin) may be a complication. It should be noted, however, that in the case of Tiffany, the teacher's attempt to assign status was somewhat perfunctory. Observing that she was excluded from her new group, the teacher took Tiffany aside and discussed the contribution she might make. On returning her to the group, the teacher told the others to "let her help with the drawing" (p. 563) – not a strong endorsement of her competence.

Whole-class discussion enables students to experience social studies in action

Whole-class discussion, properly conceived, has a unique role in social sciences learning because, as Parker[331] explains, it is so important to the formation of citizens. In his view, effective citizenship education focuses "not on civic oneness, with its legacy of racial, ideological and religious repression, but [on] what Allen (2004) calls wholeness, with its emphasis on talking, listening and political trust among strangers" (p. 11). Social studies teachers, therefore, "teach

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[328] Watson, M. & Battistich, V. (2006). Building and sustaining caring communities. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management* (pp. 253–280). Mahwah, NJ: Lawrence Erlbaum Associates.

[329] Rubin (2003), op. cit.

[330] Cohen, E. G., Lotan, R. A., Scarloss, B. A., & Arellano, A. R. (1999). Complex instruction: Equity in cooperative learning classrooms. *Theory into Practice, 38*(2), pp. 80–86.

[331] Parker (2006). Public discourses in schools. *Educational Researcher, 35*(8), pp. 11–18.

for, not just with, discussion"[332]. The value of such education is reinforced by a finding of the International Association for the Evaluation of Educational Achievement (IEA). According to their study of 90 000 students across 28 countries, democratic outcomes are significantly affected by the extent to which students experience classrooms as places that are open to the investigation of issues, where they can explore their own and their peers' opinions[333]. Hess and Posselt[334] likewise argue that:

> [an] open classroom climate for discussion is a significant predictor of civic knowledge, support for democratic values, participation in political discussion, and political engagement – measured by whether young people say they will vote when they become legally able (p. 288).

Kahne et al.[335] further support the value of discussion. They cite a number of studies that show that students' "political interest, knowledge, tolerance, involvement, and efficacy" is improved through a pedagogical approach that involves "discussion or debates, opportunities to participate in decision making and school activities". Aulls' comparison of the discourse patterns of the two history teachers[336] (see page 105) also supports these findings: the students of the teacher who encouraged them to engage in dialogue and discussion had much better recall of content.

While discussion in social science classrooms is strongly advocated, it is not without its problems. Seixas[337], for example, comments on the need to balance the "opportunity for active, interpretive participation in a classroom community of inquiry" with the "skillful direction of a teacher", to avoid giving "too much interpretive leeway", which might result in the construction and reinforcement of "untenable views of the past and of their place in historical time" (p. 320). Hootstein[338] found that while students (albeit a relatively small proportion of them) ranked discussion second (after role playing and simulations) as the strategy most effective in motivating them to learn about US history, history teachers did not rate discussion as one of their top ten teaching strategies. This may reflect its difficulty. Parker[339] (citing Greene, 1954) calls discussion one of the "great difficult things" of classroom teaching.

Discussion is enhanced by teacher statements rather than questions

While much has been written about the value of discussion, and guidelines developed, few studies have examined in detail how teacher dialogue promotes or hinders student discussion. As Parker comments, much of what passes for discussion could more accurately be described as 'recitation': a sequence involving teacher question, student response, and teacher evaluation. He argues that more attention should be paid to listening, particularly to 'humility' (realising that I may miss something), 'caution' (not giving voice to every thought that comes into my

[332] Hess, D. (2002). Discussing controversial public issues in secondary social studies classrooms: Learning from skilled teachers. *Theory and Research in Social Education, 30*(1), pp. 10–41.

[333] Torney-Purta, J., Lehmann, R., Oswald, H., & Schulz, W. (2001). *Citizenship and education in twenty-eight countries: Civic knowledge and engagement at age fourteen*. Delft: IEA.

[334] Hess, D. & Posselt, J. (2002). How high school students experience and learn from the discussion of controversial public issues. *Journal of Curriculum and Supervision, 17*(4), pp. 283–314.

[335] Kahne, J., Rodriguez, M., Smith, B., & Thiede, K. (2000). Developing citizens for democracy? Assessing opportunities to learn in Chicago's social studies classrooms. *Theory and Research in Social Education, 28*(3), pp. 311–388.

[336] Aulls, M. W. (1998). The contributions of classroom discourse to what content students learn during curriculum enactment. *Journal of Educational Psychology, 90*(1), p. 56.

[337] Seixas, P. (1993). The community of inquiry as a basis for knowledge and learning: The case of history. *American Educational Research Journal, 30*(2), pp. 305–324.

[338] Hootstein, E. W. (1995). Motivational strategies of middle school social studies teachers. *Social Education, 59*(1), pp. 23–26.

[339] Parker (2006), op. cit.

mind), and 'reciprocity' (taking the other's perspective) (p. 16). Dillon[340] contends that the term 'discussion' is often used loosely in education to cover all forms of classroom interaction, from checking understanding, to conversation, to debate, to argument, and the like. His work is one of the few social sciences research studies to attend in any detail to how teachers can facilitate discussion. His principal finding is that teachers can best encourage student talk through the use of statements rather than questions.

Dillon defines discussion as a form of "group interaction where members join together in addressing a question of common concern, exchanging and examining different views to form an answer, exchanging their knowledge or understanding, their appreciation or judgement, their decision, resolution or action over the matter at issue" (p. 8). Consistent with the aims of the social sciences, discussion is characterised by a genuine inquiry focus around an unresolved matter of mutual interest or concern and acknowledges that "better understanding, a new appreciation, a wiser judgement, a firmer resolve" (p. 7) will only arise from a community exchange of views. The essence of discussion, therefore, is that "it engages persons in relation to other persons … it is not just talk, it is interaction, and it is group interaction" (p. 12). It is this convergence of individual and collective benefit, this openness and reciprocity of contribution, that makes discussion so important in fostering a learning community.

Dillon[341] observed factors that enhance and inhibit discussion in classrooms: foremost amongst these is the role that teacher questions play. He argues that teacher questions – unless expressing genuine perplexity – actually foil discussion because they set up the expectation in students that an answer is required. This directs the talk back and forth through the teacher instead of between the students. Dillon uses the following transcript to illustrate such a pattern of interaction:

T: OK, so we've kind of covered leadership and some of the things that Washington brought with it. Why else did they win? Leadership is important, that's one.

S: France gave 'em help.

T: OK, so France giving aid is an example of what? France is an example of it obviously.

S: Aid from allies.

T: Aid from allies, very good. Were there any other allies who gave aid to us?

S: Spain.

T: Spain. Now, when you said aid, can you define that?

S: Help.

T: Define 'help'. Spell it out for me.

S: Assistance.

T: Spell it out for me.

S: They taught the men how to fight the right way.

T: Who taught?

S: The allies.

T: Where? When?

S: In the battlefield.

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[340] Dillon, J. T. (1994). *Using discussions in classrooms*. Buckingham, UK: Open University Press.
[341] Dillon, J. T. (1985). Using questions to foil discussion. *Teaching and Teacher Education, 1*(2), pp. 109–121.

In this situation, the teacher is clearly reviewing content that the students have already covered or read. Notice the relative imbalance between student talk and teacher talk, the brevity of student responses, the right–wrong nature of the exchange, and the lack of student–student interaction.

Dillon contrasts the pattern of talk in the above transcript with the pattern in the following transcript, where the subject is Louis XIV's treatment of the Huguenots:

T: So you feel that he was justified in what he was doing, as far as he was concerned – he could justify it to himself.

Diane: Yeah, he could justify it to himself. But then, before then they really didn't have a separation. So all he could see was an allegory. And he wanted to pull back on that.

T: All right, Marty raised an interesting point just a few seconds ago. He said that … [continues about Communists and Nazis in Chicago] … It's getting away from France, but again it's speaking about the same idea – acceptance of groups that are going against the norms of your society. What's your opinion on groups of this type? Should they be allowed, should they be censored, should it be washed over, should there be guidelines, stipulations – should there be control like Louis XIV tried to control them, to be done away with? – Julie.

Julie: I think that they should be allowed to speak their opinion, because … [continues] … But they should be allowed to speak their opinion, you don't have to listen. [T: OK, Sean.]

Sean: I think Marty was wrong, because … [continues] … Look what they did like, back I think in the 50s with the Communists, and McCarthy, and then during World War II with the Japanese. So, it's still going on today.

T: Right, and the concentration camps which we have had inside the United States during World War II, to house Japanese-Americans … All right, so he's totally disagreeing with what you had to say, Marty.

Marty: Yeah, well … No, he brought up a good point … [continues] … But I mean, I don't think Thomas Jefferson and those guys who signed the Constitution would like Nazis around here. Especially after what they did. I think that's why –

George: They come over here from another country for three months and they earn an ADC [welfare] check! My parents have been working for 25 odd years, and they're not getting half the money that [ethnic epithet] are getting nowadays.

T: Yes, we know … [continues].

Notice the greater use of teacher statements and signals, the more extended nature of the student talk, and the higher level of interaction between students. A similar pattern can be observed in the transcript of the discussion on Ji Li (page 120), where the teacher asks no questions at all.

There is clearly a range of complex factors at work in these examples: the content, the students' background knowledge, and their prior experience of this form of discussion (especially true for the Ji Li example). While Dillon does not suggest that recitation/review is inappropriate (rather, it serves a different purpose), he does consider that teacher talk significantly influences the pattern of interaction. For him, the key to greater student talk and enhanced student–student interaction is for teachers to replace their questions with statements, signals, and silences (see Table 25).

Table 25: Types of response that facilitate student talk and interaction

Response	Description	Example
A. Statements		
Declaration	State a thought that occurs to you as a result of what the speaker has just said.	"But I'm not sure that Ji Li would think that would be bad …"
Reflective restatement	State your understanding of what the speaker has said.	"So you feel that he was justified in what he was doing, as far as he was concerned – he could justify it to himself." "So you're saying she didn't really understand the political significance of what she was doing …"
Statement of mind	Describe your state of mind in relation to what the speaker has just been saying.	"OK, I can see where you are coming from but I don't know if I can entirely agree with that …" or "OK, I'll go along with that."
Statement of interest	State what interests you in what the speaker has just been saying.	"I'd like to hear more of your views on that." "It would help me to understand it better if I had an example."
Speaker referral	State the relationship between what different speakers have said.	"All right, so he's totally disagreeing with what you had to say, Marty." "OK, I think. Ah. We can go backwards to Marilyn's point and take off from that a bit. She said, and I think that some of you are agreeing with her – that X is the case. But Stacey said, and I think that Bonnie was saying the same thing, X is a case of Y."
Self-report	Give an account of your own knowledge, feelings, or experience in relation to the issue at hand.	"One problem I know I have when I think about this question …" "Well, that's good, I'm glad to hear some of these things. 'Cause, see, I've lived in my own little world here for so many years, and I don't run into a lot of people that would have a different opinion from what I have. So that's why I always tell you people that you got about 30 good ideas in here against one of mine, and that's why I like to discuss things with you."
B. Signals		
Phatic	Utter a brief phrase, quietly exclaim a feeling.	"Really", "Great", "Amazing", "Interesting".
Filler	Use a word or sound to indicate attentive interest.	"Mm", "I see", "Fine".
Pass	Use gesture or word to pass the next turn to another speaker.	"OK, Sean", or "Julie", or nod/smile.

C. Silence		
Deliberate silence	Maintain a deliberate, appreciative silence for 3–5 seconds.	

<div align="right">(pp. 80–91)[342]</div>

Dillon[343] cites other evidence for the relative impact of statements and questions. In one lesson that he observed, students responded for an average of 8 seconds to the teacher's questions and 13 seconds to his statements; student–student interactions followed teacher statements but not teacher questions; and student–student interactions included references to each other's contributions. In another lesson, he noted that even praise and discussion-like questions ("What do you think?" "How do you mean?") generated shorter student responses than did statements (15 seconds vs 40 seconds). The graph below illustrates a segment of this lesson. The horizontal axis shows whether the teacher used a statement (X) or a question (Q). The vertical axis shows the length of the student response in seconds. The first statement generated an 83-second response but the two immediately following questions generated much shorter responses. Note that, for the rest of the data collection period, response length rises and falls depending on whether the teacher asked a question or made a statement. In connection with this particular lesson, Dillon noted that not only did students talk *more* in response to teacher statements, they talked *differently*: "their talk has a pronounced flavour of exploration, personal revelation, interpretation of experience, questioning and interconnectedness" (p. 115).
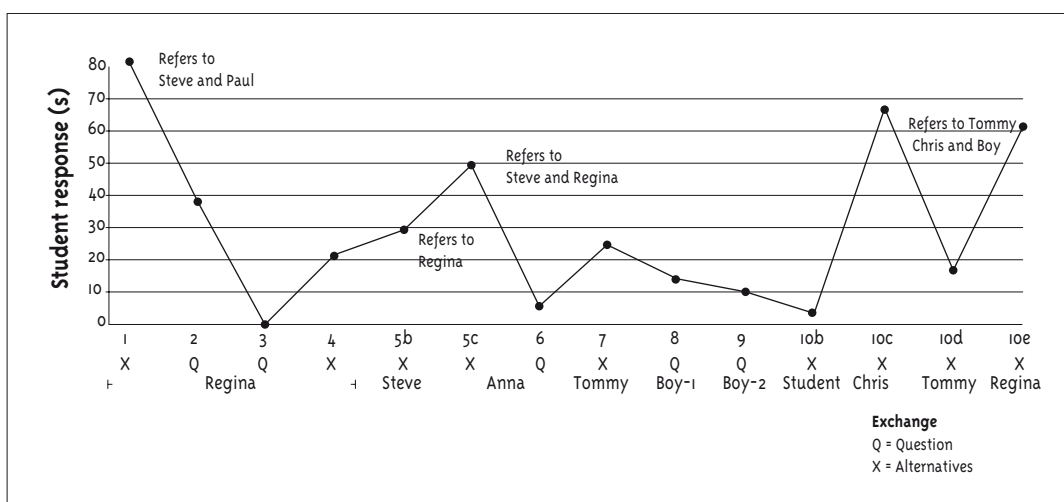
Figure 22: Questions vs alternatives in WB's class

Dillon's work has been applied in other contexts. In collaboration with the teacher of a year 1 and 2 class in a New Zealand school, Orsborn et al.[344] developed an intervention aimed at increasing student talk at 'morning news' sessions – a context with potential for social science-related content. She began the intervention by making this statement to her students:

> "Today I am not going to ask any questions during morning news. This does not mean that I am not interested in what you are saying or that you are wrong, but I will be giving you a chance to share with everyone, and to ask each other questions if you want" (p. 352).

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[342] Dillon, J. T. (1994). *Using discussions in classrooms.* Buckingham, UK: Open University Press.

[343] Dillon, J. T. (1985). Using questions to foil discussion. *Teaching and Teacher Education, 1*(2), pp. 109–121. Figure 22 is reprinted with permission from Elsevier.

[344] Orsborn, E., Patrick, H., Dixon, R. S., & Moore, D. W. (1995). The effects of reducing teacher questions and increasing pauses on child talk during morning news. *Journal of Behavioral Education, 5*(3), pp. 347–357.

During the intervention, the teacher refrained from using questions unless genuinely perplexed. She replaced them with statements – declarative, reflective restatements, or invitations to elaborate ("I'd like to hear more about that") – and she would pause, maintaining attention and giving non-verbal indications of interest.

The results of this intervention are illustrated in Table 26. Note that in Baseline 2 the teacher was asked to revert to her original pattern of interaction. The intervention clearly resulted in a substantial increase in student talk, with the amount varying in response to the teacher's use of questions (fewer questions, more talk) and pauses (more pauses, more talk). The teacher reported that her more reserved students began to contribute more, while her verbally dominant students became less so. She also reported that the intervention was relatively easy to learn and there was some transfer to other teaching contexts.

Table 26: Patterns of teacher talk and student responses

	Average number of teacher questions per 10-minute observation period	Average number of pauses per 10-minute observation period	Average length of student talk per 10-minute observation period (seconds)
Baseline 1 (initial pattern of interaction)	39	1.8	200.8
Intervention 1 (3 weeks)	2.8	6.4	301.6
Baseline 2 (3 weeks – teacher reverted to initial pattern of interaction)	39.6	2.6	196.8
Intervention 2	8.3	14.3	325.7

Other researchers have noted similar changes in student talk in response to qualititive changes in teacher dialogue. Wood and Wood[345], for example, found that deaf children spoke at greater length and with greater initiative in response to teacher statements (3.7 words per turn and 83% initiative) than they did in response to teacher questions (2.5 words per turn and 46% initiative). Whereas excessive questioning led to misunderstandings, phatics (acknowledgments and expressions of interest) encouraged learners to contribute. Evans[346] observed what happened to 19 shy kindergarten children when their teachers decided to be less controlling of conversations in show-and-tell time. The teachers asked fewer questions, choosing instead to express personal views and phatics. The study compared the impact of each of three conditions: normal (the teachers' usual style), high control (many teacher questions), and low control (the experimental style). Table 27 summarises student responses to 20 teacher initiatives:

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[345] Wood, H. & Wood, D. (1984). An experimental evaluation of the effects of five styles of teacher conversation on the language of hearing impaired children. *Journal of Child Psychology and Psychiatry, 25*, pp. 45–62.

[346] Evans, M. A. (1992). Control and paradox in teacher conversations with shy children. *Canadian Journal of Behavioural Science, 24*(4), pp. 502–516.

Table 27: Children's responses to teachers' conversational initiatives in three conditions

Variable (child)	Normal condition (mean)	High-control condition (mean)	Low-control condition (mean)
Verbosity: (total words spoken)	36.2	37	48
Fluency: (number of spontaneous words spoken)	10.6	10.0	21.1
Mean length of turn: (words per turn)	3.2	3.1	4.0
Responsiveness: (number of child turns)	7.1	7.7	7.8

(p. 511)

In the low-control condition, these shy children participated more, as measured by verbosity (total words spoken), fluency (number of spontaneous words spoken), and mean length of turn. Evans summarises:

> While it cannot be said that the children became effusive conversational partners and, while there were individual differences in the children's response to the various speaking styles, the changes were large enough to produce significantly different quantitative results in the mean number of words spoken, mean number of spontaneous words spoken, and mean length of turn (p. 512).

The following transcript from a show-and-tell session illustrates the relative impact of low- and high-control teacher initiatives. Notice how the child (C) is more responsive after the teacher (T) contributes a personal view (T2–C2 and T3–C3) than after a teacher question (T4–C4 and T6–C6):

T1:   Have you got something to tell us today?

C1:   Grampa had a baby pony.

T2:   Uhm hmm. We sometimes have calves at our place. But we never have any colts or horses!

C2:   Grampa has calves at his place. He just had a baby calf too.

T3:   Hmm. We like naming ours.

C3:   Can't remember the baby calf's name.

T4:   Uhm hmm. Do you want to tell us how you got to school today or who came with you and so on?

C4:   Myself.

T5:   I saw somebody who came with you. Who came with you this morning?

T6:   Hmm. Did you see anything special on the way to school?

C6:   (shakes head)

T7:   Hmm. (shakes head)

C7:   A squirrel. So did my sister.

The personal view expressed by the teacher here is followed by a lengthier child response.

Again, the personal view expressed by the teacher is followed by a lengthier child response.

The question asked by the teacher is followed by just a one-word child response.

Again, the questions asked by the teacher are followed by just a non-verbal head shake.

Similarly to the Orsborn et al.[347] finding, it was relatively easy for the teachers involved in this intervention to learn the skills required, using transcripts of teacher–student interactions. But as the example shows, they found it difficult to sustain a low-control style for a whole conversation.

> ### *Promote dialogue*
>
> #### *Summary of findings*
>
> - Students learn content when they talk together about that content.
> - Involving students in developing groupwork norms improves group functioning and increases contribution.
> - Explicit skills teaching develops cooperation and dialogue.
> - Teacher modelling during groupwork helps students develop dialogue skills.
> - Dialogue is encouraged by complex tasks.
> - Whole-class discussion enables students to experience social sciences in action.
> - Discussion is enhanced by teacher statements rather than questions.

5.4 Share power with students

Sharing power with students involves deliberately delegating authority to students to make decisions about their learning, and – indirectly – teaching them in ways that enable them to be more independent in their learning. Such approaches are of particular significance in the social sciences because of the social and participatory goals of the subjects in the domain. As Smith et al.[348] explain, in connection with learning stories in early childhood education, sharing meaning and power with adults enables children to:

> have their voices heard and acted on, to develop agency through having the opportunity to take initiative and play responsible roles, and to have their strengths and interests respected. Such a model encourages children to be active citizens, to take control over their own activities and to be purposeful members of their communities (p. 11).

Similarly, on the basis of student outcomes evidence, Schultz and Oyler[349] argue: "If authority in the classroom can be shared so that students are able to participate in curriculum development, democratic principles can be fostered and realised in the classroom community" (p. 444). These researchers recommend that decisions about both process and content be shared with students.

Delegating authority to students enhances participatory outcomes

Mahoney and Wheeden[350] investigated how directiveness and other aspects of teacher style affected the ways in which children with disabilities participated in dyadic play and instructional interactions. Based on an analysis of 49 teacher–child dyads involving children aged 17–71 months, the researchers concluded that style of teacher interaction explained differences in children's engagement. The more directive teachers were (in terms of their use of requests, commands, questions, hints, controls, and guides), the fewer the interactions.

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[347] Orsborn, E., Patrick, H., Dixon, R. S., & Moore, D. W. (1995). The effects of reducing teacher questions and increasing pauses on child talk during morning news. *Journal of Behavioral Education, 5*(3), pp. 347–357.

[348] Smith, A. (2005). *Children and young people's participation rights in education.* Paper presented at the New Zealand Association for Research in Education, Dunedin.

[349] Schultz, B. D. & Oyler, C. (2006). We make this road as we walk together: Sharing teacher authority in a social action curriculum project. *Curriculum Inquiry, 36*(4), pp. 423–451.

[350] Mahoney, G. & Wheeden, C. A. (1999). The effect of teacher style on interactive engagement of preschool-aged children with special learning needs. *Early Childhood Research Quarterly, 14*(1), pp. 51–68.

Cohen et al.[351] analysed group organisation and interaction in 22 social studies classrooms in San Francisco. One of the hypotheses they were investigating was that the groups' functioning was related to the amount of direct teacher supervision of the groups (above all, they were interested in how such supervision influenced student–student interaction). What they found was a statistically significant negative correlation (-0.52, $p < 0.001$) between the average rate of direct supervision and the proportion of students actually engaged in talking and working together. In other words, where teachers involved themselves directly in groups, student talk decreased. Recognising that teachers may find it difficult to change longstanding habits of supervision, the researchers also tested the hypothesis that if groups were all involved in different tasks, teachers would supervise less. The rationale for this was that if groups were all doing different work, the teacher would see less need to keep them together and less need to interrupt them to explain points of common interest. What they found was that the number of different activities operating simultaneously was negatively correlated with direct supervision (-0.4, $p < 0.01$). In other words, when the number of activities increased, direct supervision decreased. Both these sets of results suggest that, to facilitate student participation in groups, teachers should delegate authority to the students.

Sewell[352] reported on a case study teacher, Rhys, who changed his position on the teacher–student power relationship (see also page 135):

At first	Subsequently …
I thought all the learning had to come from me – otherwise it would not happen … teaching was *all down to me* … it was *my responsibility.*	I thought learning was about 'us' – I could share the teaching – the *children sharing with each other and with me.* I came to believe that the more *power shared*, the more power there was … you as the teacher don't actually lose anything by sharing it – *everyone gains* more. I came to realise how important it was to *create the space* for children to *be responsive* to each other.
Rhys thought about teaching as *planning*, *organising* and arranging activities and resources.	Rhys thought about teaching as a *learning relationship* with children, where there is *mutual trust* and *power sharing*.

Figure 23: A teacher reflects on power sharing

Two of Rhys's students described the change in this way:

Sakura: Yes, and he thinks he's one of us because he just doesn't think he knows everything. When we did our research, we suggested to him what we wanted to do. He helps us and he tries to suggest new ideas to make our research better.

Era: It makes us feel that age doesn't matter, just because you are older doesn't mean you know more.

Sakura: Instead of telling us what to do, he doesn't do that, he actually sits down and helps us. We are all learners and teachers in our classroom.

351 Cohen, E. G., Lotan, R. A., & Holthuis, N. C. (1995). Talking and working together: Conditions for learning in complex instruction. In M. T. Hallinan (Ed.), *Restructuring schools: Promising practices and policies* (pp. 157–174). New York: Plenum Press.

352 Sewell, A. (2006b). *Teachers and children learning together: Developing a community of learners in a primary classroom.* Unpublished doctoral thesis, Massey University, Palmerson North.

Sewell noticed that the children in Rhys's class moved towards *initiating* joint participation. In her reflection, she recorded a dilemma that she found herself in when, as a participant-researcher, she was asked by a student where they should put their names on a piece of work they were doing together.

> "Do I just give my opinion or enter a conversation? I am intrigued by my hesitation. Usually I would just tell, but to tell in this classroom would be to conflict with its norms. They don't want me to *tell*, rather to be *part* of their thinking. The way she repeated 'what do you think?' and kept running on with her own thoughts was so different to 'ask and wait for me to tell' – typical of one-sided participation. She was inviting me to dovetail with their thinking. What do I do … if I'm not to tell? In my moment of indecision, it dawned on me to ask what they had already considered so I could build on that" (p. 107).

This reflection shows how the students had come to *expect* power to be shared with them and how the researcher was able to share power by not telling them. One-sided participation assumes the teacher has the more powerful role; in joint participation, power is shared.

An example from Ladson-Billing's[353] three-year study of successful teachers of African American students illustrates another dimension of power sharing: the importance of recognising the social power that a group of students may hold and turning it to productive use by valuing members' skills and abilities:

> In one of the classrooms I studied, the teacher, Ann Lewis, focused a great deal of positive attention on the African American boys (who were the numerical majority in her class). Lewis, a White woman, recognized that the African American boys possessed social power. Rather than allow that power to influence their peers in negative ways, Lewis challenged the boys to demonstrate academic power by drawing on issues and ideas they found meaningful. As the boys began to take on academic leadership, other students saw this as a positive trait and developed similar behaviors. Instead of entering into an antagonistic relationship with the boys, Lewis found ways to value their skills and abilities and channel them in academically important ways (p. 160).

Lotan[354] makes it clear that *delegating* authority is not the same as *relinquishing* authority:

> When the teachers delegate authority they hand over specific responsibilities to the groups and to the individuals in the groups … Delegating authority, however, does not mean relinquishing authority … one cannot delegate authority if one does not have it in the first place (p. 171).

In other words, the teacher continues to have an important role in the prior preparation of groups, in constructing challenging tasks that warrant group effort, linking group learning to prior and subsequent learning, and in holding groups accountable for the quality of their work. McNeight[355], for example, in her study illustrating the positive impacts of delegating authority to students (see Case 2), noted how important the school–home–school discussion sequence is in building student understanding.

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353 Ladson-Billing, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. *Theory into Practice, 34*(3), pp. 159–165.

354 Lotan, R. A. (2004). Stepping into groupwork. In E. G. Cohen, C. M. Brody, & M. Sapon-Shevin (Eds.), *Teaching cooperative learning: The challenge for teacher education,* pp. 167–182. Albany, NY: State University of New York Press.

355 McNeight, C. (1998). *"Wow! These sorts of things are similar to our culture!": Becoming culturally inclusive within the senior secondary school curriculum.* Unpublished graduate research report, Department of Teacher Education, Victoria University of Wellington.

Making learning and thinking processes transparent reduces reliance on the teacher

By comparing the teaching approaches of two teachers, Aulls[356] illustrates how the learning culture of the classroom can influence outcomes for students. Mark's teaching was characterised by what Aulls calls 'strategy instruction': he simultaneously taught learning strategies and content. David's teaching was characterised by what Aulls calls 'accommodation instruction'. To increase social participation, he modified activities at the expense of higher-level thinking: narrowing the scope of information that low-achievers needed to attend to by cuing them to content that would be tested, providing models to copy, and emphasising credit for participation.

Just how different the outcomes were for the students of these two teachers can be seen by the following student comments about a note-making assignment on the Egyptian pyramids (p. 527):

Derek, in Mark's class

Taking notes before I read this assignment and focusing on key information before [in previous lessons] helped me do this activity on the pyramids. It was fun. I was interested in most of the topics we read about. In the next one [reading assignment in history] I might make up my own questions in my mind as I read and take notes and then answer them. I would ask ones that go along with the text mostly. I think that would make it a little easier for making notes I can use. See, with the pyramids, I might ask myself what each type looked like, when it was built. I might ask if I could imagine what it looked like by basically making a picture in my mind. I'd ask questions as I did my reading and stop to answer until I finish.

(Interview, Lesson 10)

Larry, in David's class

When I first got the assignment to pick out the important information and make notes about it as I read the pyramids—who did them and what shapes they had—anything that was fairly material. I did not know what to do at first. Then later, he [David] explained. He told me to write where they were built, and important facts that describe the pyramids. This helped me do this at home. I wrote down too much information. I had to cancel a lot of it in class. When Mr. C [David] hinted at what was important, what kind, how big, and who made them, then I knew how to put less. When he showed his notes on the pyramids [on an overhead projector], I underlined the right parts and took out the rest that I had from the notes I made at home. Thought we were supposed to get a question guide to read this like the ones before. Without the question guide well … I did not know what to do.

(Interview, Lesson 11)

The student who had experienced the strategy instruction was in a better position to accomplish the task and was thinking in ways that would be transferable to other situations. Aulls noted that such instruction generally changed the distribution of responsibility in the classroom, to the benefit of the low-achieving students: "Changes in who poses academic questions and statements during a lesson [made] students become more active and [helped] low achievers to accomplish academic activities and become more independent of the teacher" (p. 531). Larry, who had experienced the accommodation instruction, was much more dependent on the teacher; he had come to rely on the teacher-provided question guide and, in its absence, did not know what to do.

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[356] Aulls, M. W. (2002). The contributions of co-occurring forms of classroom discourse and academic activities to curriculum events and instruction. *Journal of Educational Psychology, 94*(3), pp. 520–538.

Learners can also be supported to take more responsibility for their own learning through the use of regular, structured, reflective activities. Swan and White[357] show how, in the context of units on Australian history and geography, a 'thinking books' strategy helped students understand "what it means to learn" and to become "more purposeful, reflective and questioning in class". Each day, students completed reflections on their learning and thinking in their thinking books, and the teacher then read and responded to these reflections. In their thinking books, students asked questions, observed connections to their own lives, considered how they had learned what they had learned, summarised their learning, and wrote what had interested them most and why. They also commented on emotional connections they made to their learning. This example (original spelling) illustrates some of these dimensions:

[S]   Today we made a concept map. I lirnt a lot about the first fleet. Conecpt maps are like the meaning of samething and a bit lige a jig saw pusel you write the thing you want to write about and put it down like a map

[T]:   Good thinking Jenny. What did you learn by doing the concept map?

[S]:   I learnt what a concept map was …

[S]:   Today we talked about the aboritines and mrs swan red us a story about the aborigines lirnt same wase to get water and to cook anmils for food

[T]:   What questions do you have about our work on Aborigines?

[S]:   … why did the wite men take all of Australia? Mrs Swan I feal sory for the aborigines. Is ther same way we can help

[S]:   The Aborigines want some of their land back. They are asking the Government to give it to them.

(pp. 94–96)

The thinking books became a source of metacognitive learning for these students; they also helped the teacher better understand her students' learning processes. Swan and White report on a follow-up, five years later, in which the students reported remembering the thinking books approach and said that they had continued to think about their learning.

A collaborative action research project by Dellett et al.[358], involving grade 3 and 4 students, reported on the impact of a metacognitive environment that integrated: direct teaching of thinking skills; 'thinking journals', in which students responded to metacognitive prompts; and "class meetings, Venn diagrams, Meta Moments, and reflective chats [as] springboards for students to articulate and recognise the efficacy of various thinking strategies" (p. 32). Pre- and post-intervention data were gathered by means of a 'metacognition survey' that asked students about their awareness of thinking and learning strategies.

At the start of the intervention, students "demonstrated little understanding about their thinking processes, and they were reluctant to try" (p. 31). The metacognitive approach resulted in students demonstrating "increased self-reliance, a new awareness of thinking capabilities, an ability to make connections to prior knowledge, the ability to take a risk as they explored solutions to particular problems, and an emerging awareness of thinking strategies". Such learning is illustrated by Kurt, who explained that he deduced the answer to a test question about Virginia by eliminating useless information and by comparing what he knew with a graphic that was provided. More generally, it can be seen in the difference in responses to a learning strategy question that was posed at the beginning and end of the

357 Swan, S. & White, R. (1994). *The thinking books*. London: The Falmer Press.

358 Dellett, K., Fromm, G., Karn, S., & Cricchi, A. (1999). Developing metacognitive behaviors in third and fourth grade students. Retrieved June, 2005, from gse.gmu.edu/research/tr/articles/ Clearview/Final%20Report.html (Graduate School of Education, George Mason University, Teacher Action Research).

learning experience: the students went from being teacher-dependent to being aware of their own learning strategies:

What do you do when you are in the middle of an assignment and you realise you don't know what to do?

Pre-intervention responses	**Post-intervention responses**
Ask the teacher.	I think about what I have done in the past that is similar; if I can't think of anything I ask three friends and if they don't know I ask the teacher.
Raise your hand and tell the teacher.	
Go ask the teacher.	
Tell teacher I don't get it.	I might read over the question again so I understand it better.
Ask someone.	
I get help from mom and dad.	I think back at what the dreictons [directions] were [re another Q].

Kourilsky and Wittrock[359] showed that students can benefit from a metacognitive environment that helps them focus on thought processes likely to block their learning. These researchers investigated what impact a generative, cooperative group approach had on teaching the concept 'market equilibrium' to 142 grade 12 students from a lower to middle socio-economic area of California. The students in the experimental group were compared with those of a control group that covered the same material with the same teacher, using cooperative groups but not the generative approach. Those in the experimental group were given two hours of instruction in which the teacher: introduced them to the principles of generative teaching (see below); explained the three mindsets that have been shown to result in economic misconceptions (see also below); provided examples of each of these mindsets (for example, confusing scarcity with rarity); and encouraged them to come up with their own examples of incorrect mindsets from previous economics learning and discuss how they had succeeded in replacing them with correct mindsets. The experimental and control groups both participated in 15 lessons. Approximately 80 percent of the dialogue was student-generated. The difference was that those in the experimental group were challenged to 'get into each other's minds' by thinking aloud about the concepts, identifying incorrect mindsets, and helping each other correct them.

The principles of generative teaching

- Relate the subject matter presented in class to the learners' prior knowledge (preconception);
- Relate subject matter to the learners' beliefs, preconceptions, and real world experiences (preconception);
- Use visual as well as verbal examples (generation);
- Take one another's learning styles into account (preconception, generation);
- Ask questions that direct each other's attention to the major content to be learned (attention);
- Ask each other high-level questions, not recall questions (attention);
- Have high expectation levels for everyone in the group (motivation);
- Have everyone in the group periodically make summaries in their own words (generation);
- Make sure everyone in the group is actively involved in the learning (motivation, generation);

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359 Kourilsky, M., & Wittrock, M. C. (1992). Generative teaching: An enhancement strategy for the learning of economics in cooperative groups. *American Educational Research Journal, 29*(4), pp 861–876.

- Remind each other that each person is ultimately responsible for his or her own learning (motivation).

(p. 869)[360]

Incorrect mindsets in learning economics

Linguistic mindset – the tendency to identify with the natural language use of the term or concept: for example, the meaning of familiar concepts such as scarcity, demand, and investment do not have quite the same meaning in economics as they have in ordinary usage (scarcity as rarity).

Physical mindset – the use of an incorrect physical analogy: for example, price ceilings and floors as something as higher or lower than themselves leading to the incorrect idea that price ceilings are shown graphically as being above equilibrium price; or the idea that an increase in supply shifts the supply curve up, rather than to the right.

Resistive mindset – the tendency to ignore or deny a reality that is in conflict with what a person believes: for example, the belief that if one has invested a lot of money or effort into a project one should finish it no matter what rather than the economic understanding that if the cost to finish is more than the project will ever earn it should not be finished.

(p. 869[361] and pp. 26–27[362])

The researchers found that the students from the 'generative teaching, cooperative learning' group performed better than those from the cooperative learning-only group in terms of their comprehension of economics: they possessed significantly less misinformation and fewer misconceptions. The researchers attributed this to the collaborative, metacognitive learning in which they had engaged:

> Apparently the instruction in learning to recognize and to modify each other's preconceptions about principles of economics influenced the revision of some of these misconceptions into more useful or more sophisticated conceptions of economics. These re-learnings of concepts of economics appear to be involved in the increase in economics comprehension that generative teaching produced in this study (p. 874).

The researchers also reported that the experimental group demonstrated more confidence in their answers than the control group. This suggests that generative teaching, in addition to improving conceptual understanding, may also have had a positive effect on students' attitudes towards economics. Given the relatively minimal nature of the intervention (two additional lessons), these are significant findings and illustrate the potential benefits of challenging students to engage in conversations with each other about their thinking.

Share power with students

Summary of findings

- Delegating authority to students enhances participatory outcomes.
- Making learning and thinking processes transparent reduces reliance on the teacher.

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[360] ibid.

[361] ibid.

[362] Kourilsky, M (1993). Economic education and a generative model of mislearning and recovery. *The Journal of Economic Education, 24(*1), pp. 23–33.

6. Interest (Mechanism 4)
Design experiences that interest students
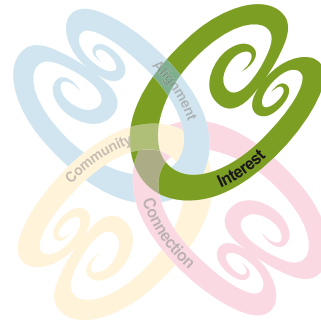
6.1 Why designing interesting experiences matters

> "We had a sheet about it … it was just an activities sheet. Had a bit about it and some questions … I remember doing it but I don't remember a thing about it" (p. 112)[363].

This comment from Amy, 12 months after a unit on medieval times, illustrates how students attach memories about what they learn to the way in which they learn it. Whereas the focus of Mechanism 2 was on ensuring that student learning experiences are explicitly aligned to important outcomes and prior knowledge and experience, the focus of this mechanism is on making those experiences memorable and on how learning activities can stimulate motivation to learn. It is through learning experiences (activities) that students encounter the knowledge, understandings, skills, values, and participatory opportunities that are important in the social sciences. But those activities first need to capture their interest. As Hansen[364] explains, discussing Dewey's conception of the teaching and learning environment:

> Engagement, involvement and engrossment, but not learning per se, [is] the immediate aim of teaching. If teachers cultivate and support conditions that engage students in an activity, whether it be interpreting a poem, conducting an experiment, or debating the cause of an historical event, learning will more likely be the outcome, or so Dewey suggests (p. 277).

Csikszentmihalyi[365] puts the importance of this motivational orientation even more directly:

> The chief impediments to learning are not cognitive. It is not that students cannot learn; it is that they do not wish to. If educators invested a fraction of the energy they now spend trying to transmit information in trying to stimulate the students' enjoyment of learning, we could achieve much better results (p. 116).

This mechanism explains how learning activities can be designed to increase engagement and interest and, as a result, generate learning that is memorable. It draws on evidence in three categories:

- Diverse motivations. Learners are not all motivated in the same way: what interests one may not interest another. For this reason, it is important to understand and take account of different motivations for learning.
- Interesting activities. Although student motivations are diverse, some activities are more intrinsically interesting than others and, therefore, have greater potential to generate learning. We provide evidence of the potential of particular types of activity to engage students.
- Variety of activities. Variety of experience makes learning more memorable. As Nuthall[366] explains:

When students experience a narrow range of classroom activities they rapidly lose the ability to distinguish one activity from another in memory. As a consequence, they lose the

[363] Nuthall, G. (2000). The role of memory in the acquisition and retention of knowledge in science and social studies units. *Cognition and Instruction, 18*(1), pp. 83–139.

[364] Hansen, D. T. (2002). Dewey's conception of an environment for teaching and learning. *Curriculum Inquiry, 32*(3), pp. 267–280.

[365] Csikszentmihalyi, M. (1990). Literacy and intrinsic motivation. *Daedalus,* (spring), pp. 115–140.

[366] Nuthall, G. (2000). The role of memory in the acquisition and retention of knowledge in science and social studies units. *Cognition and Instruction, 18*(1), pp. 83–139.

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ability to recall the curriculum content embedded in those activities. Classroom experiences become not only boringly repetitive but rapidly forgotten ... the repeated use of even the most effective of classroom tasks is likely to become counterproductive (p. 337).

Studies reported in this section provide insight into the ways in which students use their memory of specific classroom activities to recall their learning and suggest the implications of this insight for designing activities that draw on a range of modes.

> ### So what should I do?
>
> - Meet diverse motivational needs.
> - Maximise student interest.
> - Use a variety of activities.

6.2   Meet diverse motivational needs

Students are not all motivated by the same activities

While the social sciences have the potential to be intrinsically motivating because, at their heart, they tap into children's natural curiosity about the larger world[367], not all students are motivated by the same things. What is interesting and engaging for one may be demotivating for another; what has cultural and emotional meaning for one may have no meaning for another[368]. Rossi[369] noted that in-depth study of an issue, with an emphasis on argument and discussion, did not uniformly motivate students. Edgington[370] found variation in student preferences and attitudes towards the use of children's literature in social studies. Milson[371] found that students using a Web-Quest inquiry-based learning approach to a study of Ancient Egypt sometimes preferred print sources to Internet sources. He also found that while the variety and volume of information available online was an attraction for some (high-ability students), for others, the appeal lay in finding information and helping complete a group task (special education students).

Some researchers have found correlations between gender and preferences. In a study of 50 grade 5 history students, Brophy et al.[372] found that boys preferred to focus on events and the accomplishments of famous individuals while girls were more interested in generic history topics and the everyday lives of ordinary people. Rickinson[373] noted that two year 8 geography students, a boy and a girl, responded very differently to a lesson in a module on tropical rainforests. The students watched a video on the Kayapo and their life. Jo commented, "We had done a load about weather and the graphs, and it was a nice change to watch the video" (p. 131). By contrast, Aiden observed: "I liked the previous lesson about rainforest climate far

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[367] D'Addesio, J. A., Grob, B., Furman, L., Hayes, K., & David, J. (2006). Social studies: Learning about the world around us. *Young Children,* September, pp. 50–54. National Association for the Education of Young Children: Washington.

[368] Wlodkowski, R. J. (2003). *Diversity and motivation: culturally responsive teaching.* San Francisco, Calif.: Jossey-Bass.

[369] Rossi, J. A. (1995). In-depth study in an issues-oriented social studies classroom. *Theory and Research in Social Education, 23*(2), pp. 88–120.

[370] Edgington, W. D. (1998). The use of children's literature in middle school social studies: What research does and does not show. *The Clearing House, 72*(2).

[371] Milson, A. J. (2002). The internet and inquiry learning: Integrating medium and method in a sixth grade social studies classroom. *Theory and Research in Social Education, 30*(3), pp. 330–353.

[372] Brophy, J., VanSledright, B., & Bredin, N. (1992). Fifth graders' ideas about history expressed before and after the subject. *Theory and Research in Social Education, 10*(4), pp. 440–489.

[373] Rickinson, M. (1999). People-environment issues in the geography classroom: Towards an understanding of students' experiences. *International Research in Geographical and Environmental Education, 8*(2), pp. 120–139.

more because you're actually learning things about the rainforest, not well the people that live in there … say we are mainly focusing on the people, and not the rainforest … that's not really learning about the rainforest" (p. 131). The two students also had different views on the value of writing a poem or diary. Jo "enjoyed doing the poem", while for Aiden, a diary was "sort of an intimate thing, and I don't like that … it was having to write poems and diaries, I think it's not really part of Geography …" (p. 132). Reflecting on the lesson, Aiden concluded: "In Geography today I did not learn anything to my benefit" (p. 133).

What teachers envisage as motivating may not prove motivating for students

Student interest may also not match teacher perceptions. Levstik[374], for example, observed that teacher "reluctance to include divisive or coercive – or simply alternative – elements from the past contrasted sharply with students' interest in those areas" (p. 300). She found that students were interested in the way in which public policy had inhibited inclusion and had thwarted rights, while teachers rejected these evidently negative ideas on the grounds that they were not historically significant and were regarded as contentious by parents and communities. Hootstein[375] asked 18 grade 8 teachers the question: "What strategy do you use to motivate students to learn US History?" and, at the same time, asked 60 of their students to identify the one method that most motivated them to learn US history. The students' top three strategies were:

1. Role-play characters in simulations of historical or hypothetical events.
2. Participate in group discussions of textbook or other material.
3. View videos and/or films about historical figures or events.

These were the only strategies mentioned by 10% or more of the students. Fifteen of the teachers also listed role play of characters in simulations, and five listed viewing of historical videos or films. The teachers did not rank group discussion of textbooks and materials in their top 10 strategies. This signals a discrepancy between the strategies teachers use to motivate their students, and the strategies that their students actually experience as motivating. These findings also reinforce the fact that no one strategy is motivating for all students. Only 22% of the students (13) ranked the top-rated strategy (role playing characters) as their best motivator.

What these findings show is that teachers need to find out what motivates *their* students. One approach is to list teaching methods/approaches (such as role playing, reading historical novels, participating in small-group projects) and ask students to rank these in order of preference. Another approach, used by Schneider et al.[376], involved an instrument developed and validated by Csikszentmihalyi and Larson[377] that enables students to record their subjective experience of tasks as they engage in them and keep a log of their experiences as they move from one activity to another. The instrument is based on general principles of motivation and comprises the following items:

[374] Levstik, L. S. (2000). Articulating the silences: Teachers' and adolescents' conceptions of historical significance. In P. N. Stearns, P. Seixas, & S. Wineburg (Eds.), *Knowing teaching and learning history: National and international perspectives* (pp. 284–305). New York: New York University Press.

[375] Hootstein, E. W. (1995). Motivational strategies of middle school social studies teachers. *Social Education, 59*(1), pp. 23–26.

[376] Schneider, B., Csikszentmihalyi, M., & Knauth, S. (1995). Academic challenge, motivation, and self-esteem: The daily experiences of students in high school. In M. T. Hallinan (Ed.), *Restructuring schools: Promising practices and policies* (pp. 175–195). New York: Plenum Press.

[377] Csikszentmihalyi, M., & Larson, R. (1987). Validity and reliability of the Experience-Sampling Method. *Journal of Nervous and Mental Disease, 157*, pp. 525–536.

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- Challenge. To what extent does this activity make you feel excited or make you want to get involved?
- Skill. To what extent is this activity enabling you to use your skills?
- Importance. To what extent is the activity important to you? To what extent do you feel that it is related to your future goals?
- Interest. To what extent do you wish to be doing this activity? To what extent do you enjoy what you are doing? To what extent is the activity interesting to you? To what extent are you concentrating on the activity?
- Success. To what extent are you feeling successful at the current activity? To what extent are you feeling in control as you work on the current activity?
- Relaxation. To what extent do you feel relaxed rather than anxious while you are doing this activity?
- Self-esteem. To what extent are you living up to your own expectations as you do this activity? To what extent are you feeling good about yourself as you do this activity?
- Cooperation. To what extent do you feel cooperative rather than competitive while you are doing this activity?

Allowing students to make their own learning choices can motivate them to engage

Kilpatrick[378], writing a long time ago, asserted that content that was important was content that was real for students. He believed in learning without compulsion and believed that this could best be achieved by replicating the way people learned in daily life – through self-initiated, purposeful, group activity, guided by the teacher.

> If we conceive activities as ranging on a scale from those performed under dire compulsion up to those into which one puts his [sic] single 'whole heart' the argument herein … [is that] the term 'project' or purposeful act [is at] the upper portions of the scale.

The findings of the studies outlined below suggest that Kilpatrick's assessment of the value of self-initiation and purposeful activity continues to be vindicated.

Inquiries based on students' own interests and questions engage students

Inquiry-based learning, stimulated by students' own questions, is a feature of the 'Base 6' approach used by the teachers of year 9 and 10 students in Bartlett's research[379.] This programme is characterised by curriculum integration (English, social studies, and science) and authentic contexts. Student projects, done individually or collaboratively (two each term), are initiated by the students and driven by their own questions and interests. For each project, students search print, electronic, and video data and interview people within and outside the school. They "ask productive questions, gather information of all kinds, reduce and synthesise that information, and then analyse, interpret, and evaluate it" (p. 39). As well as developing students' knowledge and skills within the particular contexts of social studies and the other two subjects, the project impacted positively on attendance and participation in NCEA. When data on the Base 6 and non-Base 6 students in the same school were compared, it was found that the Base 6 students were more frequent attenders and that Base 6 students – particularly those who were Māori – attempted more NCEA unit standards.

The positive impact of empowering students to be active researchers, driven by their own questions and research agendas, can also be seen in an initiative reported by Kellett, Forrest

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[378] Kilpatrick, W. H. (1918). The project method. *Teachers College Record, 19*(September), pp. 319–335.

[379] Bartlett, J. (2005). Inquiry-based curriculum integration in the secondary school. *SET: Research Information for Teachers, 3*.

(aged 10), Dent (aged 10), and Ward (aged 10)[380]. This initiative was successful for a number of reasons. Not only were students explicitly taught the research skills they would need, they had 'complete free choice' when it came to the questions and topics they would research. A report on 'How Nine- to Eleven-Year-Olds [are] Affected by the Nature of Their Parents' Jobs' illustrates the kind of student-relevant and student-significant foci of the projects undertaken by the students. The depth of insight evident in Ruth and Naomi's reflections on their project speaks for itself:

> Although this was only a small project with 70 children from our school we still think it has shown us some interesting data. We had an impression before we started that children would be much more discontented about how their parents' work affected their family life (we're not sure we can explain why, it's an impression that just sort of 'is around') and yet we found quite the opposite. Perhaps this is because of the age. At nine and ten we think we are a lot more grown up than adults sometimes think we are. A lot more children thought that their parents' work hours were 'just right' rather than 'too long' even though we think children would want to spend more time with their parents they are realistic about the situation and understand that parents have to work to earn money. The other really interesting conclusion is that children feel that more parents seem to come home 'tired' than 'irritable' or 'angry'.
>
> If we could do this project over again we would change some things to make it better. Because we tried to be sensitive about some children not having a mum or a dad or having several mums and dads or having a mum or dad who was unemployed we probably made the questionnaire too detailed and complicated. We found that we didn't need all the data we collected and only analysed the parts of the questionnaire that told us about children's feelings about their parents' jobs. If we could do this again we would probably make the questionnaire much simpler and perhaps only ask about one parent. Also it would be really interesting to do a comparison between what six-year-olds feel and what ten-year-olds feel about their parents' jobs because we think there would be a big difference. Perhaps this is something we can investigate in the future (p. 336).

These students' emphasis on how interesting they found the data, and their attention to implications for future research, are just two of the indications that this approach engaged them in worthwhile learning. It is also clear that they were learning about important ideas (the impact of employment on young family members) and that they were engaged in ways that developed their inquiry skills (gathering information from a range of sources, reporting key aspects of their process, summarising key findings, considering a range of perspectives, and reflecting on the learning process).

The element of choice was also central to the approach reported by Schultz[381] (see page 187), in which the students' own concerns provided the basis for a social-action project. By focusing on concerns that were a priority for students, the teacher was trying to "take the curriculum away from the scripted lesson plans and give it to the students to develop their unique interests" (p. 168).

Interest

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[380] Kellett, M., Forrest, R., Dent, N., & Ward, S. (2004). Just teach us the skills please, we'll do the rest: Empowering ten-year-olds as active researchers. *Children and Society, 18*(5).

[381] Schultz, B. D. (2007). "Not satisfied with stupid band-aids": A portrait of a justice-oriented, democratic curriculum serving a disadvantaged neighborhood. *Equity & Excellence in Education, 40*(2), pp. 166–176.

Caution: Being able to choose activities based on interests does not guarantee that students will engage in learning with important outcomes

In the Kellett example, above, being able to choose worked well for the learners. But findings from the ULTP serve as a reminder that student choice may not always work as well: the activities they choose may not necessarily support their learning. Nuthall[382] explained how students' interests and background knowledge influenced the activities they chose and either increased or decreased the likelihood of learning. Those with greater relevant background knowledge were more likely to choose appropriate activities. "Individual differences in students' interests, involvement, and background knowledge determined what they learned, which in turn determined the background knowledge they could use to learn from new experiences" (p. 335).

When students choose activities, they are influenced – at times, in unintended ways – by what they consider their teacher to value or expect. During a session in which students could choose tasks to complete, "Teine chose to create a word finding puzzle using the words about Antarctica the teacher had recorded on the blackboard" (p. 18). "As it turned out, the word finding puzzle became the occasion for reinforcing one of her misconceptions" (p. 26)[383]:
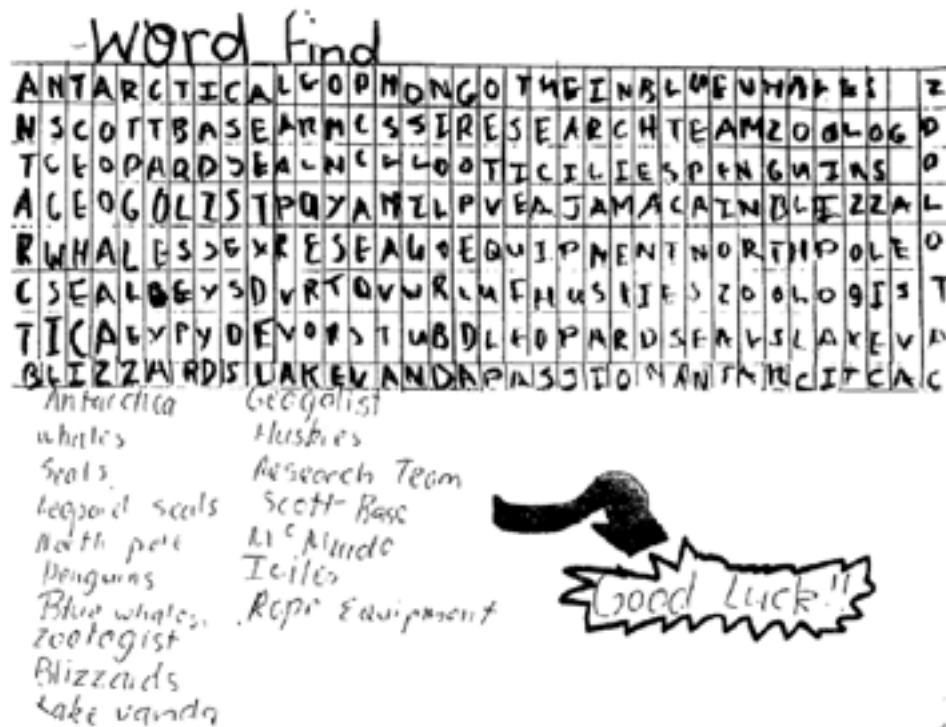
Figure 24: Antarctica word find[384]

As can be seen, the word find helped Teine remember some place names in Antarctica, but it also included mistakes (for example, 'North Pole'). In this way, it served to reinforce a misconception for Teine.

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382 Nuthall, G. (1996). *What role does ability play in classroom learning?* Paper presented at the New Zealand Association for Research in Education, Nelson.

383 ibid.

384 ibid., p. 49.

Table 28: Learning outcomes of items on the South Pole

	Pre-test			Post-test			Interviews		
	MC	List	Map	MC	List	Map	MC	List	Map
Jane	Arctic circle	O	Arctic circle	Arctic circle	✓	✓	✓	✓	✓
Joy	North Pole	North Pole	✓	✓	✓	✓	✓	✓	✓
Jim	Arctic circle	O	O	✓	O	O	✓	O	O
Paul	✓	✓	✓	✓	✓	✓	✓	✓	✓
Teine	North Pole	North Pole	North Pole	Arctic circle	North Pole	O	Arctic circle	✓	Arctic circle
	Key: O = omitted answer; ✓ = correct answer								

Unlike Jane, Joy, and Jim, who all learned and remembered the location of the South Pole, Teine persisted in her understanding that the North Pole was in Antarctica. One reason for this is that the teaching did not explicitly refer to the location of the South Pole; a second reason is that, by choosing the word finding activity and lacking appropriate feedback, Teine learned nothing new – neither did she correct the knowledge that she brought to this task.

> ### *Meet diverse motivational needs*
>
> ***Summary of findings***
>
> - Students are not all motivated by the same activities.
> - What teachers envisage as motivating may not prove motivating for students.
> - Allowing students to make their own learning choices can motivate them to engage.

6.3   Maximise student interest

Student interest is often used to explain why particular approaches work in terms of social sciences learning: an activity arouses student interest, interest leads to engagement, engagement leads to learning. While there is a substantial literature on generic motivational strategies (such as use of rewards, highlighting the instrumental value of activities, or various forms of competition), this report focuses on those that are specific to social sciences teaching and learning.

First-hand experience of social, cultural, economic, and political situations makes learning real

'Real experience', in the pedagogical sense, encompasses activities that either match or directly replicate reality or that require participation in real situations beyond the classroom.

In-class real experience

First-hand experience does not need to involve complex, out-of-school arrangements. Skerrett White[385] illustrates how teachers can capitalise on the moment and use real experiences in

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[385] Skerrett White, M. N. (2003). *Kia mate ra ano a Tama-nui-te-ra: Reversing language shift in kohanga reo.* Unpublished doctoral thesis, University of Waikato, Hamilton.

ways that enable children to participate in and better understand important cultural values, beliefs, and practices. She tells the story of the community at Te Amokura Kōhanga Reo making jam together:

> "Within the centre we have a plum tree. In the summer it was laden. The fruit was sweet. Our kuia (elder) was in the Kōhanga. She did not like to waste food. Therefore it was decided to use the fruit and make jam. This activity is not a particularly 'Māori' thing to do, but embedded within the activity there was a sense of manaakitanga, where making the jam was a community effort, with everyone pitching in to help. From the karakia before the gathering of the fruit from Te Wao Nui a Tane, during the preparation of the fruit and utensils for the cooking process, to the eating and sharing of the jam, the whānau worked as a collaborative unit … There were cultural and identity links as, after assessing for taste and the satisfaction on completion of the task, the remaining jars of jam were given away to help fundraise for a Māori school under threat of closure. The whole activity was conducted in te reo Māori … with an oral and written literacy component as the activity was documented with the use of photographs. The photographs were subsequently annotated and made into a book for follow up discussion and reflection" (pp. 16–19).

In a similar way, Riel's[386] work on 'learning circles' shows the impact on students of learning from and with other students who, though distant in terms of location, are engaged in real time and with a real purpose. She reports how eight classes worked together as virtual learning communities on cross-curricular projects emphasising themes central to the social sciences; for instance, 'places and perspectives', 'society's problems', and 'global issues'.

Students in one class sponsored a project which sought information about the founding of their communities. Students in Australia shared stories of the discovery of opal mines that led to the settling of Coober Pedy where people live underground to escape the severe weather of the desert. Students in New York described how the early trading centre at the junction of two railroad lines developed into a thriving business centre and finally into a suburb of a larger city. From Canada came stories of native people trading sea otter furs with the British for blankets and tools, as well as stories about settlements established by the Loyalists fleeing from the New America (p. 2).

These projects focused on the exploration and solving of real problems that were relevant and meaningful to the students. Mostly via the online learning network, the students shared their work and their teachers collaborated. A teacher in Syracuse wrote the following online letter to the other teachers involved. It shows how an introductory part of the approach – the exchanging of welcome packs – was of particular interest to her students. She described her students opening the packs sent them by students in British Columbia:

Dear Circle Mates,

… Picture, please, a group of ten fourth graders spread about the Library floor with bits and pieces of the Welcome Pack from British Columbia. Each is deeply engrossed in reading the brochures, maps, clippings, etc. There is considerable verbal exchange as they call out pieces of information they find interesting. There is some arguing over who gets what next. There are two boys now pulling out the globe to do a comparison of the location of British Columbia and Syracuse and there is considerable discussion about the weather differences.

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[386] Riel, M. (2000). Learning circles: Virtual communities for elementary and secondary schools. Retrieved May, 2006, from http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/10/e8/d1.pdf

Two other youngsters get out an atlas, check a map, put the atlas away and get a "better" one. A girl carries a clipboard and is writing down questions. These are to be used in the next Learning Network message. Two teachers move in and about this scene answering questions, or making suggestions for further analysis. This goes on for thirty minutes and must end only because another group wishes to use the floor space. Grudgingly, things are put away, but the conversation continues. "Why …", "What about …", "Did you see …", "Well, I think …"

The Welcome Pack is clutched securely in the hands of one student and the slightly noisy group exits the library on its way to the reading room. These deeply involved, actively engaged, turned on, task-oriented learners are a group of "reluctant readers" who normally have far more interesting things to do with their time than to attend to their studies. But [in the learning circle work] they are the best workers and thinkers I've seen in a long time. They are writing, they are reading, they are asking questions, they are learning and they are enjoying it!

That's it for today …

Lois in overcast Syracuse

This example shows how motivating it can be for students to experience first-hand, real material, from real students, for a real purpose. The contents of the welcome packs could have been collated and arranged by the teacher, but it was the 'realness' of the exchange that generated the high levels of student interest. Riel went on to report a range of positive outcomes for the diverse learners involved in the project, including at-risk students. These outcomes included intellectual accomplishments, enhanced self-images, and improved behaviour.

First-hand experience focused on authentic issues

The teachers at Campus Kindergarten turned the unexpected arrival of an abandoned shopping trolley into a learning opportunity[387], empowering the children to take responsibility and be active citizens in their community. With the help of their teachers, the children engaged in a series of real experiences: they wrote a letter to the supermarket management; offered to return the trolley; visited the supermarket and suggested that signs warning against trolley theft be repositioned where thieves would be more likely to see them; and made signs. They also wrote a letter to the editor of the local newspaper, addressed to the perpetrators:

Dear trolley skaters

We are the Campus Kindy preschoolers. This morning we found a trolley in our garden. We also saw one in a tree and in the lake. We feel worried and angry. Stop stealing trolleys because it is not the right thing to do. You are crossing the law. You are going to go to jail or you will get punished by the judge or Prime Minister.

From the Campus Kindy Preschoolers (p. 11)

This project is testament to the benefits of giving students first-hand experience in responding to a local issue. A similar approach was taken by a teacher and students at a school called Byrd

387 Davis, J. & Pratt, R. (2005). Creating cultural change @ Campus Kindergarten: The sustainable planet project. *Every Child, 11*(4), pp. 10–11.

Interest

Community Academy, in a disadvantaged area of Chicago[388]. The teacher, Brian, had been inspired by a workshop for a programme called 'Project Citizen', aimed at teaching students about how government works and how students can affect public policy change. He left the workshop committed to designing a programme for his grade 5 African American students that would build on their existing capabilities:

> "All of them had to problem solve on a daily basis outside of the classroom in their neighborhood. The unfortunate part was that I did not see the school recognizing these problem solving or critical thinking abilities, and I wanted to find a way to bring these street savvy, analytic skills into the classroom" (p. 168)[389].

The way in which Brian positioned his students was particularly important. He saw them not only as young people from a poverty-stricken, drug- and crime-ridden area but as students who "are capable citizens and good thinkers with untapped creativity needing the opportunity to demonstrate and practice their intelligences" (p. 168). He tapped in to that creativity by asking them to identify all the problems that affected them. In an intense session, they identified such issues as teenage pregnancies, litter in the park, the state of windows (bullet-holed and foggy), and the broken classroom heaters and toilets.

> "Before it was all said and done, these fifth-graders had identified 89 different problems that affected them and their community, a challenge I had posed to them just an hour prior … As the list grew and I hurriedly marked up the chalkboard with their ideas, some students began arguing with one another that a problem they proposed had already been mentioned. Insightfully, Dyneisha cut through the ensuing debate and stated, "Most of the problems on that list have to do with our school building bein' messed up. Our school is a dump! That's the problem" … With this profound analysis there was a sense of affirmation in the room, and the students unanimously agreed the most pressing issue was the poor condition and inadequacy of their school building" (p. 167).

From this beginning, there grew a curriculum that Schultz describes as co-created or emergent, authentic, democratic, and social justice-oriented. The community had been promised a new school six years earlier, but nothing had happened. For the next seven months, the students' learning was focused on the issue of improving their school. During these months, they engaged in the following kinds of activities:

- generating a list of people to talk to and identifying decision makers who it might be useful to contact;
- discussing the role of the media in getting the word out about their cause;
- listing ways of applying pressure (this list included: "surveying students, teachers, and staff; petitioning; interviewing people with power in the community; writing letters to the legislature and inviting politicians to the school; holding a press conference; and producing a documentary video" (p. 169);
- documenting problems through photographs and compositions.

The students created a compelling letter and sent it to the school board, city officials, newspapers, and others in the community.

> "In reaching out beyond the four walls of the classroom, the students became quickly engaged in real life curricula. As the class made its concerns known, many people offered insight, assistance, donations, and the much-needed publicity. Taking into account advice from these outsiders, the students put together a comprehensive action plan" (p. 170).

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[388] Schultz, B. D. (2007). "Not satisfied with stupid band-aids": A portrait of a justice-oriented, democratic curriculum serving a disadvantaged neighborhood. *Equity & Excellence in Education, 40*(2), pp. 166–176.
Schultz, B. D. & Oyler, C. (2006). We make this road as we walk together: Sharing teacher authority in a social action curriculum project. *Curriculum Inquiry, 36*(4), pp. 423–451.
[389] Schultz (2007), op. cit.

To facilitate the action plan, the cause was integrated with work in all curriculum areas and the classroom became the 'campaign office'. While the teacher had provided the initial opportunity and had created a space for his students to engage with authentic issues, it was the students themselves who instigated the subsequent learning:

> "Now awakened, the young people's intelligence, inspiration, interest, and imagination certainly drove their learning. Instead of relying on me to create lesson plans that tailored and contrived different activities, the students had the responsibility to figure out what was most important to solving this problem … students were meeting a standard of excellence because it was necessary for solving the authentic curriculum at hand" (p. 172).

It was clear that the students were not only interested in their first-hand experience; they were making learning gains as well. Schultz reports that before this experience, few of the students valued their learning, many failed to participate in class activities and complete homework, and many were frequently absent. During this real experience, however, they became active participants, enthusiastic about working together to pursue a shared vision. Achievement on test scores increased for most students, some significantly, without time being spent directly 'preparing' for those tests. Discipline problems decreased markedly, and attendance ran at 98%. The students were able to see some, though not all, of the problems remedied, and improvements made to their school. This comment from Jaris, one of the students involved, highlights how 'real' the experience was and, therefore, empowering:

> "Being an interviewer … makes me feel like a business manager … It makes me feel real important, and other kids look up to me. This has never happened to me in school before" (p. 171).

Laney[390] compared the use of real-life objects (for example, a limited set of art supplies, a limited amount of money, samples of alternative food items) to develop grade 1 students' understanding of opportunity cost with the use of illustrations of the same objects. The real-life objects (direct experience) and illustrations (vicarious experience) were used in conjunction with a story about producer and consumer dilemmas. Laney found that the students with the real-life objects made real decisions; those with the illustrations made hypothetical decisions. While little immediate difference in conceptual understanding could be attributed to the two conditions, a delayed post-test showed that long-term understanding was enhanced by the direct experience. The findings of this study were complicated by the researcher's aim to simultaneously test whether understanding would be improved if students were encouraged to devise their own labels for concepts (for example, 'next best' for 'opportunity cost'). He found that the most powerful long-term effect came from combining real-life experience with student-devised labels.

These findings on the impact of real experience were consistent with those of a similar Laney study[391], which examined whether direct experience was sufficient on its own to make a difference to students' understanding of 10 economics concepts. The classroom of 31 grade 1 students was set up as a market economy. For the first week, students were paid in play money for daily attendance. They were then able to set up their own 'stores' and purchase a limited number of items (for example, pencils, markers, pads) from a 'factory warehouse' operated by the teacher. The students then engaged in two 20-minute 'market days' each week for six

[390] Laney, J. D. (1989). Experience- and concept-label-type effects on first-graders' learning, retention of economic concepts. *Journal of Educational Research, 82*(4), pp. 231–236.
Laney, J. D. (2001). Enhancing economic education through improved teaching methods: Common sense made easy. In J. Brophy (Ed.), *Subject-specific Instructional Methods and Activities (Advances in Research on Teaching, vol. 8)*. New York: Elsevier.
[391] Laney, J. D. (1993). Experiential versus experience-based learning and instruction. *Journal of Educational Research, 86*(4), pp. 228–236.

weeks. On these occasions, they were free to buy and sell and produce goods and services. The factory warehouse was only open every other day. At the end of each market, the students were divided into two different groups to complete different follow-up activities. Based on the market day experience, one group drew a picture and wrote stories that were recorded by an adult and used to accompany the picture. The other group was debriefed in a teacher-led inquiry in which the students' mistakes and misconceptions (as revealed in pre-tests and on the 'market day') were addressed. At the debrief:

- the students role-played a teacher-selected event from the classroom marketplace;
- the teacher and students identified the central issue/problem/question associated with the event;
- the teacher presented new information about the concept, relevant to the issue/problem/question;
- the teacher helped the students relate the new information to past experience and apply it to the issue/problem/question.

In a pre-test of student understanding of the 10 economics concepts, none of the students achieved mastery level (more than 80% correct). In the post-test, no students in the group that drew a picture and wrote stories achieved mastery, but 94% of the students in the teacher-led, debriefing group did achieve mastery. On the basis of these findings, Laney concluded that "to make substantive gains in their understanding of economics concepts, young children must also have their attention drawn to the concepts that can be distilled from those experiences" (p. 235). It appears that the experience focuses students' attention on surface-level features rather than underlying concepts. To develop understanding of the concepts at stake, they need directly-aligned learning activities that draw explicit attention to those concepts. As part of this study, Laney also examined the performance of a teacher-led, debriefing control group who had not experienced the classroom marketplace for themselves but were 'debriefed' using hypothetical scenarios. These students did not achieve as well as the group that had had the direct experience before their debriefing. Laney commented, "Just as experience alone is not the best teacher, neither is economics instruction alone sufficient to produce substantive learning, at least with respect to young children's understanding of economic concepts" (p. 236). What worked, in this case, was the combination of real experience and teacher-led debriefs focused on the important economics concepts.

Real experiences focused on political engagement

Real experiences of a political nature were crucial to the positive impacts on learning reported in the following studies.

Elder et al.[392] took 35 US college students to New Hampshire where, as part of their political studies course, they were immersed in the critical final weeks of the Democratic Presidential Primary. They worked on the campaign of their choice, attended campaign events, and talked with experts involved in the campaign. This practical experience was supported with more traditional, classroom-based activities. The researchers used a quasi-experimental design to measure the impact of the experience on the students' attitudes towards politics, subsequent political engagement, and interest in political careers. The students completed a survey in November 2003, before the campaign experience, and again in December 2004, some 10 months after completion of the course. A control group consisting of comparable students from another institution also completed the survey in December 2004. Unlike the New Hampshire group, these students did not have off-campus experience of an actual campaign.

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[392] Elder, L., Seligsohn, A., & Hofrenning, D. (2006). Experiencing New Hampshire: The effects of an experiential learning course on civic engagement. *Journal of Political Science Education, 3*(2), pp. 191–216.

Based on the two surveys, the experimental group reported a marked increase in:

- attentiveness to the news: 87% reported that they followed the news 'closely' – up from 45%. (The corresponding post-survey figure for the control group was 54%.)
- the likelihood that they would run for office: 19% reported this as 'very likely' – up from 10%.
- the likelihood that they would pursue a career in politics or public service in the future: 71% – up from 59%.

According to the surveys:

- 97% of the experimental group (76% of the control group) discussed politics and current affairs with friends/family 'more than once or about once' per week.
- 100% of the experimental group (86% of the control group) followed the election 'very or somewhat closely'.
- 100% of the experimental group (83% of the control group) voted in the 2004 election.
- 94% of the experimental group (45% of the control group) were very interested in the political campaigns.
- 94% of the experimental group (73% of the control group) 'strongly disagreed' with the statement 'politics is not relevant to my life right now'.

Students in the experimental group believed that their attitudes towards political engagement were more favourable as a result of their involvement in the real experience of the Primary process:

> "Prior to NH I followed politics briefly. After being 100% involved in the middle of something so exciting and political it peeked [sic] my interests. I find now that I follow politics far more closely than I ever did on a very regular basis" (p. 205).

> "My political experience allowed abstract issues to become more tangible and following politics on a day-to-day basis more relevant" (p. 205).

Beaumont et al.[393] studied 21 courses in a variety of US colleges and universities that also focused on promoting political engagement. All incorporated experiences such as:

- extensive student discussion or reflection;
- interaction with political leaders/activists as guest speakers;
- politically related internships;
- community placements or politically focused service-learning;
- research or action projects.

Pre- and post-surveys were completed by 481 students and revealed significant positive change in the students' political knowledge and skills, democratic participation, and expectation of future political activity.

Beaumont et al. noted that the impact of a course on students related, to some extent, to the level of political interest that they had before starting.

Interest

Table 29: Impact of courses on student political interest[394]

		Pre-survey		Post-survey		Significance p from ANOVA contrasts	Effect size d from paired sample t-test
		Mean	SD	Mean	SD		
Politically engaged identity	Low initial interest	3.45	1.09	3.95	.97	.001	.49
	High initial interest	4.86	.79	4.82	.88	n.s.	
Foundational political knowledge	Low initial interest	3.19	1.10	3.90	1.05	.001	.66
	High initial interest	4.56	.82	4.66	.83	.038	.12
Skills of political influence and action	Low initial interest	2.99	1.13	3.63	1.09	.001	.58
	High initial interest	4.06	1.09	4.26	.98	.002	.19
Expected participation in conventional electoral activities	Low initial interest	3.65	1.05	3.96	1.10	.001	.29
	High initial interest	4.66	1.05	4.68	1.06	n.s.	
Expected participation in political voice activities	Low initial interest	3.29	1.04	3.55	1.13	.001	.24
	High initial interest	3.93	1.04	3.94	1.09	n.s.	

For 'low initial interest' students, the interventions significantly enhanced their sense of identity as politically engaged persons and the expectation that they would participate in a range of political activities. The effect sizes were small-to-medium (Cohen's d = .24 to .66). 'High initial interest' students showed smaller but still significant gains in understanding and skills (d = .12 to .19). These results show that well-designed courses can effectively promote various dimensions of political engagement in a diverse range of undergraduate students.

Real experience out of school

The value of education beyond the classroom is widely recognised. As Alleman and Brophy[395] comment:

> Out-of-school learning opportunities can provide a valuable link between classroom instruction and life applications … By having students share information gained through out-of-school interviews, observations, surveys and discussions, teachers can exploit learning opportunities that are not cost effective or practical during school time. Such activities will also enhance the curriculum and keep it up to date.

For the children at Roskill South Kindergarten, the out-of-centre experience was not a formal visit to a public museum or site but a trip down the road to Melwyn's house. Melwyn, who had seemed disconnected from his peers, had frequently asked other children to come and play at his house but, because they didn't know him well, most said no. The teachers, together with Melwyn's family, decided to take the entire kindergarten group (45 children and some extra

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[394] ibid., p. 256.

[395] Alleman, J. & Brophy, J. (1994). Taking advantage of out-of-school opportunities for meaningful social studies learning. *The Social Studies, 85*, pp. 262–267. This quote retrieved from website abstract: http://ed-web3.educ.msu.edu/reports/ed-researchrep/97/97-nov-report1.htm

adults) to visit Melwyn's house. The researchers[396] reported that the trip was a great success. Following on from this, Melwyn began to participate in the kindergarten programme with enthusiasm (p. 20). Since the visit was videoed, Melwyn was also able to revisit the event at home, and at kindergarten with his peers. As a consequence of "the event, and the opportunity to revisit it, he established a sense of belonging and connection" (p. 21).

There is evidence that more typical out-of-school excursions or field trips also benefit learning. The tikanga ā iwi level 5 exemplar He Hui Raupatu illustrates how drawing on first-hand experience enabled a student to model the use of an inquiry process and develop understanding of her people and the place where the taonga were passed to Te Kooti[397]. The class attended a Treaty of Waitangi claim hearing in Waihou over two to three days. The claim related to a piece of land that had been flooded due to the construction of a dam by the local council. The land was important because of its association with Te Kooti. The students listened to the speakers during the day, took what they had heard back home each night, and reorganised it in ways that made sense to them. The combination of first-hand experience and ongoing processing enabled students to learn how to follow an organised process for discussing just outcomes and to suggest meaningful ways of resolving conflict.

The level 4 exemplar Parekereke shows how a visit by kura students to an iwi in Taranaki, complemented by evening discussions, strengthened the students' understanding of the significance of te reo and the need to maintain and perpetuate it[398]. As the students explained:

> "Kare tātou te Māori i te pirangi kia mate to tātou reo i nga mahi pēhitanga a tauiwi. Timatahia ēnei kura kia kore ai e memehā te reo Māori i roto i ngā tau kei te haere mai. Mā ēnei kura ka taea te āwhina i te iwi ki te pupuri ki ngā tāonga tuku iho a kui ma, a koro ma."

In a study of year 10 students in Hong Kong, Lai[399] reported that a field trip was generally 'cherished' because of its rarity and the freedom it afforded, and because it enabled students to gain new perspectives on ideas they had encountered in the classroom. Teacher–student rapport improved, and students were more proactive in their learning (though this did not carry over into the classroom). Nundee[400], studying a group of nine- to twelve-year-olds, found that fieldwork generated significantly greater cognitive and affective learning than would have been possible in a regular classroom environment. Kanu[401] found that a field trip to a sweat lodge, together with the ensuing discussion, helped Aboriginal students develop pride in their cultural ceremonies and the confidence to express their views in social studies.

Interest

Rivers[402] found that the effectiveness of site visits was due in part to the mix of excitement and curriculum-related learning. Two of the six case studies reported on involved social sciences content and visits to a museum. The students interviewed (years 3–4 and 5–8) all believed that the experiences had "contributed to their learning in ways that could not be replicated at school" (p. 12). Their teachers were of the same view, noting the impact on students' interest and learning:

- All teachers stated that the visits their students undertook as part of their classroom programmes enhanced student learning because the visit programmes provided unique and stimulating learning opportunities.
- The activities and discussions they held in their classrooms before and after the visits helped to enrich the visit experience.
- Teachers believed that it was important to provide background knowledge for the visits, and also follow-up activities. In particular, they thought that it was important to ensure that a school visit was not a one-off activity for the students but part of a more extensive unit.
- Student data show that when relevant and related concepts were highlighted in both the school and the LEOTC site, students were more likely to make positive learning gains.
- When teachers shared the learning goals with their students, the students were more likely to make positive learning gains because the goals provided a focus and they could work towards them (p. 15).

Alton-Lee and Nuthall[403] have suggested that positioning fieldwork as the culmination of classroom experiences may not be optimal. When a trip comes at the end of a unit, its value is diminished because the learning it affords is not available when key constructs are being formed. These researchers suggest that students may derive greatest benefit from fieldwork that takes place towards the beginning of units of work, thus enabling them to all draw from the shared experience.

Cautions: out-of-school experiences are not sufficient in themselves and may exclude diverse learners

While the case for out-of-school experiences is strong, two caveats have been noted. The first is that simply having an experience is not enough. The Alleman and Brophy[404] abstract quoted on page 192 concludes, "out-of-school learning opportunities will have the greatest impact if students understand their purposes and can participate in debriefing discussions that focus on important conclusions and implications." The students interviewed in the Rivers[405] study acknowledged that "that work in class after the visit helped to consolidate their learning from the pre-visit activities and during the visit itself" (p. 12). Likewise, Laney's study[406], reported in chapter 4, showed that students learn much more from an out-of-class experience if they are debriefed in a teacher-led inquiry that helps them engage deliberately with explicit underlying concepts: "To make substantive gains in their understanding of economic concepts, young

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[402] Rivers, J. (2006). Effectiveness of programmes for curriculum based learning experiences outside the classroom: A summary of research by Judy Moreland, Clive McGee, Alister Jones, Louise Milne, Ariana Donaghy, and Thelma Miller, University of Waikato. Retrieved November, 2006, from www.tki.org.nz/r/eotc/leotc/pdf/leotc_effectiveness_of_programmes.pdf

[403] Alton-Lee, A. & Nuthall, G. (1998). *Inclusive instructional design: Theoretical principles emerging from the Understanding Learning and Teaching Project.* Wellington: Ministry of Education.

[404] Alleman, J. & Brophy, J. (1994). Taking advantage of out-of-school opportunities for meaningful social studies learning. *The Social Studies, 85,* pp. 262–267. This quote retrieved from website abstract: http://ed-web3.educ.msu.edu/reports/ed-researchrep/97/97-nov-report1.htm

[405] Rivers (2006), op. cit.

[406] Laney, J. D. (1993). Experiential versus experience-based learning and instruction. *Journal of Educational Research, 86*(4), pp. 228–236.

children must also have their attention drawn to the concepts that can be distilled from [direct] experiences" (p. 235). Harwood and Usher[407] found that students who walked a route and then completed a map of their journey by themselves did less well than those whose teachers were involved in the mapping exercise.

The second caveat may be less obvious. In the context of geography fieldwork, Nairn[408] examined the largely taken-for-granted assumption that all students will handle and enjoy the experience. Fieldwork, especially in physical geography, inevitably involves walking and climbing. Nairn (see also page 148) recounts how Cathy, a secondary student with an easily dislocated knee, did not go on a scheduled peninsula walk that she guessed would be impossible for her. Instead, she stayed behind and watched television. Interviewed seven months later, she was still feeling the academic impact of her exclusion:

> "I didn't get to go on the long walk so I still don't get some of the things that other people do" (p. 278).

Cathy missed the walk – and the geographical knowledge to be gained on it. Nairn says that incidents such as these reinforce and reiterate able-bodied discourses. In this situation (and in others she documents with an undergraduate context), a pedagogy privileges physically able, young bodies. Nairn suggests strategies for addressing such difficulties: for example, before a fieldtrip, giving students the opportunity to communicate their expectations, along with any issues relating to physical abilities, medical conditions, diet, or sleeping; and, during the trip, accessing geographical knowledge via sound, smell, taste, and touch, as well as sight. She does, however, argue that these strategies also need to be critically evaluated.

Ballantyne and Packer[409] offer an interesting comparison to Nairn's work. These researchers surveyed 424 primary and secondary school students who had completed full- or half-day environmental education programmes in natural areas in south-east Queensland. The authors were able to confirm that "learning in natural environments is attractive to students and encourages them to think about environmental attitudes and behaviour" (p. 228). Fifty-nine percent of students said they had enjoyed their visit either 'very much' or 'quite a lot'; primary students were more enthusiastic than secondary. This enjoyment related mostly to actually seeing the forest, interacting with the animals, and participating in games and outdoor activities. Interestingly, only 4% of primary and secondary students reported that it was the learning activities that they had enjoyed the most. This is probably not surprising, given the novelty value and emotional appeal of the experience, but it does raise questions about the nature of the learning that takes place on field trips. Nairn reported that the social, not the cognitive outcomes were what students remembered most. Ballantyne and Packer suggest that it may be best not to over-structure the cognitive aspect of learning during the actual field trip, instead maximising the emotional experience and extracting the cognitive benefits through preparatory and follow-up classwork. Another interesting finding from this study is that while 59% of students said that they enjoyed the out-of-class experience, 41% said they enjoyed it 'a little' or 'not at all'. Although the authors do not elaborate on the reasons for this statistic, it does lend support to Nairn's contention that the appeal of fieldwork may not be as widespread as is often supposed.

[407] Harwood, D. & Usher, M. (1999). Assessing progression in primary children's map drawing abilities. *International Research in Geographical and Environmental Education, 8*(3), pp. 222–238.

[408] Nairn, K. (1999). Embodied fieldwork. *Journal of Geography, 98*, pp. 272–282.

[409] Ballantyne, R. & Packer, J. (2002). Nature-based excursions: School students' perceptions of learning in natural environments. *International Research in Geographical and Environmental Education, 11*(3), pp. 218–236.

Interest

Visiting speakers

The impact that visiting speakers can have on students' long-term learning has been highlighted by Alton-Lee et al.[410] and McBride[411]. These authors reported on the effect that two guest speakers had on students during a social studies unit on Antarctica. One of the speakers was a geologist and an experienced mountaineer who had led a mapping expedition to Antarctica; the other had done a survival training course and had worked for a summer in Antarctica. When interviewed a year after the unit, none of the five case study students mentioned any of the women they had read about, but they did have very clear memories of the two women speakers. The speakers had engaged the students with their vivid accounts of their experiences and with the slides and artefacts, particularly clothing, that they shared. The impact of the two visitors was strong enough to challenge the male-only / male norm schemata that implicitly dominated the students' prior knowledge.

Garbutcheon Singh et al.[412] reported shifts in students' understandings in the course of an integrated whole-school project that explored Indonesian–Australian relations and that used visiting speakers. At the beginning of the unit, the Australian students focused on the differences between Asian people and themselves; by the end, they were recognising similarities. The authors claim that a particularly important component of the pedagogy that supported this shift was personal contact with visitors to the classroom and school, representative of a range of Asian perspectives. In a similar finding, Laney et al.[413] noted that intergenerational involvement (consisting of inquiry research using interviews and surveys, guest speakers, and pictorial timelines charting the real-life stories of adult contributors) was a major factor in helping students view ageing more positively. While the direct contact was clearly a key element in bringing about this shift in attitudes, the researchers emphasised how important it was to focus the students' attention on the ideas to be learned:

> Simply putting active older adults and young people together was not enough to promote children's attitudinal change toward ageing. Nor were any of the other experiential instructional activities sufficient for this purpose, not without being followed by carefully executed, teacher-debriefings that (a) highlighted the concepts to be learned and (b) facilitated child–child and teacher–child communication exchanges about these same concepts (p. 544).

Another intergenerational programme that successfully shifted children's attitudes towards older people also involved much more than simply putting children and older adults together. Lynott and Merola[414] viewed as important the multidimensional aspect of the contact in a programme they used with grade 4 classes in 2002–05. The first dimension was the equal-status nature of the contact. All those involved used each other's first names; students visited a retirement community; members of a retirement community visited the school. The second dimension was common goals. The 'elders' had the goal of meeting a younger person from outside their own family, and the students, the goal of meeting an older person from outside

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[410] Alton-Lee, A. G., McBride, T., Greenslade, M., & Nuthall, G. (1997). *Gendered discourses in social studies: Intermediate students' learning and participation during studies of Antarctic work and survival focused on women.* Report to the Ministry of Education: Understanding Learning and Teaching Project 3. Wellington: Ministry of Education.

[411] McBride, T. (1997). *Planning, preparing and teaching gender-inclusive curriculum: Evaluation and implications from a teacher's perspective.* Report to the Ministry of Education: Understanding Learning and Teaching Project 3. Wellington: Ministry of Education.

[412] Garbutcheon Singh, M., Abbott, M., Preece, M., & Elliott, K. (1999). Negotiating studies of Asia in years one and two: Collaboration in the production and use of knowledge. *Australian Journal of Early Childhood, 24*(2), p. 28.

[413] Laney, J. D., Wimsatt, T. J., Moseley, P. A., & Laney, J. L. (1999). Children's ideas about ageing before and after an integrated unit of instruction. *Educational Gerontology, 25*, pp. 531–547.

[414] Lynott, P. P. & Merola, P. R. (2007). Improving the attitudes of 4th graders toward older people through a multidimensional intergenerational program. *Educational Gerontology, 33*(1), pp. 63–74.

their family. The young had the goal of learning about childhood in times past, and the elders, the goal of sharing their experiences of childhood.

> The elders came to the first visit with a written anecdote about an event from their childhood. They read it aloud to their young partner, and then the two discussed it at some length. Some of the residents brought pictures and other memorabilia from their past to help the students learn. In addition to the anecdotes, the children came with a long list of questions from which they would write a short biography of their partner. Many of the questions focused on historical events (e.g. "What was it like to live during the Depression?"). Others reflected the young people's interest in more recent activities (e.g. "Do you go to bars?"). Some questions were sensitive (e.g. "Why don't you live with your family?" "Are you afraid to die?"). The elders had given the children permission to ask any question – another indicator of the equal status between the two age groups (p. 66).

A third dimension, cooperative interaction, involved learning tasks such as interviewing, writing mini biographies, drawing pictures, exchanging stories of memorable events from when they were 'about 10 years old', and creating a 'memory book' based on those stories. The students also created and performed a play based on their learning, which the elders witnessed as audience. The fourth and final dimension was institutional support from the retirement community, the school, and the researchers' institution, which made it possible to meet the financial and material needs of the programme.

At the start of the five-month programme, students were given a list of 17 pairs of descriptors and, in each case, were asked to select a number from 1 to 7 to indicate a point on the continuum that best described older people. At the end of the programme, the students were given the same list and asked to redo the task. The shift in their views was statistically significant for 9 of the 17 items: 'intelligent—ignorant', 'clean—dirty', 'rich—poor', 'warm—cold', 'appropriate—odd', 'valuable—worthless', 'healthy—sick', 'good—bad', and 'relaxed—tense'. The changes for the other items, while not statistically significant, were nevertheless all positive.

Table 30: Comparison of pre- and post-test mean scores for characteristics of older people[415]

Characteristics of older people	Pre-test mean	Post-test mean
Wise vs foolish	5.98	6.01
Strong vs weak	3.53	3.77
Intelligent vs ignorant	5.59	6.11
Active vs not active	3.71	4.03
Clean vs dirty	5.70	6.04
Fast vs slow	2.79	2.99
Happy vs sad	5.41	5.61
Rich vs poor	4.24	4.48
Warm vs cold	4.78	5.13
Behaves appropriately vs behaves oddly	5.80	6.55
Valuable vs worthless	5.88	6.17
Safe vs dangerous	6.18	6.38
Healthy vs sick	4.51	5.10

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[415] ibid., p. 71.

Interest

Makes a difference in the world vs makes no difference in the world	5.15	5.31
Good vs bad	6.25	6.51
Trustworthy vs untrustworthy	6.21	6.44
Relaxed vs tense	4.72	5.37
Note: Means are base on a 7-point scale. A higher score indicates a more positive attitude.		

Kaimahi and Kairangahau[416] also described intergenerational contact as important for learning, this time in the context of a kōhanga reo. The following exchange between a kōhanga reo child and a visiting kuia and researcher illustrates this:

> The visiting kuia and researcher is approached on entering the kōhanga by a child who is curious about the kuia's moko. "He aha tena?" she asked, and traced the design and allowed the kuia to draw with a finger on her chin. "Such curiosity and courage to happily converse with a kuia is an indication of the child's ability and confidence, and confirmation to staff and whānau that their mokopuna are being well prepared and supported for success in their life's journey. Furthermore, the interaction illustrates the inter-generational transmission of Mātauranga Māori which is integral to kohanga" (Hariata Pohatu, researcher).

In the intervention described by Kanu (see page 58), the students in the 'experimental' class were visited on three occasions by aboriginal elders/experts[417]. Student comments indicate the impact they made. Following the visit of a First Nations athlete and teacher, an Aboriginal student said:

> "Joe's story was awesome. I can see myself going in that direction too …" (p. 19).

Following the visit of an Aboriginal elder, a non-Aboriginal student said:

> "I have often heard that the sweet-grass ceremony is superstition. Last week, I learned from Les (the Aboriginal elder) that the sweat lodge, the drumming ceremony and the sweet-grass are part of Aboriginal spirituality. We all have ways of expressing our spirituality" (p. 19).

Drama and simulations

The impact that drama can have on student interest and learning in social studies was highlighted in a unique collaboration reported by Millar et al.[418], involving a teacher and class of students, a social studies advisor, a Māori advisor, and a drama advisor. This collaboration developed a process drama based on *The Nickle Nackle Tree*, a fictional text by Lynley Dodd[419], and used it as a means for developing year 7 students' understanding of the Treaty of Waitangi (see Case 7)[420]. The students created a fictional world of birds and then took on the roles of new arrivals in this fictional land. As the drama unfolded, the need for a treaty with the original inhabitants became apparent. *The Nickle Nackle Tree* became a metaphor for this treaty. The

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[416] Kaimahi & Kairangahau, (2005). Te Kohanga Reo o Puau Te Moanui a Kiwa. Retrieved June, 2005, from www.minedu.govt.nz/index.cfm?id=8390.

[417] Kanu, Y. (2005). *Does the integration of Aboriginal cultural knowledge/perspectives into the curriculum increase school achievement for Aboriginal students? Some preliminary findings.* Paper presented at the American Educational Research Association Annual Meeting, Montreal.

[418] Millar, R., Fitzgerald, K., & Brown, J. (2005). *Goblins, witches and the Treaty! Supporting a teacher to use drama to teach about the Treaty of Waitangi.* Paper presented at the New Zealand Association for Research in Education, Dunedin.

[419] Dodd, L. (1996). *The Nickle Nackle Tree.* Wellington: Mallison Rendel.

[420] Millar, R., Fitzgerald, K., & Brown, J. (2005), op. cit.

process drama was followed by a range of other learning activities, all focused on developing understandings of the different perspectives people had, and have, on the Treaty of Waitangi. Pre- and post-unit interviews were carried out with four children and the teacher. The same group of children was interviewed again three months after the unit was completed. During the interviews, children were asked to interpret the perspectives of people depicted in three photos/drawings of scenes related to the Treaty of Waitangi. The interviews revealed shifts in the complexity of the students' understanding of the treaty concept and in their understanding of the different perspectives of the groups that signed the treaty. The students quoted in the Case affirmed the affective value of the drama activity: "It made the class really close social-wise"; "the nickel nackle tree rocked. You should do the learning as drama as well 'cause you really get stuck into it."

Similarly positive impacts were reported by Otten et al.[421], who reported on an intervention in which grade 5 students were presented with historical information in the form of a story embedded in a musical drama, which they went on to rehearse and perform. Two groups of students were involved in this study: those who participated in the musical drama, and a control. The students involved in the drama demonstrated greater historical knowledge and enjoyment than those in the control group.

Catterall[422] also identified the impact that drama can have on teaching. He describes an experimental study that examined the extent to which the 71 students involved in a 24-week drama programme improved their peer conflict resolution skills and motivation. Eighty percent of the students were from low-income families, and the schools they came from reported significant issues with behaviour, academic achievement, and language. Two of the three schools from which they came were identified as poor performers academically. The outcomes of the students involved were compared with those of 84 students who were not.

> Children acted out concepts and created scene studies in which students explored the interplay of ideas; participants also tested the dynamics, rationales and consequences of actions by taking on various roles in conflict situations. They created scenarios in which conflict might be defused. Students wrote, produced, directed and acted in culminating plays (p. 163).

Data from student surveys showed that the drama students made significant gains, not only in their attitudes towards acting, but on the social sciences outcomes of metacognition, problem resolution skills, and self-efficacy. The effect sizes for these dimensions are listed in the right-hand column of Table 31:

Interest

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[421] Otten, M., Stigler, J., Woodward, J. A., & Staley, L. (2004). Performing history: The effects of a dramatic art-based history program on student achievement and enjoyment. *Theory and Research in Social Education, 32*(2), pp. 187–212.

[422] Catterall, J. S. (2007). Enhancing peer conflict resolution skills through drama: an experimental study. *Research in Drama Education, 12*(2), pp. 163–178.

Table 31: Changes in perceptions and attitudes (drama vs control group)[423]

Scale	Effect size
Pro-social changes in behavior	
Ability to work with others when disagreeing	.28
Ability to work effectively in groups	.35
Problem resolution skills	.47
Conditions and processes of learning	
Metacognitive skills	.38
Self-efficacy	.62
General outlook	.22
Reflection on drama medium	
Liking to act and perform	.16

In the studies cited above, drama is the principal pedagogical approach. In other studies that report positive impacts for drama, it is just one aspect of a unit that makes use of a range of other experiences. Grant[424] writes of Linda Strait, a history teacher whose students developed complex and nuanced understandings of history (see also page 105 and Case 8). While the success of her approach cannot be attributed solely to the use of drama, a drama activity used during an eight-day series of lessons on civil rights was identified by both researcher and students as particularly effective. The teacher herself became the owner of a 1950s skating rink; the students were allocated various other roles. The scenario revolved around an attempt by the owner of the rink to enforce a 'whites only' policy. The students, in role as mixed-race customers, responded to that attempt. It was the teacher's intention to give her students an opportunity to apply concepts they had already learned and to feel the emotions of the 1950s civil rights context. The importance of this active participation comes through in this comment from James, one of the students:

"We actually encountered somebody who discriminated against black, minority groups … [the simulation] got us more involved, [the activity] involved students more in actually learning about it" (p. 93).

While the researcher does not claim that this activity (or even the sequence of activities) caused the positive impact on student learning, he suggests that its influence is worth noting:

The skating rink activity, [James] said, gave him a "good idea" of what life was like for minority citizens in the 1950s. Even so, James makes no assumption that this one exercise gives him license to fully know how people felt at the time. "It's hard to imagine what black people actually encountered," he said, "… and how degrading it must be … I couldn't imagine living [like that]." After a pause, James adds, "I don't know about you, but I'd be suicidal." While this comment might be dismissed as hyperbole, James's quiet and cautious demeanor during the interviews suggests that his conclusion represents a fledgling attempt to put himself in the shoes of another. His effort may be thin, but it may well represent an important step toward empathic thinking (p. 100).

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423 Catterall (2007), op. cit.

424 Grant, S. G. (2001). It's just the facts, or is it? The relationship between teachers' practices and students' understandings of history. *Theory and Research in Social Education, 29*(1), pp. 65–108.

Using anecdotal evidence from a tertiary context, Roper[425] suggested that simulations can generate student interest. The students in a political science class participated in a semester-long simulation set in a fictitious country; they were allocated roles and had to develop newspaper reports and position papers. Roper reports that the students found the simulation "interesting, relevant and an opportunity to apply their classroom knowledge" (p. 252). While this single finding suggests that simulation games hold motivational and educational promise, other teaching strategies such as fieldwork and stories, also intuitively appealing, have been found to have drawbacks, so caution needs to be exercised when attributing academic outcomes to them.

Museum theatre

Jackson and Rees Leahy[426] studied the impact of theatre events experienced by students when visiting two museums. The students encountered the 'single character storytelling' dramatisations as they moved around the museum (not in dedicated theatres). At one museum:

> the children are introduced to 'Gabrielle', a woman from St Kitts, who narrates and enacts moments from the story of her life, from girlhood in the Caribbean to emigration to the Mother Country in the early 1950s, and her ensuing experiences as an immigrant. While there are various points at which interaction occurs between Gabrielle and the listeners, this is quite clearly a performance; the 'theatre' is created out of the gallery space with children gathered round the area set aside for Gabrielle's chair. And the distinction between the performance space and audience space is sustained, informally, throughout: when children are invited at a key point in the play to offer Gabrielle advice by whispering in her ear, they are entering the acting space, crossing an undeniable threshold. The piece also has a title, No Bed of Roses (p. 307).

At the second museum:

> the event takes place in the back garden of a life-size replica of a typical semi-detached house set out as it would have been during the Second World War. There is no play as such. The encounter is just one, albeit very distinct, ingredient within 'the 1940s Experience'. The character, Muriel, is a housewife who greets the children as they emerge into the back garden after walking around the house. The 25-minute session involves a 'conversation' between Muriel and her audience, during which the children find out about domestic life during the war. In contrast to No Bed of Roses and the use of a distinct performance space, at the IWM the immersive environment of the replica house and garden become the stage set that actor and audience occupy together (p. 307).

At both museums, the dramatisations were accompanied by other activity-based tasks, also intended to interest and involve students. The researchers compared the experience and learning of groups that had witnessed the dramatisations on their museum visits with groups that had not. They suggested that those who had experienced the dramatisations were more likely to empathise, particularly with negative or problematic aspects of the period. Many of the students were able to write letters 'home', as if they were in Gabrielle's shoes or related to her. By contrast, the groups that had not experienced the dramatisation were:

> lacking the experience of the over-arching performed narrative to provide coherence and personal meaning to the variety of stimuli that they encountered [and] faced the bigger challenge of having to piece together the disparate elements of their visit. With the aid of worksheets and circulating teachers, they had to construct their own narratives from

425 Roper, S. D. (2004). Teaching students how to be revolutionaries or reformers: A course simulation. *Innovations in Education and Teaching International, 41*(3), pp. 245–253.

426 Jackson, A. & Rees Leahy, H. (2005). "Seeing it for real …?" – Authenticity, theatre and learning in museums. *Research in Drama Education, 10*(3), pp. 303–325.

the collections, resulting in a much wider variety of responses than was the case with the theatre groups. These ranged from confusion, through lack of interest and poor recall, to intense engagement in a few notable instances (p. 314).

Jackson and Rees claim that when students actively participated in the dramatisations, this impacted on their interest and learning. They were able to refer back to Gabrielle, for example, when trying to explain new understandings. The students suggested that they had learned more about 'how it was' from Gabrielle than they could have learned at school, and "you remember it better" – "seeing things in real life will stay in your memory forever" (p. 318).

Hands-on activities (construction)

In a recent review of the use of haptics (touch) in education, Minogue and Jones[427] stated that while active manipulation can contribute to complex understandings, we have little knowledge of the processes by which this happens. The following studies, all related to social sciences outcomes, shed some light on the potential of touch for motivating and enhancing learning.

Working with autistic children to improve their social competence, LeGoff found that, regardless of the children's age, LEGO™ materials were a very effective medium[428]. This intervention consisted of one LEGO™ Club session per week for 24 weeks. It resulted in a significant impact on three measures of social competence: motivation to initiate social contact with peers; ability to sustain interaction with peers for a period of time; and overcoming the symptoms of aloofness and rigidity. Over the six months of the intervention, the duration of the children's social interactions with peers when in unsupervised and unstructured situations increased by 175%.

Roach and Gunn[429] studied 17 tertiary students who, as part of their history course, were required to construct a model of a medieval town based on visuals and text sources. All six of those interviewed reported that they had gained genuine enjoyment from the task. The course "changed the way they thought about history". One student noted that "history is more about what's happening, how something's actually developed rather than just facts and dates"; another, that the course made "history more like a living history" (p. 201). Cohen et al.[430] described how designing a defensible castle for the Crusaders impacted on a group of middle-school history students engaged in a unit, 'How do historians know about the Crusades?' The students were given pictures and the floor plan of a ruined castle, a resource card with key background information, and a variety of materials. Then, working in groups, they had to construct models of castles and explain to their classmates the features that made them defensible. The researchers say that tasks such as this, with ill-structured solutions, provide motivational challenge for students. The researchers report learning gains for this activity, based on pre- and post-test assessments, but not control group results. For this reason, it is difficult to know how much learning – especially in relation to important historical ideas as distinct from the detail of castle construction – to attribute to the task.

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[427] Minogue, J. & Jones, M. G. (2006). Haptics in education: Exploring an untapped sensory modality. *Review of Educational Research, 76*(3), pp. 317–348.

[428] LeGoff, D. B. (2004). Use of LEGO™ as a therapeutic medium for improving social competence. *Journal of Autism and Developmental Disorders, 34*(5), p. 557.

[429] Roach, A. & Gunn, V. (2002). Teaching medieval towns: Group exercises, individual presentations and self-assessment. *Innovations in Education and Teaching International, 39*(3), pp. 196–204.

[430] Cohen, E. G., Lotan, R. A., & Holthuis, N. C. (1997). Organizing the classroom for learning. In E. G. Cohen & R. A. Lotan (Eds.), *Working for equity in heterogeneous classrooms: Sociological theory in practice* (pp. 31–43). New York: Teachers College Press.

The hands-on aspect was also identified by Rivers[431] as an important component of learning experiences outside the classroom (see page 194). Their case studies showed "that teachers, education officers and students all believed that access to expertise, spaces, exhibits, artefacts and hands-on experiences not available at school provided stimulating, realistic learning experiences" (p. 11). They attributed the success of out-of-school experiences to their novelty, to their tangible nature, to the opportunities they gave students to engage all their senses, and the strong emotional and physical responses evoked as a consequence. Opportunity to participate in hands-on activity was likewise identified as an effective strategy by Jackson and Rees Leahy[432] in their study of museum dramatisations, discussed in the preceding section. These authors claimed that:

> many of the children remembered and enjoyed *doing* more than listening, looking or taking notes. Above all (and again unsurprisingly) the children were virtually unanimous in their conviction that you learn more when you're enjoying yourself ('If you're enjoying yourself, you might take in more') (p. 312).

Narratives have emotional appeal that engages students

Stories and content as narrative

> A story is a beautiful means of teaching religion, values, history, traditions, and customs; a creative method of introducing characters and places; an imaginative way to instill hope and resourceful thinking. Stories help us understand who we are and show us what legacies to transmit to future generations (p. 176)[433].

Egan[434] argues that stories challenge and stimulate the imaginative powers of children and have, therefore, an important affective dimension and motivational powers. He makes his case on the grounds that stories have these characteristics:

1. Rhythm. "[Stories] set up an expectation at the beginning, this is elaborated or complicated in the middle, and is satisfied at the end … stories hold their power over us as long as all the events stick to and carry forward the basic rhythm" (p. 24).[435]

2. Binary opposites. These order complex knowledge. The most "powerfully engaging opposites – like good/bad, security/fear, competition/cooperation – are emotionally charged and, when attached to content, imaginatively engaging" (p. 3).[436]

3. Concern for affective responses (how people feel; their motivations). "To present knowledge cut off from human emotions and intentions is to reduce its affective meaning. This affective meaning, also, seems especially important in providing access to knowledge and engaging us in knowledge" (p. 30).[437]

Interest

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[431] Rivers, J. (2006). Effectiveness of programmes for curriculum based learning experiences outside the classroom: A summary of research by Judy Moreland, Clive McGee, Alister Jones, Louise Milne, Ariana Donaghy, and Thelma Miller, University of Waikato. Retrieved November, 2006, from www.tki.org.nz/r/eotc/leotc/pdf/leotc_effectiveness_of_programmes.pdf

[432] Jackson, A. & Rees Leahy, H. (2005). "Seeing it for real …?" – Authenticity, theatre and learning in museums. *Research in Drama Education, 10*(3), pp. 303–325.

[433] Schram, P. (1994). Collections from the people of the story. In The National Storytelling Association (Ed.), *Tales as Tools: The Power of Story in the Classroom* (pp. 176–178). Jonesborough, TN: The National Storytelling Press.

[434] Egan, K. (1988). *Teaching as storytelling.* London: Routledge.
Egan, K. (1989). Layers of historical understanding. *Theory and Research in Social Education, 17*(4), pp. 280–294.

[435] Egan (1988), op. cit.

[436] Egan, K. (2005). *An imaginative approach to teaching.* San Francisco: Jossey-Bass.

[437] Egan (1988), op. cit.

Evidence from Levstik's study of grade 5 and 6 history students backs Egan's claim: students showed interest in historical fiction and biography and demonstrated strong moral and emotional responses following encounters with history stories[438]. And according to Levstik and Pappas, young children also found history interesting when it was presented to them in story form[439].

Tyson's research on the response of African American students to contemporary fiction used to help them learn about social action also suggests the potential of literature. Observing the impact that literature had on students' understanding of social action, she suggests that "reading and writing can assist students in understanding and considering possibilities for transforming individual, communal, and societal problems and injustices through social action" (p. 44)[440].

Over the course of a year, Tyson met with seven grade 5 African American boys, using literature to highlight societal dilemmas. Through reading and discussion, she encouraged the boys to develop a critical literacy: to move beyond the 'what', 'who', and 'where' questions to the 'why' questions. She found that "in their analysis of the social issues presented in the children's literature, the boys deconstructed power relationships and began to develop a framework to encompass individual, communal, and civic grievances and/or responsibilities necessary for social change" (p. 157)[441]. That is, they moved towards a social action stance.

The students began to notice the purpose behind the stories – their meaningful content – and their power to engage:

> Colin exclaimed, "you're like making some kinda pattern with all your stories you brought in here … like sad stories. But true." Baby Jay added, "Like stuff we see in our neighborhood" (p. 158)[442].

In a subsequent study, Tyson[443] again used literature as a pedagogical strategy to facilitate African American students' understandings of social action. The focus question this time was 'How can children's literature be used in the urban classroom as a catalyst for exploring social action issues and understandings?' (p. 45). Tyson was particularly interested in how connecting the 20 participants' day-to-day lives to the literature might encourage discussion about, and interest in, social action. Over the course of the school year, the students read and discussed five stories involving examples of social action. Tyson carried out classroom and participant observations and interviewed students. One of the stories they read was *SeedFolks* by Paul Fleischman, a story in which 13 voices tell the story of an abandoned city lot that evolves into a neighbourhood garden. Diverse characters create a community in this unpromising environment. Prior to beginning the intervention, Tyson established that only three of the 20 students were able to express any understanding of social action. See the left-hand column of Figure 25:

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[438] Levstik, L. S. (1986). The relationship between historical response and narrative in a 6th grade classroom. *Theory and Research in Social Education, 14*(1), pp. 1–19.
Levstik, L. S. (1989). Historical narrative and the young reader. *Theory into Practice, 28*, pp. 114–119.

[439] Levstik, L. S. & Pappas, C. C. (1987). Exploring the devlopment of historical understanding. *Journal of Research and Development in Education, 21*, pp. 1–15.

[440] Tyson, C. A. (2002). "Get up offa that thing": African American middle school students respond to literature to develop a framework for understanding social action. *Theory and Research in Social Education, 30*(1), pp. 42–65.

[441] Tyson, C. A. (1999). "Shut my mouth wide open": Realistic fiction and social action. *Theory into Practice, 38*(3), pp. 155–159.

[442] ibid.

[443] Tyson (2002), op. cit.

Pre-intervention ideas about social action	Ideas about social action, following the reading and discussion of two contemporary fiction stories
Sunny "[Social action is] the way a person acts or interacts … you know how you act."	→ "It's still like I said before the way you act, but it is what other people do with you too. Like with the garden all those people were social acting together."
Jameelah "[Social action is] standing up for yourself."	→ "I want to add that you can like stand up for yourself and take care of the environment too. You could take care of older people too."
Michael "[Social action is] the way that you interact with others, with those around you. How you interact with people around you to help someone."	→ "It's like how you help someone, I still mean that, but it is an action taken on behalf of yourself too, or others in the community."

Figure 25: Three students develop their social action understandings

(pp. 51–52)

After reading and discussing just two of the five texts, including *SeedFolks*, the number of students able to express some understanding of social action went from three to 19. It can be seen from the right-hand column of Figure 25 that Sunny, Jameelah, and Michael also broadened their definitions of social action to include other people and environmental concerns and to link their own and others' interests. Both of Tyson's studies show how literature with themes reflecting contemporary issues was able to provide "opportunities for these students to develop a sense of social and political identity" (p. 55). Literature helped the students to understand and consider "possibilities for transforming individual, communal, and societal problems and injustices through social action" (p. 44). It fostered, says Tyson, a 'metadiscourse' that helped students to define social action and their own positionality and identity with regard to potential social action" (p. 60). Stories were also identified by Kanu[444] as one component of an approach that successfully integrated Aboriginal content into social studies in ways that led to improved student participation and achievement.

Literature, although not explicitly designed for social studies purposes, was also shown by Hoodless[445] to support the development of children's understanding of parallel times. Her findings come from a study of how 35 children perceived time and chronology in story books. After reading stories such as *Where the Wild Things Are*[446] to small groups and then discussing them, she noticed the potential of story books to support contemporaneity. She explains:

In history, children need skills in making their own 'jumps' in time in order to place events in appropriate periods. The notion of parallel times would contribute to their skill in placing

[444] Kanu, Y. (2005). *Does the integration of Aboriginal cultural knowledge/perspectives into the curriculum increase school achievement for Aboriginal students? Some preliminary findings.* Paper presented at the American Educational Research Association Annual Meeting, Montreal.

[445] Hoodless, P. A. (2002). An investigation into children's developing awareness of time and chronology in story. *Journal of Curriculum Studies, 34*(2), pp. 173–200.

[446] Sendak, M. (1963). *Where the wild things are.* Harper & Row.

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aspects of history from different places in a contemporary time frame. For example, the idea of contemporaneity, or parallel times, is fundamental to an awareness that the Aztecs lived in Meso-America at the same time period as the late mediaeval and early modern monarchs in England (p. 196).

She says that the potential of stories lies in the fact that they provide meaningful contexts and that children are used to engaging with them. Laney et al.[447] also mention the power of memorable children's books (and pictures) which, when selected to show positive views of ageing, can support shifts in children's biases and prejudices.

Caution: narratives and stories may have undesirable impacts on student learning

While there are positive reports about the use of stories and narratives in the social sciences, some studies have shown the potential for less desirable – and at times undesirable – impacts on student learning.

Fisher[448] found that the classical Greek play, *Antigone*, had a positive impact when she used it to teach students about the values and belief systems of ancient cultures and to promote cultural understanding and empathy. The play was thought-provoking and "stretched students' minds and hearts", but students were unable to appreciate its implications or express real depth of understanding. Edgington makes a similar caution in a review of what research does and does not reveal about middle-school social studies[449]. He suggests that:

> the use of children's literature in social studies will not necessarily guarantee greater content knowledge achievement. Some students demonstrate greater content mastery through literary instruction, while others show a higher degree of content knowledge achievement through instruction that focuses primarily on the textbook (para. 12).

While stories may motivate students and stimulate their imaginations, as Egan[450] claims, this imaginative stimulation may actually stand in the way of achieving certain outcomes valued in the social sciences. In a year-long qualitative study of two history classrooms, Barton[451] examined grade 4 and 5 students' ideas about historical evidence. He discovered that the students found it difficult to use evidence when forming conclusions about their history learning and suggested that an overemphasis on narratives had led to this difficulty. He suggested that emphasising a single version of events (as narratives typically do) without inviting speculation about other versions, may contribute to this weakness. Further, he suggests that the use of narratives may lead to the following problems for students:

1. They assume the story is true because they get caught up in the story itself and don't approach it with a critical eye.
2. Narrative doesn't help them understand how historians use evidence to create historical accounts.
3. "Children may assume that the stories they read are accurate, or that all historical accounts are equally fictional" (p. 15).

447 Laney, J. D., Wimsatt, T. J., Moseley, P. A., & Laney, J. L. (1999). Children's ideas about ageing before and after an integrated unit of instruction. *Educational Gerontology, 25*, pp. 531–547.

448 Fisher, S. (1996). Teacher research as a reflective practice: A social studies-English-drama project. *Social Studies Review, 36*(1), pp. 43–45.

449 Edgington, W. D. (1998). The use of children's literature in middle school social studies: What research does and does not show. *The Clearing House, 72*(2), pp. 121–125.

450 Egan, K. (1998). *Teaching as storytelling.* London: Routledge.

451 Barton, K. C. (1997b). "I just kinda know": Elementary students' ideas about historical evidence. *Theory and Research in Social Education, 25*(4), pp. 407–430.

4. Children "think of the past as too much like a story" – they assume that history proceeds in linear fashion, not realising that many events happened at the same time and that different groups of people were having different experiences.

VanSledright and Brophy[452] drew similar conclusions. They noticed that while 4 out of 10 grade 4 students responded to questions about the history of their country in extended storytelling style (rather than single-word or brief responses), a year later, 9 of the same 10 students responded in this way. For example, when asked if she knew why America was once called 'The New World', Rita replied in this way:

Rita: Yeah. We learned this in social studies.

Interviewer: What did you learn?

Rita: Because they used to live in England, the British, and they didn't know about … they wanted to get to China 'cause China had some things they wanted. They had some cups or whatever – no, they had furs. They had fur and stuff like that and they wanted to have a shorter way to get to China so they took it and they landed in Michigan, but it wasn't called Michigan. I think it was the British that landed in Michigan and they were there first and so they tried to claim that land, but it didn't work out for some reason so they took some furs and brought them back to Britain and they sold them, but they mostly wanted it for the furs. So then the English landed there and they claimed the land and they wanted to make it a state, and so they got it signed by the government or whoever, the big boss, then they were just starting to make it a state so the British just went up to the Upper Peninsula and they thought they could stay there for a little while. Then they had to fight a war, then the farmers, they were just volunteers, so the farmers went right back and tried to get their family put together back again.

Interviewer: Did you learn all this in state history this year [fourth grade]?

Rita: Um hum.

(p. 849)

Rita told a believable story in a convincing way, demonstrating skilful use of motives, outcomes, drama, and imagination. But her story contained a number of conflations. She confused the motives that drove initial exploration with the motives behind fur trading and colonisation. She confused ideas about North American contacts with Europe with ideas relating to the exploration, settlement, and statehood of Michigan. And she lacked understanding about the need for reasonable evidence.

The authors suspected that this shift to storytelling style "might be a result of their fifth-grade teacher's pedagogical emphasis on historical fiction, although it could be a more generalized phenomenon related to the study of history" (p. 851). They also noticed that the students' responses included 'fanciful elaborations' in which accurate information was mixed with misconceptions. In response to these findings, they suggest that:

[the] historical treatment of any particular time and place needs to be contextualised within the broad sweep of history with reference to timelines, landmark events and inventions, and social and political developments … it needs to be taught within a context that will allow [students] to draw inferences about causal relationships that avoid the kinds of naive conceptions and conflations that were elicited during our interviews (p. 853).

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[452] VanSledright, B. & Brophy, J. (1992). Storytelling, imagination, and fanciful elaboration in children's historical reconstructions. *American Educational Research Journal, 29*(4), pp. 837–859.

Interest

These suggestions resonate with Egan's note regarding the 'oddities' and 'strangeness' found in narrative, and its potential for encouraging presentism[453].

Barton[454] likewise found that, while narratives and stories appeal to students because of their familiarity, teachers who rely on them to teach history risk reinforcing the misconceptions that history is linear and single-perspective. The above findings illustrate the risks of using teaching approaches that hook into students' schema for 'interesting learning' but which may limit their attention to evidence and accuracy.

A similar caution is issued by Grant[455], who compared the historical understanding of two groups of students. One group was taught by George Blair, a teacher who took a narrative approach to the teaching of history. Blair's teaching was characterised by dramatic stories of personalities, policies, and events, told in oratorical style (with vocal inflections, emotion, personal reflections, and rhetorical questions) and with an emphasis on facts. The following transcript – where the subject is Dwight Eisenhower's foreign and domestic policy dilemmas – illustrates his style:

> "Eisenhower was conservative … But it will blow up in his face … He made several appointments to the Supreme Court, but one at least is very liberal … and (emphatically) that shocks the hell out of Eisenhower … Remember there was tremendous pressure … very serious things happen and early on in Eisenhower's presidency … He's hit in the face with the Brown decision … Eisenhower disagrees, but he has to enforce it and he does … and there is a serious confrontation in the South … Eisenhower also confronts the Soviets … (dramatically) We hate the Soviet Union, we fear the Soviet Union … We've got the H-bomb, but we're scared as hell … So the foreign policy John Foster Dulles comes up with … [is] a sad state of affairs … It's called massive retaliation … [and it means] any aggression by the Communists and we would retaliate with everything we have, massively, with everything we have …" (p. 71).

Following this introduction, Blair begins a lecture on US foreign policy:

> "Now the book doesn't tell you this … In the 1956 Hungarian Revolution … the Hungarians ask for our help and we don't give it to them … (incredulously; loudly) Massive retaliation? We aren't going to retaliate at all! It's just sword rattling and it doesn't make any sense … We're not going to blow up the world … Who're we trying to kid? … Massive retaliation; but we can't do that … Massive retaliation … what sense does that make? (quietly) But it shows how afraid we really are … John Foster Dulles uses the idea of brinkmanship … pushing the Soviets to the brink of war … But how far can you push? … The Soviets do the same thing … Much of the Cold War, we push and push and push … as far as we possibly can and there's tension, and stress, and anxiety. There's not a lot of fighting, but there's a helluva lot of tension, stress, and anxiety. (A student, David, asks, "Were any shots fired?") Yes … Korea, Vietnam … between the US and the USSR? No … they never attack one another directly …"

Blair's students came to view history as 'the facts': a series of facts about names, dates and places, a chronicle of what happened in the past, or – as one student, Bill, put it – "It's like history is already made, you know what I mean? It's facts. So I don't know if there's much you could discuss" (p. 83). None of the students thought that the stories they heard or the

[453] Egan, K. (1989). Layers of historical understanding. *Theory and Research in Social Education, 17*(4), pp. 280–294.

[454] Barton, K. C. (1997a). History – it can be elementary: An overview of elementary students' understanding of history. *Social Education, 61*(1), p. 13.
Barton, K. (1996). Narrative simplifications in elementary students' historical thinking. In J. Brophy (Ed.), *Advances in Research on Teaching, Volume 6* (pp. 51–83). Greenwich, CT: JAI Press Inc.

[455] Grant, S. G. (2001). It's just the facts, or is it? The relationship between teachers' practices and students' understandings of history. *Theory and Research in Social Education, 29*(1), pp. 65–108.

content they learned gave them new or provocative ways of thinking about civil rights; they found the stories and content interesting, but affirming of what they already knew. In terms of understanding the historical significance of events, students struggled to make connections between the past and present in relation to civil rights. The connections that they did make were weak; Kate suggested, for example, that "people in the past were 'not so much [different] in, like, their ideas, probably, but, how they looked, how they dressed, and all that. I don't think – I mean, we've changed a lot, but ... not too much" (p. 87). Students attributed whatever ability they had to make general connections between past and present not to their history teacher but to other sources (for example, family, media, or their English class). Interviews did reveal empathy, in the sense that students had a disposition to look for other perspectives on events, but they *did not* do this in the context of civil rights, and they didn't position themselves within those perspectives. As Ann explained, "History is just given to you. This is your history, just learn it" (p. 102). The narrative approach taken by their teacher did not bring them to understand alternative points of view. In summary:

> Blair's students are exposed to a seemingly coherent and engaging narrative of the beginnings of the civil rights movement. Yet neither that narrative, nor the ones that Blair presents in other units, seems to inspire students' engagement with or their understanding of history (p. 102).

The example just discussed examined the impact on students of exposure to a narrative instructional style that extended for the duration of a whole unit. By contrast, Nuthall[456] examined the impact on one student of a single narrative encounter. In this case, the teacher read a narrative account from a history picture book that aimed to explain the societal changes that led to the Peasants' Revolt. Figure 26 shows part of the narrative, and Amy's response when asked at the end of the unit about William Caxton and why he was famous: she referred instead to the Peasants' Revolt (p. 315).

The narrative went like this	Amy is asked why William Caxton was famous
Teacher It [the feudal system] was becoming more like, um, a sort of market society where you worked and were given ... money for the work you did ... and also about this time there were lots of new inventions ... um, for example, *Students* The printing. Printing. *Teacher* The printing press. William Caxton, he invented the printing press. Right. And firearms were invented too ... anyway. To get back to the peasants' revolt ... Wat Tyler isn't actually mentioned in this story ... and if anyone is interested in this book, there is some more information about the peasants' revolt.	*Amy* I thought it might have been for the peasants' revolt ... We had the peasants' revolt. *Interviewer* Yes, you remember doing something about the peasants' revolt. *Amy* Read a story.

Figure 26: Amy not learning about William Caxton

Hearing the story about the Peasants' Revolt, including the aside about William Caxton's invention of the printing press, did not help Amy learn what was intended. Instead, it led her to incorrectly reference the Peasants' Revolt when trying to answer a question about Caxton.

[456] Nuthall, G. (1999). The way students learn: Acquiring knowledge from an integrated science and social studies unit. *The Elementary School Journal, 99*(4), pp. 303–341.

Interest

The following figure is an attempt to simplify Nuthall's thorough and complex explanations for Amy's error, based on schema theory:

```
┌─────────────────────┐      ┌─────────────────────┐         ┌─────────────────────┐
│   Representation     │      │     Contextual      │         │       Schema         │
│                      │ ───▶ │   generic schema    │ ──────▶ │   Peasants' Revolt   │
│  Information about    │      │                     │   │     └─────────────────────┘
│  William Caxton       │      │   Narrative about the │     │
│                      │      │   Peasants' Revolt   │     │   ┌─────────────────────┐
└─────────────────────┘      └─────────────────────┘     │   │       Schema         │
                                                         └─▶ │  Inventions/printing │
                                                             │        press         │
                                                             └─────────────────────┘
```
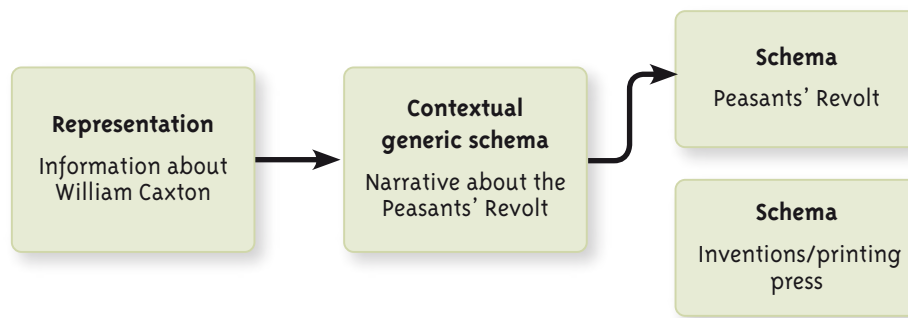
Figure 27: Amy's error in terms of schema theory

The contextual generic schema – the nature of the learning context in which students encounter an idea – affects what they learn and remember. So for Amy, the strength of the contextual schema for the Peasants' Revolt narrative led her to attach the information about William Caxton to her Peasants' Revolt schema instead of her inventions/printing press schema.

The design and selection of resources impacts on interest

Illustrations and pictures

The use of pictures has long been regarded as motivating. Thompson[457], for example, reported in 1911 that:

> A brief survey of one's experience [in the use of illustrative material] brings out a number of pleasing results; interest is not only aroused but kept up; the study of geography is made easier and more profitable; long vanished peoples take on their proper aspects and become acquaintances instead of words or shadows (p. 177).

In geography contexts, research shows that illustrations can add substantially to understanding where supplemented by text and/or where key textual information is included on the visual itself[458]. Levstik and Barton[459] noted the value of pictures for stimulating children's talk about historical matters, but they found that grade 1 to 6 students tended to view them uncritically, assuming their veracity. For this reason, they recommended that the "role of instruction [in relation to the use of pictures] might be to present a variety of images for discussion and interpretation and to encourage the creation of images of both historic and current events so that children come to see pictures as intentioned creations" (p. 43).

This excerpt from a letter written by a student to a classroom visitor[460], affirms the value of visuals:

> "I don't understand 100 per cent but the slides really helped me … About Antarctica; I was surprised that it was not a small island. From the slides I know now what it looks like" (p. 14).

457 Thompson, L. W. (1911). Pictures in history classes. *History Teacher's Magazine, 2*(8), p. 177.

458 Purnell, K. N. & Solman, R. T. (1991). The influence of technical illustrations on students' comprehension in geography. *Reading Research Quarterly, 26*(3), pp. 277–299.
Purnell, K. N., Solman, R. T., & Sweller, J. (1991). The effects of technical illustrations on cognitive load. *Instructional Science, 20*, pp. 443–462.

459 Levstik, L. S. & Barton, K. (1994). *They still use some of their past: Historical salience in elementary children's chronological thinking.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

460 Alton-Lee, A. & Nuthall, G. (1998). *Inclusive instructional design: Theoretical principles emerging from the Understanding Learning and Teaching Project.* Wellington: Ministry of Education.

Like Levstik and Barton, these researchers caution against assuming too much of pictures, because it seems that unless students have relevant, prior experience of the pictured contexts, pictures may assist short-term rather than long-term memory.

Videos and animations

The use of videos as a resource is reported in a study by Gersten et al.[461] (see Case 4). These researchers found that stopping each 4- to 10-minute segment 3 or 4 times to clarify content (by explaining, responding to a student question, or asking a question), the teacher facilitated understanding of the resource.

Connelly et al.[462] researched the impact of a sophisticated animated cartoon resource[463] in a Northern Ireland context. The cartoons in the resource were computer-generated animations, with a cast of child-characters in a park setting. The researchers explored what it was about these cartoons that attracted the interest of young children and how it was that they helped inhibit development of common misunderstandings and distortions. Ninety-five children aged 3–4 were assigned to an intervention group and another 70 to a control group. The aim of the intervention was to use the cartoons, which feature stories about what it means to be different, to address the issues of disability and race.

Figure 28: The five main characters from the Media Initiative for Children™

For the purpose of this intervention, three clips were chosen, featuring:

- Tom, who wears a corrective eye patch. This clip was chosen since teasing and name-calling have been associated with visible disabilities.
- Kim, a Chinese character. This clip was chosen since Chinese are the largest minority ethnic group in Northern Ireland.
- Two boys, one in a Rangers (Protestant) shirt, the other in a Celtic (Catholic) shirt.

461 Gersten, R., Baker, S., Smith-Johnson, Dimino, J., & Peterson, A. (2006). Eyes on the prize: Teaching complex historical content to middle school students with learning disabilities. *Exceptional Children, 72*(3), pp. 264–280.

462 Connelly, P., Fitzpatrick, S., Gallagher, T., & Harris, P. (2006). Addressing diversity and inclusion in the early years in conflict-affected societies: A case study of the Media Initiative for Children – Northern Ireland. *International Journal of Early Years Education, 14*(3), pp. 263–278.

463 Available from www.pii-mifc.org. Figure 28 is provided courtesy of Peace Initiatives Institute, Media Initiative for Children.

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Supporting resources included hand puppets representing the four main characters, jigsaws, feelings cubes, lotto games, and posters. Resources for parents were designed to encourage discussion at home. Neither the video clips nor the supporting resources were used with the control group.

The intervention had a significant impact on the students' ability to recognise exclusion. In the pre-test, 17% of the control group and 12% of the intervention group believed that one of the cartoon characters was being purposely excluded. In the post-test, the percentage for the control group had fallen to 14% while the percentage for the intervention group had risen to 50%. The intervention also had an impact on the students' ability to understand what it feels like to be excluded. In the intervention group, the percentage of children who believed that the excluded child would be sad rose from 44 to 67. The corresponding percentages for the control group were 27 and 33. The intervention showed a moderate effect for increased willingness to include those different from themselves: 50% of the intervention group showing increased willingness to play with others vs 33% of the control group. The researchers noted that the intervention was more successful in increasing children's willingness to play with those with a disability or from a different race than those from a different religious culture.

Although there are factors other than the animations at work here (the researchers emphasised, for example, community links and partnerships with parents/home; non-visual resources and activities were also employed), by replacing existing negative images with "positive stories about what it meant to be different" (p. 268), the animations clearly helped challenge these 3- and 4-year-olds' misconceptions concerning people with disabilities or from other ethnic groups.

Diagrams – resource enhancement

When resources such as maps integrate illustrations and text so that they are accessible and easy to use, students are more likely to engage with them in ways that support their learning. At times, the teacher may need to alter (enhance) published resources to align them more closely with prior knowledge and/or the learning intentions. The following studies give insight into the impact that effective integration of elements can have on student engagement and learning.

It is common practice in geography for teachers to support written material with maps, graphs, cross-sections, and the like. The idea is that words and graphics will complement each other and that any misunderstandings arising from the one will be clarified by the other. Purnell and Solman[464] tested the relationship between text and illustrations in a series of experiments with year 8–11 Australian geography students. The experiments compared the impacts of presenting material (the land phase of the water cycle and a geographical cross-section) as text (described in words) and as illustration. Students were assigned to one of three conditions: text only, illustration only, or text plus illustration. The researchers found that students performed better on a multichoice test requiring comprehension of illustrations than one requiring comprehension of text, but the most significant effect was obtained for students who were tested on text plus illustrations. The authors explained this as consistent with dual-processing theory (see for example, Mayer & Moreno[465]), which suggests that processing via more than one channel expands the limited capacity of working memory.

[464] Purnell, K. N. & Solman, R. T. (1991). The influence of technical illustrations on students' comprehension in geography. *Reading Research Quarterly, 26*(3), pp. 277–299.

[465] Mayer, R. & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. *Educational Psychologist, 38*(1), pp. 43–52.

Table 32: Percentage correct on questions involving interpretation of cross-section

Method of presentation	Percentage of multichoice questions correctly answered (n = 25; grade 9 boys)
Text only	44.6
Illustration only	53.4
Text plus illustration	60.8

(p. 292)[466]

The researchers made two important qualifications to their findings. Firstly, the effect was only tested in relation to two particular types of technical illustration and that both of these had a strong spatial component. Secondly, the combined effect of text and illustrations was only significant when the content of the text and the content of the illustration overlapped each other. It was not produced when the content of the text was related to, but did not overlap, the content of the illustration. This suggests the importance of ensuring that resources are mutually reinforcing and that illustrations are not used simply as pictorial enhancement.

In a related set of experiments, Purnell et al.[467] examined the effect of another common practice in geography: the use of a key or legend adjacent to diagrams. The researchers compared the impact of having the key on the diagram itself ('integrated') versus the impact of having the same information in an adjacent key ('split'). The following two examples come from pages 447 and 448:
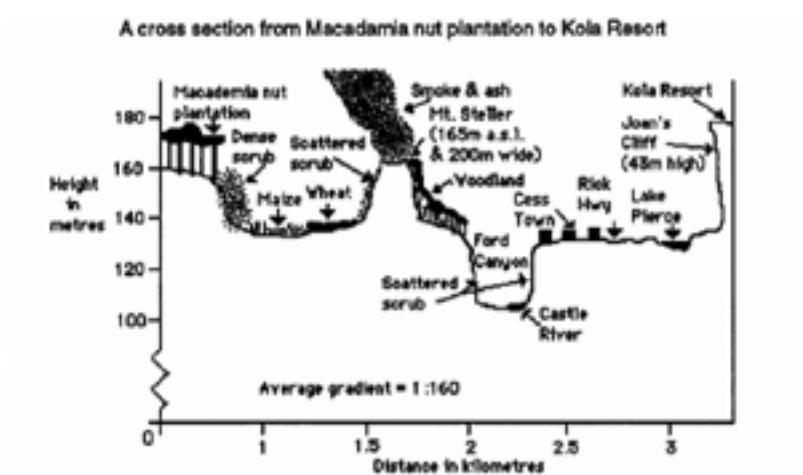
Figure 29: An integrated presentation

466 Purnell & Solman (1991), op. cit.

467 Purnell, K. N., Solman, R. T., & Sweller, J. (1991). The effects of technical illustrations on cognitive load. *Instructional Science, 20*, pp. 443–462.
Figures 29 and 30 are reprinted with the permission of Springer Science and Business Media.

Interest
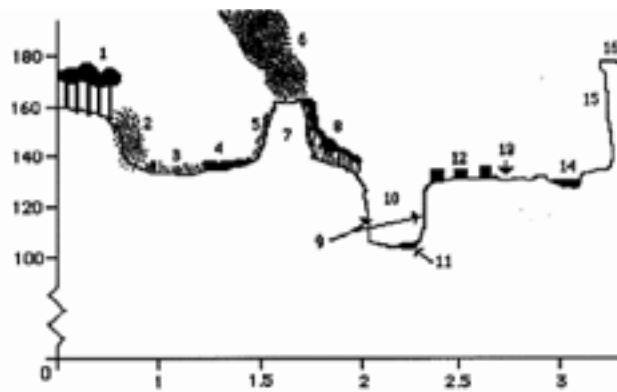
A cross section from Macadamia nut plantation to Kola Resort

Key:
  1. Macadamia nut plantation
  2. Dense scrub
  3. Maize
  4. Wheat
  5. Scattered scrub
  6. Smoke and ash
  7. Mt. Stellar (165m a.s.l. and 200m wide)
  8. Woodland
  9. Scattered scrub
  10. Ford Canyon
  11. Castle River
  12. Cass Town
  13. Rick Hwy
  14. Lake Pierce
  15. Joan's Cliff (43m high)
  16. Kola Resort
Vertical scale: Height in metres
Horizontal scale: Distance in kilometres
Average gradient = 1:160

Figure 30: A split presentation

By comparing the pre- and post-test scores for the participating students, the researchers concluded that the integrated presentation was consistently better. This was true for items involving recall of information and items that required inferences to be made, but the effect was most evident for factual items. The authors explained these effects in terms of the extra cognitive load created when students have to hold information in memory as they move back and forth between two sources of information (key and diagram), both of which are necessary for comprehension. This has been referred to as 'the split-attention effect'[468]. It appears, therefore, that there is value in teachers enhancing diagrams to align them more closely with the cognitive processes involved in their interpretation.

Multimedia tools, simulations, and games

To measure the impact of a multimedia intervention on problem solving, Saye and Brush[469] compared the results of two groups of grade 11 students who studied the same history topic with the same teacher. One group used a custom-designed set of integrated multimedia tools; the other was teacher-directed and mostly involved video, recitation, and individual desk work. The researchers reported that the multimedia group showed greater interest in their learning and achieved better academic outcomes. Although their recall was only slightly better than that of their peers in the control group, they had better recall of information in context. They

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[468] Cooper, G. (1998). Research into cognitive load theory and instructional design at UNSW. Retrieved from http://education.arts.unsw.edu.au/CLT_NET_Aug_97.html
Sweller, J. (1994). Cognitive load theory, learning difficulty and instructional design. *Learning and Instruction, 4*, pp. 295–312.

[469] Saye, J. W. & Brush, T. (1999). Student engagement with social issues in a multimedia-supported learning environment. *Theory and Research in Social Education, 27*(4), pp. 472–504.

put forward a greater number of persuasive arguments than the control group, considered more counter-arguments when defending a position, and showed greater levels of enthusiasm, dialogue, and persistence in unit activities. The researchers concluded that "scaffolded multimedia may provide a more authentic context for learning that raises student interest, confronts students with alternative perspectives, and makes knowledge more available for application to social problems". They also found, however, that "expert guidance by the teacher seems to remain a crucial factor for nurturing the disciplined inquiry necessary for addressing social problems critically" (p. 472).

Britt and Aglinskas[470] examined the impact of a computer-based tutorial and practice environment, *Sourcer's Apprentice*, aimed at teaching students to notice and use sources and to compare information across documents. This study is described under Mechanism 2 (see page 106) because of its powerful alignment characteristics, but the researchers attribute at least some of its success to the interest and motivation generated by the game environment and authentic problem solving involved.

In a recent review of the educational effects of games, Squire[471] acknowledged that there has been little research as yet into how widely used social-studies-related games such as *Sim City* and *Civilisation* promote learning. He argues, however, that educators ought to learn from the motivational design characteristics of such games, which he characterises as follows:

> The game provides a set of experiences, with the assumption being that learners are active constructors of meaning with their own drives, goals, and motivations. Most good games afford multiple trajectories of participation and meaning making. Content is delivered just-in-time and on demand to solve problems. An emerging model of games suggests that they excel by providing learners with situated experiences of activities, whereby they develop new ways of thinking, knowing, and being in worlds (pp. 24–25).

An international relations simulation studied by Shellman and Turan[472] led to substantive gains in knowledge and critical and analytical thinking skills for the tertiary students involved. The authors reported that the simulation also proved to be an enjoyable and memorable educational experience:

> "Our simulation pits students against one another on international terrorism, the future of Iraq, and globalization. Students are assigned various roles and asked to develop goals to achieve … Students research their country positions on multiple issues, discuss those positions and develop an overall strategy to achieve their goals. Each group's budget forces them to consider the cost of their actions and plan strategies to increase their combined resources. To take any action (publicly or secretly), students must fill out an action form. The action form records the action taken, describes it and indicates the costs/benefits to perform the action. Most important from a learning perspective, students must apply a theory or concept from the course content to explain and/or justify each action taken" (p. 23).

This particular simulation also involved the use of technology: email for communications and negotiations, the Internet for posting and accessing documents and event summaries, and spreadsheets for managing transactions and webcasts. 'Media' reported every 45 minutes via an Internet site. Students rated themselves using a survey, and these ratings were used by the researchers to evaluate how much the students had learned from the experience and how much they had enjoyed it. Ratings were done using a 1–5 continuum, with 1 meaning

[470] Britt, A. & Aglinskas, C. (2002). Improving students' ability to identify and use source information. *Cognition and Instruction, 20*(4), pp. 485–522.

[471] Squire, K. (2006). From content to context: Video games as designed experience. *Educational Researcher, 35*(8), pp. 19–29.

[472] Shellman, S. M. & Turan, K. (2006). Do simulations enhance student learning? An empirical evaluation of an IR simulation. *Journal of Political Science Education, 2*(1), pp. 19–32.

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'no enhancement' and 5 meaning 'high enhancement'. Table 33 summarises the ratings data obtained from the 82 self-evaluations:

Table 33: Mean enhancement ratings for simulation[473]

Question theme	Mean enhancement rating
Overall International Relations	4.15
Theories	3.56
Concepts	4.02
International Organizations	4.06
Country/Organization	4.52
Critical/Analytical thinking skills	4.01
Fun	4.35
Technology	3.74
Exercise	4.32

In the context of two introductory political studies classes (on American government), Baranowski[474] investigated the effect of short, simple simulations – not the complex, time-consuming simulations that have typically been the subject of research. Similar conditions prevailed in both the experimental and the control classes, and the students in each were not significantly different in terms of their knowledge of legislative processes or other characteristics. The simulation was used only with the experimental class:

"On the day of the simulation, I provided blank name tags (large Post-It Notes, actually) for the students on which they filled out their name, chamber, party, and leadership or committee position. I began by laying out the timetable for the exercise: 15 minutes for setup and organization, 15 minutes for subcommittee consideration of the bill (20 minutes in the Senate), 10 minutes for full committee consideration (15 minutes in the Senate), 10 minutes for House Rules Committee consideration, and the remaining 25 minutes for the rest of the process. The class split into two halves, with the senators on one side of the classroom and the representatives on the other. The House and Senate halves further split into the Judiciary Committees, which were considering the legislation; the leaders of both parties, who caucused to devise strategy, after which they dispatched their whips to get vote counts and work the floor; and the few members not in the leadership or on a committee. The deliberations started in a subcommittee of Judiciary, in which members, guided by the chair and ranking minority member, discussed and marked up the legislation" (p. 36).

On a post-test, the class that had participated in the simulation performed significantly better in terms of knowledge of legislative processes than the non-simulation class. The simulation class also scored significantly higher on a related exam: its mean score was 86.9% compared to 79.1% for the control (a difference that is statistically significant at the .05 level).

Baranowski also performed a multivariate analysis on the post-test data, analysing the relationship between the dependent variable of 'correct answers to legislative process questions' and the independent variable of instructional techniques (which included: participation in the simulation, being in attendance for the lecture material on Congress, and reading the chapter on Congress in the text). Of the three instructional techniques, only participation in

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[473] ibid., p. 27.

[474] Baranowski, M. (2006). Single session simulations: The effectiveness of short congressional simulations in introductory American government classes. *Journal of Political Science Education, 2*(1), pp. 33–49.

the simulation was found to be significant, with a coefficient in the expected direction. This finding suggests not only that simulations can be effective but that even brief simulations can increase student knowledge.

Caution: It is not sufficient that activities be interesting

> There is a strong tendency to equate motivation with learning. Much of what goes on in classrooms is based on the belief that if students are interested and involved in an activity, they will learn from it. Being attentive and engaged is equated with learning. However, students can be highly motivated and actively engaged in interesting classroom activities, yet not be learning anything new. Learning requires motivation, but motivation does not necessarily lead to learning[475].

In many of the studies reported above, the 'interesting activity' that engaged students and supported their learning worked because other things were going on that capitalised on that interest. What is important is that the interesting activities activate the learning mechanism discussed in the previous section; that is, the activities align to the important outcomes. The two mechanisms should go hand-in-hand:

| **Interest** | | **Alignment** |
| Design experiences that interest students | ⟷ | Align experiences to important outcomes |
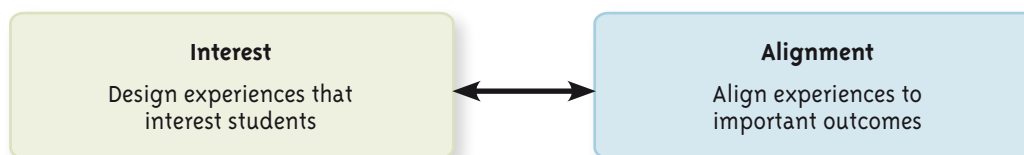
Figure 31: Interest and alignment go hand-in-hand

Interesting activities that are aligned to important outcomes foster student engagement of the kind that leads to achievement in the social sciences. This is clear from the studies cited in the previous sections, where, for example, researchers noted:

- the interest and engagement shown by students on museum visits – but also the need for teachers to plan and to prepare students for the visits in ways that maintained a focus on important learning goals (alignment);
- the student interest and engagement sparked by drama/simulations – but also the need for teachers to debrief their students in ways that focused them on important concepts;
- the student interest and engagement sparked by intergenerational contact – but also the need for teachers to debrief students in ways that highlight the important concepts and facilitate communication relating to those concepts.

Interesting activities, then, are necessary but not sufficient. Tumblety[476] notes this point in relation to role play in history: "[It] may lead to greater student interest in the topic but almost certainly does not lead to better academic performance in itself" (p. 4). While teachers need to be aware of the extent to which activities interest and engage their students, they must also attend to the longer-term goal of the enterprise, which is the achievement of important learning outcomes.

Interest

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[475] Nuthall, G. (2007). *The hidden lives of learners.* Wellington: NZCER, p. 35.

[476] Tumblety, J. (2004). *Evaluating role play in history teaching.* Paper presented at the 6th annual Conference for the Development of Teaching and Learning in History, University of Oxford.

> **Maximise student interest**
>
> *Summary of findings*
> - First-hand experience of social, cultural, economic, and political situations makes learning real.
> - Narratives have emotional appeal that engages students.
> - The design and selection of resources impacts on interest.

6.4   Use a variety of activities

The combination – and particularly the range – of experiences in a sequence of teaching activities affects the extent to which students learn from and remember those experiences. Even an activity that has proven very successful in terms of generating student interest can't be used over and over again to the same effect. In this last section, we highlight evidence for what teachers understand intuitively: students need to experience a variety of activities of different types:

> when students experience a narrow range of classroom activities they rapidly lose the ability to distinguish one activity from another in memory. As a consequence, they lose the ability to recall the curriculum content embedded in those activities. Classroom experiences become not only boringly repetitive but rapidly forgotten … the repeated use of even the most effective of classroom tasks is likely to become counterproductive (p. 337)[477].

This supports what Mercer[478] describes as the legitimate but often forgotten goal of teaching – to make information memorable.

The studies reported in this section provide insight into how students use their memory of specific activities when trying to recall their learning. They reinforce how important it is that students engage in a variety of different types of activities.

> It is perhaps too often forgotten in the analysis of teaching and learning that one legitimate goal for a teacher is to make information memorable. Graham Nuthall's work shows us that one way of making information memorable is to embed the information in a range of different activities. This practice leads to the information being experienced and stored in memory in a variety of ways, so it has a better chance of being remembered.[479]

Using a variety of activity types helps students recall the content embedded in those experiences

Students have difficulty remembering information derived from similar learning experiences, since the similarity of the experiences makes it difficult to differentiate one from another[480]. While students need multiple learning experiences (aligned to the important outcomes), those experiences need to be of a variety of different types so that the students are able to differentiate between them.

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477 Nuthall, G. (2000). The role of memory in the acquisition and retention of knowledge in science and social studies units. *Cognition and Instruction, 18*(1), pp. 83–139.

478 Mercer, N. (1995). *The guided construction of knowledge: Talk amongst teachers and learners*. Clevedon, England: Multilingual Matters.

479 ibid., p. 27.

480 Nuthall, G. (1999). The way students learn: Acquiring knowledge from an integrated science and social studies unit. *The Elementary School Journal, 99*(4), pp. 303–341.
Nuthall, G. & Alton-Lee, A. (1995). Assessing classroom learning: How students use their knowledge and experience to answer classroom achievement test questions in science and social studies. *American Educational Research Journal, 32*(1), pp. 185–223.

"It was clear that memory search made as much use of the contextual (episodic) details of learning experiences as it did of the semantic informational content of those experiences" (p. 337)[481].

The researchers in the ULTP studies noticed that, when asked how they had answered test items or to recall what they had learned, students' memory searches "made as much use of the contextual (episodic) details of learning experiences as [they] did of the semantic informational content of those experiences" (p. 337)[482]. In other words, the students remembered not only the conceptual language and ideas, but also the specific classroom experiences (discussions or activities) in which they encountered them. At times, students recollected both the answer to a question and the experience through which they had learned it. At other times, students recalled the relevant activity but not the curriculum content they should have learned from it, as this transcript illustrates[483]:

> Rata: Yeah, we did a chart on it, but I can't remember what we put on it now … this big picture on this big piece of paper on the wall and our group has to do something on weather and you had to write these, the North, South, East, and West, on it and see, and put which weather brings the hottest (laugh).
>
> Interviewer: Right, and your group did that?
>
> Rata: Yes, and you had to put it up on the wall.
>
> Interviewer: Right, and do you remember which was the warm dry one?
>
> Rata: No (laughs).
>
> Interviewer: Can you picture it in your mind, the one your group did? Who did the writing on the chart?
>
> Rata: Bruce.
>
> Interviewer: Did he. Did you help?
>
> Rata: Um no, the other two didn't help us, only me and Bruce done it. I did some of the writing on it and he, he wrote it out, and I wrote weather, and he, um, we both thought it up, and looked on our chart [weather records] to see which one was warm.

Rata had been asked if she remembered which wind brought the hottest weather to her city. She couldn't remember the answer, but, as the extract above shows, she recalled in some detail the activity designed to support the learning. Immediately after a unit on medieval times, Amy was able to recall the teacher saying that the Magna Carta was 'a record of the rights of free men', that there had been a class discussion, and that they had completed an activity sheet with a picture, text, and questions. Twelve months later, she couldn't remember what the Magna Carta was, but she did remember the activities:

> "We had a sheet about it … it was just an activities sheet. Had a bit about it and some questions … I remember doing it but I don't remember a thing about it"[484].

Skerrett White described how Hinepau, a five-year-old in a Māori immersion setting, was able to retell – both in English and in Māori – the story of Hatupatu and the Birdwoman. The researcher attributed this learning to Hinepau's multiple and varied learning experiences:

481 Nuthall (1999), op. cit., p. 337.
482 ibid., pp. 303–341.
483 ibid.
484 Nuthall, G. (2000). The role of memory in the acquisition and retention of knowledge in science and social studies units. *Cognition and Instruction, 18*(1), p. 112.

Interest

hearing different versions of the story being read, visiting the location of the rock where Hatupatu had hidden, and joining her classmates in dramatising the story (see page 66)[485].

The Level 2 exemplar Te Papatipu o Horouta shows how integration of a variety of first-hand experiences (CD resource, patere, and painting) helped students understand the passing down of history[486]. The patere experience supported the learners to develop the tools, knowledge, and language to engage in the Māori world. It mediated the cognitive, social, and cultural. It identified the key people, places, and events in Ngāti Porou and, through its style (with its emphasis on beat and rhythm) and its manner of delivery (continuous and in a group), it helped to make the learning memorable. See Akonga's response to the teacher's prompt:

Ko tōna pepehā.

Pawhiri mai mō te tuhinga kōrero.

Figure 32: Pawhiri mai mō te tuhinga kōrero

Pouako: Ki ou whakaaro, he aha o tatou tipuna i tito patere ai?

Akonga: He pai no ratou ki te waiata, kia tere mau nga kupu.

Consistent with other findings about the use of multiple types of activity, Laney et al.[487] (see page 196) showed how shifts in student attitudes resulted primarily from the combination of carefully selected, memorable children's books and pictures, and intergenerational activities – with the teacher helping the students to draw the key understandings from these learning experiences.

Use a variety of activities

Summary of findings

• Using a variety of activity types helps students recall the content embedded in those experiences.

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[485] Skerrett White, M. N. (2003). *Kia mate ra ano a Tama-nui-te-ra: Reversing language shift in kohanga reo.* Unpublished doctoral thesis, University of Waikato, Hamilton.

[486] Te Tāhuhu o te Mātauranga (2006). *Ngā Tauaromahi Marautanga o Aotearoa: Tikanga ā Iwi.* Wellington: Learning Media and the Learning Centre Trust of New Zealand.

[487] Laney, J. D., Wimsatt, T. J., Moseley, P. A., & Laney, J. L. (1999). Children's ideas about ageing before and after an integrated unit of instruction. *Educational Gerontology, 25*, pp. 531–547.

7. Conclusion

This synthesis has sought to identify and explain teaching approaches that enhance outcomes for diverse learners in the domain of social sciences / tikanga ā iwi. These outcomes were broadly defined to encompass knowledge and skills outcomes, participatory and affective outcomes, and outcomes related to cultural identity. Through a process consisting of a systematic search of the literature, analysis, and synthesis, a set of four underlying mechanisms was identified:

Mechanism 1: Connection

Make connections to students' lives

Mechanism 2: Alignment

Align experiences to important outcomes

Mechanism 3: Community

Build and sustain a learning community

Mechanism 4: Interest

Design experiences that interest students
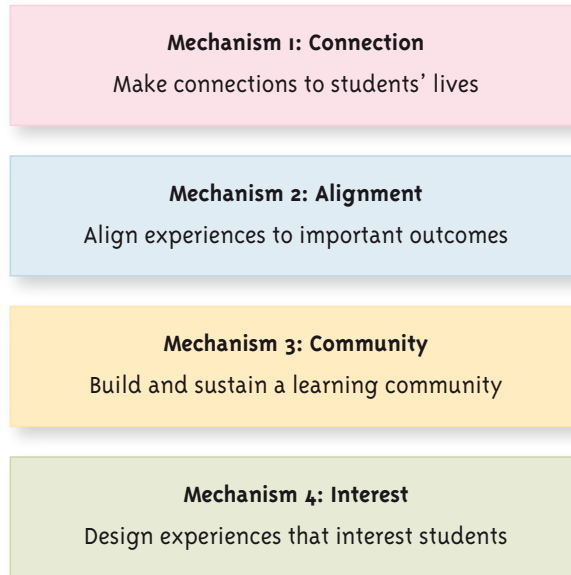
Figure 7: The four mechanisms

These broad and explanatory mechanisms were derived from a synthesis of the main themes evident in the research studies. The themes have been discussed in detail in the body of this BES. In column 2 of the following table they are framed as advice for teachers on how to activate the different mechanisms. Recognising that highly-abstracted findings are liable to be over-simplified or misinterpreted, column 3 seeks to clarify what each of the findings is and is not saying.

Conclusion, Appendices A, B, C

Table 34: Clarifying the findings of the *Social Sciences / Tikanga ā Iwi BES*

Causal mechanism	Advice	What this *is* and *is not* saying
Connection *Make connections to students' lives*	**Draw on relevant content** **Ensure inclusive content**	**This *is* saying that …** students' understanding of important ideas and processes in the social sciences is enhanced when the teacher: encourages them to use their own experiences as a point of comparison when learning about other people's experiences in different times, places, and cultures; uses language that is inclusive of all learners and their experiences; selects resources that make diversity visible and avoid biased and stereotypical representations. **This *is not* saying that …** learning must *always* begin from the students' experience –connections can be made subsequently. learning must have obvious, practical application to students' current or future lives – it can be relevant simply because, for example, it arouses curiosity or sparks interest. all opinions and views are equally valuable and must be accepted – diverse perspectives and experiences should be used to promote discussion and dialogue, not uncritical acceptance. biased resources should never be used – what matters is that the set of resources used in a sequence or unit of work should present a variety of perspectives that collectively make diversity visible.
Alignment *Align experiences to important outcomes*	**Identify prior knowledge** **Align activities and resources to intended outcomes** **Provide opportunities to revisit concepts and learning processes** **Attend to the learning of individual students**	**This *is* saying that …** student understanding of important ideas and processes in the social sciences is enhanced when the teacher accesses relevant prior knowledge, using it to minimise duplication of what is already known and address misunderstandings that could inhibit new learning. If important outcomes are to be achieved, activities and resources need to be aligned to them. Teachers optimise alignment when they make it transparent to their students, design learning opportunities that are sequenced in response to ongoing assessment, and provide opportunities to revisit important content and processes. **This *is not* saying that …** teachers should simply access prior knowledge – the information that is gained must be *used* to *inform* decisions relating to the content and process of subsequent teaching and learning. teachers should only access prior *topic* knowledge – they should first consider the learning intentions for the upcoming work and then decide on the type of prior knowledge that needs to be accessed. If, for example, learning intentions are conceptual, it is students' current conceptual understandings that need to be accessed. teachers should simply provide students with multiple learning experiences – opportunities need to be aligned to curriculum goals, revisited, and involve a variety of activity types so that the important learning will be more memorable. an apparently logical sequence of activities will be effective – assessment may reveal that the sequence needs to be adapted to meet students' needs.

Causal mechanism	Advice	What this *is* and *is not* saying
Community *Build and sustain a learning community*	**Establish productive teacher–student relationships** **Promote dialogue** **Share power with students**	**This *is* saying that …** student understanding of important ideas and processes in the social sciences is enhanced when teachers: establish productive relationships with students; explicitly develop their students' interaction skills; put in place inclusive practices that acknowledge multiple abilities and contributions; delegate to students authority to make decisions about their learning; design tasks and organise experiences that require student–student dialogue and interaction. **This *is not* saying that …** learning is *only* about relationships – relationships need to be productive in terms of supporting student engagement and success in learning. teachers need to use activities in which students engage in dialogue with each other – such activities are of value only if they are aligned to the learning purpose and explicit attention is given to developing the necessary participatory skills. teachers need to use more group work / cooperative learning / discussion – they should carefully design group tasks to require multiple abilities and contributions; these should be publicly acknowledged. teachers should *relinquish* authority – delegating authority means empowering students to make decisions about their learning, not abdicating responsibility and leadership.
Interest *Design experiences that interest students*	**Meet diverse motivational needs** **Maximise student interest** **Use a variety of activities**	**This *is* saying that …** student understanding of important ideas and processes in the social sciences is enhanced when the teacher: makes learning as memorable as possible by deliberately designing learning experiences that are sensitive to students' differing interests, motivations, and responses; provides a variety of experiences that become memorable anchors for learning and subsequent recall; helps students draw the learning from these experiences. **This *is not* saying that …** increased enjoyment is an end in itself – while it is important that students find their learning interesting and enjoyable, experiences also need to be aligned to, and designed to meet, learning goals. teachers should use *their* favourite motivational activity – as far as student engagement and achievement go, what matters about an activity is how interesting and motivating students find it. students always need multiple ways to learn – what they need are memorable anchors that help them recall their learning. meaningful experiences automatically generate learning – students need to be debriefed so that the important learning can be drawn out and new understandings scaffolded.

Conclusion, Appendices A, B, C

Teaching as Inquiry: an evidence-informed model of pedagogy		What this *is* and *is not* saying
Teaching as Inquiry	Focusing inquiry Teaching inquiry Learning inquiry	**This *is* saying that …** teaching strategies may not work in all contexts: a strategy may work in one context but not another, for one student / group of students but not another, or in relation to one outcome but not another. effective pedagogy requires teachers to inquire into: the outcomes that should be prioritised for their students (the focusing inquiry), teaching actions that are most likely to enhance outcomes for their students (the teaching inquiry), and into the actual impact of their actions on their students (the learning inquiry). it is important to test new ideas aimed at improving student outcomes, but to do so responsibly by drawing on strategies that have the greatest likelihood of success. Because this BES is based on a wide range of outcomes-linked evidence, it is a strong informant of such strategies. inquiry requires openness to new possibilities, recognition that a particular strategy may not work (fallibility), and persistence in finding more effective strategies. **This *is not* saying that …** teachers should simply implement research findings – findings are informants of possible change, not instructions or recipes; they need to be carefully and systematically monitored for their impact in the immediate classroom context. teachers' own experience is not a useful informant of pedagogy – it is, but it is not the only source of possibilities. teachers' own experience is less useful than research evidence – both are useful. Teachers' experiences are richly contextualised and immediately accessible. Research offers access to new possibilities and makes claims based on rigorous, transparent methods. inquiry must always be intensive and time-consuming – deliberate, purposeful inquiry is necessary for understanding what is really happening for students during the teaching–learning process, but inquiry also takes place informally as teachers make moment-by-moment decisions during their teaching. that Teaching as Inquiry must follow a given sequence – there is no fixed sequence. One teacher might notice something about a student, and so begin with the learning inquiry. Another might read about a strategy that was successful for an outcome they were working towards, and so begin with the teaching inquiry.

While the studies reported in this synthesis provide examples of how teaching has led to positive outcomes for diverse students, context is such a significant factor in education that care must be taken to avoid reading too much certainty into pedagogy–outcomes connections. What 'worked' in one context may not necessarily work in another because of differences in the teacher, students, and learning environment or because of subtle differences in the intended outcomes or the resources available.

Attending to the mechanisms and the related advice increases the *likelihood* that teaching will be effective. Ultimately, however, effectiveness has to be assessed context by context, in terms of its impact on valued student outcomes. Effective teaching in the social sciences, therefore, requires an inquiry-minded approach to pedagogy, as illustrated in the following evidence-informed model of inquiry and action and explained in section 2.2 of this BES. (See page 52). The mechanisms, together with the associated advice and elaborations, are intended as a tool for inquiry – a tool for designing teaching in ways that that are most likely to achieve the desired outcomes, and a tool for helping teachers explain and understand why and how their own students did or did not learn.
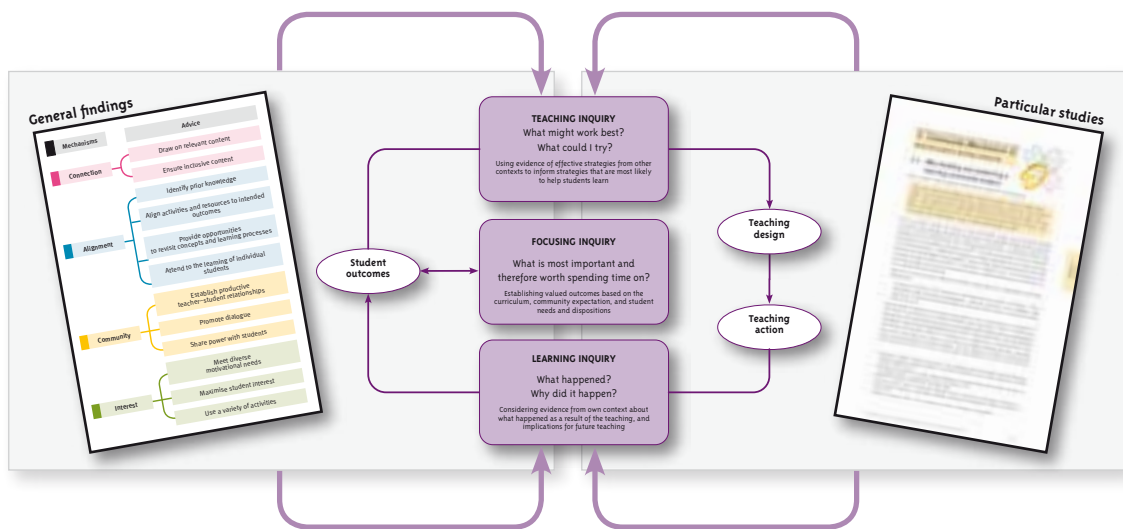
Figure 33: The *Social Sciences / Tikanga ā Iwi BES* as an informant of Teaching as Inquiry

By using the mechanisms and advice in this way, teachers acknowledge that the design, evaluation, and improvement of social sciences teaching is evidence informed. They also recognise the importance of collaboration, dialogue, and open-mindness when considering alternative approaches – and the importance of reflecting on the outcomes for each learner.

Inevitably, this BES is structured so that each of the four mechanisms is reported in a separate section. A consequence of this is that studies tend to be reported within the framework of a single mechanism, when, in most instances, a complex combination of the mechanisms was at work. To highlight this complexity, appendix D presents a series of cases that are drawn from the research evidence. Most are structured as in Table 35:

Table 35: Structure of the cases

Source	The study or studies from which the case is drawn
Introduction	A summary of the pedagogy and outcomes involved in the research and the nature of the research
Targeted learning outcomes	A statement about the learning outcomes set by the teacher/s involved in the research
Learners and learning context	A summary of the relevant characteristics of the student/s involved in the research. Typical details include age, level, gender, ability.
Pedagogy	A summary of the approach taken to teaching and learning
Outcomes	A statement or data about the learning outcomes for students. Sometimes the outcomes are based on a before-and-after analysis of achievement. In other cases, they are based on a comparison of different students or groups of students.
How the learning occurred	An explanation of how the learning relates to the four mechanisms. Where appropriate, student voice is used to support explanations.
Implications for pedagogy	Some implications for wider social sciences teaching and learning
Inquiry questions	Questions to consider when using this piece of evidence to inform a focusing inquiry, teaching inquiry, or learning inquiry
Other references	Other related research

Summary of Cases

1. **Facilitative inclusion for Ian and his peers** is based on the work of Christine Rietveld. Ian is a five-year-old with Down Syndrome. This case contrasts his experiences of kindergarten and primary school and highlights how his teachers' views and practices impacted on his learning and that of his peers.

2. **Making links between cultures: ancient Roman and contemporary Sāmoan** is based on the work of Christine McNeight. This case highlights the effectiveness of an approach that explicitly encouraged students to discuss their learning at home and compare and contrast another culture with their own.

3. **To speak or not to speak: creating spaces for quiet students in classroom talk** is based on the work of Karen Nairn. This case reveals the positive impact of an intervention aimed at increasing the verbal participation of quiet girls. The two key elements were a 'women-focused curriculum' and a 'turn-taking' strategy.

4. **Teaching complex historical content to middle school students with learning disabilities** is based on the work of Russell Gersten and others. This case provides evidence of an approach that enabled students – those with reading difficulties, and competent readers, too – to develop higher-level conceptual understandings about history.

5. **Partnering and participation** is based on the work of Elaine Vine. This case concerns how a new learner of English was introduced to learning that required him to work as a partner. The key was a sequence of activities that gave him multiple opportunities to practise the partnering process.

6. **Participating in a community to learn about community** is based on the work of Alison Sewell. This case is about a teacher whose perspective on teaching and learning shifted significantly and about how he learned to connect (cognitively, socially, emotionally, and physically) with his students. It describes the impact of these changes on his students' understanding of community, and on their identity and participation as learners.

7. **Tō tātou Tiriti – Karawhiua! Our Treaty – Go for it!** is based on the work of Ruth Millar, Kerri Fitzgerald, and Jane Brown. This case shows how a teacher – supported by Māori, social studies, and drama specialists – used process drama and a range of other activities to support students in their learning about the Treaty of Waitangi.

8. **The master storyteller and the master arranger** is based on the work of S. G. Grant. This case contrasts the very different approaches that two teachers, 'George' and 'Linda', take to teaching a civil rights unit. It explains the relationship between those approaches and their students' historical knowledge, understanding of significance, and empathy.

9. **Cultural continuity** is based on the work of Yatta Kanu. This case presents findings from a study that examined the impact of an intervention that involved deliberate and intensive integration of Aboriginal cultural knowledge and perspectives. It reveals the positive impact that this integration had on Aboriginal students' achievement.

Appendix A: Significance of the outcomes

Cultural identity outcomes

'Culture' is defined in *Social Studies in the New Zealand Curriculum*[488] as "understandings, patterns of behaviour, practices, and values shared by a group of people" (p. 56) and within *Tikanga ā Iwi i roto i Te Marautanga o Aotearoa* as "ko ngā maramatanga, ngā tauiratanga whanonga, ngā mahi me ngā uara e whakamahi tahingia ana tetahi ropu"[489]. In both definitions, the notion of *group identity* is central. Thus 'culture' equates not just with 'ethnicity'; it admits a wider classification that takes in location, age, gender, common interest, and the like.

The Ministry of Social Development argues[490] that cultural identity is an important contributor to well-being because it provides a sense of belonging, along with access to social networks "which provide support and shared values and aspirations … (and which) help break down barriers and build a sense of trust between people" (p. 82). In other words, cultural identity contributes to what Putnam[491] calls 'social capital': the flows of trust, reciprocity, information, and cooperation that help bond social networks. The Ministry acknowledges that there is a risk that excessively strong identities can be intolerant of the practices of others, creating barriers and leading to exclusion. So when we use the term 'cultural identity' to refer to an outcome, we use it deliberately to refer to the contribution that the social sciences make to *student understanding of the identities that derive from their own membership of groups and their understanding of the ways in which cultural identity (their own and others') can be a force for both cohesion and tension.*

There is a strong connection between this cultural identity outcome and the citizenship tradition that has been evident, but not always explicit, in New Zealand social studies (see for example, Aitken[492], Barr[493], McGee[494], Openshaw[495]). The aims of *Te Whāriki* and of kōhanga reo also declare the centrality of community and the importance of strengthening community identity. In the case of kōhanga reo and kura kaupapa Māori, this is further reinforced by a commitment to the preservation of te reo as "te mauri o te mana Māori": the life principle of Māori mana (p. 7)[496]. Integral to the preservation of the language is the valuing of whanaungatanga (sense of family, cooperative effort, unity, and togetherness) alongside cultural autonomy as found in the concept of mana Māori motuhake[497]. Similarly, Anae (2002, cited in Silipa[498]) found that strengthening the identity of Pasifika students impacted positively on their confidence, self esteem, and learning.

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[488] Ministry of Education (1997). *Social studies in the New Zealand curriculum*. Wellington: Learning Media.

[489] Te Tāhuhu o te Mātauranga (2000). *Tikanga ā Iwi i roto i Te Marautanga o Aotearoa*. Wellington: Learning Media.

[490] Ministry of Social Development (2005). *The social report 2005*. Wellington: Ministry of Social Development.

[491] Putnam, R. D. (2001). *Bowling alone: the collapse and revival of American community*. London: Simon & Schuster.

[492] Aitken, G. (2005). *Social studies curriculum design: Learning from the past*. Unpublished doctoral thesis, The University of Auckland.

[493] Barr, H. (1998). The nature of social studies. In P. Benson & R. Openshaw (Eds.), *New horizons for New Zealand social studies*. Palmerston North: ERDC Press.

[494] McGee, J. (1998). Curriculum in conflict: Historical development of citizenship in social studies. In P. Benson & R. Openshaw (Eds.), *New horizons for New Zealand social studies*. Palmerston North: ERDC Press.

[495] Openshaw, R. (1996). Social studies in the New Zealand curriculum? Critical citizenship or crucial cop out? *Delta: Policy and Practice in Education, 48*(2), pp. 159–172.

[496] Hohepa, M. (1990). *Te kōhanga reo hei tikanga ako i te reo Māori*. Unpublished Master of Arts in Education thesis, The University of Auckland.

[497] ibid., pp. 9–11.

[498] Silipa, S. R. (2004). *Nurturing coolness and dignity in Samoan students' secondary school learning in Aotearoa/ New Zealand*. Unpublished doctoral thesis, University of Canterbury, Christchurch.

It is difficult to directly measure the strength of cultural identity and, therefore, the importance of this outcome. Proxy measures can, however, provide some indication of social cohesion. In the 1996 and 2001 censuses, about 25% of Māori stated that they could hold a conversation in Māori about everyday things[499]. A 2001 survey on the health of the Māori language reported that 59% of Māori could understand the language and 42% could speak it with some proficiency[500]. For other ethnic groups, the proportion who could speak the language of their forebears ranged from 17% for Cook Islands Māori to 81% for Koreans[501].

While trends in 'loneliness' are difficult to discern, 18% of those over the age of 15 reported having felt lonely in the past 12 months[502]. Rates were higher for Māori and Pacific peoples relative to European/Pākehā and for women relative to men[503]. Although the overall suicide rate has declined slightly since 1998, rates are higher for males, youth, young adults, and Māori[504]. Of 13 OECD countries, New Zealand has the third-worst rate for male youth suicide and the worst for female suicide. It is one of a small number of countries in which the suicide rate for young people is greater than the rate for their elders[505]. Income disparities are also growing, which may contribute to a greater sense of social disconnection.

Evidence from the Competent Children Project[506], which charts the cognitive, social, and attitudinal competencies of about 500 children from the Wellington region, also provides a measure of the nature and strength of children's cultural identity. Approximately one-quarter of the children in the study reported that they were picked on or bullied in the previous two months – in most cases, at school. Fifteen percent reported that they had, themselves, bullied another child in the last few months. Almost twice as many children from decile 5–10 schools as from decile 1–4 schools reported being bullied. Those involved in bullying, whether victims or bullies, tended to have lower scores on competency measures than those who were not (p. 177). Students whose teachers judged them to be performing below average were less positive about their classroom experience (p. 213). Boys tended to be less positive than girls about school and less likely to say that they usually "did interesting things (50% compared with 61%), were treated fairly in class (69% compared with 78% of girls), and kept out of trouble (53% compared with 70% of girls)" (p. 213).

Knowledge outcomes

The development of conceptual understanding is central to this outcomes set. 'Conceptual understanding' refers to understanding of concepts expressed as single words (for example, 'conflict', 'culture', 'government') or elaborated as ideas or generalisations (for example, "conflict is inevitable between individuals and groups, and within and between groups" (p. 16)[507].

Development of conceptual understanding has been a strong feature of social science learning since the early 1960s[508]. Taba argued that learning in the social sciences was not about accumulating vast quantities of facts; it was about concepts and ideas. Bruner's[509]

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[499] Ministry of Social Development (2005). *The social report 2005*. Wellington: Ministry of Social Development, p. 26.

[500] ibid., p. 86.

[501] ibid., p. 88.

[502] ibid., p. 144.

[503] ibid., pp. 132–135.

[504] ibid., p. 136.

[505] ibid., p. 29.

[506] Wylie, C., Thompson, J., Hodgen, E., Ferral, H., Lythe, C., & Fijn, T. (2004). *Competent children at 12*. Wellington: New Zealand Council for Educational Research.

[507] Department of Education (1977). *Social studies syllabus guidelines*. Wellington: Department of Education.

[508] Taba, H. (1962). *Curriculum development: Theory and practice*. New York: Harcourt, Brace and World, Inc. Taba, H., Durkin, M. C., Fraenkel, J. R., & McNaughton, A. H. (1971). *A Teacher's handbook to elementary social studies*. California: Addison-Wesley Publishing Company.

[509] Bruner, J. (1960). *Process of education*. Cambridge: Harvard University Press.

spiral curriculum reinforced this view, arguing that students needed repeated exposure to key ideas. After years of detailed research in New Zealand classrooms, Nuthall[510] came to a similar conclusion, arguing that what was most needed to enhance student learning was for teachers to select the important ideas and concepts and then spend time developing students' understanding of them. Important ideas are not just organisationally appealing; they are cognitively significant.

Each of the social science curriculum statements has a strong conceptual emphasis. *Te Whāriki*[511], *The New Zealand Curriculum*[512], and *Tikanga ā Iwi i roto i Te Marautanga o Aotearoa*[513] are all organised around conceptual strands that reflect important areas of learning. The geography syllabus is structured around six sets of important geographic ideas, all related to the central concept of 'environment'[514]. The economics syllabus identifies six important economics ideas that underpin the curriculum at every level[515]. Although it does not define them as closely, the history syllabus acknowledges the importance of understanding "important historical terms and ideas" (p. 10)[516].

There are limited data on the conceptual understanding of New Zealand children and young people. Although conceptual understanding has long been valued in New Zealand social studies, there has been little empirical work done to ascertain levels of student understanding – nothing along the lines of what has been done in Australia by the Australian Council for Educational Research[517] or in the United States by Brophy and Alleman[518]. Smythe[519] interviewed 142 primary and secondary school students to determine their understanding of ten social studies concepts. He concluded that the "meanings children attribute to concepts should influence the design of social studies lessons" but that the "breadth and subtlety of concepts often goes unused or unrecognised" by teachers (p. 195). He also drew attention to the dangers of focusing on developing students' 'understanding' of concepts rather than their ability to act appropriately in relation to the concepts. He observed, for example, that children had no difficulty understanding the concept of 'cultural difference' yet they spent little time learning how to accept cultural difference[520]. Lindsay[521] observed of his sample of 128 primary school children that they had generally poor understanding of chronology and that this hampered their development of historical thought. The most comprehensive and recent

[510] Nuthall, G. (2004, 21 February). Interview with Kim Hill on National Radio.

[511] Ministry of Education (1996). *Te Whāriki: He Whāriki mātauranga mō ngā mokopuna o Aotearoa: Early childhood curriculum*. Wellington: Learning Media.

[512] Ministry of Education (2007). *The New Zealand Curriculum*. Wellington: Learning Media.

[513] Te Tāhuhu o te Mātauranga (2000). *Tikanga ā Iwi i roto i Te Marautanga o Aotearoa*. Wellington: Learning Media.

[514] The six sets of contributing ideas are location, distance and accessibility; patterns, processes and regions; interaction; change; systems; culture and perception (Department of Education, 1990, p. 21).

[515] The six important economics ideas are scarcity; choice and opportunity cost; specialisation and interdependence; exchange; allocation; and optimisation (Department of Education, 1990, pp. 18–19).

[516] Department of Education (1989). *History forms 5 to 7 syllabus for schools*. Wellington: Department of Education.

[517] Doig, B., Piper, K., Mellor, S., & Masters, G. (1992). *Conceptual understanding in social education:* Australian Council for Educational Research.

[518] Brophy, J. & Alleman, J. (2000). *Primary-grade students' knowledge and thinking about Native American and pioneer homes*. Theory and Research in Social Education, 28(1), pp. 96–120.
Brophy, J. & Alleman, J. (2001). What primary grade students say about their ideal future homes. *Journal of Social Studies Research, 25*(2), pp. 23–35.
Brophy, J. & Alleman, J. (2005). Primary-grade students' knowledge and thinking about transportation. *Theory and Research in Social Education, 33*(2), pp. 218–243.

[519] Smythe, K. (1992). The social concepts of children. In R. Openshaw (Ed.), *New Zealand social studies: Past, present and future*. Palmerston North: The Dunmore Press.

[520] Smythe, K. (1991). *Successful social studies (6th ed.)*. Hamilton: Developmental Publications.

[521] Lindsay, J. (1994). Children's concepts of chronology. *The New Zealand Journal of Social Studies,* 3(1), pp. 20–25.

work on New Zealand students' conceptual understanding in social studies has been carried out by the National Education Monitoring Project (NEMP)[522].

The 1997 NEMP assessments revealed that many year 8 students did not understand the meaning and function of such parliamentary roles as Prime Minister (only 17% were judged to have a 'good' understanding of this role); government (15%), ministers (12%), and coalition parties (29%). The same students also had difficulty explaining how governments are formed. Only 12% had a 'good' or 'very good' understanding of how laws are passed. A large majority of students from years 4 and 8 struggled to respond satisfactorily when asked to explain a historical event and its consequences (pp. 21–35)[523]. The 2001 assessments revealed improved year 4 knowledge of New Zealand history and students at both levels were able to identify distinctive symbols of New Zealand identity. Concerns remained, however, about year 8 students' knowledge of the parliamentary processes. Only a small percentage knew how members of parliament are elected (12%) and what they do in parliament (15%). Approximately 10% of year 4 and 50% of year 8 students showed at least moderate knowledge of the Treaty of Waitangi, but the report noted substantial room for improvement. Less than half of the year 8 students were able to explain the significance of the arrival of Captain Cook, the arrival of the first Māori, or women's suffrage. Students had limited knowledge of immigrant cultures or features of New Zealand culture and identity. Only 6% of year 4, and 16% of year 8 students were able to provide 'strong' or 'very strong' responses to a task that required them to assess the suitability of a place for settlement. The 2005 social studies assessments revealed that the overall performance of year 8 students remained unchanged from 1997. Gaps in conceptual knowledge continued to be identified. For instance:

- students' knowledge and understanding about Māori culture and protocols was found to be superficial, in spite of opportunities to learn;
- knowledge relating to place and environment was lacking (less than half of the year 8 students could match names and pictures of New Zealand mountains);
- resource and economic issues proved a major challenge for students;
- only about half of year 4 students could talk about any local, national, or international current issue or event.

It is of particular concern that the performance of year 8 students was lowest for those in the low-decile group – often significantly lower than that of students in the medium-decile group[524]. While it can justifiably be claimed that these results do not capture the full picture of children's conceptual knowledge in social studies because they deal largely with formal, adult knowledge, it is nevertheless clear that there are significant gaps in conceptual understandings that are core curriculum goals. Alton-Lee and Praat[525] have also expressed concern about the differential achievement of boys and girls, particularly in this curriculum area that aspires to value diversity and to empower all students to participate in a changing society as informed, confident, and responsible citizens.

[522] Flockton, L. & Crooks, T. (1998). *Social studies assessment results 1997. National Education Monitoring Report 8*. Dunedin: University of Otago, Educational Assessment Research Unit.
Flockton, L. & Crooks, T. (2002). *Social studies assessment results 2001. National Education Monitoring Report 22*. Dunedin: University of Otago, Educational Assessment Research Unit.
[523] Flockton & Crooks (1998), op. cit.
[524] Crooks, T., Flockton, L., & Meaney, T. (2006). *Social studies assessment results 2005. National Education Monitoring Report 34*. Dunedin: University of Otago, Educational Assessment Research Unit.
[525] Alton-Lee, A. & Praat, A. (2001). *Questioning gender: Snapshots from explaining and addressing gender differences in the New Zealand compulsory sector*. Wellington: Ministry of Education.

Skills outcomes

Although any separation of understanding and skills is somewhat artificial, the 'skills' category of the classification highlights the methods and techniques that are central to the development of social sciences understandings and to the expression of those understandings by students. Skills are a broad set, many of which do not belong uniquely to the social sciences (for example, skills associated with reading and writing). While such skills cannot be ignored by this synthesis, its primary focus is skills that are more particularly related to social sciences learning.

Social sciences skills are defined to varying degrees of specificity and within different classifications in curriculum documents. In seeking to weave together "intricate patterns of linked experience and meaning" (p. 41)[526], *Te Whāriki* does not isolate discrete skills. Nevertheless, the curriculum acknowledges the importance of developing such social-science-specific abilities as expressing ideas, taking on different roles in different contexts, and stating a conflicting opinion assertively and appropriately. Historically, the English- and Māori-medium social studies curriculum statements have been equally cautious about defining discrete skills. Instead, they have encouraged skills development within a structure of three designated 'processes': processes of inquiry, of values exploration, and of social decision making. In effect, these processes have structured skills development around action sequences oriented towards the collecting, processing, and communicating of information about society; the exploring and analysing of values; and the making of decisions about possible social actions. *The New Zealand Curriculum*[527] suggests that a single process, social inquiry, encompasses the key elements of what were formerly these three processes. The curriculum has always included a metacognitive element. While not unique to social sciences, this element underscores the importance of helping students develop reflective and evaluative skills in association with the process and outcomes of their learning.

Discrete skills find more explicit expression in the senior school social sciences curriculum as lists or 'banks' of specific skills and within particular achievement standards. Skills in geography are grouped as thinking skills, practical skills, social skills, and valuing skills. Many of these are generic to all social sciences (and to other learning areas), but some are fairly discipline-specific; for example, constructing and using maps, constructing and interpreting climate graphs, and using and making raised relief models. There are also particular achievement standards that have a strong 'skills' focus[528], referenced to the extensive skills banks produced by the Board of Geography Teachers[529]. In history, skills are grouped according to whether they are information gathering, information processing, or presentation skills. Again, there is a considerable generic component to these skills, but some, such as establishing historical relationships between cause and effect and between past and present, are fairly specific to history. The skill of essay writing is prominent in some achievement standards and others are aligned with the skill groups identified in the curriculum[530]. The classification of skills in economics is organised around four clusters: thinking, investigative, statistical, and decision-making skills. The statistical cluster, where the skills of interpolation, use of matrices and economic indicators, and calculation of elasticities find their home, is the most subject-specific. Within the achievement standards, students are encouraged to develop the skills of investigating current economic issues. In classical studies, students are required to

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[526] Ministry of Education (1996). *Te Whāriki: He whāriki mātauranga mō ngā mokopuna o Aotearoa / Early childhood curriculum*. Wellington: Learning Media.

[527] Ministry of Education (2007). *The New Zealand Curriculum*. Wellington: Learning Media.

[528] For example, at level 1: Apply skills and ideas with direction in a geographic context; at level 2: Apply skills and ideas in a geographic context; and at level 3: Select and apply skills and ideas in a geographic context.

[529] Board of Geography Teachers (1992). *G6: Skills in geography: Forms 5–7: Teacher resource material rev. ed.* Christchurch: Geography Resource Centre.

[530] For example, at level 1: Carry out an historical investigation; interpret historical sources; and communicate historical ideas.

develop the skills to analyse classical literature and artwork and to write logically developed, sustained responses in essay form.

Given the extent to which skills infuse the curriculum, it is perhaps unsurprising that such limited data is available relating to skills outcomes in the social sciences domain. The NEMP reports data on participatory skills (see the next section), but outcomes relating to other skills clusters are reported only for small-scale classroom studies or for surveys of skill development in more generic domains, such as literacy and numeracy.

Participatory outcomes

Participatory outcomes relate to students' ability to participate, contribute, become involved, interact, and engage in dialogue. They relate both to confidence (for example, speaking publicly, making a contribution to a group) and to appropriateness (demonstrated, for example, by inclusive personal behaviour [such as anti-racist and anti-sexist interactions with peers]). Participatory outcomes have knowledge and skills components and, for that reason, also fit into the conceptual understanding and skills categories. The skills involved in participation encompass clusters such as those outlined by Elliott and Busse[531]:

- cooperation: helping others, sharing and abiding by rules;
- assertiveness: initiating behaviours, making requests and responding to others' behaviour;
- responsibility: communicating with adults and demonstrating care;
- empathy: expressing concern for others;
- self-control: responding appropriately to conflict or corrective feedback from adults.

The key feature of participatory outcomes that warrants a separate category for them, however, is the combination of knowledge and skills that enables contribution to communities and enhances participation.

That this set of outcomes is important can be seen from the outcomes found in the various curriculum statements: develop respect for, and ease of communication with, those who are different from themselves (*Te Whāriki*[532]); develop a sense of responsibility for the needs and well-being of the group[533]; make choices about preferred actions and justify those choices (*Social Studies in the New Zealand Curriculum*[534]); participate as critical, active, informed, and responsible citizens (*The New Zealand Curriculum*[535]). The social studies curriculum has a strong emphasis on building participatory outcomes through the use of a sequenced process for examining societal issues (a process referred to in *The New Zealand Curriculum* as 'social inquiry') and by exploring perspectives on, and conflicts associated with, these issues. Likewise, there is a strong, explicit, decision-making element in both geography and economics.

In spite of this emphasis in the curriculum, data relating to participation in the democratic process at its various levels has given cause for concern. Voter turnout for the 2001 local body elections was the lowest in five elections, leading the Minister of Local Government to comment that New Zealanders are "apathetic and indifferent" and to call for compulsory voting (Lee cited in Orsman[536]). By 2004 the situation had deteriorated even further, with fewer than 45% of eligible voters voting. The new minister called for an inquiry, claiming that such a low turnout was "bad for democracy" (Carter cited in Tunnah[537]). Even when there is

[531] Elliott, S. N. & Busse, R. T. (1991). Social skills assessment and intervention with children and adolescents: Guidelines for assessment and training procedures. *School Psychology International, 12*, pp. 63–83.

[532] Ministry of Education (1996), op. cit.

[533] ibid.

[534] Ministry of Education (1997). *Social studies in the New Zealand Curriculum.* Wellington: Learning Media.

[535] Ministry of Education (2007), op. cit.

[536] Orsman, B. (2001, October 15). Banks set to roll on roads. *New Zealand Herald.*

[537] Tunnah, H. (2004, October 11). Poll apathy dismays minister. *New Zealand Herald.*

an opportunity for more direct involvement, participation is low. For example, voter turnout for the important 1992 referendum on the electoral system was only 55%. There is emerging evidence, however, that participation in formal political processes may be increasing for Māori. In 2005, Māori chose to be on the Māori roll rather than the general roll in a ratio of 3:1; for young Māori (18-year-olds voting for the first time) the ratio was 12:1. It has been argued that this is an intuitive, emotional choice, based on an increasing level of engagement with Māori language and culture[538].

NEMP reports provide some insight into the development of social-science-specific participatory skills[539]. The 1997 assessments[540] showed that year 8 students participated well in a school council scenario, but students in both year 4 and year 8 were less successful when it came to discussing a rule-making scenario involving collaboration with others. Year 8 students found it difficult to come up with a strong problem-solving strategy for a scenario that involved them trying to persuade their school to put in a good drinking fountain. In a scenario that required them to consider different points of view on disability, students showed a strong tendency to take sides, with only 2% of year 4, and 4% of year 8 students able to take a full and balanced view. The 2001 assessments[541] reported less skills-related information, but the tasks common to both the 1997 and 2001 assessments revealed a slight reduction in the quality of debate on the part of year 8 students, an increased ability to reach consensus, and – among year 4 students – less involvement in discussion and collaboration. The 2005 assessments found that while both year groups could identify issues in school conflict situations well, they were more inclined to describe adult rather than student initiatives as solutions. In relation to community issues, they showed much less understanding about participating as citizens than they did in relation to school issues – focusing mainly on personal and interpersonal qualities[542]. These data show that not only is formal citizenship knowledge lacking in New Zealand primary school students but there is also limited development of important citizenship skills: problem solving, understanding different points of view, discussion, and collaboration. These skills, together with those of critical thinking and personal reflection, are more vital than ever as people come to exercise citizenship by increasingly informal means.

At secondary level, a survey[543] of 821 year 11 students and 438 teachers from 107 New Zealand schools reported "a disturbing lack of knowledge of the United Nations Convention on Human Rights (UNCROC) amongst secondary school students" (p. 152). More particularly, from a participatory perspective, students were much more likely than teachers to prioritise participation rights (for example, the right to be consulted and to be taken into account, to access information, to enjoy freedom of speech and opinion, and to challenge decisions made on their behalf) over provision rights (minimum standards of health, education, physical care, etc.) and protection rights (safety from discrimination, abuse, exploitation, substance abuse, injustice, and conflict). In other words, students viewed themselves as 'social actors', not just beings "acted upon by the adult world" (pp. 154–55).

538 Williams, J. (2005). Keynote address. New Zealand Social Sciences Conference: SocCon05, Wellington.

539 Flockton, L. & Crooks, T. (2006). *Social studies assessment results 2005*. *National Education Monitoring Report 36*. Dunedin: University of Otago, Educational Assessment Research Unit.

540 Flockton, L.. & Crooks, T. (1998). *Social studies assessment results 1997*. *National Education Monitoring Report 8*. Dunedin: University of Otago, Educational Assessment Research Unit.

541 Flockton, L. & Crooks, T. (2002). *Social studies assessment results 2001*. *National Education Monitoring Report 22*. Dunedin: University of Otago, Educational Assessment Research Unit.

542 Crooks, T., Flockton, L., & Meaney, T. (2006). *Social studies assessment results 2005*. *National Education Monitoring Report 34*. Dunedin: University of Otago, Educational Assessment Research Unit.

543 Taylor, N., Smith, A. B., & Nairn, K. (2001). Rights important to young people: Secondary student and staff perceptions. *The International Journal of Children's Rights, 9*, pp. 137–156.

Affective outcomes

Affective outcomes relate to students' emotional responses to learning and to the development of dispositions such as curiosity, reflection, and commitment to social justice and equity.

The importance of affective learning is captured by Gaye Ruru, Assistant Principal of Ngongotaha School, who, in discussing the establishment of their Ngati-Whakaue enrichment class, said the school was aiming to "optimise (the) children's chances of being stronger through the rest of their lives, not just improvement in the here and now … these memories will stay with them for the rest of their lives …" (p. 22)[544]. In other words, these enduring outcomes relate to the experiences that schools provide that transcend immediate academic goals.

Affective outcomes are usually expressed more generally than those in the other categories. *Te Whāriki* talks about building self-worth and confidence (p. 22) and reducing boredom and frustration (p. 24); the history syllabus characterises history as a source of lifelong pleasure and intellectual satisfaction (p. 6); geography aims to help students build confidence and self-respect (p. 5); the social sciences curriculum statement in *The New Zealand Curriculum*[545] says that "as they explore how others see themselves, students clarify their own identitites in relation to their particular heritages and contexts" (p. 30).

The NEMP reports that as far as primary school social studies is concerned, the affective learning needs of students are not being entirely met. While NEMP acknowledges the difficulty of drawing strong conclusions about affective outcomes because children don't always know when they are actually 'doing social studies', only 4–5% of year 4 students ranked social studies among their three favourite subjects for each of the years 1997, 2001, and 2005[546]. Over the same period, the percentage of year 8 students who ranked social studies in their 'top 3' went down from 16 to 13 to 7. In 2005 the subject was ranked 12th out of 14 by year 4 students and 11th equal by year 8 students. The percentage of year 4 students reporting that they learned 'heaps' in social studies dropped from 50% in 1997 to 30% and 31% in 2001 and 2005 respectively. In year 8, the decline was also marked: from 29% in 1997 to 16% in 2001 and 12% in 2005.

Other evidence suggests that the aims of schools in terms of affective education not generally being met. Truancy is increasing. The most recent survey indicates an overall truancy rate of 3.4%[547]. This is an increase of 0.5% since 2002. Rates are highest in secondary schools (6.9%). Data from student interviews suggest concerns with the affective outcomes of schooling. Students in AIMHI schools reported the negative impacts of poor teacher–student relationships[548]. Interviews with year 9 and 10 Māori students revealed that many felt excluded by classroom language, mispronunciation of their names, and lack of attention to their culture[549]. Such experiences are not new for Māori. Writing about New Zealand native schools, Simon and Smith[550] report that many teachers in native schools acted "as if the cultural identity of the pupils did not need to be acknowledged in the classroom" (p. 119). In Competent at 12,

[544] McFarlane, A. H. (2004). *Kia hiwa ra! Listen to culture*. Wellington: New Zealand Council for Educational Research.

[545] Ministry of Education (2007). *The New Zealand Curriculum*. Wellington: Learning Media.

[546] Flockton, L.. & Crooks, T. (1998). *Social studies assessment results 1997. National Education Monitoring Report 8*. Dunedin: University of Otago, Educational Assessment Research Unit.

[547] Ministry of Education (2005). *Attendance, absence and truancy in New Zealand schools in 2004*. Wellington: Research Division, Ministry of Education.

[548] Hill, J. & Hawk, K. (2000). Making a difference in the classroom: Effective teaching practice in low decile, multicultural schools. Retrieved May, 2005, from www.minedu.govt.nz/index.dfm?layout=document&documen tid=6135&data=l

[549] Bishop, R., Berryman, M., Tiakiwai, S., & Richardson, C. (2003). *Te Kotahitanga: The experiences of year 9 and 10 Māori students in mainstream classrooms*. Wellington: Ministry of Education.

[550] Simon, J. & Smith, L. T. (2001). *A civilising mission? Perceptions and representations of the New Zealand native schools system*. Auckland: Auckland University Press.

the most recent report from a major longitudinal study of student experience at school, the authors found that although 12-year-old children were generally positive about school, 16% had medium–high scores on the factor relating to distress at school[551]. Boys were generally less positive about school than girls.

Dispositions form the other aspect of affective outcomes: 'personal' dispositions, towards curiosity, perseverance, and the like and 'interactive' dispositions, such as social justice, equity, and respect for the environment. It has been argued that the social sciences provide a unique platform, not fully exploited, for developing these interactive dispositions because these are so closely aligned to the society-oriented goals of the various social science disciplines (see, for example, Lee[552] in relation to early childhood and Harrison[553] in relation to primary and secondary social studies).

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[551] Wylie, C., Thompson, J., Hodgen, E., Ferral, H., Lythe, C., & Fijn, T. (2004). *Competent children at 12*. Wellington: New Zealand Council for Educational Research.

[552] Lee, D. (2004). Early childhood social sciences: Social justice education or social engineering? The first years: Ngā tau tuatahi. *New Zealand Journal of Infant and Toddler Education, 6*(1), pp. 30–34.

[553] Harrison, K. (1998). Social studies in the New Zealand curriculum: Dosing for amnesia or enemy of ethnocentrism? In P. Benson & R. Openshaw (Eds.), *New Horizons for New Zealand Social Studies*. Palmerston North: ERDC Press.

Appendix B: Strategies for accessing prior knowledge

1. Accessing prior knowledge through interviews

Interviews have been widely used to access students' prior knowledge. The most extensive work in this area has been carried out by Brophy and Alleman[554] with K–3 children in the United States. In their studies, they examined children's understandings of 'cultural universals' – the "domains of human experience that have existed in all cultures, past and present"[555] – investigating children's understandings of, and misconceptions about, food, clothing, shelter, communication, transportation, family living, childhood, money, and government. The researchers used a 'funnel interview' technique, characterised by a sequence of questions that are broad to start with (to encourage extended response statements), then probing (to seek clarification and elaboration), and finally (if necessary) specific (to direct attention to aspects of the subject that the student has not already raised). For example, when researching children's prior knowledge and thinking about government, Brophy and Alleman asked the questions in Figure 34[556]:

"Today we're going to talk about government.
What is government?"
[Broad]

"Who is the head of
government?"
(If student says 'president',
ask for name.)
[Probing]

"What are taxes?
Who pays them?
Who gets that money?
What do they do with it?"
[Specific]
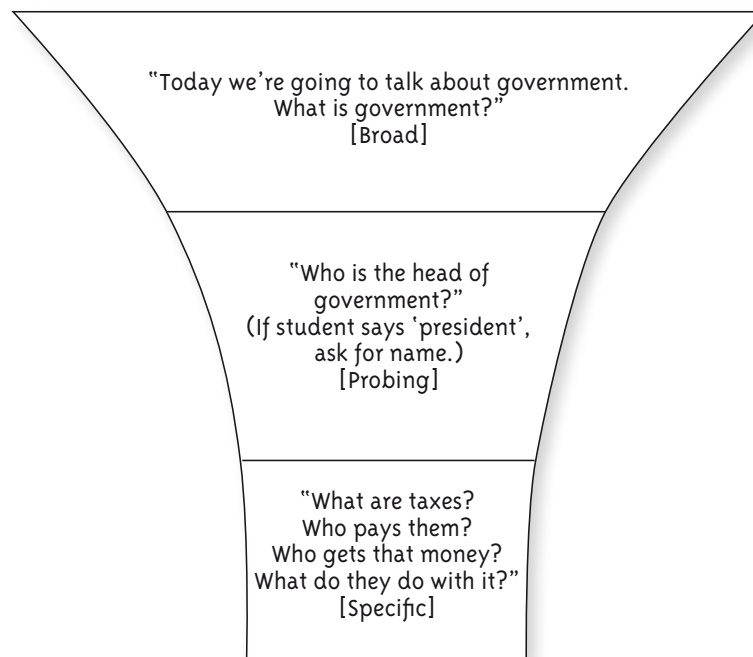
Figure 34: The funnel interview technique

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554 Brophy, J. & Alleman, J. (2000). Primary-grade students' knowledge and thinking about Native American and pioneer homes. *Theory and Research in Social Education, 28*(1), pp. 96–120.

Brophy, J. & Alleman, J. (2001). What primary grade students say about their ideal future homes. *Journal of Social Studies Research, 25*(2), pp. 23–35.

Brophy, J. & Alleman, J. (2005). Primary-grade students' knowledge and thinking about transportation. *Theory and Research in Social Education, 33*(2), pp. 218–243.

555 Brophy, J. & Alleman, J. (2006). *Children's thinking about cultural universals.* Mahwah: Lawrence Erlbaum Associates, p. 5.

556 Brophy, J. & Alleman, J. (2002). *Primary grade students' knowledge and thinking about government as a cultural universal.* Chicago: Spencer Foundation, p. 195.

The funnel interview technique is also characterised by the use of vernacular (rather than precise) terms to describe historical periods. For example, terms such as 'the cave days' and 'the days of the pilgrims' were used instead of numerical dates or 'precise periodisation', to increase the likelihood that students would respond[557].

Interviews have also been used by other researchers to access students' prior knowledge in relation to: historical significance[558]; economic concepts such as scarcity, choice, opportunity cost, and monetary value[559]; and the roles and intentions of peers and teachers[560].

One of the major problems of interviews is that they are time-consuming to conduct. For this reason, researchers – especially in science education – have paid a great deal of attention to how to most efficiently access students' ideas. In an early review of the research, Sutton[561] identified four possible approaches:

- interviewing individual students;
- using word association or word sorting tasks;
- asking students to write definitions or choose a preferred statement from several correct ones;
- asking students to rate ideas in terms of bipolar dimensions.

Acknowledging the difficulties that teachers face in working with large classes, Sutton suggested that the most practical approaches involved asking students to prepare concept maps or topic overviews or to sort words and objects in ways that revealed the students' mental processes and their ability to classify. Osborne and Freyborg[562] encouraged the use of classroom observations – where a teacher colleague would focus on what the students were understanding as they engaged in classroom activities – and the use of multichoice questions based on science-related illustrations and ideas. They warned, however, that while these approaches may save teacher time, there is a risk that they will reveal more about the test constructor's ideas than the children's ideas. They suggested that this risk could be mitigated by first interviewing a small sample of children and then taking account of the insights gained when designing the questionnaire.

557 Brophy & Alleman (2005), op. cit.

558 Yeager, E., Foster, S. J., & Greer, J. (2002). How eighth graders in England and the United States view historical significance. *The Elementary School Journal, 103*(2).

559 Schug, M. C. & Jean Birkey, C. (1985). The development of children's economic reasoning. *Theory and Research in Social Education, 13*(1), pp. 31–42.

560 Porath, M. (2003). Social understanding in the first years of school. *Early Childhood Research Quarterly, 18*, pp. 468–484.

561 Sutton, C. R. (1980). The learners' prior knowledge: A critical review of techniques for probing its organisation. *European Journal of Science Education, 2*(2), pp. 107–120.

562 Osborne, R. & Freyberg, P. (1985). Children's science. In R. Osborne & P. Freyberg (Eds.), *Learning in Science: The Implications of Children's Science* (pp. 5–14). Auckland: Heineman Education.

2. Accessing prior knowledge through conversations with learners

A problem with semi-structured interviews, reported by some researchers, is how to draw out reticent students. Keddie[563], working with 5- and 6-year-old boys, used an affinity group approach, which worked well in terms of encouraging his subjects to speak openly about their ideas. To further encourage the boys, the groups met in 'natural' settings such as the playground or small conference rooms.

A methodology designed specifically to privilege youth voice and facilitate greater civic participation grew out of Tuhiwai Smith et al.'s research[564] into what it meant to be a young person in rural New Zealand at the end of the 20th century. These researchers initially accessed the student voice via focus groups operating with mutually agreed codes of conduct to ensure participant safety. A second phase involved the creation of 'youth tribunals' where students could hear and witness testimonies. These met in schools, community venues, sporting centres, council buildings, parks, and marae (Māori meeting houses). Influenced by the processes used by the Waitangi Tribunal[565], these tribunals created spaces in which young people were able to nominate topics of interest and then speak to them. To capture the counter-stories of young people, the researchers present had to listen more than talk.

Mercer et al.[566] report on a teacher who, working with 9- and 10-year-old students in the UK, encouraged them to explore each other's prior knowledge by consistently asking two questions: 'What do you think?' and 'Why do you think that?' The teacher formalised the strategy by issuing students with a tally card that had the dual purpose of reminding them to ask the questions and giving them a means of recording the number of times they did so. Mortimer[567] describes how the voices of young children with special educational needs and disabilities can be heard through such means as observation and interpretation, talk-through approaches, and play-based assessment (such as art, role-play, stories, and welcome profiles).

Inman and Turner[568] describe an image-based approach in which students were asked to visualise a place 'with cultural harmony' and then describe it to the group as well as write and share definitions. The students responded with visions such as this:

> "It's a hot place, everyone is talking to each other, no-one gets hurt, they come from different countries, races and colours, they are different ages. All are getting along."

563 Keddie, A. (2004). Research with young children: The use of an affinity group approach to explore the social dynamics of peer culture. *British Journal of Sociology of Education, 25*(1), p. 35.

564 Tuhiwai Smith, L., Smith, G. H., Boler, M., Kempton, M., Ormond, A., Chueh, H., & Waetford, R. (2002). "Do you guys hate Aucklanders too?" Youth voicing difference from the rural heartland. *Journal of Rural Studies, 18,* pp. 169–178.

565 A tribunal established by the New Zealand Government in 1975 to hear claims by Māori against the Crown.

566 Mercer, N., Wegerif, R., & Dawes, L. (1999). Children's talk and the development of reasoning in the classroom. *British Educational Research Journal, 25*(1), pp. 95–111.

567 Mortimer, H. (2004). Hearing children's voices in the early years. Support for Learning, 19(4), pp. 169–174.

568 Inman, S. & Turner, N. (2007). Researching cultural harmony through the student voice. *Education, Citizenship and Social Justice, 2*(2), pp. 119–133.

The rationale for this approach drew on the work of Barnard[569]:

> Children know more than they know they know. They surely know more about what they know than the researcher does. Most of what they know, they know implicitly. Knowledge is not filed away in pupils' heads in answer form waiting for the stimulus of the perfect question to release it. No researcher has ever found out what it means to be a new age traveller's child or a foster child or a teenage mother by asking directly, 'What does it mean to be a …?'

3. Accessing prior knowledge through pre- (and post-) tests

Pre- and post-tests have been used to detect misconceptions and then to evaluate the extent to which they have been corrected (see for example, Berti & Benesso[570]). Alton-Lee[571] describes a variation on pre- and post-testing – the Haberlee evaluation technique – that makes use of assessment of prior knowledge to develop students' metacognitive awareness. Using this technique:

1. The students sit a pre-test. The teacher collects these papers in and analyses them for what they reveal about prior knowledge.
2. At the end of the unit students re-sit the test, using a clean copy.
3. Following completion of the post-test, students are reissued their pre-test. Together, students and teacher compare the pre- and post-tests and discuss difficulties and shifts in understanding.

This approach, although not empirically tested, is derived from empirical studies of student learning processes. It is characterised by a shared discourse in which teacher and students consider the learning results for the whole class. Shared inquiry of this kind – into where learning did and did not occur, and what it was that students did to learn – involves a radically atypical use of test data. In this approach, ownership of the data is shared and connections are made between teaching, classroom participation, and learning.

A number of studies reported in this synthesis describe the use of pre-tests and post-tests as part of their methodology. See, for example: Berti and Benesso[572], Berti and Monaci[573], Ernst

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569 Barnard, P. (2001). Using image-based techniques in researching pupil perspectives. Conference paper, ESRC Network Project: Consulting Pupils about Teaching and Learning, 2001. Retrieved September, 2005 from www.consultingpupils.co.uk

570 Berti, A. E. & Benesso, C. (1998). The concept of nation-state in Italian elementary school children: Spontaneous concepts and effects of teaching. *Genetic, Social, and General Psychology Monographs, 120*(2), pp. 121–143.

571 Alton-Lee, A. (1983). Organising for learning: The results of an ecological study. *SET: Research Information for Teachers, 2(*5). See p. 6.

572 Berti & Benesso (1998), op. cit.

573 Berti, A. E. & Monaci, M. (1998). Third graders' acquisition of knowledge of banking: Restructuring or accretion. *British Journal of Educational Psychology, 68,* pp. 357–371.

and Monroe[574], Hodkinson[575], Hollingsworth et al.[576], Laney[577], Laney et al.[578], Nuthall[579], Nuthall and Alton-Lee[580], Twyman et al.[581], and van der Shee[582]. Hollingsworth et al.[583], for instance, used a board game both as a pre-test and a post-test to uncover ideas about power in society.

4. Accessing prior knowledge through questionnaires/surveys

A number of researchers have used questionnaires and surveys as a means of determining students' skills or what they know and think about particular concepts, for example: Davies et al.[584], Kwan[585], Tan Geok-Chin et al.[586], and Taylor et al.[587]. Concepts or skills have related to, for example, environmental knowledge, economic aspects of citizenship, mapping skills, understandings of rights, and rights that are important to young people.

[574] Ernst, J. A. & Monroe, M. (2006). The effects of environment-based education on students' critical thinking skills and disposition toward critical thinking. *Environmental Education Research, 12*(3–4), pp. 429–443.

[575] Hodkinson, A. (2004). Does the English curriculum for history and its schemes of work effectively promote primary-aged children's assimilation of the concepts of historical time? Some observations based on current research. *Educational Research, 46*(2), p. 99.

[576] Hollingsworth, S., Gallego, M., & Standerford, N. S. (1995). Integrative social studies for urban middle schools: A case for multiple literacies. *Theory and Research in Social Education, 13*(3), pp. 204–233.

[577] Laney, J. D. (1993). Experiential versus experience-based learning and instruction. *Journal of Educational Research, 86*(4), pp. 228–236.

[578] Laney, J. D., Frerichs, D. K., Frerichs, L. P., & Pak, L. K. (1995). *The effect of cooperative and mastery learning methods on primary-grade students learning and retention of economic concepts*. Paper presented at the annual meeting of the National Council for the Social Studies, Chicago.

[579] Nuthall, G. (1999). The way students learn: Acquiring knowledge from an integrated science and social studies unit. *The Elementary School Journal, 99*(4), pp. 303–341.

[580] Nuthall, G. & Alton-Lee, A. (1993). Predicting learning from student experience of teaching: A theory of student knowledge construction in classrooms. *American Educational Research Journal, 30*(4), pp. 799–840.

[581] Twyman, T., Ketterlin-Geller, L. R., McCoy, J. D., & Tindal, G. (2003). Effects of concept-based instruction on an English language learner in a rural school: A descriptive case study. *Bilingual Research Journal, 27*(2), pp. 259–274.

[582] van der Shee, J. A. (1999). The effect of student freedom of choice in learning map skills. *International Journal in Geographical and Environmental Education, 8*(3), pp. 256–267.

[583] Hollingsworth, S., Gallego, M., & Standerford, N. S. (1995). Integrative social studies for urban middle schools: A case for multiple literacies. *Theory and Research in Social Education, 13*(3), pp. 204–233.

[584] Davies, P., Howie, H., Mangan, J., & Telhaj, S. (2002). Economic aspects of citizenship education: An investigation of student's understanding. *The Curriculum Journal, 13*(2), pp. 201–223.

[585] Kwan, T. (1999). Pre-teenage children's vernacular perception and experience of maps in Hong Kong. *International Research in Geographical and Environmental Education, 8*(1), pp. 5–25.

[586] Tan Geok-Chin, I., Kim-Eng Lee, C., & Kim Chuan, G. (1998). A survey of environmental knowledge, attitudes and behaviour of students in Singapore. *International Research in Geographical and Environmental Education, 7*(3), pp. 181–202.

[587] Taylor, N., Smith, A. B., & Nairn, K. (2001). Rights important to young people: Secondary student and staff perceptions. *The International Journal of Children's Rights, 9*, pp. 137–156.

5. Accessing prior knowledge through visuals

Barton and Levstik[588] have made extensive use of pictures to access students' understanding of historical significance. By this means they have identified the generally uncritical lens that students bring to interpretation. Other educators and researchers have also used visuals as a means of gaining insight into what students know. The methods they have tried include: sorting of photographs, picture recognition, picture drawing, using open questions to invite responses to visuals, and using cartoon strips as catalysts for student response[589]. Approaches that involve drawing have been found effective for accessing the prior knowledge of students who are unfamiliar with the language of instruction[590].

[588] Barton, K. & Levstik, L. S. (1996). "Back when God was around and everything": Elementary children's understanding of historical time. *American Educational Research Journal, 33*(2), pp. 419–454.

[589] Foster, S. J., Hoge, J. D., & Rosch, R. (1999). Thinking aloud about history: Student interpretations of historical photographs. *Theory and Research in Social Education, 27*, pp. 179–215.

Harnett, P. (1993). Identifying progression in children's understanding: The use of visual materials to assess primary school children's learning in history. *Cambridge Journal of Education, 23*(2), p. 137.

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Lee P., Dickinson A., & Ashby R. (1997). "Just another emperor": Understanding action in the past. *International Journal of Educational Research, 27*(3), pp. 233–244.

Levstik, L. S. (2000). Articulating the silences: Teachers' and adolescents' conceptions of historical significance. In P. N. Stearns, P. Seixas, & S. Wineburg (Eds.), *Knowing teaching and learning history: National and international perspectives* (pp. 284–305). New York: New York University Press.

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Alton-Lee, A., Rietveld, C., Klenner, L., Dalton, N., Diggins, C., & Town, S. (2000). Inclusive practice within the lived cultures of school communities: Research case studies in teaching, learning and inclusion. *International Journal of Educational Inclusion, 4*(3), pp. 179–210.

Appendix C: Learning trajectories

The studies in the following list concern students' knowledge, understandings, skills, participation, or attitudes as they relate to the social sciences. Some provide a snapshot in time of a particular group of students. Others compare students of different ages or in different grades. The studies are not prescriptive; at best, they can only suggest the path that students may follow as they learn and develop.

Table 36: Studies that reveal either the nature or the trajectory of students' knowledge, understanding, skill, participation, or attitudes

Reference	Strategy	Content	Learners	Comment
Ashby, R., Lee, P., & Shemilt, D. (2005). Putting principles into practice: teaching and planning.		Outlines stages in the development of students' ideas about evidence, based on systematic research of classroom experience.		The authors argue that their model does not describe the ways in which the ideas of any individual student should develop; rather, it provides a generalisation applicable to the majority of students. Analogy: pathways across a mountainside – may or may not take a particular path (p. 165).
Barton, K. & Levstik, L. S. (1996). "Back when God was around and everything": Elementary children's understanding of historical time.	Students were asked to place two pictures in chronological sequence, then to locate a further seven photos in relation to the first two. They were asked to justify their positioning.	Historical time	58 children in grades 1–6	"Visual images proved to be particularly good stimuli for conversation, not just with emergent readers but with all of the children we interviewed" (p. 447).
Berti, A. E. (1992). The acquisition of the concept of shop profit by 3rd grade children.		Acquisition of the profit concept	Grade 3	
Brophy, J. & Alleman, J. (2002b). Learning and teaching about cultural universals in primary-grade social studies.	Funnel interviews	Cultural universals: children's understandings of and misconceptions about concepts such as food, clothing, shelter, communication, transportation, family living, childhood, money, and government.	Primary students	Brophy and Alleman's extensive research with primary students has found that "the mostly tacit knowledge that children accumulate about cultural universals through everyday experiences is limited, disconnected, and frequently distorted by naive ideas or outright misconceptions" (p. 99).

Reference	Strategy	Content	Learners	Comment
Brophy, J., VanSledright, B., & Bredin, N. (1992). Fifth graders' ideas about history expressed before and after the subject.	Interviews and KWL	History	80 grade 5 students	Students' knowledge and thinking about history became more sophisticated but misconceptions still persisted. The researchers found differences between what boys and girls wanted to learn about history. Boys: events and the accomplishments of famous individuals; girls: generic history topics and the everyday lives of ordinary people.
Carretero, M., Lopez Majon, A., & Jacott, L. (1997). Explaining historical events.		Explanations for historical events	Compared novice history students aged 15–17 and history graduates (experts)	Found that students attribute greater weight to personalistic causes – the intentions and motivations of people – than to abstract political and economic causes. Experts attribute varying degrees of importance to different causes depending on the event; 15-year-olds often see them as personal.
Cooper, G., Arago-Kemp, V., Wylie, C., & Hodgen, E. (2004). *Te rerenga a te pirere: A longitudinal study of kōhanga reo and kura kaupapa Māori students.*	Interviews with children, parents, kaiako, and tumuaki; assessment tasks with children. Longitudinal study.		111 kōhanga reo and kura kaupapa Māori students (3 cohorts)	Areas of importance in Māori-medium education, including knowledge of tikanga Māori. Interviews with children, parents, kaiako, and tumuaki; assessment tasks with children.
Davies, P., Howie, H., Mangan, J., & Telhaj, S. (2002). Economic aspects of citizenship education: An investigation of students' understanding.		Economic aspects of citizenship		
	Questionnaire	Knowledge of mapping	87 children aged 11–12 in Hong Kong	

Reference	Strategy	Content	Learners	Comment
Foster, S. J., Hoge, J. D., & Rosch, R. (1999). Thinking aloud about history: Student interpretations of historical photographs.	Think aloud with photographs	History	Grade 3	"As students matured they appeared more able to make credible inferences about the lives of people portrayed in historical photographs. Presumably this occurred as their knowledge of United States history increased. However, despite this general pattern, inconsistencies in performance existed within each age level group … we detected some differences in black and white students' interpretations of the photographs."
Furth, H. (1980). *The world of grown-ups: Children's conceptions of society.*	Interviews and KWL	Understandings about society as a system: its institutions, rules, and users; its service and production; its roles and symbols.	195 children aged 5–11	
Grant, C. M., Boucher, J., Riggs, K. J., & Grayson, A. (2005). Moral understanding in children with autism.		Children with autism were compared with control groups on their ability to make moral judgments.		
Harnett, P. (1993). Identifying progression in children's understanding: The use of visual materials to assess primary school children's learning in history.	Interviews and pictures	Historical thinking	24 children aged 5, 7, 9, and 11	Children looked at five sets of postcards, described the pictures, and sequenced them in time order. The researcher reported a progression in historical thinking and the ability to sequence and date (chronological understanding).

Reference	Strategy	Content	Learners	Comment
Harwood, D. & Jackson, P. (1993). 'Why did they build this hill so steep?': Problems of assessing primary children's understanding of physical landscape features in the context of the UK national curriculum.	Three means of assessing students: oral interview, picture recognition, picture drawing. (Each reveals different aspects of student knowledge.)		9- to 11-year-olds	The researchers found a correlation between children's first-hand experience of a landscape feature and their conceptual understanding (p. 76). Many misconceptions revealed. Suggest sequential development of physical landscape concepts starting from real-life, through to more technical.
Hollingsworth, S., Gallego, M., & Standerford, N. S. (1995). Integrative social studies for urban middle schools: A case for multiple literacies.	Used a board game both as pre-test and post-test.	Uncovering ideas about power in society		
Hoodless, P. A. (2002). An investigation into children's developing awareness of time and chronology in story.	Accessing prior knowledge through reading and having conversations about stories. Cautions re risks in questioning to access prior knowledge. Link to Valencia and to Sutton.	Perceptions of time and chronology in storybooks	35 Manchester children aged 3–9 from one urban and one suburban school	Revealed evidence about what children at particular ages know and can do as regards 'time' and 'chronology'. Methodology: reading stories together in small groups, conversations about them, open and then supplementary questions. Implications for pedagogy.
Haught, P. A., Walls, R. T., Laney, J. D., Leavell, A., & Stuzen, S. (1999). Child and adolescent knowledge and attitudes about older adults across time and states.	True/false quiz following facts on ageing	Knowledge about and attitudes towards ageing		Showed that amount of contact with older people did not correlate with accuracy on the true/false quiz, or with bias.
Keddie, A. (2004). Research with young children: The use of an affinity group approach to explore the social dynamics of peer culture.	Affinity group approach: These groups met in 'natural' settings, for example, areas of the playground and small conference rooms to encourage students to talk openly.	Social dynamics of peer culture	Boys aged 5–6	

Reference	Strategy	Content	Learners	Comment
Kontogiannopoulou-Polydorides, G., Fragoulis, G., Zanni, A., & Ntelikou, M. (2003). Cultural appropriation of concepts of democracy.		How 14-year-olds in Italy, Germany, Hungary, and Greece conceptualise democracy	14-year-old students in Italy, Germany, Hungary, and Greece	
Lappalainen, S. (2004). They say it's a cultural matter: Gender and ethnicity at preschool.	Ethnographic study	Ways in which nationality, ethnicity, and gender are discussed and negotiated	6-year-old girls in two classes in Finland	
Lee, P. & Ashby, R. (2000). Progression in historical understanding among students ages 7–14.	Providing pairs of stories about the same historical period but drawing different conclusions, and then asking, does this mean: … no one knows what happened? … it is just a matter of opinion? … there is no single answer? … one of the stories must be wrong?	Thinking about historical evidence	7- to 14-year-olds	Teachers compare student reponses with the levels outlined by the researchers: *The past is given.* *The past is inaccessible.* ('We can't know because we weren't there.') *The past as interpreting stories* (Differences in accounts are the result of mistakes and gaps in information.) *The past as reported in a more or less biased way* *The past as selected and organised from a viewpoint* (Differences in accounts are the result of selection.) *The past as reconstructed in answer to questions in accordance with criteria* (It is the nature of accounts to differ, depending on the author's position and choice.)
Lee P., Dickinson A., & Ashby R. (1997). "Just another emperor": Understanding action in the past.	Range of methods: open questions based on text and pictures, selection of statements	Ideas about explanations of action in history	320 students aged 7–14	

Reference	Strategy	Content	Learners	Comment
Levstik, L. S. & Barton, K. (1994). *They still use some of their past: Historical salience in elementary children's chronological thinking.*	Arrange historical pictures in sequence		58 students in grades 1–6	The researchers found that while pictures are useful for stimulating talk, children are largely unquestioning of their veracity. They concluded that "the role of instruction might be to present a variety of images for discussion and interpretation and to encourage the creation of images of both historic and current events so that children come to see pictures as intentioned creations" (p. 43).
Levstik, L. S. (2000). Articulating the silences: Teachers' and adolescents' conceptions of historical significance.	Students and teachers were provided with captioned historical pictures and asked to select the events that were important enough to include on a timeline of the past 500 years.	Compared grade 5–8 students' views of historical significance with the views of 20 preservice and 12 inservice teachers.	Grades 5–8 plus 20 preservice and 12 inservice teachers	Levstik noted that "the first person plural came naturally to these students, teachers and teacher candidates as they talked about an American past. 'We' fought the revolution. 'We' discovered a cure for polio … historical events took on significance when they formed 'us', 'changed us', or 'made us a nation'. This tendency towards a single shared story is problematic from the point of view of relegating the activities of other cultural groups to 'sidebars to the main events', but it is also problematic from the point of view of the students' experience. Assumptions about 'we' and 'other' in student comments to each other may cause some students to drop out of conversations.

Reference	Strategy	Content	Learners	Comment
Matthews, H. (2003). 'Children and regeneration – Setting an agenda for community integration and participation'.		Young people's public participation in local decision making		The researchers propose a typology of community action that recognises the different ways in which children may be drawn into the process of neighbourhood renewal and offers a set of recommendations that, if taken up, provide an agenda that will strengthen the active social commitment of young people in general.
Moore, P. (1995). Information problem solving: A wider view of library skills.		Students' information problem solving: cognitive and metacognitive domains		
Porath, M. (2003). Social understanding in the first years of school.	Picture stories (mini cartoon strips) used to elicit understandings, then semi-structured interviews	Understanding of the roles and intentions of peers and teachers	42 4- to 5-year-olds	Understanding of others' intentions was a significant predictor of the ability to analyse classroom experiences.
Pramling, I. (1991). Learning about "The Shop": An approach to learning in pre-school.	Investigation	Ways in which 5- and 6-year-olds think about the functions of money in shops, principles of trade, and the role of advertising	70 5- to 6-year-olds	

Reference	Strategy	Content	Learners	Comment
Renold, E. (2001). Learning the 'hard' way: Boys, hegemonic masculinity and the negotiation of learner identities in the primary school.	A year-long ethnographic study. Ongoing participant observation and unstructured, exploratory group interviews (in friendship groups).	Construction of children's gender and sexual identities at the end of primary school	56 year 6 students in two semi-rural primary schools in England	The researcher found that two-thirds of the boys "went to great lengths to avoid studious behaviours, particularly boys who were deemed high achievers … some boys deployed humorous techniques (including the teasing and ridiculing of others) and some boys engaged in disruptive, 'rule-breaking' behaviours. Others played down their achievements. Each strategy was a means of concealing conformist attitudes to schooling and to avoid being positioned as studious" (p. 373).
Schug, M. C. & Jean Birkey, C. (1985). The development of children's economic reasoning.	Structured interviews comprising questions and hypothetical problems relating to economic concepts	Economic concepts such as scarcity, choice, opportunity cost, and monetary value		Mechanism 1 – such as scarcity, choice, opportunity cost and monetary value
Smythe, K. (1992). The social concepts of children.	Interviews	Concept of 'conflict'	142 students in years 7–10	The researcher found a generally negative connotation for the concept of 'conflict'. This connotation was shaped, in his view, by the narrow and prevalent adult definition of conflict as 'physical violence' and missed the 'sense of excitement' that a broader view of the concept could engender if depicted as also related to power, injustice, a 'better way', basic needs, freedom and the like.

Reference	Strategy	Content	Learners	Comment
Tan Geok-Chin, I., Kim-Eng Lee, C., & Kim Chuan, G. (1998). A survey of environmental knowledge, attitudes and behaviour of students in Singapore.	Questionnaire	Extent of students' environmental knowledge and the sources of that knowledge	1256 grade 9 and grade 11 students in Singapore	
Taylor, N., Smith, A. B., & Nairn, K. (2001). Rights important to young people: Secondary student and staff perceptions.	Survey	Understanding of rights and of the rights that are important to young people	821 secondary students	
VanSledright, B. (2002). *In search of America's past: Learning to read history in elementary school,* pp. 112–164.		Students' analysis of historical sources		Historical analysis: a continuum of strategic levels – from comprehension (level 1) to testing and refining of interpretations (level 4).
von Karolyi, C. (2006). Grappling with complex global issues – Issue awareness in young, highly gifted children: Do the claims hold up?	Self-report and responses to drawings	Gifted students' awareness of issues	Highly gifted 7- to 9-year-olds were compared with their peers	The researcher found that "as a group highly gifted children were unambiguously shown as having superior understanding of issues; both the issues that they and their parents identified as being of importance to them, and the environmental and human rights issues depicted in drawings". While self-report from the students did not reveal significant differences, the highly gifted students' responses to issue-laden drawings revealed considerably more issue awareness.
Waniganayake, M. & Donegan, B. (1999). Political socialisation during early childhood.		Pre-school children's political understandings		

Reference	Strategy	Content	Learners	Comment
Whitebread, D., Coltman, P., Anderson, H., Mehta, S., & Pino Pasternak, D. (2005). *Metacognition in young children: Evidence from a naturalistic study of 3–5 year olds.*	Two-year study	The development of self-regulatory and metacognitive abilities	Children aged 3–5 in naturalistic educational settings in the UK	
Wiegand, P. & Stiell, B. (1997). Children's relief maps of model landscapes.	Children were asked to map four landscape models of differing complexity that had been constructed from smooth damp sand.	Relief mapping	111 5- to 11-year-olds	The researchers developed an age-related progression in relief mapping.
Yeager, E., Foster, S. J., & Greer, J. (2002). How eighth graders in England and the United States view historical significance.	Interview	Views of historical significance	Grade 8 students in England and the United States	This research sheds light on issues of national/ cultural bias and personal relevance and lessons to be learned from history as lenses through which to view historical significance (p. 199).

Appendix D: Cases

Case	Title	Author	Source
1	Facilitative inclusion for Ian and his peers	Rietveld	Rietveld, C. (2002). *The transition from preschool to school for children with Down syndrome: A challenge to regular education?* Unpublished doctoral thesis, University of Canterbury, Christchurch.
2	Making links between cultures: ancient Roman and contemporary Sāmoan	McNeight	McNeight, C. (1998). *"Wow! These sorts of things are similar to our culture!": Becoming culturally inclusive within the senior secondary school curriculum.* Unpublished graduate research report, Department of Teacher Education, Victoria University of Wellington.
3	To speak or not to speak: creating spaces for quiet students in classroom talk	Nairn	Nairn, K. (1997). Hearing from quiet students: The politics of silence and voice in geography classrooms. In J. P. Jones, H. Nast, & S. Roberts (Eds.), *Thresholds in feminist geography* (pp. 93–115). Lanham: Rowman & Littlefield Publishers.
4	Teaching complex historical content to middle school students with learning disabilities	Gersten et al.	Gersten, R., Baker, S., Smith-Johnson, J., Dimino, J., & Peterson, A. (2006). Eyes on the prize: Teaching complex historical content to middle school students with learning disabilities. *Exceptional Children, 72*(3), pp. 264–280.
5	Partnering and participation	Vine	Vine, E. W. (2003). "My partner": A five-year-old Samoan boy learns how to participate in class through interactions with his English-speaking peers. *Linguistics and Education, 14*(1), pp. 99–121.
6	Participating in a community to learn about community	Sewell	Sewell, A. (2006b). *Teachers and children learning together: Developing a community of learners in a primary classroom.* Unpublished doctoral thesis, Massey University, Palmerson North.
7	Tō tātou Tiriti – Karawhiua! Our Treaty – Go for it!	Millar et al.	Millar, R., Fitzgerald, K., & Brown, J. (2005). *Goblins, witches and the Treaty! Supporting a teacher to use drama to teach about the Treaty of Waitangi.* Paper presented at the New Zealand Association for Research in Education conference, Dunedin.
8	The master storyteller and the master arranger	Grant	Grant, S. G. (2001). It's just the facts, or is it? The relationship between teachers' practices and students' understandings of history. *Theory and Research in Social Education, 29*(1), pp. 65–108.
9	Cultural continuity	Kanu	Kanu, Y. (2006). Getting them through the college pipeline: Critical elements of instruction influencing school success among Native Canadian high school students. *Journal of Advanced Academics, 18*(1), pp. 116–145.

Facilitative inclusion for Ian and his peers

Source

Rietveld, C. M. (2002). *The transition from preschool to school for children with Down Syndrome: A challenge to regular education?* Unpublished doctoral thesis, Education Department, University of Canterbury, Christchurch.

Rietveld, C. (2003). *Parents, preschools/schools and professional: Impact of relationships on children's inclusion.* Paper presented at the Child and Family Policy Conference, Dunedin.

Rietveld, C. (2004, 23 November). *Contextual factors affecting inclusion during children's transitions from preschool to school.* Paper presented at the CHILDforum 8th annual New Zealand Early Childhood Research Symposium, Wellington.

Introduction

This case highlights how pedagogical approaches impact on outcomes for learners with and without impairments, particularly on participatory outcomes but also on cultural identity, skills, and affective outcomes. It contrasts the lack of inclusion experienced by Ian (who has Down syndrome) when at kindergarten with his "inclusion as an equal same-status participant engaging in a full range of roles" when at school (p. 8). It also highlights how the pursuit of participatory outcomes for Ian promoted positive outcomes for his non-impaired peers in terms of their ability to engage with others and solve problems.

Learner/s and learning context

The focus child in this case was Ian, a five-year-old boy with Down syndrome, who was observed as he made the transition from kindergarten to school.

Pedagogy

In the transition from kindergarten to school, Ian experienced markedly different pedagogical approaches:

- At kindergarten, he experienced 'illusory inclusion': he was treated as an object, and as an object of charity.
- At school, he experienced 'facilitative inclusion': he was able to participate in reciprocal equal-status, relationships and engage in the full range of roles on offer.

Outcomes

At kindergarten, Ian experienced illusory inclusion, which restricted his ability to participate with his peers and to engage in meaningful learning interactions. In contrast, at school he experienced genuine inclusion and became a valued participant of the class and the school community. The following two examples highlight the outcomes of these two distinctly different pedagogical approaches:

Example 1: Illusory inclusion at kindergarten

Ian and William are looking at the same book. Ian labels all the zoo animals correctly. William ignores Ian's vocalisations and makes up a story about the animals. William incorrectly labels the camel a kangaroo. Ian points out and says, "Monkey." Another child looks on. William says to the child, "I'm not reading you a story. I'm reading Ian a story." William's mother arrives. William hands the book to Ian and says to his mother, "I'm reading Ian a story." His mother asks, "Are you?" William and his mother depart. [Observer comment: No farewell greeting to Ian.]

After a similar incident on another day, the teacher rewards the typically developing child for reading to Ian: "That was very kind of you."

Example 2: Inclusion at school

Block corner [developmental] time. Each of the four children present including Ian, has made their own house. Ian puts a car in Alex's house.

Alex to Ian: "No. Not in my house – in your [emphasised] house." Ian takes the car out, puts it in his own house, and says to Alex, "In there. See."

Alex to Ian: "Yes. You need to make a roof … like this … like this, Ian." He shows Ian. Ian adds blocks in the same way Alex is showing him.

Alex to Ian: "See the roof, Ian." Ian repeats, "Roof."

Alex to Ian: "The house is all complete. It's a good house."

Ian to Alex: "Thank you." Ian adds some blocks to the house …

Alex to Ian: "We need to make a new road now." Ian repeats, "Road."

Outcomes	In example 1, William did not learn to relate to Ian; he ignored Ian's vocalisations (even when appropriate), which sent Ian a message that his contributions weren't valid.

In example 2, Ian was exposed to concepts such as 'roof' and 'road' and shown how to construct these, and he learned about property ('mine' and 'yours'). Alex learned how to give Ian information to solve a problem.

Facilitative inclusion was associated with the following outcomes:

• meaningful gains in terms of culturally valued skills, for example, literacy and enhanced social skills;
• classmates responding respectfully to diversity;
• participation in a richer social context that facilitated of ongoing development; for example, after-school visits to friends, being selected by peers for specific activities – Ian became part of the peer culture.

The outcomes were positive, not only for Ian, but, also for the whole group of learners. |

How the learning occurred		Crucial to achieving outcomes inclusive of all children was a *social construction model* of disability rather than a *deficit, personal tragedy, or medical model*. The theories of disability underpinning the pedagogical approaches used by Ian's teachers and teacher aide directly impacted on his experience of school and his learning. Their approach recognised that social and cognitive learning are intertwined and that relationships are central to the scaffolding of learning.
	Community

Build and sustain a learning community | The teacher and teacher aide avoided framing Ian as problematic. Instead, they showed his peers how to solve problems and give feedback in ways that encouraged the development of inclusive, productive relationships.

The teacher recognised the inappropriateness of excessive hugging and picking up. She interpreted some of Ian's unconventional behaviours positively, in ways that valued him. There was an emphasis on building respectful relationships. |
| | **Alignment**

Align experiences to important outcomes | The teacher recognised that experiences supporting Ian's inclusion in a peer group were important and had to take precedence over other considerations. This can be seen in her decision not to intervene when Ian and his peers were having fun together stamping their feet when they were meant to be eating their lunch. |
| | **Connection**

Make connections to students' lives | The teacher helped the students develop language strategies that would include Ian. (For example, "If there's a problem, tell Ian what it is. Tell Ian if there's too many cars, it'll break. Tell him where he can put the cars and blocks.") |
| | **Interest**

Design experiences that interest students | Ian's competencies and interests were highlighted in a class culture that was inclusive of diverse children's interests. |

Cases

Contrasting views about disability — their impacts on learner outcomes

Personal tragedy

Views disability as a problem or deficit located within the individual and in need of 'fixing'.

Responses
- Well-intentioned pity or charity
- Compensation rather than education
- Denial of dignity and respect

Pedagogical approach experienced at kindergarten
Teachers:
- constructed Ian as an object of charity;
- allowed Ian's peers to take on the dominant role and interpreted their interactions with him as acts of charity;
- praised Ian's peers for interacting with him ("That was very kind of you") in ways that implied unequal status;
- positioned Ian as 'other' (rather than 'us'/'we') in their comments;
- made allowances for Ian's antisocial acts and did not address the pedagogical message that this sent to other children — with the result that they came to avoid him;
- did not expect reciprocity.

Ian experienced exclusion or illusory inclusion.

Social constructivist

Views disability not so much as the result of a person's impairment, but as a product of social factors in the contexts in which s/he participates that create barriers and limit opportunities for equal participation.

Response
Manage the context and environment to provide appropriate educational experiences for all students, including those with identified impairments.

Pedagogical approach experienced at school
Teacher and teacher aides:
- did not allow Ian's peers to frame him as problematic;
- assisted Ian's peers to problem solve and give him feedback in ways that taught him how to participate and interact appropriately;
- recognised and interrupted illusory inclusion (such as excessive hugging or picking up);
- helped Ian's peers develop strategies to include him ("If there's a problem, tell Ian what it is. Tell Ian if there's too many cars, it'll break. Tell him where he can put the cars and blocks");
- highlighted Ian's competencies and interests and created a class culture that was inclusive of all students;
- interpreted unconventional behaviours in a positive, valuing manner;
- facilitated Ian's inclusion by the peer group (by recognising when interactions between him and his peers were more important than by managing behaviour [when, for example, instead of eating lunch, they were all having fun stamping their feet]).

Ian and his peers experienced inclusion. Cognitive and social learning were intertwined.

Mechanism 1: Connection

Mechanism 2: Alignment

Mechanism 3: Community

Mechanism 4: Interest

The interplay of biological and contextual factors

Neither of the above two contrasting models can entirely explain every aspect of classroom interaction. Disability is not wholly a social construct: many situations involve an interplay of biological and contextual factors. In this particular case, there were also wider contextual factors contributing to the positive outcome for Ian. These include the classroom culture and the warm relationships that the teacher enjoyed with her students. Social norms — such as looking out for one another and making sure that everyone is included at break times — were specified, enforced, and reinforced. The children's learning, and the teacher's support, was further enhanced by the employment of a teacher's aide (a trained teacher) to support the learning in the classroom. The teacher made her commitment to a philosophy of inclusion very clear in her communications with parents and others in the school's early intervention programme.

How the learning occurred

Implications for pedagogy

These findings highlight the significant impact that contextual factors have on outcomes for learners with impairments. Such factors include teaching/learning practices, beliefs, support, and the nature of the school and the wider system of which it is part. It is important that teachers recognise the interplay of biological and contextual factors and that interactions and relationships create a pattern of facilitative inclusion for all learners, rather than a pattern of exclusion, which may be active (such as teasing) or passive (such as ignoring). Educators should be able to distinguish between facilitative/authentic inclusion, in which learners participate with equal status and engage in the full range of roles that are typical in the context, and ineffective/illusory inclusion, in which, for example, some are assigned inferior roles.

Implications for pedagogy

The **personal tragedy model** can lead to responses from students that are not well intentioned, or to well-intentioned responses in which one student adopts a superior but benign position in relation to the other. The latter kind of interaction, no matter how well intentioned, always involves a subtle denial of dignity and respect. Unequal peer interaction cannot lead to the desirable outcomes offered by mutually supportive, reciprocal interaction — for example, friendship. Reciprocal participation requires equality, not charity.

Bronfenbrenner's ecological model

Vygotsky's theory of learning

Social model of disability
This model regards how impairments are classified, treated, and interpreted as socially constructed but does not ignore the existence of impairments and/or the usefulness of medical and therapeutic treatments.

Pedagogy
- Focus on the student's functioning within his/her immediate context
- Attention to the interplay of biological and contextual factors
- Consideration of the broader social, political, and structural factors impacting on that functioning
- **Learning as the quality of the student's interaction and relationships with more expert learners.**

Becoming a valued, included member of the classroom and its subgroups	Being treated as an equal, valued, and contributing member of the centre, class, and school	Facilitative processes	Participation in the full range of culturally valued roles in that setting

Intended outcomes

The culturally valued learning that is necessary for living in an inclusive society	Facilitative/authentic inclusion rather than exclusion or ineffective/ illusory inclusion	Successful transition and development supported	Participation in the full range of culturally valued roles available in the setting

The above diagram is an interpretation of Rietveld C. (2004, 23 November), pp. 4–5.

The evidence presented in this case can be used to inform teachers' inquiries into their own practice.

Inquiry

Teaching inquiry

Teaching design

Student outcomes

Focusing inquiry

Teaching action

Learning inquiry

Focusing inquiry
What is most important and therefore worth spending time on?

Teaching inquiry
What might work best? What could I try?

Learning inquiry
What happened? Why did it happen?

Suggested questions:
- Why is inclusion as a valued participant in the peer culture of the classroom essential for optimal learning? Have you given attention to how learners with impairments participate in the peer culture?
- Do your pedagogical practices reflect a 'personal tragedy' or 'social constructivist' model of impairment? Where are the fundamental differences between these two models?
- How could you facilitate the inclusion of a child with an intellectual impairment in your classroom?

Cases

2

Making links between cultures: ancient Roman and contemporary Sāmoan

Source	McNeight, C. (1998). *"Wow! These sorts of things are similar to our culture!" Becoming culturally inclusive within the senior secondary school curriculum.* Unpublished graduate research report, Department of Teacher Education, Victoria University of Wellington.
Targeted learning outcome/s	This classroom programme was designed to address, for a group of Sāmoan girls, their sense of being culturally excluded by curriculum content and classroom processes, and to increase their engagement with learning. The particular curriculum focus was **conceptual understandings** about the religious practices of ancient Rome and the impact of Christianity on those practices.
Learner/s and learning context	Four 17- to 18-year-old Sāmoan girls from low socio-economic status families had a history of limited engagement with school and limited academic achievement. While generally attentive, they were "cautious and tentative" when responding to questions in class. They had close and strong connections to their Sāmoan community and deep commitment to their religious and cultural values. The intervention described in this case was introduced during a unit on Roman Religion and *The Aeneid*, part of the classical studies programme.
Pedagogy	The teacher used two key strategies. First, she demonstrated how the students could engage in purposeful discussions about classroom learning with a significant other (for example, a mother, sister, or friend) from their own culture. The discussion was to be purposeful by involving an active search for similarities and differences between classical Roman and contemporary Sāmoan culture. No attempt was made to identify these similarities and differences at school; this was left for the home discussions, where the students could draw on cultural knowledge as well as school learning. These discussions highlighted, for example, similarities in the nature and purpose of artefacts, gender roles, religious rituals and beliefs, relationships, social occasions, communications, and history.
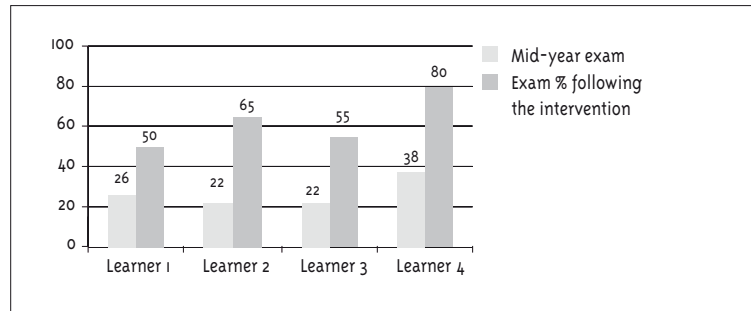
Second, the teacher set up one-on-one discussions and small, teacher-directed focus groups where the similarities and differences that had been identified at home could be recalled at school and their meaning reflected on and elaborated.
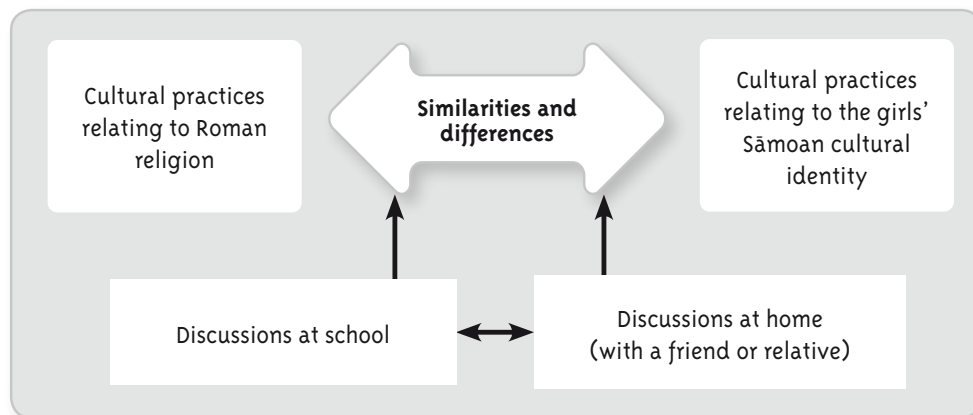
Outcomes	Comments from the girls showed that the intervention heightened their sense of inclusion and that they found it empowering to discover how their own experiences connected with the content of their learning.

A comparison of pre- and post-test evidence revealed that the girls' conceptual understanding was significantly greater than before. In the mid-year exam before the intervention, the four girls achieved marks of 22, 22, 26, and 38 percent. Both exam and intervention were assessed by the same teacher, required similar writing skills, and involved comparable content (in terms of conceptual understandings). The girls' marks in the exam that followed the intervention were more than double what they were at mid-year. |

Mid-year exam / Exam % following the intervention

	Mid-year exam	Exam % following the intervention
Learner 1	26	50
Learner 2	22	65
Learner 3	22	55
Learner 4	38	80

How the learning occurred

Connection

Make connections to students' lives

The teacher made the girls' own lives and cultural experiences a point of reference for their learning about an unfamiliar historical and cultural context. By embedding the girls' cultural knowledge in their learning, this approach provided cultural continuity. The information that the girls gained from their discussions at home and brought back to school was new to the teacher.

By identifying similarities and differences, the students were able to draw parallels between the distal context and their own experience. This metacognitive strategy has been found to be a powerful learning tool (Mazarno et al., 2001), and it explains, in part, the shifts in outcomes for these learners.

Interest

Design experiences that interest students

The home discussions were set up in such a way that the girls could attend to the aspects of ancient Roman and contemporary Sāmoan culture that most interested them. This meant that there was far more discussion about religious beliefs and rituals than about any of the other aspects: artefacts, gender roles, relationships, social occasions, communications, and history.

The students were directly involved in a range of discussion activities, both in and out of school. The varied activities and contexts helped them recall the content that was embedded in the discussions.

Alignment

Align experiences to important outcomes

By discussing her learning and the links between ancient Roman and contemporary Sāmoan cultures with her mother, not only did Mi'i become much more involved with course content, but also she and her mother were empowered by the experience. Mary and Charlotte, who described their home discussions as "rehearsals" for their discussions at school, also reported that those home discussions had helped them clarify their ideas. The combination of home and school discussions provided a variety of learning opportunities, all explicitly aligned to the teaching purpose.

Community

Build and sustain a learning community

It was identified as significant that links were made in one-on-one discussions with the teacher or in focus groups involving all four girls. These discussions were opportunities for the girls "to explore, to refine and develop or reject ideas in a natural conversational environment away from an evaluative classroom climate" (Mazarno et al., 2001). That the students also asked the teacher about her cultural background in relation to the ideas being explored demonstrates the shared nature of the knowledge building.

The teacher–student relationship was conducive to learning: the teacher modelled a connection to her own cultural experience, and she established small groups that offered a safe context for discussions. The importance of such strategies is reinforced by the Sāmoan learner in Silipa's study who said:

Man! Sometimes the teacher shares with us her own story about her family and where they spent Christmas or the weekend and stuff like that. It kinda makes you feel confident to share your own story and stuff. Cus, it's like saying your story aloud before writing it down. Doing this in a group is choice, better than saying it in front of the whole class. The teacher is just choice (Ata, year 11).

Cases

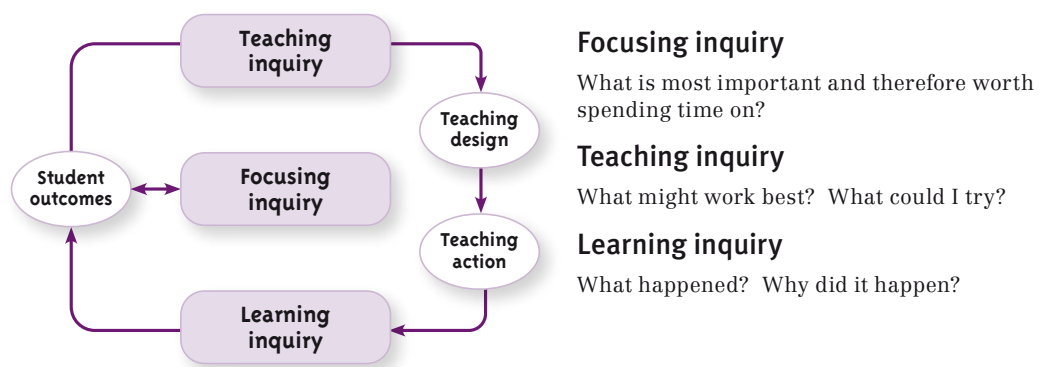|	
Implications for pedagogy	This evidence demonstrates that making connections to students' lives can have a significant impact on their learning, even when the topics or contexts are distant in time and/or place. Metacognitive strategies, such as the similarities–differences strategy used here, can be effective. The gains may not be only in conceptual understanding, but also in learners' sense of inclusion. While connections can be reinforced at school, they can also be strengthened through involvement and dialogue with the learner's family and community.
Supporting evidence	For evidence relating to the impact of the similarities–differences strategy, see Marzano, R., Pickering, D., & Pollock, J. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievment.* Virginia: Association for Supervision and Curriculum Development. Silipa, S. R. (2004). *Nurturing coolness and dignity in Sāmoan students' secondary school learning in Aotearoa/New Zealand.* Unpublished doctoral thesis, University of Canterbury, Christchurch
Inquiry	The evidence presented in this case can be used to inform teachers' inquiries into their own practice.

Focusing inquiry

What is most important and therefore worth spending time on?

Teaching inquiry

What might work best? What could I try?

Learning inquiry

What happened? Why did it happen?

Suggested questions:

- How could you avoid promoting binary ('them and us' or 'us and other') thinking when using a similarities–differences metacognitive strategy? How could you ensure that the goals advanced by this approach are aligned to, not contrary to, curriculum goals?
- For which students or groups of students have you provided the greatest (and least) opportunity to connect learning to their cultural backgrounds and experience?
- How might you structure an activity so that students from diverse cultural backgrounds have opportunities to connect new learning to their own prior experience?
- To what extent has your teaching approach promoted opportunities for students to learn through dialogue with their peers, families, and others?
- Has your teaching emphasised the skills required for quality dialogue? What impact has your modelling / questioning / use of statements had on learning?

To speak or not to speak: creating spaces for quiet students in classroom talk

Source	Nairn, K. (1997). Hearing from quiet students: The politics of silence and voice in geography classrooms. In J. P. Jones, H. Nast & S. Roberts (Eds.), *Thresholds in feminist geography* (pp. 93–115). Lanham: Rowman & Littlefield Publishers. Nairn, K. (1995). Quiet students in geography classrooms: Some strategies for inclusion. *New Zealand Journal of Geography*, October, pp. 24–31. Nairn, K. (1994). *Quiet students in geography classrooms*. Unpublished Master of Arts thesis, University of Canterbury, Christchurch.
Introduction	The word 'space' is used in the title of this case to refer to the 'public verbal space' in which classroom talk takes place. Whether students speak or do not speak in the classroom is important, given the relationship between talking and learning. Nairn investigated why some students remain silent in the forum of class discussion and why girls are overrepresented in the silent group of students in coeducational classrooms. She also designed an intervention with the aim of increasing the verbal participation of quiet girls and examined its impact. The 'women-focused curriculum' intervention involved content that was carefully selected for its interest and relevance to girls and teaching strategies that were designed to encourage public participation by minimising the risks involved.
Targeted learning outcome/s	The objectives for the geography lesson featured in this case centred on understanding how people's perspectives are shaped by their culture and lifestyle and how "each society perceives and interprets its own and other environments through the perspective of its own culture". Further to these objectives, the researcher and teacher also aimed to increase the public participation of girls in geography classes. Nairn emphasises that participating in the public verbal space (talking) is critical for learning in geography and other subjects. She also points out a longer term reason for developing students' verbal skills: their ability to compete in the labour and training markets. Nairn proposes that active participation in classroom discussion is important for five reasons: 1. Talking is central to the learning process because, through talking, we "remake knowledge for ourselves" (Barnes 1976). 2. Students who talk aloud in class influence what gets taught (Alton-Lee, Nuthall, & Patrick, 1993). 3. There is a relationship between talking in class and the acquisition of new knowledge: students generate "knowledge constructs as they engage in the process of making meaning out of curriculum content" (ibid.). 4. Teachers can check students' understanding and correct any misunderstandings when students are talking aloud. 5. Class discussions are opportunities for female students to practise talking in public – an important skill in terms of future participation in society (p. 97).
Learner/s and learning context	### Finding out who takes up the public verbal space in 5L, 5N, 7H, and 7L Nairn investigated public teacher–student interactions in two year 11 and two year 13 geography classes from two schools – one in a small rural town and the other in a city. The year 11 students were working on a population studies topic and the year 13 students on a cultural process topic: migration. She found that "There were inequalities in the average public participation patterns of female and male students and also inequalities within gender groups" (1994, p. 65). Observations of the four classes over two months revealed that: - 39% of all student–teacher interactions were with female students (and 61% with males); - between 30 and 58% of female students and between 14 and 44% of male students in each class were silent; - the girls who took up the most public verbal space relative to other girls took up much less than the most talkative boys. ### An attempt to shift the public verbal space patterns in 5L Nairn describes the impact of a women-focused curriculum intervention on the students in 5L, a class of 30 students. Over the observation period, the absence rate for the girls in this class was 7% and for the boys, 3%. Nairn described 9 of the 11 girls and 7 of the 19 boys as quiet. She interviewed 10 of these quiet students, 7 girls and 3 boys.

Cases

Pedagogy

Content of the women-focused curriculum

The women-focused curriculum involved a lesson centred around a video featuring a Bangladeshi woman, Daslima, who was trying to decide whether to marry.

Strategies of the women-focused curriculum

1. Comparing

   The students were given the task of comparing their 'typical' timetable with Daslima's 'typical' timetable. In this way, they were able to explore their prior knowledge before being introduced to the new content.

2. Turn taking

   So that they could all participate publicly, the students took turns to share what they thought were the main messages/ideas in the video. The following protocols were followed:

   • Preparation time was provided – time for students to think and discuss with their neighbours before speaking publicly.

   • It was agreed that there would be no interruption or response from other students when points of view were presented.

   • Anyone could decline their turn – it was acceptable to choose not to talk.

Outcomes

Prior to the women-focused curriculum

Females in 5L had 36% of the public student–teacher interactions in their lessons (observed over two months).

"Four male students took up the most public verbal space, ahead of the female student with the highest rate of public participation" (p. 66).

Amy was silent during three lessons and asked for the teacher's help in only one lesson.

Amy reported fear of being laughed at if she were to contribute publicly: "People are just sort of scared … just the fact that if you are wrong you know you are going to get laughed at" (p. 94). She also said she was reluctant to 'put the teacher out' by asking for help (p. 105).

During the women-focused curriculum

Females in 5L had 41% of the public student–teacher interactions.

Five out of 11 girls reported that they had participated 'more' or 'much more', while 17 out of the 18 boys reported that they had participated 'the same', 'a little less', or 'much less'.

Altering the content on just one occasion inspired some girls to talk more. Their interest and responses increased when examples and issues involving women were introduced.

"When they got women-focused content that was interesting and relevant to talk and think about, female students talked more, watched more, and wanted more" (p. 113).

Amy participated (along with all of the other students) in the turn-taking exercise.

Nichola reported that her participation had been 'about the same' but noted that her contribution was of greater length and quality than usual. She said that she "gave more of an answer … it was probably a longer response which makes it more of an impulse …" (p. 124).

Students' ratings of the importance of the content

	No	Little	Some	Very	Extremely
Female	0	0	4	4	3
Male	2	5	7	4	0

How the learning occurred

Women-focused content – examples and issues involving women → Strategies to engage with that content in ways that facilitate public participation of all learners → Increased verbal participation of quiet students

How the learning occurred	**Connection** *Make connections to students' lives*	The success of the intervention is explained, in part, by the interest that the female students found in the content and by its relevance to their lives and experiences. Seven of 11 of the girls rated the content as 'very' or 'extremely' important; the other four rated it as of 'some importance'. By comparing their own typical timetables with Daslima's, the students made connections to their own lives. Nairn warns, however, that there is a risk in strategies that make students' own experiences yardsticks against which to measure the experiences of others: they may reinforce 'third-world difference', with unintended, negative outcomes.
	Alignment *Align experiences to important outcomes*	The activities and resources were deliberately aligned to the purpose of engaging all students with the learning. By using the video featuring Daslima – a girl of similar age but different race and class, the intervention ensured that the students' interests, particularly those of the quiet girls, were attended to. The turn-taking strategy promoted the engagement of all students, not just those who typically occupied the public verbal space.
	Community *Build and sustain a learning community*	Turn taking encouraged the public participation of all students. The risks were minimised since the criteria for evaluating participation were the same for everyone: It is not enough to introduce women-focused content and expect female students to automatically begin participating in public. The structure that facilitates public participation must be changed to provide minimal risk opportunities for quiet female students to take up and gain confidence; turn taking provides one such structure (pp. 111–112). Three protocols governed the turn-taking strategy. These were particularly important in establishing relationships that would promote dialogue in this classroom: 1. Students were not put on the spot – they had time to prepare. 2. Students were not judged – others were not to interrupt or make evaluative comments. 3. Students were not compelled to speak – this demonstrated respect for the students and recognised that there were other ways of participating, including listening and watching. Mae and Nina suggest why the strategy succeeded for them: Mae: *Yeah I thought that was good … because everybody got a chance to have their say and because everybody had to say it they were all sort of equal and nobody could … disagree with their answer because they could just say their own thing as well so it was just what you thought and it was easier because everybody said what they thought* (p. 29). Nina: *It was quite good I thought, the way that she went around the classroom and got everyone to say something … because that way people get used to saying it and they are not really as worried about it and also if you are asking everyone to do it, you don't think oh I'm going to the the only one, if you are not used to calling out or something* (p 29).
	Interest *Design experiences that interest students*	When the researcher asked students why they had participated more during the women-focused lesson, their interest in the content was a common theme: Mae: *I think I answered more than I would have because I found it interesting so I watched it and got involved in it … I watched it more.* Zoe: *I think I might have put a bit more in than usual … Because I found it interesting, it wasn't the usual boring geography lesson, it was more interesting.*

Cases

The female students described here were consciously, not naturally, silent. Their silence was, in many cases, a protective strategy for managing the risks around how their public talk might be evaluated. Simply expecting them to participate in public talk would not have worked. Opportunities for public talk occurred only after changes were made to the content and pedagogy of the geography curriculum. As Nairn points out,

> It is our responsibility as geography educators to make it worthwhile for quiet female and male students to take part in our classes – taking part in class is used in the broadest sense to include talking, watching, listening – this means creating curriculum content and participation structures with quiet female and male students' needs and interests in mind (p. 30).

This responsibility and opportunity relates not only to geography but to other subjects as well.

When making decisions about content and the pedagogical approach, teachers need to recognise:

- the impact that a concern to 'get answers right' has on the willingness of some quiet students to publicly answer questions. Girls express greater fear about 'getting it wrong' and fear of being laughed at.
- that students participate in different ways, depending on the context. 'Quiet students' are not necessarily quiet in every context. They can be 'insiders' when at the centre of localised private spaces inhabited by close friends, and 'outsiders' when on the margins of the public verbal and physical space of the classroom.
- the impact of classroom climate. Some quiet students are uneasy about how they may be watched and judged by their peers.

Implications for pedagogy

Nairn outlines a number of strategies to try, including:

- group-building activities;
- think, pair, share preparation before discussions;
- increasing wait time;
- changing students' seating positions, one's own position, the arrangement of the room;
- ensuring that students interact with each and every other student over a period of time;
- allocating 'participation cards' to students – once they have used them up, they have no more turns;
- asking students to write a reflection note about how much they participate and how they feel about participating;
- targeting quiet areas of the class;
- communicating with students through a weekly or monthly diary system;
- developing inclusive curriculum.

Nairn says that developing women-focused content to empower female students is a complex task:

> Content must realistically portray the positive and negative aspects of women's existence, and it must value women's traditional (often unpaid) achievements as much as their non-traditional achievements.

Inquiry

The evidence presented in this case can be used to inform teachers' inquiries into their own practice.
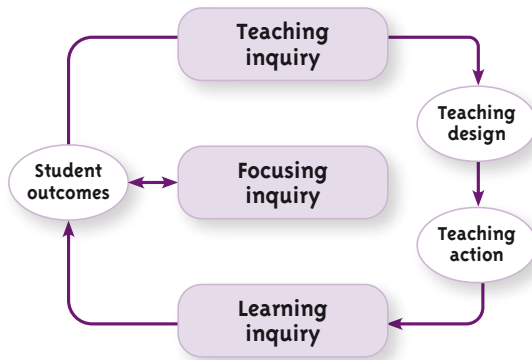
Focusing inquiry

What is most important and therefore worth spending time on?

Teaching inquiry

What might work best? What could I try?

Learning inquiry

What happened? Why did it happen?

Suggested questions:

- Think of a time when you were asked or expected to talk in a group situation. Which (if any) of the three protocols were in place? How did this affect your participation and the participation of the others?
- Who are the quiet students in your class/es? Which students occupy most public verbal space?
- Think of the content in your programme. For which students is it of interest or most/least relevant?
- What risks do your quiet students run when participating in the public space? How might these be overcome?
- In what contexts could turn taking or a similar strategy be used?

Other references

Nairn, K. (1996). (Appendix to quiet students in geography classrooms article): Some strategies to try. *New Zealand Journal of Geography, 23*.

New Internationalist (circa 1986). *A Women's World* series: The price of marriage and the struggle for land. (Video).

Cases

Teaching complex historical content to middle school students with learning disabilities

Source	Gersten, R., Baker, S., Smith-Johnson, J., Dimino, J., & Peterson, A. (2006). Eyes on the prize: Teaching complex historical content to middle school students with learning disabilities. *Exceptional Children, 72*(3), pp. 264–280.
Introduction	Learners with reading difficulties are often disadvantaged in social sciences by teaching/learning approaches that rely on reading expertise. This can often be seen in their superficial knowledge of key concepts (memorised names and dates, for example) or in the lower expectations that teachers have of them. This study provides evidence of an approach that enabled learners with reading difficulties – and competent readers, too – to develop higher-level, conceptual understandings. In a randomised control trial, the content was delivered in a *traditional* manner to a control group and *interactively* to an experimental group. It was found that students with learning difficulties were able to develop complex historical understandings when they could access the content via highly interactive learning opportunities.
Targeted learning outcome/s	1. Describe key events in the Civil Rights Movement. 2. Explain the meaning of those events and their significance to contemporary society.
Learner/s and learning context	This case involved Grade 7 and 8 students (ages 13–14). Half the students were classified as 'learning disabled' (LD), with reading difficulties and problems with organisational strategy. On average, they were reading at a 9- to 10-year age level (several years behind their chronological age) and reading 40% fewer words per minute than their peers. Learning-disabled students were assigned randomly to either the control group or the experimental group.

Pedagogy

Resources

- the video *Eyes on the Prize* (two-hour edited version)
- relevant extracts from the textbook and from magazines of the era.

Learning experiences

1. Both groups:
   - viewed the video over a period of five weeks in 18 four to 10-minute segments, read written resources, and responded to questions based on the video and those resources;
   - completed four compare–contrast worksheets that drew attention to contemporary comparisons and examples of decisions made by different people;
   - were helped to construct vivid narratives of the period by responding throughout the unit to the question or "How would you feel if [you were in that situation or were that person]?"
2. The control group (traditional approach):
   - responded to video-related questions posed by the teacher and students at the end of each day's segment;
   - answered questions on their own, before whole-class discussion;
   - read text passages on their own;
   - completed compare–contrast worksheets on their own.

3. The experimental group (interactive approach):

This group used exactly the same resources and activities as the control group but in these importantly different ways:

- In addition to the questions at the end of each video segment, the teacher interrupted each segment on three or four occasions to clarify content, respond to student questions, or ask students a question.
- Questions were answered using a think, pair, share approach.
- Text passages were read in mixed-ability pairs, with students reading alternate paragraphs aloud. Pairs were asked to help each other if stuck on a word.
- The compare–contrast worksheets were completed in pairs.

Students from both groups were assessed on three measures, but only the LD students were assessed using the content interview. This interview was an acknowledgment that a written assessment would not adequately capture what these students understood.

Summary of results (mean scores)

Assessment measure	LD students			Non-LD students		
	Control group	Experimental group	Effect size	Control group	Experimental group	Effect size
Content interview (out of 30)	21.9	26.1	.72			
Written exam (out of 20)	6.3	9.3	1.0	10.1	12.0	.76
Matching test (out of 18)	13.6	15.6	.62	16.4	17.1	.35

LD students in the experimental group outperformed LD students in the control group on all measures. Effect sizes for the content interview and written exam were large.

Non-LD students in the experimental group outperformed non-LD students in the control group, indicating that the approaches used specifically for the benefit of LD students also benefited non-LD students.

Using curriculum resources that students found accessible improved the learning of all students – significantly more so when this was done in conjunction with interactive approaches.

It was the interactive assessment measure (the content interview) that gave the LD students the best opportunity to demonstrate their learning. Compare, for example, Jaime's answers to the question "Why did *Eyes on the Prize* begin with the Emmett Till segment?"

1. **Jaime's response (written examination)**

   Because he got deformed from the [unclear]. And he was from the South and had an open casket ceremony.

2. **Jaime's response (content interview)**

   Jaime: *Maybe because that started the Civil Rights Movement.*

   Interviewer: *How did it start it?*

   Jaime: *Maybe they just got mad about it and decided to do something about it.*

   Interviewer: *Who got mad?*

   Jaime: *The African Americans. And so … because they killed him. They killed Emmett Till. And they were like tired of it so they like tried to do something.*

   Interviewer: *OK. What did they try to do?*

   Jaime: *They would like try to go on to marches and stuff. They were … so they would be able, wouldn't be like discriminated.*

   Interviewer: *Tell me a little bit about Emmett Till. Who was he and what happened?*

   Jaime: *He was a boy from the North. They weren't really racist up there. So he wasn't used to that. In the South, he went down to visit and he talked to a European American and he got killed for just doing that.*

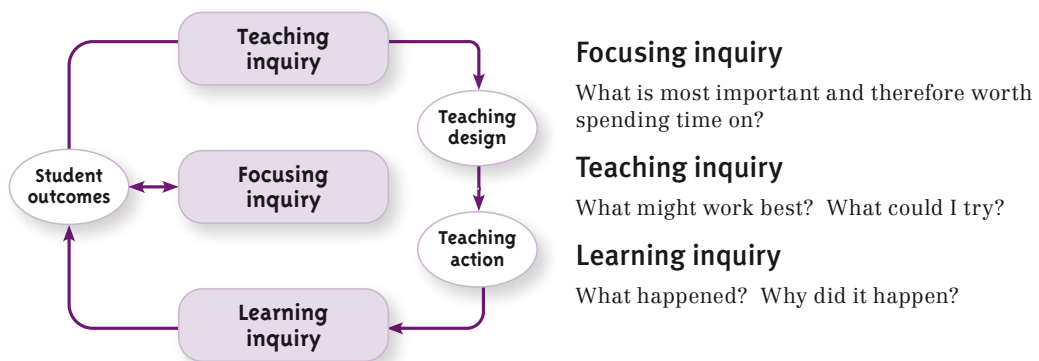   Interviewer: *And then what happened to the people who killed him?*

   Jaime: *They didn't get … they weren't accused of it. But later TV like stations paid them to tell the truth, their side of the story. And they said that they didn't kill him.*

Note how much richer the interview response is, though not initially. Note also that the incremental nature of the interaction enabled Jaime to demonstrate his knowledge of the content. He did not, however, explicitly answer the required question, so he scored in the middle range.

Cases

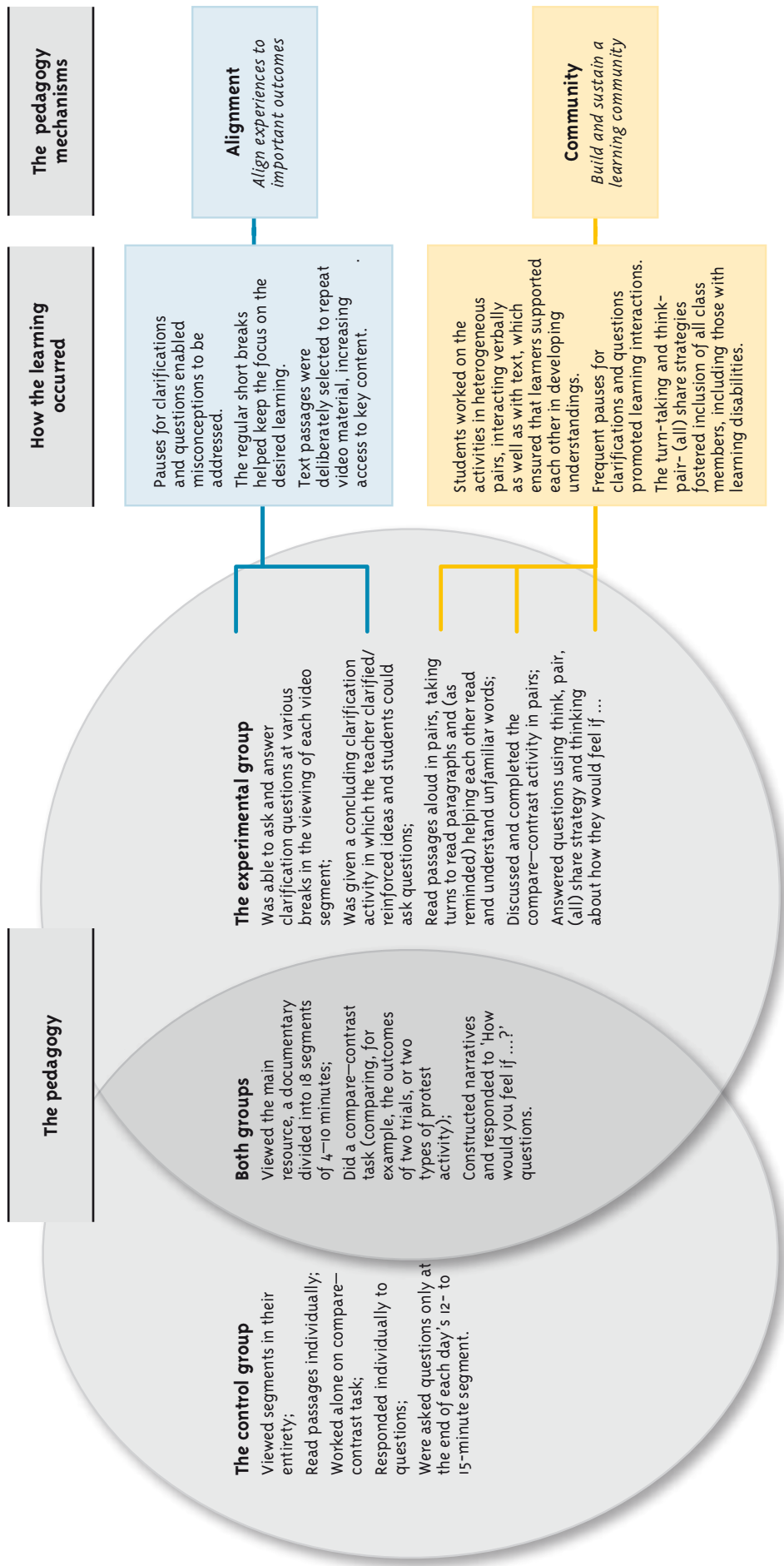The learning of LD students (and others) is assisted by:

- carefully structured activities that enable sustained interactions between partners with different levels of ability;
- deliberate repetition of the same information from different sources (in this case, the video and extracts from a textbook and magazine);
- the use of empathy questions (such as "How would you feel if …?") to help students personalise historical events;
- the use of brief discussion (in this case, at intervals during the video screening, which appeared not to interrupt the flow of the content);
- allowing students to demonstrate their understanding in oral interviews.

The evidence presented in this case can be used to inform teachers' inquiries into their own practice.

Focusing inquiry

What is most important and therefore worth spending time on?

Teaching inquiry

What might work best? What could I try?

Learning inquiry

What happened? Why did it happen?

Inquiry

Suggested questions:

- Thinking about your last social sciences lesson, choose two students to focus on, one with reading difficulties, the other a competent reader. How would each have experienced that lesson? How well did each achieve?
- How might learning difficulties (such as limited reading skills) impact on students' developing understandings of complex historical concepts?
- What characteristics of the interactive (experimental) approach might explain the difference between Jaime's written and interview responses?
- How did the approaches used in this case differ from your own past efforts to:
  - sustain interactions between partners?
  - repeat information?
  - use empathy questions?
- Which of your learners do you think would most benefit from an approach like the one exemplified by this case?

The pedagogy mechanisms

Alignment
Align experiences to important outcomes

Community
Build and sustain a learning community

How the learning occurred

Pauses for clarifications and questions enabled misconceptions to be addressed.

The regular short breaks helped keep the focus on the desired learning.

Text passages were deliberately selected to repeat video material, increasing access to key content.

Students worked on the activities in heterogeneous pairs, interacting verbally as well as with text, which ensured that learners supported each other in developing understandings.

Frequent pauses for clarifications and questions promoted learning interactions.

The turn-taking and think-pair- (all) share strategies fostered inclusion of all class members, including those with learning disabilities.

The pedagogy

The experimental group

Was able to ask and answer clarification questions at various breaks in the viewing of each video segment;

Was given a concluding clarification activity in which the teacher clarified/reinforced ideas and students could ask questions;

Read passages aloud in pairs, taking turns to read paragraphs and (as reminded) helping each other read and understand unfamiliar words;

Discussed and completed the compare–contrast activity in pairs;

Answered questions using think, pair, (all) share strategy and thinking about how they would feel if … .

Both groups

Viewed the main resource, a documentary divided into 18 segments of 4–10 minutes;

Did a compare–contrast task (comparing, for example, the outcomes of two trials, or two types of protest activity);

Constructed narratives and responded to 'How would you feel if …?' questions.

The control group

Viewed segments in their entirety;

Read passages individually;

Worked alone on compare–contrast task;

Responded individually to questions;

Were asked questions only at the end of each day's 12- to 15-minute segment.

5 *Partnering and participation*

Source	Vine, E. W. (2003). "My partner": A five year-old Samoan boy learns how to participate in class through interactions with his English-speaking peers. *Linguistics and Education, 14*(1), pp. 99–121.
Introduction	This case focuses on the experience of one student, five-year-old Fa'afetai, during a social studies unit. Fa'afetai was new to the classroom, having recently arrived in New Zealand from Sāmoa, and was a new learner of English. At the beginning of the sequence of social studies lessons, it was clear that Fa'afetai did not understand the partnering process. Given multiple opportunities to practise partnering with another learner, Fa'afetai was able not only to participate but also to negotiate partnering and, ultimately, to use it for his own purposes. Instead of being limited to follower roles in social studies activities, he became an active participant.
Targeted learning outcome/s	This unit of work focused on different perspectives on and experiences of Christmas, particularly those of people with disabilities and of people who have to spend Christmas in hospital. It was an objective of the unit that all students would be able to participate in the learning.
Learner/s and learning context	Arriving recently from Sāmoa, Fa'afetai had spent just six weeks in Ms Nikora's class in this decile 3 school of 125 students on the outskirts of a metropolitan area near Wellington. He came from an extended family in which three languages – Sāmoan, Niue, and English – were spoken. There were 8 girls and 10 boys in the year 0–1 class. Ms Nikora was Māori and spoke Māori but not Sāmoan. Half of the students in her class were Māori. The one other Sāmoan spoke only English. The other students in the class were all European New Zealanders. The learning described in this case took place during a three-day intensive social studies unit, Christmas in Hospital (Smythe, 1996).

Pedagogy	Ms Nikora used partnering 16 times in the course of the unit, at least once each session. The partnering activites consisted of:
	
	• choosing a partner (Fa'afetai's peers modelled what to say and do);
	• talking with a teacher-allocated partner:
	  – following a story;
	  – about a picture;
	  – in response to a visiting speaker;
	  – to share ideas;
	  – after listening to a recorded phone interview;
	  – to reflect on the morning's activities;
	• working in a small group to discuss a video:
	
	What I want you children to do is this: I'm going to give you a picture, and I want you to have a look at the pictures, and you're going to do this with partners [she picks up the pictures from the floor], and you're going to talk about what you can see in the picture.

Outcomes	As Fa'afetai found himself engaged in the many activities that required partnering, he began to respond in different ways:

Session 1. He did not understand the 'partner' process. When the teacher handed a puzzle to his partner, William, Fa'afetai said, "Ohh" – sounding unhappy. This suggests that he did not understand that he and William were to work together on the puzzle.

Session 2. He used the word 'partner' when sitting facing another student.

Session 3. He chose a partner by touching their shoulder, saying their name, and joining hands. (He moved away from a person he did not want to partner with.)

Session 4. He refused to share a puzzle with a partner.

Session 5. He used partnering as an opportunity for physical play.

Session 7. He reached out for a partner and said, "My partner." He engaged with his peers in explaining "No your partner." He showed understanding that partnering related particularly to classroom learning tasks as distinct from the free play that went on at playtime each morning.

Session 9. He used his understanding of the partnering process to negotiate relationships with his peers outside of the teacher-designed partner activities. For example, when Timothy attempted to sit next to William, Fa'fetai's partner in previous activities, Fa'afetai said, "No your partner" and put Timothy's book under the table, thus making it clear that William was *his* partner, not Timothy's.

Fa'afetai became increasingly involved as a partner in the learning activities, simultaneously learning classroom procedures, English language, and curriculum content. He also learned to negotiate practices that facilitated his involvement in a partnership and used that partnership for his own purposes.

The researcher observed:

He has been learning languaculture, not just language. He has been learning the word 'partner', but also the practices that relate to it in everyday life, the culture of this classroom (p. 119). |

How the learning occurred	**Alignment**

Align experiences to important outcomes | Fa'afetai gained an understanding not only of the word 'partner' but also how to choose a partner when asked to, engage with a partner, and initiate partnership with a peer. He was able to do this because the teacher provided him with repeated opportunities to practice partnering as he engaged with the different activities in the unit. |
| | **Community**

Build and sustain a learning community | Fa'afetai's engagement was promoted by the opportunities he was given to observe others partnering and was reinforced by the expectation of his teacher and peers that he, too, would be a partner. His teacher was struck by how much Fa'afetai learned from his fellow students:

"He just learned so much from his peers. And I think that's a really valuable lesson that it's taught me. I know that they learned in spite of the teacher, but I just didn't realise how quickly the growth would occur and how much of a change it would actually make over such a short period of time" (Fa'afetai's teacher, six months later). |

Implications for pedagogy	1. Teachers need to be aware of the complexity of the challenge facing ESOL students, who must simultaneously learn in three domains: classroom practice, English language, and curriculum content.
2. It is important to provide opportunities for students to engage with all three domains in activities that involve them in interaction with their peers, because such opportunities allow them to manage their own learning.

Cases

The evidence presented in this case can be used to inform teachers' inquiries into their own practice.
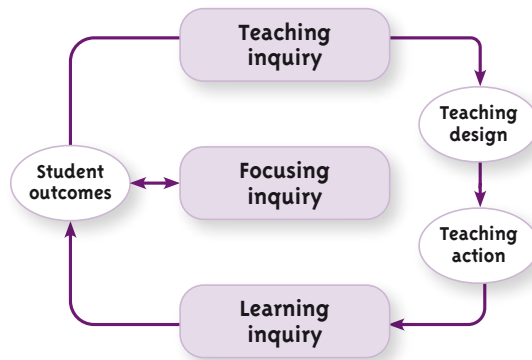
Focusing inquiry

What is most important and therefore worth spending time on?

Teaching inquiry

What might work best? What could I try?

Learning inquiry

What happened? Why did it happen?

Suggested questions:

- Has your approach with ESOL students emphasised classroom practice, English language, or curriculum content? Have you promoted participation in ways that allow them to learn simultaneously in all three domains?
- Can you think of learners whose participation could be supported by partnering activities?

Other references

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6 *Participating in a community to learn about community*

Source	Sewell, A. M. (2006). *Teachers and children learning together: Developing a community of learners in a primary classroom.* Unpublished doctoral thesis, Massey University, Palmerston North.

Introduction

The researcher believed that, for students to learn how to participate in society, they need opportunities to take on real roles and responsibilities in the classroom. When she shared her sociocultural ideas with the teacher in this case (Rhys), the two began a journey of collaborative action-research in which his practice, based for the most part on a one-sided pedagogy, came to incorporate practice based on a pedagogy of joint participation. His changed perspective on teaching/learning and the resulting shifts in the practice led to significant advances in the conceptual understandings of his learners, in their ability to participate together, and in their identities as intentional learners. For Rhys and his class, social studies was no longer about preparing for future participation: it was about embedding learning; in the here-and-now community of their own classroom.

Rhys came to understand that you can't teach children *about* social participation – they have to *live* it.

Targeted learning outcome/s

Rhys's class was working on a social studies unit based on the concepts 'culture and heritage' and 'social organisation'. His aim was for his students to develop conceptual understandings about 'community', 'roles', and 'responsibilities' as they related to the classroom context.

Rhys also wanted to progress the broader aims of social studies as they relate to participation in society: he wanted his students to be involved in making decisions about and sharing responsibility for learning in their classroom. Pursuing these broad aims, he supported his students as they made the transition from passive recipients of knowledge to active supporters of each other's learning, and as they learned to build on each other's ideas to create new understandings.

Learner/s and learning context

One teacher learner

- Rhys, team leader, 35-year-old Pākehā male in third year of teaching at decile 3 full primary school.

Thirty year 3 and 4 learners

Four case study students:

- Sakura, female, Iraqi
- Era, female, Māori
- Ikani, male, Sāmoan
- Caleb, male, Pākehā.

Pedagogy

As part of the dialogic processes of collaborative action-research, Rhys questioned some of his taken-for-granted perspectives on learning and teaching:

Initial perspective

"I'm the boss … I make the decisions."

"I decide the learning directions."

"My class is not a democracy."

"Teachers are in the hot seat."

"Teaching is all down to me … it's my responsibility."

Rhys thought about teaching as planning, organising, and doing activities.

End-of-year perspective

"I work *with* children."

"[Learning is about] valuing each other."

"I've really been open and … devolved power to everyone."

"[It's about] actually listening to each other."

Rhys thought about teaching as a learning relationship with children, where there is mutual trust and power sharing.

Cases

As his perspective changed, Rhys worked on shifting his practice – from one-sided to joint participation.

Pedagogy

Characteristics of one-sided pedagogy	Characteristics of joint participation
1. Cognitive dominance	1. Cognitive connection
Rhys was transmitting information or arranging activities for his students to do and acquire ideas from. Either he or his students were active: they weren't active *together*.	
2. Social control	2. Social connection
Rhys held the power and made all decisions about the directions and processes of learning.	
3. Emotional distance	3. Emotional connection
While Rhys made many emotional connections with students, there were no explicit rituals or forums for sharing and respecting each other's emotional responses.	
4. Physical disconnection	4. Physical connection
Rhys positioned himself in ways that physically separated him from the students.	

As Rhys's class established itself as a community of learners, a culture of learning developed that was not confined to social studies. The outcomes summarised below were evident across the curriculum.

1. Conceptual understandings

The success of the approach can be seen in the way in which a group of students co-constructed an analogy for 'community':

A community is like a jigsaw, it has pieces …
Each piece relates to another piece …
The pieces are people …
You need to learn off other people …
The pieces connect together to make the community …
You can make your own puzzle/community …
People bring skills, feelings, and attitudes to their community …
The glue is communication and the connections between people in the community.

Outcomes

2. Learning identities: metacognitive and affective outcomes

	Perspectives of learning (metacognitive outcomes, p. 126)	
	Initial perspectives	**New perspectives**
Sakura	"A good learner is good at *finishing* things on time and not rushing their work."	"My classmates and the teacher *help me learn* … you can *share* your ideas … We are all teachers and learners in here!"
Ikani	"A good learner *sits up properly* and writes properly."	"A good learner sits *beside* people they can learn with."
Caleb	"A good learner *listens* very carefully."	"Learning is *sharing your mind* and stuff."
Era	"A good learner would *get on* with their work and *finish* it at the right time."	"The *learning intentions* are really good to help you *learn*."

Outcomes

3. Participatory outcomes

Sakura went from preferring to work alone to initiating joint participation and valuing the product that came from learning together.

Era went from participating as a reproducer of information to participating as a learner intent on creating new ideas with others.

Caleb went from holding on to his ideas in the belief that to share them was cheating to realising that sharing ideas was a way to learn.

Ikani originally positioned himself as a captive in the classroom (where "you did this learning stuff"). He became a learner who recognised that he had expertise to share.

Cases

Developing joint participation in a community of learners

One-sided pedagogy	Joint participation pedagogy: evidence of reciprocal connections
Cognitive dominance Rhys was: • telling information; • arranging activities; • focusing on finishing tasks; • giving instructions; • asking *his* questions; • judging outcomes.	**Cognitive connection** Rhys: • invited students to contribute their ideas about learning goals; • modelled how to respond to someone else's thinking so that ideas were listened to, built upon, and challenged (dovetailing); • provided opportunities for students to dovetail their ideas to form new ideas together; • positioned himself as a learner with the students. **Rhys's voice** "Let's sit down and talk about that." "I agree with that …" "But I think …" "I'd like to pick up on …" **Student voices** (responding to the researcher's question "Why did you make a class quilt?") Era: *It's because so that um …* Ikani: *… It's so you can um learn …* Era: *… learn about community …* Ikani: *… and about people* Era: *… so that you knew you were in a community … the whole class actually made it …* Ikani: *… just like a puzzle …* Sakura: *We all share ideas about … how you are unique and where you need everyone to give ideas.*
Social control Rhys was: • making all planning decisions; • taking sole responsibility for managing behaviour and learning; • holding all the power.	**Social connection** Rhys: • made learning decisions with the students; • wrote learning intentions and success criteria with students; • shared responsibility for managing behaviour – created space for dialogue about behavioural issues; • gave opportunities for students to negotiate aspects of their learning as it progressed; • provided forums for students to share and reflect together on their new learning. Realising that a new class of five-year-olds was starting at their school, the class wanted to help them develop a sense of belonging to the school community. They decided to co-author a booklet called The Book of Jubilee School. Rhys and the students shared decisions about the content, their responsibilities for developing the book, and how it would be used. **Student voice** Caleb: *He's given us choices instead of saying "Do this, do that" … He doesn't force us to do things … I'm happy because someone is actually paying attention to what we want to do instead of just doing their own thing.*

Emotional distance

Rhys:

- valued students for who they were and cared deeply about making a difference in their lives;
- believed in relational-based teaching;
- **but** kept an emotional distance from the students, excluding them from knowing him in his different roles.

Emotional connection

Rhys:

- established rituals where he and the students could share their out-of-school lives;
- talked explicitly about what it means to be a respectful listener;
- valued students' honesty and openness about what was going on in the classroom;
- valued the diversity of expertise that learners bought to the classroom;
- was open and honest with students about his own life in ways that allowed them to appreciate his different roles.

Rhys used a daily ritual, 'What's on Top?', in which he and the students sat in a circle and had the opportunity to share an event or an issue from their out-of-school lives. It was a genuine and honest sharing of their minds and hearts in response to tragedy, joy, or mundane events. What's on Top? often began with Rhys or a student saying "Let's catch up on each other."

Student voices

Caleb: *Rhys is like an open book ... You know what he is thinking.*

Ikani: *We feel comfortable.*

Sakura: *He cares about us when we are sick or we done wrong.*

Physical disconnection

Rhys:

- sat in his 'teacher's chair', facing the students;
- stood while students sat beneath him;
- enforced out-of-bounds spaces;
- at mat time, had students sit facing him.

Physical connection

Rhys:

- let go of the teaching space (he got out of his chair);
- positioned himself at children's level by kneeling, lying, or sitting with them;
- allowed spaces that had previously been deemed out-of-bounds to be opened up as learning spaces for all;
- sat in a circle with the students so that everyone could see each other.

Student voice

Ikani: *It just feels like he is not the head any more ... He is one of us ...*

How the learning occurred	**Connection** *Make connections to students' lives*	Rituals such as What's on Top? provided a forum in which students and the teacher could hear about each other's lives. By listening to students (rather than deciding what to teach and then letting the students know), the teacher had insight into their lives and, as a result, could ensure that the content of learning was relevant to them.
	Alignment *Align experiences to important outcomes*	While the study was centred around the classroom as a learning community, the impact of this particular mechanism is also apparent. The teacher modelled a number of participation modes to support the learners with developing their own participatory skills. He modelled, for example, how to dovetail conversations, so that his students could learn how to talk to each other in ways that would build shared knowledge. By embedding learning about community deep within the programme instead of restricting it to dedicated social studies time, the teacher ensured that the students were repeatedly engaging with the concept. Alignment between pedagogy and student outcomes is also apparent in the teacher's shift from a focus on 'doing' to a focus on 'learning'. This shift, aligned with the goals he had for his learners, led to a corresponding shift of emphasis for the students – from 'finishing activities' to thinking and talking about 'learning'.
	Community *Build and sustain a learning community*	The comparison of one-sided and joint participation pedagogies on page 274 shows how the development of cognitive, social-emotional, and physical connections in all learners, including the teacher, supported shifts in student achievement and participation. This research highlights the role of sensitive, caring relationships focused on learning. The researcher noted a link between student learning and the honest expression of feelings and valuing of each other's expertise. In Rhys's classroom, she saw acts of compassion, sacrifice, humility, and loving kindness that contributed to a climate in which learning could flourish (2006b, p. 132). This research also highlights the importance of sharing power in learning relationships: When teachers vested authority in children to address their own inquiry questions, and when they guided their attempts to do so, some children in the present study came to view learning as more than searching for other people's knowledge, it came to be about 'sharing their minds' with their peers, their teachers and outsiders to create new knowledge (p. 220). Further, the study shows the potential for learning when dialogue is given a central place in social studies – there were ongoing opportunities for students to share their ideas with each other and to reflect on their own learning.
Implications for pedagogy		The findings illustrate the importance of teachers and students learning together in joint participation models where both contribute support and direction to shared activities. In a community of learners, students not only construct conceptual understandings about social studies but also develop identities as intentional learners and learn responsive and caring ways of relating to others. Before trying to establish joint participation pedagogies, teachers should first question their own taken-for-granted perspectives on teaching and learning. This re-evaluation is a prerequisite for the paradigm shift necessary to understand and develop the cognitive, social, emotional, and physical reciprocities characteristic of communities of learners. The sociocultural approach provides a different way of thinking about teaching practice and how young people learn. If it is true that learning is embedded in the social and cultural context, then it is our professional responsibility as teachers to distinguish between one-sided and joint participation models and to develop new pedagogical practices in which the historical boundaries between teachers and students are removed.

Inquiry

The evidence presented in this case can be used to inform teachers' inquiries into their own practice.

Focusing inquiry

What is most important and therefore worth spending time on?

Teaching inquiry

What might work best? What could I try?

Learning inquiry

What happened? Why did it happen?

Suggested questions:

- Can you identify instances of reciprocity in a recent lesson? How might you have enhanced the cognitive, social, and emotional connections with your learners?
- How might one of your lowest or highest-achieving students perceive your pedagogy – as one-sided or joint participation?
- Identify the students in your class who you know would most benefit from joint participation pedagogy. What learning needs do they have that you are not currently addressing?
- What barriers might you face in providing opportunities for your students to participate together as a community of learners?
- How might others (students, parents, teachers) perceive the introduction of joint participation strategies in your classroom? How might you talk with them about those perceptions?

Cases

Tō tātou Tiriti – Karawhiua! Our Treaty – Go for it!

Source

Millar, R., Fitzgerald, K., & Brown, J. (2005). *Goblins, Witches, and the Treaty!: Supporting a teacher to use drama to teach about the Treaty of Waitangi.* Paper presented at the NZARE Conference, Dunedin.

Targeted learning outcome/s

This classroom programme was designed to support a teacher to use drama to teach a year 7 class about the Treaty of Waitangi. Recent (Flockton & Crooks, 2001) NEMP results showed that, despite changes to the social studies curriculum, year 4 and 8 students have limited knowledge and understanding of the Treaty and early New Zealand history. The aim of this intervention was to reinvigorate teaching and learning around the Treaty by integrating social studies and drama. The social studies focus was an exploration of why different groups of people hold different points of view about the same events. The main drama objective was for students to plan and develop a drama based on the Treaty.

The Learner/s and learning context

This year 7 class of 32 students in a city intermediate school: consisted of 22 Pākehā, eight Māori, and two Korean students. The teacher was in her fifth year of teaching and had expressed a strong interest in drama. She had previously taught units on the Treaty of Waitangi and was keen to use drama as a way to explore differing perspectives. When planning and implementing the programme, the classroom teacher was supported by a Māori adviser, a social studies adviser, and a drama adviser. It was identified in the early stages of the programme that the students needed to learn how to work cooperatively.

Pedagogy

The major activity was a process drama based on *The Nickle Nackle Tree* (Dodd, 1996). The students created a fictional world of birds, in which they took on the role of newly arrived inhabitants. The need for a treaty with the original inhabitants soon became apparent. The Nickle Nackle Tree served as a metaphor for the treaty.

The process drama was followed by a variety of other learning activities, all aimed at developing understandings of the different perspectives that people had, and continue to have, on the Treaty of Waitangi. The sequence of activities, together with student reflections, is outlined more fully in further sections of this case.

1. Shifts in student learning revealed by the written assessment

Students' responses to Treaty questions were much longer in the written assessment that followed the unit than in the pre-assessment. In many cases, students who were unable to make any response to questions in the pre-assessment could outline a number of key ideas in response to each question in the post-assessment (see the following example).

Outcomes

2. Shifts in student learning revealed by interviews

Pre- and post-unit interviews (interviews 1 and 2) were completed with four students and the teacher. The same students were also interviewed three months after the completion of the unit. At the interviews, they were shown three illustrations of scenes relating to the Treaty of Waitangi and asked to interpret the perspectives of the people depicted in them.

Following the unit, the students' conceptual understandings of the Treaty were more complex, as were their understandings of the perspectives of the different groups involved in the signing. See the following table for a brief before-and-after summary of the shifts:

Before	After
The students:	The students:
• had a general understanding of treaties and agreements but these were not contextualised to Aotearoa New Zealand and the Treaty of Waitangi; • were unsure of the identity and perspectives of key figures; • responded tentatively and required multiple prompts; • (in one case) believed that Europeans settled New Zealand before Māori.	• identified some of the key people/roles involved in the Treaty of Waitangi; • elaborated more and gave more examples; • addressed more perspectives; • expressed ideas with greater confidence; • could discuss the complexities and understand the dilemmas that confronted people (that is, they could recognise the 'grey' and see different perspectives).

3. Shifts in outcomes for Anna Blue, Chelsea, and Apples

In interview 1, Anna Blue's response to question 1 was 55 words in length; in interview 2, it was 138 words, reflecting her increased confidence. In the second interview, both Anna Blue and Chelsea were able to be far more specific in their identifications of people involved in the signing of the Treaty. In the second interview, Apples revealed much greater understanding of the perspectives of the people involved in the signing and much less of the uncertainty he expressed in the earlier interview.

Anna Blue – response to question 1

Interview 1

Who do you think those people are in the picture?

They could, it looks like one of them is a Māori man, and I think there's a couple of Europeans as well, down the back, and it looks like this is like a Māori chief, and he's coming to this person to say welcome to New Zealand, these are our people now, they are joining us.

Interview 2

Tell me about the people in the picture.

Yes – these two people – this man looks like a Māori chief because he is quite old, and this might be his son, like he could be the next Māori chief? And this here is a British official, this man here has a Bible in his arm and he's a missionary, they are like Christian people who wanted to make Christians and all that, and this man here with this barrel thing, he's a grog seller, he sells beer, and when they get drunk they start fighting a lot, and this man is a farmer, and he has got land, and I think this guy here is pointing to the Māori chief and maybe asking him something? And this guy, he might not speak English, and this one will, and he's trying to ask him what is he saying? Yeah.

Cases

Outcomes

Outcomes	**Chelsea – response to question 1**	
	Interview 1	**Interview 2**
	Who do you think these people are?	Now with this picture, six people standing in a row, start from here and explain to me who each person is.
	The main people from the Māori and the English people?	*Well he's … can't remember his name … well he wasn't an English people, and he's a missionary, yeah, he's with the grog seller, grog seller alcohol on the right, he's the farmer, he's the Māori Chief.*

	Apples – concluding statement	
	Interview 1	**Interview 2**
	Maybe that guy is his friend, and they are pointing at each other's friend, I dunno!	*And this guy is the farmer who is thinking should they do it or should they not because he is thinking it is maybe not a good idea or maybe it is 'cause he doesn't know much about it. This guy is thinking and talking to the chief saying what should we do, should we do it or not? And the chief he is saying should I trust these guys? He is pointing to them, he is pointing to the chief.*

In this case, all four mechanisms worked together in such a way that diverse learners were able to deepen their understandings about the different points of view that people have on the Treaty of Waitangi.

How the learning occurred	**Connection** *Make connections to students' lives*	• The learners in the class were all introduced to *The Nickle Nackle Tree*. This provided a shared experience to connect with when engaged in the other learning activities. • *The Nickle Nackle Tree* analogy supported their learning about the Treaty.
	Alignment *Align experiences to important outcomes*	• The teacher's need for content knowledge was addressed by the involvement of the drama adviser and the Māori adviser. • Students' misconceptions were explicitly addressed. Advisors supported the teacher in clarifying student misconceptions. • Multiple learning opportunities in a range of modes were provided: drama, written activities, conversations, picture interpretation. • All activities were aligned to the learning goal.
	Interest *Design experiences that interest students*	• The active nature of many of the activities, and the opportunities they provided for students to take on roles and talk with others, aroused interest in the learning. • Student interest was captured through the appealing analogy of the Nickle Nackle Tree.
	Community *Build and sustain a learning community*	• Many of the activities involved working in groups. • Most of the activities involved students talking with each other and the teacher. • Diverse learners were able to engage with the learning as they were provided with roles and tasks that suited them.

Teachers' reflection

On learning in an active, engaging, motivating way

"It was a different way of learning. It was just totally different, they had never done anything like that before. They had never, they were so used to being at their desk and copying off the board, that to actually think and work together and, you know, be part of the group, was such a huge thing, and to be in a different space, to be in the whare rather than in the classroom, that was really hard … In the end it just sort of happened, they just sort of pulled in, and in the last session it was just amazing as they sort of went WOW and they understood."

On listening to children and allowing them to talk together

"[I learnt] sometimes it's better to listen to them than for them to listen to you all the time, and for them to discuss it rather than you to just sit back, but if you negotiate a good discussion and give them a good topic to discuss, then you should just be able to listen, because they all feed off each other …

"I am so used to teaching in the class. They are working in groups, working in a controlled manner, because that's what we are encouraged to do, in a way, you know, encouraged to have bums in seats and all that sort of thing, and parents, school, everyone encourages that really … I think they started to see that there were differences in the two Treaty versions, but more importantly, that something had happened in the past that we were still worrying about today, that we were still focusing on today that had impact on their parents and on people."

On the importance of teacher content knowledge

"You've really got to know, you've got to read the books and know your stuff before you go and teach anything, you can't just go off a bit of paper, you've got to know your stuff."

On expectations

"They are so intelligent, I can't believe their intelligence, it's so much higher than what I would have suspected, and they are supportive of each other … they've just got so many great things to say … When I have had time to listen, perhaps because there's been a few people in the classroom, they are saying just amazing things."

Glossary

Aotearoa	The traditional Māori name for New Zealand, usually translated as 'The land of the long white cloud'
Māori	The indigenous people of Aotearoa New Zealand
Ngāi Tāhu	The principal Māori iwi (tribe) of Te Wai Pounamu (the South Island) of New Zealand
Pākehā	Applied to non-Māori New Zealanders, usually of European descent
Treaty of Waitangi	Signed in 1840 by the British Crown and Māori chiefs and considered to be the founding document of Aotearoa New Zealand
Whare	House – in schools, often a room designated for Māori studies

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Cases

Pedagogy: teaching/learning activities	Learner reflections on the activities	What the reflections tell us about how the mechanisms were activated
Drama games. For example, knots, a game in which groups of 5–10 students stand shoulder to shoulder in a circle. They put their hands into a clump in the centre. They close their eyes and, when told to, find two hands to clasp. On opening their eyes, the challenge is to untangle into a circle without losing hand contact. Used to practice cooperative skills and build the group (Le Fevre, 2002).	*It made the class really close social-wise.*	
Process (no script) drama based on *The Nickle Nackle Tree* (Dodd, 1996). Used for building an imagined community. Summary of stages: 1. The story was shared. 2. Groups 'built the culture' of one of the groups of birds – including rules and reasons for leaving homeland and reasons for valuing berries (resources) – and 'met' the Ballyhoo birds, the original inhabitants of the tree.	*It related to real life because the birds were fighting over berries and humans do the same over land and resources.* *The Nickle Nackle Tree rocked. You should do the learning as drama as well 'cause you really get stuck into it.* *The Nickle Nackle Tree is like real life because we all care about where we live and don't want to lose it.*	Using the Nickle Nackle Tree as a metaphor for a treaty and involving the students in the process drama helped students understand the treaty concept and brought their learning to life, making it memorable.
3. The Ballyhoo birds 'learnt' from the other birds. 4. The Ballyhoo bird assistant (teacher in role) was introduced – appalled at how the new birds used the berries. 5. Tension built up – the need for a treaty was established. 6. War council.		The analogy between their experience in the process drama and real life helped them to understand social studies concepts.
Mapping activity. Used to link places that people have moved from and to (for example, Britain to Australia, Spain to Peru, Holland to Indonesia).	*It's like watching how people in England moved to New Zealand because of poverty and famine. It's like today.* *The world is large, and we start in one area and consume all the land in that area, and then we spread in another part of the world.*	The mapping activity helped show the connection between migration in the nineteenth and twentieth centuries, making the learning more significant and motivating.
	This activity was hard but interesting. My partner and I worked through it and we finished. Yeah!	Working with a partner supported this learner with the challenge of the activity.
Readings (segments) about early Māori village life, and miming (Arbury, 1993). Jane, the Māori adviser, elaborated and answered questions about the readings.	*I remember sharing the roles in society, in that everyone had a part to play in the community to make it.* *This was one of my favourite activities because it was so awesome to get to bring back these moments of making, creating, building, fighting and solving things.*	The Māori adviser supported the teacher in addressing the misconceptions that some students had.
Debrief in groups so that students could pool what they knew. The debrief raised further questions. The Māori adviser or teacher answered these questions and elaborated on the students' ideas. They also asked the students, "What helped you to learn?" (Drama, discussion, cooperative learning …?)		

Pedagogy: teaching/learning activities	Learner reflections on the activities	What the reflections tell us about how the mechanisms were activated
Sorting and classifying concepts about the Treaty of Waitangi and its significance (Naumann, 2002). **Creating and videoing moving sculpture.** Using voice and action to present ideas about the Treaty. **Picture interpretation** (Ministry of Education, 1999). **Who were the groups of settlers?** Discussion.	*"I thought it was good because we got to show what was positive and negative from our view."*	
Freeze frame plus spoken thoughts	*"I loved doing the freeze frame. It was so fun and it brought me closer to my classmates."*	The freeze frame activity developed not only cognitive outcomes relating to the Treaty of Waitangi but also affective and participatory outcomes.
Creative visualisation of Claudia Orange's description in *In tune* (Ministry of Education, 1997b). **Response** (drawing or writing). "Heads on your desks, and turn on your TV set in your mind, and see these pictures."	*"I remember seeing a visual picture in my mind with people in red coats marching around and lots of people in the boats and a few shops."* *"The English flag high in the sky and the governor being made fun of with the boats out in the harbour."* *"I could see a very clear image in my mind"* [visually impaired learner].	The visualisation activity was quite different from the others, which had been drama- and paper-based. It was effective for many students, including a visually impaired learner.
Freeze frame. The *Press* picture of the signing of the Treaty at Akaroa	*"We learnt a lot because we explained what we thought our characters was saying."*	
Role play: Treaty of Waitangi Tribunal (Ngāi Tahu claim) **Roles:** tribunal member, Ngai Tahu, Prime Minister, lawyers, judges (Ministry for Culture and Heritage, 2004)	*"It was such a wonderful act. It felt so real. I was a lawyer."*	The role play activity generated a lot of interest. Students found it relevant and significant because they got to experience what it might feel like to be a lawyer in that situation.
Reflective circles	*"I think that the class discussions were great because it helps you to learn and remember."* *"The class discussions were great cause I've found that when I talk about something it helps me."*	Dialogue was key for this learner: talking with the class supported their learning.

Source	Grant, S. G. (2001). It's just the facts, or is it? The relationship between teachers' practices and students' understandings of history. *Theory and Research in Social Education, 29*(1), pp. 65–108.
Introduction	Grant observed two history teachers with distinctly different approaches teaching a civil rights unit. Subsequent interviews with seven students revealed a strong correlation between the teachers' practices and their students' ideas about history in general and the civil rights era in particular. The students of one of the teachers had views of history that were much more thoughtful, nuanced, and complex than the students of the other. Moreover, they saw history as a more vibrant and powerful influence on their lives (p. 83). This case outlines the two different approaches and the contrasting outcomes for students.
Targeted learning outcome/s	Three aspects of historical thinking in relation to civil rights: • historical knowledge • historical significance • historical empathy.
Learner/s and learning context	Both teachers were at the same school, preparing students for the same high-stakes state examinations, and both regarded the teaching of civil rights as important. The interviewed students were all European Americans: four female and three male. Six of them averaged grades in the 90s; the other had grades in the 80s.
The pedagogy	Grant's study contrasts the pedagogies of the two teachers' who were teaching the same content in the same school to similar students. The different features of their approaches can be seen in the transcripts below and the overview on page 290.
Linda Strait's pedagogy: 'master arranger'	For the eight lessons in the civil rights unit, Linda Strait's approach was to use a range of different activities and resources and to involve everyone (including herself) as active participants in the learning. One activity that was particularly significant for students' learning was a simulation. In it, "students imagine that they are living in the early 1950s and that a local skating rink owner refuses to admit minority customers. In small groups, students are to create a strategy for winning access to the rink." Each of the groups has 10 minutes to plan its approach and six minutes in the simulation (p. 76). In the transcript, the teacher – playing the skating rink operator – is seated on a chair in the middle of the room, and each group approaches her in turn (p. 78):

The first group (Jerry, Sue, Linda, Rachel, and Terry – all white students) approach Strait. They do so sheepishly and hesitantly. Strait immediately launches into her character. "How did you folks get in here?" she demands.

Sue: *We want to skate.*

Strait: *Sorry, whites only.*

Jerry: *What's the difference?*

Strait: *That's the policy, that's always been the policy … in this town.*

Jerry: *… that isn't fair …*

Linda: *You're going to lose customers.*

Strait: *… no problem so far … you (pointing to Jerry, presuming he is white and the others are minorities) can skate, but they have to go.*

Jerry: *We have no choice but to protest.*

Rachel: *And we'll encourage our friends not to come.*

Strait: *… I'm not too concerned … As you can see, it's busy tonight …*

Jerry asks if the students can regroup and come back. Strait, still in character, asks him what he's talking about. He tries to explain that he's talking to Strait, the teacher.

Strait: *I own a skating rink. I don't know any teacher. (To Jerry) He can skate, but the rest of you got to get out of here.*

Rachel: *If you don't let us skate, we're going to block the door.*

Strait: *Well, that's fine. I'll just have you arrested … I suggest you leave or I'm going to call to get you removed from the premises.*

As Jerry's group leaves, Ned, a member of the audience, calls out, "Man, this is impossible!" Back in their seats, the group huddles and returns for a second try.

Jerry says, "We have to emphasise that this is a racist facility."

Strait shrugs: "It's no different from any other in this town."

The other groups follow. Most echo the arguments about fairness and the loss of business, and issue threats of ensuing protests. Some try to broker special times for minority skaters; others appeal to Strait's courage in breaking with tradition. The last group uses some of these appeals and adds one new one:

The final group (two white boys, Ben and Steve; two white girls, Melissa and Anna; and one Chinese-American girl, Kim) approach Strait. She ignores them.

Finally, Melissa says, "Excuse me." Strait looks up.

Ben: *We'd like to skate in your rink.*

Strait: *You can skate, but the rest of you have to get out of here.*

Ben: *What you're doing is unconstitutional.*

Strait: *I know my constitution.*

Steve: *If you're going to segregate …*

Strait: *Look, I'm not a lawyer, I'm a businesswoman … But there's no law in this town that says I can't just have whites.*

Steve: *But if you kick us out, where can we go?*

Strait: *… not my problem. Find another place.*

Anna: *It's our right to skate … Think of all the money you're losing.*

Strait: *Well, it's about closing time … [This is a] teen curfew violation. (Ned calls out: "There was no teen curfew in the rules!") … I need to be getting home … There's no law that says I have to let you in.*

Kim: *Where are we supposed to go?*

Strait: *Go somewhere else.*

Melissa: *If the movie theater let us in, would you let us in?*

Strait: *That's an interesting question.*

Ben: *… are you thinking about it?*

Strait: *… but … [if I did that, then others would be] ready to lynch me.*

Steve: *The minorities would stand up for you.*

Kim: *… think about it, you're a female … How do you know that others wouldn't follow you?*

Linda Strait's pedagogy: 'master arranger'

George Blair's pedagogy: 'master storyteller'

George Blair's approach emphasised narrative instruction – dramatic stories of key historical personalities, policies, and events, built using oratorical style (vocal inflections, emotion, personal reflections, and rhetorical questions) and emphasising facts.

The following transcript concerns how Dwight Eisenhower tried to negotiate foreign and domestic policy dilemmas (p. 71):

"Eisenhower was conservative … But it will blow up in his face … He made several appointments to the Supreme Court, but one at least is very liberal … and (emphatically) that shocks the hell out of Eisenhower … Remember there was tremendous pressure … very serious things happen and early on in Eisenhower's presidency … He's hit in the face with the Brown decision … Eisenhower disagrees, but he has to enforce it and he does … and there is a serious confrontation in the South … Eisenhower also confronts the Soviets …(dramatically) We hate the Soviet Union, we fear the Soviet Union … We've got the H-bomb, but we're scared as hell. So the foreign policy John Foster Dulles comes up with … [is] a sad state of affairs … It's called massive retaliation … [and it means] any aggression by the Communists and we would retaliate with everything we have, massively, with everything we have …"

With that set-up, Blair begins a lecture on US foreign policy:

"Now the book doesn't tell you this … In the 1956 Hungarian Revolution … the Hungarians ask for our help and we don't give it to them … (incredulously, loudly) Massive retaliation? We aren't going to retaliate at all! It's just sword rattling and it doesn't make any sense. We're not going to blow up the world. Who're we trying to kid? …Massive retaliation; but we can't do that … Massive retaliation … what sense does that make? (quietly) But it shows how afraid we really are … John Foster Dulles uses the idea of brinkmanship … pushing the Soviets to the brink of war … But how far can you push? … The Soviets do the same thing … Much of the Cold War, we push and push and push … as far as we possibly can and there's tension, and stress, and anxiety. There's not a lot of fighting, but there's a helluva lot of tension, stress, and anxiety. (A student, David, asks, "Were any shots fired?") Yes … Korea, Vietnam … between the US and the USSR? No … they never attack one another directly …"

Outcomes

Key outcomes for students in the two classes are outlined in the overview on page 290. Strait's students came to see history not just as a series of facts, but as complex, tentative, and ambiguous. Her students were much more likely than Blair's to see a connection between the past and their own lives, and they also developed greater ability to see multiple perspectives and feel empathy.

The researcher cautioned that although the data suggested a correlation between teacher approach and student learning outcomes, the evidence was not strong enough to support a claim that the approaches *caused* the outcomes:

While Strait's and Blair's instructional practices may not cause their students' views of history, those practices figure prominently in explaining the differences across their students' views (p. 81) … I am not proposing that teachers' instruction causes their students to hold the views of history that they do. Teaching and learning are richly complex activities … looking at students' views on history in light of their teachers' instructional practices, then, is less about drawing a direct connection between the two than it is about exploring points of coherence (p. 102).

The evidence presented in this case can be used to inform teachers' inquiries into their own practice.
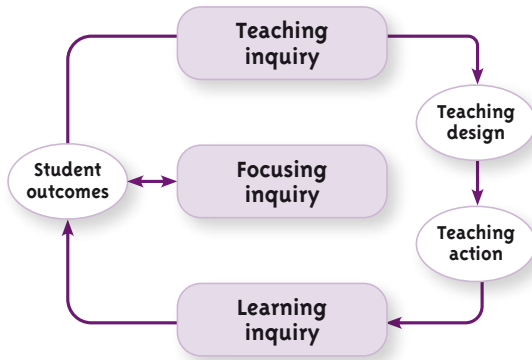
Inquiry

Focusing inquiry

What is most important and therefore worth spending time on?

Teaching inquiry

What might work best? What could I try?

Learning inquiry

What happened? Why did it happen?

Suggested questions:

- In what ways is your typical teaching approach similar to, or different from, the approaches of Strait and Blair?
- What aspects of your practice have helped or hindered students in developing awareness of the complexity of historical knowledge and understanding?
- What aspects of your practice have helped or hindered students in developing historical empathy?
- Which of the achievement objectives in your students' programmes might best be supported through a scenario or simulation approach?

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Cases

	Linda Strait: 'master arranger'	George Blair: 'master storyteller'
Alignment *Align experiences to important outcomes*	The activities and resources were aligned to the intended outcomes: while they dealt with different time periods, circumstances, and groups of people, all of the lessons focused specifically on civil rights. Students had multiple learning opportunities (eight lessons) in a range of modes: reading, writing, viewing, role-playing, video followed by group discussions, magazine articles, quiz (identifying civil rights / civil liberties), simulation, review activities.	The teacher did not focus exclusively on civil rights. He incorporated ideas into the context of the times. Civil rights were dealt with across several chapters in the textbook.
Interest *Design experiences that interest students*	Students' interest was maximised through their involvement in a simulation centred on a 1950s civil rights scenario. The teacher and students were all assigned roles and were able to experience the emotions of the situation at the same time as they were learning facts and concepts. The activity provided enabled students to go beyond an intellectual grasp of, and generalised sympathy for, the injustices suffered by African Americans and to gain an experiential grasp of civil rights issues.	The teacher emphasised facts in the stories and presented civil rights issues in chronological order as per the textbook. He used outline notes on overheads. The students copied these but rarely interrupted the teacher's monologue/lecture.
Community *Build and sustain a learning community*	The teacher's role was that of 'knowledge giver', 'knowledge evaluator', and 'creator of opportunities for students to work together'. The emphasis was on students applying their learning and feeling the emotions aroused by civil rights issues – in addition to learning facts and concepts.	Used narrative instructional style to recount the stories of historical personalities and describe policies and events. He built dramatic stories with the help of oratorical devices, such as vocal inflections, emotion, personal reflections, and rhetorical questions.
Connection *Make connections to students' lives*	In teaching her students about the civil rights movement, the teacher did not restrict herself to the big events and the experiences of the major players; she also made use of lesser known events and people, which helped make the content more accessible for the students. They were able to connect more easily with the content because they encountered it through the stories of ordinary people.	The teacher focused on the actions and experiences of certain key players. He emphasised the facts in the stories and presented civil rights issues in chronological order as per the textbook.

George Blair: 'master storyteller'

Student outcomes

Historical knowledge: 'History as the facts'

Students sensed history as a series of facts: names, dates, places – a chronicle of what happened in the past. One saw it this way: "It's like history is already made, you know what I mean? It's facts. So I don't know if there's much you could discuss" (p. 83). None of the students thought that the content or stories in Blair's class gave them any new or provocative ways of thinking about civil rights – they found it interesting, but it merely affirmed what they already knew.

Significance: thin and weakly developed connections between past and present

None of the connections made between past and present related to civil rights. The connections that were made were weak. For instance, Kate suggested that "people in the past were not so much [different] in, like, their ideas, probably, but, how they looked, how they dressed, and all that. I mean, we've changed a lot, but … not too much" (p. 87).

When students did make connections between more general aspects of past and present, they attributed these to sources such as their family, the media, or their English class – not to Blair's teaching.

Connection to students' lives: Blair's students could discern little impact of the past on their present-day lives.

Empathy: disposition to consider others' perspectives but not in relation to the learning context

The interviews revealed that students had empathy in the sense that they were disposed to look for alternative perspectives on events, but they did not do this in the context of civil rights, nor did they position themselves within those perspectives. As Ann explained, "History is just given to you. This is your history, just learn it" (p. 102). Blair's narrative approach did not bring them to understand alternative points of view.

Linda Strait: 'master arranger'

Student outcomes

Historical knowledge: 'History as complex ideas'

Students came to sense history as complex, tentative, and ambiguous. All those interviewed spoke of the understandings they had gained as a result of the unit. For instance, James said, "I knew discrimination, for example, existed, but I didn't know it quite to the extent that I've learned about this year" (p. 84). The students also questioned their understandings. They were alert to the fact that historical knowledge of the same events was constructed differently by different people and that this gave them latitude to construct interpretations for themselves.

Significance: thoughtful and textured connections between past and present

All three of those interviewed made comments indicating that they were making thoughtful and textured connections between past and present. For instance, James recalled the connection Strait had made between the injustices suffered by African Americans in the 50s and 60s and those suffered by homosexuals today. Another example is found in Melissa's reference to present-day issues of racism and prejudice in the US. It is important, however, to recognise, the danger of such connection-making leading to lineality (over-simplified, straight-line-type connections between the past and present) and presentism (overreliance on the present to interpret the past).

Connection to students' lives: Strait's students were more likely than Blair's to recognise a connection between what had happened in the past and their lives today.

Empathy: disposition to consider others' perspectives in relation to the learning context

The interviews revealed that students had empathy in the sense that they were disposed to look for alternative perspectives on events, and they did this in the context of civil rights – considering, for example, the different perspectives that black and white people might have brought to scenes in a documentary, and how those perspectives may well have changed over time.

Cases

Source

Kanu, Y. (2006). Getting them through the college pipeline: Critical elements of instruction influencing school success among Native Canadian high school students. *Journal of Advanced Academics, 18*(1), pp. 116–145.

Kanu, Y. (2005, April 11–15). *Does the integration of Aboriginal cultural knowledge/perspectives into the curriculum increase school achievement for Aboriginal students? Some preliminary findings.* Paper presented at the American Educational Research Association annual meeting, Montreal.

Kanu, Y. (2007). Increasing school success among aboriginal students: Culturally responsive curriculum or macrostructural variables affecting schooling? *Diaspora, Indigenous, and Minority Education, 1*(1), pp. 21–41.

Introduction

Kanu investigated two grade 9 social studies classes over the course of a year, comparing a 'culturally responsive' teaching approach with a 'traditional' approach. In the culturally responsive, or enriched, class, the teacher (Mr B) explicitly integrated Aboriginal knowledge and perspectives into the content, resources, teaching, and assessment strategies. In the traditional class, the teacher (Mr H) did not deliberately and consistently integrate Aboriginal knowledge and perspectives.

While this was not strictly an experimental study, there were marked differences in the outcomes for the Aboriginal students from the two classes in terms of social studies test scores, conceptual understanding, and motivation for attending. Integration of Aboriginal cultural knowledge and/or perspectives was linked to improved learning for all students but especially for Aboriginal students.

Targeted learning outcome/s

Both teachers reported that their teaching goals included developing their students' conceptual understanding of social studies topics, such as human rights, and their ability to apply learning beyond the lessons.

The learning objectives in the enriched class were carefully designed to embed Native perspectives. The teacher aimed for students to understand:

the importance of respect in Native cultures, the vital role of elders, the importance of family and community to Native identity, the importance of spirituality in learning and education and in the lives of many Native peoples, the various effects of European contact and settlement on Native peoples, and Native contributions to Canadian society (2006, p. 124).

Learner/s and learning context

There were 31 Aboriginal students (Ojibway, Dene, Cree, Metis, and Sioux) involved in this study, all from low socio-economic status backgrounds. Fifteen were in the 'enriched' class, and 16 in the 'regular' class. Both classes had social studies twice per week.

During the course of a school year, 63 observations were made of the enriched class and 34 of the control class (these were recorded in note, audio, and video form). Thirty-one Native students and ten non-Native students were interviewed. Further data were obtained from students' written work and reflections, teacher and student journals, and records of attendance and participation.

	The enriched class (Mr B) – a culturally responsive approach	The regular class (Mr H) – a traditional approach
Learner/s and learning context	The learning opportunities for the students in this class put Aboriginal perspectives at the centre. These opportunities included: • storytelling, with access to 'counter-stories'; • learning scaffolds, such as examples and experiences; • activities that involved observational learning instead of listening to teacher-talk; • talking/problem-solving/sharing circles in which everyone had a chance to contribute but was not forced to do so; • members of the Aboriginal community coming in as guest speakers; • the use of visual-sensory modalities (such as overhead transparencies); • the use of journal writing as an alternative to oral presentations in front of the class. The teacher emphasised and valued the students' existing knowledge base. To facilitate understanding, he tried to ensure that no unnecessarily complex language was used in teaching content or in tests. Mr B had superior knowledge of unit topics, Native issues, and history. He actively sought to strengthen his own understandings in these areas and to embed Aboriginal perspectives into his programme.	The teacher: • where convenient, occasionally introduced Native content and perspectives into a curriculum that remained largely Eurocentric; • relied solely on a textbook for Aboriginal material. Mr H believed in the principle of inclusion but felt uncomfortable focusing on Aboriginal perspectives because he believed that to do so would be unfair to students from other minorities.

Data show that, in terms of their understanding of social studies concepts, higher-level thinking, and self-confidence, regularly attending Aboriginal students in the enriched class achieved more highly than their counterparts in the regular class. For example, one student was able to describe what he had learned in a human rights unit in this way: "I now see the banning of Aboriginal ceremonies in the past as cultural genocide, and I can defend my position on that if asked …"

More than 80% of the students in the enriched class passed their assessments on social studies content, compared with just 44% of those in the control group, as the table shows:

Outcomes

Social studies achievement of regularly attending Aboriginal students		
	The enriched (culturally responsive approach) class	The regular (traditional approach) class
Pass rate (%)	88	44
Average mark (%)	72	48
Mark range (%)	61–83	40–60

Cases

Outcomes

Attendance levels were not higher for the enriched class, but it is important to note that the students who did attend regularly often cited the integration of Aboriginal perspectives as a reason for their regularity. For example:

> *I look forward to this class every week. You learn something new about Native issues, like successful Native professionals, politicians, and businesses, and this whole idea of urban reserves in Winnipeg … suddenly you don't feel that bad about yourself any more.*

> *We are learning a lot about Native issues in this class, and about other indigenous cultures. For example, I enjoyed the video* Whale Rider *which was about Māori culture in New Zealand. It has some similarities with Cree culture.*

By contrast, students in the regular class, when asked to explain what made them consistent attenders, said they came to school because they were required, or forced, to do so:

> *If I don't get my attendance slip signed by Mr. H I will lose the government financial assistance I am getting for attending classes.*

How the learning occurred

When interviewed, students in the enriched class attributed their improved achievement to the following elements in Mr B's approach:

Connection

Make connections to students' lives

- Cultural continuity: their understanding was broadened and deepened by the introduction of Aboriginal content and perspectives. The teacher supported social studies learning with Aboriginal literature, myths, and legends and stories by First Nations authors. He used videos and print material on Native issues and perspectives, including material on the Indian Acts and how they impacted on Aboriginal peoples' human rights.
- They were given opportunities to make connections between what they were learning about others' culture and their own lives:

> *We are learning a lot about Aboriginal issues in this class, and about other indigenous cultures. The video* [Whale Rider] *we saw about Māori culture in New Zealand has some similarities with Cree culture and it showed us how cultures adapt to change* (p. 35).

- Counter-stories. For example, material about the Iroquois Confederacy was used to counter the myth that Aboriginals did not have an organised form of government before the arrival of the Europeans. Counter-stories (provided by the research team, the teacher, and the students' own research) took students beyond the scope of their textbooks and deepened their understandings:

> *Our discussion of the Aboriginal interpretation of the 1876 Indian Act provided a different perspective and that really opened my eyes … I cannot believe that Aboriginals were not allowed to leave their reserves without a permit.*

- Classroom displays and resources that made Aboriginal culture visible.
- Learning scaffolds, including demonstrations and illustrations from Native culture, that provided support for conceptual understandings.

Students also remarked on how valuable they found it to be able to draw on the knowledge of the Ojibway and Cree research assistants.

Alignment

Align experiences to important outcomes

The researchers noted that Mr B willingly attended workshops in an effort to enhance his own knowledge and understanding of Aboriginal issues and history. This had an impact on his students:

> *He knows a lot about Aboriginal cultures/issues/content and he is always bringing these into Social Studies* (Aboriginal student, p. 37).

Students spoke positively of the way in which their teacher explained important ideas in clear, simple language. Another factor that made his teaching effective was his revisiting of key content, particularly in preparation for assessments.

How the learning occurred	**Community** *Build and sustain a learning community*	Students responded well to the opportunities they were given to work in supported small groups and to take ownership and lead decisions in those groups. They also found one-on-one interactions with the teacher valuable. Discussion circles were facilitated in ways that ensured equal, respectful, and non-threatening opportunities for students to share ideas with each other: *I feel respected in this class. Mr B always insists that we listen to each other and respect what each of us has to say* (2007, p. 37). Productive student relationships supported the learning of both Aboriginal and non-Aboriginal students: *He has a positive attitude toward us and he wants us to do well. He gets really mad when we don't do our assignments* (2007, p. 37).
	Interest *Design experiences that interest students*	Strategies used by the teacher included stories, discussion circles for sharing views and ideas, visits from Native guest speakers, and field trips to Aboriginal communities (to experience a pow-wow and a sweat-lodge). The positive impact of these experiences was emphasised by students.
Implications for pedagogy	The theoretical framework that motivated this study, and which Kanu uses to explain the findings, is that of cultural discontinuity. This framework is built on the idea that students' cultural socialisation affects how they learn in the school system – and how they "negotiate, mediate, and respond to curriculum, instructional strategies, learning tasks, and communication patterns in the classroom" (2007, p. 24). While discontinuity, or cultural mismatch, sets children up for failure, continuity of home and school cultures increases the chance of success. Kanu emphasises the critical role that teachers have in strengthening cultural continuity. Their knowledge, attitudes, and instructional approach have the power to make a positive difference for students: Successful integration [of cultural perspectives] requires sensitive, caring teachers who are knowledgeable about Aboriginal issues and topics and pedagogical strategies (or are willing to acquire such knowledge) and value them sufficiently to integrate them into their curricula on a consistent basis (2007, p. 37).	

Cases

The evidence presented in this case can be used to inform teachers' inquiries into their own practice.
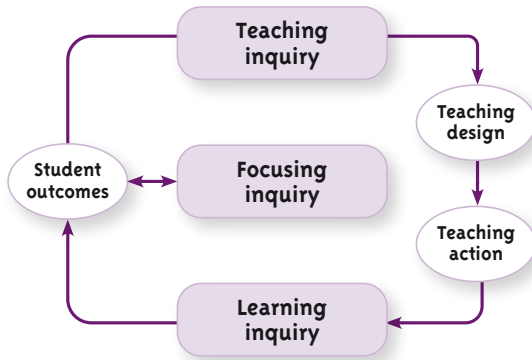
Focusing inquiry

What is most important and therefore worth spending time on?

Teaching inquiry

What might work best? What could I try?

Learning inquiry

What happened? Why did it happen?

Suggested questions:

- What knowledge do you have, or need to acquire, in order to maximise cultural continuity for all your students?
- Do you / how could you engage students with counter-stories and ideas that go beyond what is readily available in textbooks and other published resources?
- How might your students describe your relationship with them? Would they use the terms 'respectful' and 'caring'?
- Do you integrate cultural knowledge – reflecting all the cultures represented in your class – into your teaching in a deliberate, consistent manner, or only incidentally?

References

Where the reference is in **bold**, see the list of URLs beginning on page 311 for a link to full bibliographic details.

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Glossary of Māori and Pasifika terms

Ako Teaching and learning, understood as a single, reciprocal process (Māori).

Aotearoa Traditional name for New Zealand, usually translated 'The land of the long white cloud' (Māori).

He aha tena? What is that? (Māori).

Iwi People, nation, tribe (Māori).

Kaiako Teacher, instructor (Māori).

Kawa Protocol, ceremonial procedure (Māori).

Kōhanga reo Māori-medium early childhood centre (often, **kōhanga**).

Kōrero Conversation, discussion.

Kuia Elderly woman, grandmother, female elder.

Kura kaupapa Māori Māori-medium school (often, **kura**).

Manaakitanga Hospitality (Māori).

Māori The indigenous people of Aotearoa New Zealand.

Marae Traditionally, the space immediately in front of a wharenui (meeting house); often used to refer more generally to the whole complex associated with the wharenui (Māori).

Mātauranga Māori Traditional Māori knowledge (Māori).

Moko Traditional facial tattoo (Māori).

Mokopuna Grandchildren, but by extension can mean any young children (Māori).

Pākehā New Zealand-born non-Māori, especially those of European descent (Māori).

Palagi A person of European descent (Sāmoan).

Pasifika New Zealanders born in, or descended from those born in Sāmoa, Tonga, the Cook Islands, Niue, Tokelau, Tuvalu, and some other, smaller Pacific nations.

Pōwhiri Formal welcome or opening ceremony (Māori).

Taiohi Young, youthful (Māori).

Taonga Prized possession, treasure, inheritance (Māori).

Tapu Sacred, forbidden, restricted, set apart (Māori).

Te ao Māori 'The Māori world' or a Māori world view.

Te reo Māori The Māori language (often, **te reo**).

Te Wao Nui a Tane The realm of Tane, guardian of the forest (Māori).

Tikanga The usual and accepted procedure or way of doing things (Māori).

Tikanga ā iwi. The culture of a people, social sciences (Māori).

Tino rangatiratanga Sovereignty or self-determination; in this context, Māori control of things Māori.

Tumuaki Principal, head teacher, leader (Māori).

Whānau Family, to be understood in a much more encompassing sense than the nuclear family (Māori).

Whanaungatanga Sense of family, kinship, belonging (Māori).

Index

A model of pedagogy for the social sciences

Given their emphasis on diversity and explanation, the questions pursued in this synthesis implicitly acknowledge that there is no easy 'what works' answer for teachers: 'what works' depends on the context. This means that it is important to also understand *why, for whom, and in what circumstances* a particular teaching approach is effective. For this reason, this research supports a model of pedagogy based on teacher inquiry: a model in which teachers inquire into the impact of their actions on their students and into interventions that might enhance student outcomes. It distinguishes three phases of inquiry: a focusing inquiry, a teaching inquiry, and a learning inquiry.

The *focusing inquiry* helps determine direction. Given that time is limited and that students need multiple opportunities to engage with the content of new learning, priorities need to be established; this is the purpose of this phase of the cycle. The focusing inquiry is termed an 'inquiry' because the prioritising process draws from a variety of sources: curriculum requirements, community expectations, and, most importantly, the learning needs, interests, and experiences of the learners.

The focus of the *teaching inquiry* is on identifying strategies that are most likely to help the students achieve the selected outcomes. Central to this inquiry are the questions 'What could I try?' and 'How good is the evidence?' These questions imply a considered and reflective approach to practice and research that requires the ability not only to locate the evidence but also to evaluate its quality. In determining what to try, teachers are exposed to different sources of evidence, including their own experience as teacher and learner; the experiences of colleagues; prescriptive sources, such as curriculum documents and textbooks; and systematic sources, such as professional development and research. This does not mean that one idea is as good as another. Some are better supported by evidence, and the questions that guide the teaching inquiry are aimed at seeking these out. The mechanisms, developed as they were from a wide base of evidence across the social sciences, are key informants. Based on this inquiry, teachers design teaching actions (learning experiences) for their students.

The focus of the *learning inquiry* is on the impact of teaching actions on student outcomes. Central to this inquiry is the collection and analysis of quality evidence based on the questions 'What is happening for students in my classroom?' and 'Why might this be happening?' Pursuing answers to the first question, teachers may find, for example, that some students are not interested in the content or that some have contributed little to teacher-led discussion or that some have difficulty working together and learning in groups. To determine what future action is appropriate, the teacher then needs to find out why students are responding in such ways. Hence the second question, 'Why might this be happening?' The mechanisms offer a framework that can help teachers answer this question.

The *Social Sciences / Tikanga ā Iwi BES* as an informant of Teaching as Inquiry

Overview of findings

Mechanisms — What works?	Advice — So what should I do?	Reasons — Why should I do it? *Because there is outcomes-linked evidence that …*
Connection — Make connections to students' lives	Draw on relevant content	Embedding students' cultural knowledge and experiences in content enables cultural continuity. Making students' own lives a point of comparison supports access to new learning.
	Ensure inclusive content	Language can either make diversity visible or bias student understandings. Resources can either make diversity visible or bias student understandings.
Alignment — Align experiences to important outcomes	Identify prior knowledge	Identifying student prior knowledge: – helps set the direction for learning by distinguishing 'new' learning from that which is already known; – alerts teachers to the transfer of existing understandings that may inhibit new learning; – alerts teachers to student misunderstandings that may inhibit new learning. Research-based trajectories of students' conceptual and skills development alert teachers to the possible nature of students' prior knowledge. Techniques for accessing prior knowledge need to be aligned to the type of prior knowledge sought. Teachers' prior knowledge impacts on the extent to which they can support student learning.
	Align activities and resources to intended outcomes	Purposefully aligning activities to desired outcomes supports students in achieving those outcomes. Aligning resources to the purpose of a task supports students in achieving outcomes related to that task. Modelling of intended outcomes makes alignment transparent to students. Making the purpose of tasks clear to students reduces ambiguity and helps them to focus on important learning. Aligning assessment with teaching helps communicate what is important.
	Provide opportunities to revisit concepts and learning processes	Students need three to five aligned experiences not more than two days apart. Providing multiple learning opportunities supports concept development. Providing opportunities for repeated practice supports skills development. Reducing coverage enables students to focus on important ideas and processes.
	Attend to the learning of individual students	Differing levels of engagement with relevant ideas lead to differences in outcomes for students. Differences in interests, involvement, and background knowledge influence students' engagement. The sequence in which different activity types occur can influence what students learn from each activity.

Mechanisms	Advice	Reasons
What works?	So what should I do?	Why should I do it? *Because there is outcomes-linked evidence that …*

Community
Build and sustain a learning community

Establish productive teacher–student relationships

Building respectful relationships with students:
– establishes a basis for learning;
– helps create a sense of community.
Inclusive relationships increase the involvement of diverse students.
Modelling learning behaviours in relationships helps embed a focus on learning.

Promote dialogue

Students learn content when they talk together about that content.
Involving students in developing groupwork norms improves group functioning and increases contribution.
Explicit skills teaching develops cooperation and dialogue.
Teacher modelling during groupwork helps students develop dialogue skills.
Dialogue is encouraged by complex tasks.
Whole-class discussion enables students to experience social sciences in action.
Discussion is enhanced by teacher statements rather than questions.

Share power with students

Delegating authority to students enhances participatory outcomes.
Making learning and thinking processes transparent reduces reliance on the teacher.

Interest
Design experiences that interest students

Meet diverse motivational needs

Students are not all motivated by the same activities.
What teachers envisage as motivating may not prove motivating for students.
Allowing students to make their own learning choices can motivate them to engage.

Maximise student interest

First-hand experience of social, cultural, economic, and political situations makes learning real.
Narratives have emotional appeal that engages students.
The design and selection of resources impacts on interest.

Use a variety of activities

Using a variety of activity types helps students recall the content embedded in those experiences.

Causal mechanism	Advice	What this *is* and *is not* saying
Connection *Make connections to students' lives*	**Draw on relevant content** **Ensure inclusive content**	**This *is* saying that …** students' understanding of important ideas and processes in the social sciences is enhanced when the teacher: encourages them to use their own experiences as a point of comparison when learning about other people's experiences in different times, places, and cultures; uses language that is inclusive of all learners and their experiences; selects resources that make diversity visible and avoid biased and stereotypical representations. **This *is not* saying that …** learning must *always* begin from the students' experience –connections can be made subsequently. learning must have obvious, practical application to students' current or future lives – it can be relevant simply because, for example, it arouses curiosity or sparks interest. all opinions and views are equally valuable and must be accepted – diverse perspectives and experiences should be used to promote discussion and dialogue, not uncritical acceptance. biased resources should never be used – what matters is that the set of resources used in a sequence or unit of work should present a variety of perspectives that collectively make diversity visible.
Alignment *Align experiences to important outcomes*	**Identify prior knowledge** **Align activities and resources to intended outcomes** **Provide opportunities to revisit concepts and learning processes** **Attend to the learning of individual students**	**This *is* saying that …** student understanding of important ideas and processes in the social sciences is enhanced when the teacher accesses relevant prior knowledge, using it to minimise duplication of what is already known and address misunderstandings that could inhibit new learning. If important outcomes are to be achieved, activities and resources need to be aligned to them. Teachers optimise alignment when they make it transparent to their students, design learning opportunities that are sequenced in response to ongoing assessment, and provide opportunities to revisit important content and processes. **This *is not* saying that …** teachers should simply access prior knowledge – the information that is gained must be *used* to *inform* decisions relating to the content and process of subsequent teaching and learning. teachers should only access prior *topic* knowledge – they should first consider the learning intentions for the upcoming work and then decide on the type of prior knowledge that needs to be accessed. If, for example, learning intentions are conceptual, it is students' current conceptual understandings that need to be accessed. teachers should simply provide students with multiple learning experiences – opportunities need to be aligned to curriculum goals, revisited, and involve a variety of activity types so that the important learning will be more memorable. an apparently logical sequence of activities will be effective – assessment may reveal that the sequence needs to be adapted to meet students' needs.

Causal mechanism	Advice	What this *is* and *is not* saying
Community *Build and sustain a learning community*	**Establish productive teacher–student relationships** **Promote dialogue** **Share power with students**	**This *is* saying that …** student understanding of important ideas and processes in the social sciences is enhanced when teachers: establish productive relationships with students; explicitly develop their students' interaction skills; put in place inclusive practices that acknowledge multiple abilities and contributions; delegate to students authority to make decisions about their learning; design tasks and organise experiences that require student–student dialogue and interaction. **This *is not* saying that …** learning is *only* about relationships – relationships need to be productive in terms of supporting student engagement and success in learning. teachers need to use activities in which students engage in dialogue with each other – such activities are of value only if they are aligned to the learning purpose and explicit attention is given to developing the necessary participatory skills. teachers need to use more group work / cooperative learning / discussion – they should carefully design group tasks to require multiple abilities and contributions; these should be publicly acknowledged. teachers should *relinquish* authority – delegating authority means empowering students to make decisions about their learning, not abdicating responsibility and leadership.
Interest *Design experiences that interest students*	**Meet diverse motivational needs** **Maximise student interest** **Use a variety of activities**	**This *is* saying that …** student understanding of important ideas and processes in the social sciences is enhanced when the teacher: makes learning as memorable as possible by deliberately designing learning experiences that are sensitive to students' differing interests, motivations, and responses; provides a variety of experiences that become memorable anchors for learning and subsequent recall; helps students draw the learning from these experiences. **This *is not* saying that …** increased enjoyment is an end in itself – while it is important that students find their learning interesting and enjoyable, experiences also need to be aligned to, and designed to meet, learning goals. teachers should use *their* favourite motivational activity – as far as student engagement and achievement go, what matters about an activity is how interesting and motivating students find it. students always need multiple ways to learn – what they need are memorable anchors that help them recall their learning. meaningful experiences automatically generate learning – students need to be debriefed so that the important learning can be drawn out and new understandings scaffolded.

Teaching as Inquiry: an evidence-informed model of pedagogy		What this *is* and *is not* saying
Teaching as Inquiry	Focusing inquiry Teaching inquiry Learning inquiry	**This *is* saying that …** teaching strategies may not work in all contexts: a strategy may work in one context but not another, for one student / group of students but not another, or in relation to one outcome but not another. effective pedagogy requires teachers to inquire into: the outcomes that should be prioritised for their students (the focusing inquiry), teaching actions that are most likely to enhance outcomes for their students (the teaching inquiry), and into the actual impact of their actions on their students (the learning inquiry). it is important to test new ideas aimed at improving student outcomes, but to do so responsibly by drawing on strategies that have the greatest likelihood of success. Because this BES is based on a wide range of outcomes-linked evidence, it is a strong informant of such strategies. inquiry requires openness to new possibilities, recognition that a particular strategy may not work (fallibility), and persistence in finding more effective strategies. **This *is not* saying that …** teachers should simply implement research findings – findings are informants of possible change, not instructions or recipes; they need to be carefully and systematically monitored for their impact in the immediate classroom context. teachers' own experience is not a useful informant of pedagogy – it is, but it is not the only source of possibilities. teachers' own experience is less useful than research evidence – both are useful. Teachers' experiences are richly contextualised and immediately accessible. Research offers access to new possibilities and makes claims based on rigorous, transparent methods. inquiry must always be intensive and time-consuming – deliberate, purposeful inquiry is necessary for understanding what is really happening for students during the teaching–learning process, but inquiry also takes place informally as teachers make moment-by-moment decisions during their teaching. that Teaching as Inquiry must follow a given sequence – there is no fixed sequence. One teacher might notice something about a student, and so begin with the learning inquiry. Another might read about a strategy that was successful for an outcome they were working towards, and so begin with the teaching inquiry.