CURRPD Presentation – A Curriculum Design Project: Applying a model to create coherence for deep learning (Graham McPhail and Barbara Ormond) (15 June 2021)

Slide 6 - Curriculum issues in History education

Picking up on Graham's points about the problems that the model is a response to, and problems illustrated in the engineering study, my research into History as a school subject for Years 11-13 students similarly showed a number of these problems.

Value of the Model: 'curricular autonomy in NZ'

First, the Model is of value in helping teachers deal with problems arising from curricular autonomy in New Zealand.

Like most subjects History has very broad statements in the New Zealand Curriculum and teachers have almost full autonomy over what history they teach. They can teach about any time period and any place. This means it is a huge responsibility and a challenge for teachers to determine what they should teach, and there is little evidence that school programmes are designed in a manner which gives much consideration to coherence or in a manner which considers what historical knowledge may be of most value.

This quote from my research illustrates the challenge for teachers.

- 'It is an incredibly high trust model that we've presented to teachers. I understand how it sits within the philosophy of *The New Zealand Curriculum* to allow schools to evolve their own local prescriptions and curriculum, and that is admirable in terms of responding to student voice and learners in front of you, but even for a fairly confident reasonably sized department like ours where we can discuss and develop ideas together, it is still a huge challenge to create our own curriculum and justify the choices that we make.' (*Research participant*)

So, because teachers are expected to be curriculum designers, the CDC Model is of immense value.

<u>Problem</u> - 'skills' versus 'knowledge' bifurcation

Secondly the emphasis on skills in the New Zealand Curriculum is clearly evident in History. Skills are seen as distinct from knowledge.

The History achievement standards signal that 'skills' and 'procedures' for investigating history are <u>the most critical</u> and can be shown independently of the knowledge learned by students

While knowledge is not deliberately marginalised in History there is for some achievement standards a focus on skills at the expense of knowledge. One example of this is the standard which assesses the skills of interpreting primary and secondary sources. Students go into the exam with no knowledge of the history topic that the sources are drawn from and expected

to provide valid interpretations of what the sources are about. Historical knowledge is therefore seen to be of lesser value than the applied 'skills' of comprehension and interpretation. This goes against historians' usual practice. Curriculum Design coherence would instead see a situation where skills and knowledge are developed alongside each other and are interconnected in students' learning.

Slide 7 'The problems in History education'

Problem - **fragmented curricular content without conceptual integration and coherence**

In my opinion the most critical of these problems for History is the fragmentation of history into small bites of knowledge suitable for addressing very specific and predictable examination questions.

So teachers are not encouraged to think about the coherence of their programmes. Instead what is chosen is selected on the basis of what portions of knowledge will enable students to get the best results in their assessments.

The NCEA for History is a system which rewards detailed knowledge - knowledge that is narrowed and limited. The NCEA rewards pre-prepared rote learned answers of that specific knowledge.

Fragmented through

- narrowing the focus of learning to the specifics needed to address the NCEA standards

'So it's creating, of course, all hateful things of rote learning and preparing and redrafting one essay throughout an entire year. So it's narrowing the focus and you can talk all you like about teachers, it's in the teachers hands, … but it's not actually, it's the framework that we operate within.' (*Research participant*)

Because students don't need the credits from doing all the available achievement standards, teachers are also very selective of which standards are taught. This leaves out important learning and reduces opportunities for creating coherence in curriculum design.

Slide 8

- knowledge is fragmented due to the **segmented** nature of the achievement standards for the NCEA
- knowledge is marginalised in **teachers' conceptions** which has implications for curricula coherence

So, the nature of the assessment for the NCEA **segments** knowledge, and over the two decades of the NCEA's existence **teacher's conceptions** of knowledge have shifted. They largely think in terms of knowledge that will **'best fit'** the standards and knowledge which

will **engage** students rather than critically think about what knowledge is of most importance and how to structure that knowledge cohesively over an extended period of teaching and learning time.

My research has also shown that these problems are fairly widespread – for example in Art History students are only required to study one topic, for example Early Renaissance Art, in a years' programme and this doesn't provide the same opportunity as multiple topics would to examine a concept like 'naturalism' across time or place. A broader knowledge of art history developments is needed to enable students to engage in more abstract thinking about art.

Slide 15- The CDC Model

Slide 16 – Element 1

- The course designer begins by deciding on the subject topic, course, or programme to be designed and then creates a concept map of superordinate (key) and subordinate concepts (related) eventually devising a proposition that states what the topic, course or programme is about.

(diagram)

- The process of developing the proposition statement includes identifying the key subject concepts in accordance with the epistemic structure of the topic.
- The role of the proposition statement is to connect the topic to the main subject concepts thereby beginning the process of design coherence.

Slide 17 – examples of key and related concepts

I'm using two examples here – one from a topic which is commonly taught in junior social studiets – Human Rights – and the second from a topic I teach my pre-service teachers – the Principles upon which Assessment should be based.

Slide 18 – Examples of propositions

So you can see from these two examples that the propositions provide clear direction on what the topic is about and propositions identify the most important concepts that need to be brought out when teaching the topic.

Slide 19 - Element 2

- This element connects the subject concepts in the epistemic structure identified in Element One to the course content. The combination of the subject concepts and the subject content is 'Knowledge-that'.
- This element illustrates the key distinction that the model makes between subject concepts and subject content. The difference is that subject concepts are generalisable and can apply to varied 'content' while 'content' is specific.
- There are three justifying criteria for choosing the content:
  - the most apposite content (epistemic); the best content to explain the concept.
  - content that in some way shows the development of the concept (socio-epistemic); for example I might teach about colonisation and show how the people's views of the concept have changed over time from a focus on the success of Empires to being seen in terms of oppression.
  - content that may be socio-politically important. This is particularly relevant in the case of the social sciences but also applies to the arts, science etc.

Slide 20 – Examples of Element 2 connecting subject concepts to content

Slide 21 – Element 3 connect knowledge that to know how to

Knowledge that is the content and concepts you have taught in your topic.

Know-how-to is the competencies, techniques, or skills relevant to the subject.

Element 3 links these together. Teachers will teach students the skills to make the subject concepts understood. For example I might teach students how to interpret an historical source, such as an historical document to explain an historical concept.

Knowledge-that, on its own, can be too abstract for learners while *know-how-to (*the skills), can be a form of limiting instrumentalism when unconnected to knowledge-that. Where the two are brought together there is the potential for deep and cumulative learning as concepts create linking mechanisms for moving between diverse, context-specific instances of content and know-how-to applications, into the world of generalisation and abstraction.

- The model proposes a focus on **two key competencies** that aim to highlight the connection between knowledge-that and know-how-to: **performance competencies** and **judgement competencies**.

1. Performance competencies are the techniques and skills which students apply in practice, and

2. Judgement competencies refer to

- the degree of understanding in using subject concepts to either inform their practice or solve theoretical problems, and
- judgement of the effectiveness of the solutions by applying conceptual reasoning.

Judgement competencies require students to know why something is 'as it is' – that is showing intelligent knowledge of why something is the way it is.

Slide 22 – Evaluating knowledge that and know how to

- The proposition guides what will be evaluated
- The purpose of evaluation is to measure the level of mastery achieved by establishing the degree of understanding students demonstrate between their know-how-to and knowledge-that.
- In this Element three competencies are assessed –
    1. recall
    2. skill and technique
    3. intelligent know-how-to

This element looks at how to evaluate what students have learned and the extent to which students have mastered the connections between *knowledge-that* and *know-how-to*.

The proposition written in Element 1 is the statement against which we evaluate what students have learned.

There are three components to measuring this

1. recall
2. skill and technique
3. intelligent know-how-to

Slide 24 – Examples of Element 4

Human Rights

1. what do they know about Human Rights and relevant concepts?
2. what skills have students shown, for example do they understand different viewpoints on Human Rights?
3. Are students demonstrating intelligent know-how-to, for example illustrating an understanding of bias and its implications for evaluating human rights issues.