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COOPERATIVE LEARNING IN PRESCHOOL SETTINGS:

ENHANCING THE SOCIAL INTEGRATION

OF YOUNG CHILDREN WITH DISABILITIES

by

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of the requirements for the degree
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ABSTRACT

An examination was made of the effectiveness of cooperative learning as a strategy for enhancing the social acceptance of preschool children with disabilities who had been included in a mainstream educational setting. Preschool groups accommodating children with special needs were randomly assigned to one of three experimental conditions - cooperative play and social skills training, social skills training only, or control (no intervention). Children in the cooperative play programme received significantly higher levels of social acceptance than did those in the social-skills or regular preschool programmes. Moreover, the cooperative play group showed significantly more positive and more frequent social interactions with nondisabled peers than did the children in the other groups. It was also found that following the intervention the children in both the cooperative and social-skills treatment groups were rated significantly higher than were those in the control group on social skills and social play posttest measures. The results thus indicate that the use of structured cooperative play yielded an incremental effect over social-skills training in furthering the social integration of preschool children with disabilities in mainstream settings. The finding that increased social acceptance occurs in situations where social-skills training is undertaken within a
framework of structured cooperative play was discussed in terms of its implications for the social inclusion of young children with disabilities in integrated educational settings. It was noted that if participation in mainstream preschool settings is to be of real value for young children with disabilities, programmes designed to maximize social acceptance, such as structured cooperative play and social-skills training, need to be utilized to facilitate social interaction. Indeed, in the absence of strategies to enhance social integration, the placement of young children with disabilities in mainstream educational settings may well place such children at risk with respect to their social development.
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CHAPTER 1

Introduction

In recent years, special education policy in New Zealand, as in many other western countries, has reflected an increasing preference for providing education for children with special needs in integrated settings (Ashman & Elkins, 1990). The inclusion of children with special needs in regular classrooms (mainstreaming) is a policy which recognizes the rights of children (and the wishes of their parents) to be educated in the least restrictive (i.e., most "normal") environment possible. This policy is underpinned by a belief that if the development of young children with special needs is to be maximized, a naturalistic context which provides optimal learning opportunities is essential. In this sense, current special education policies in most Western countries (including New Zealand) can be seen to reflect the belief that the regular (preschool and school) classrooms provide the "public" microsystems for such an ecological context (Bronfenbrenner, 1979).

Over the past decade there has been a rapid expansion in the provision of special education programmes and services for children of preschool age with disabilities in both Australia and New Zealand (Pieterse, Bochner & Bettison, 1988). In New Zealand, these services have been both home- and centre-based, - in each case catering for
children with a range of potentially handicapping conditions (rather than being founded on specific categorial types of disability), and providing programmes across a broad spectrum of curriculum areas. One of the major intended outcomes of early intervention programmes has been the inclusion of preschool children with special needs in regular preschool educational settings (McDonald, 1985). Since the first step in the "formal" education process for all children is usually enrolment at a regular preschool, it seems clear that social integration is an underlying goal of early intervention programmes.

Public kindergartens with designated "special needs groups" are one example of such a type of "regular" preschool provision - in that in each case an additional "special education" preschool teacher is provided to work with a small group of disabled preschoolers during regular kindergarten sessions. The 1989 New Zealand Education Act specifies that "people who have special educational needs (whether because of disability or otherwise) have the same rights to enrol and receive education at state schools as people who do not" (p. 7). Accordingly, the Special Education Service which has responsibility (via the Ministry of Education) for developing early intervention services in New Zealand, has a goal of integrating young children with special needs into regular educational environments. Consequently, over the past few years, separate preschool provisions for children with particular categories of disability (e.g., intellectual disability)
have been decreasing rapidly, while increasing numbers of preschoolers with a disability are being placed in mainstream facilities.

The policy of placing young children with special needs in mainstream educational environments is not without very considerable problems, however, and upon close inspection much of the enthusiasm for inclusion policies appears to have been largely predicated on a relatively simple-minded interpretation of the contact hypothesis (Allport, 1954) - the expectation being that closer proximity to children with disabilities will reduce other children’s negative attitudes toward them. Hundert & Houghton (1992) have pointed out that "much of the movement for mainstreaming children with disabilities is based on the compelling rationale of its social benefits for these children" (p. 311). This is demonstrated in the implicit assumption held by many advocates of mainstreaming policies that integration per se will increase the probability of social interactions taking place, and that these social interactions will necessarily increase the social acceptance of children with disabilities. However, in the area of special education, the "contact hypothesis" has not generally been supported. It needs to be noted that it is in fact probable that further problems will arise as a consequence of inclusive placements if adequate special provisions are not made available to facilitate the children’s social integration. Very often in such circumstances, as Gottlieb (1981) has
pointed out, the disabled child's social difficulties are actually exacerbated, and they tend to be more often socially rejected, exhibiting more social isolation and more often becoming the recipient of negative behaviours, than their normally developing peers (Burstein, 1986; Honig & McCarron, 1988; White, 1980).

The effectiveness of early intervention programmes has been evaluated extensively via two general approaches which have yielded very similar outcomes (Guralnick, 1989; Guralnick & Bennett, 1987). The first approach has involved use of meta-analysis techniques to generate estimates of the effects of early intervention (Casto & Mastropieri, 1986; Shonkoff & Hauser-Cram, 1987), while the second has focussed on the effects of intervention on specific populations of children (Guralnick & Bricker, 1987). Evidence from both of these sources suggests that for children with cognitive and general developmental delays, early intervention programmes can undoubtedly facilitate cognitive development. At the same time, some resistance has emerged to the idea of cognitive development as the major (and in some cases the only) index of intervention programme effectiveness. In this respect, some authors have recommended the use of other measures related to adaptive functioning, health, social competence and social support - in addition to those assessing cognitive development (Taft, 1983; Zigler & Trickett, 1978), and perhaps in response to these views more comprehensive assessments of intervention outcomes
such as family functioning and the quality of parent-child interactions are being reported (e.g., Bradley & Caldwell, 1984; Farran et al, 1987; Turnbull & Blacher-Dixon, 1980). As Guralnick (1989) has pointed out, however, "conceptually integrated, developmentally-based noncognitive measures of effectiveness remain to be identified and generally utilized" (p. 276).

Given the intent of early intervention programmes to increase the social acceptance of children with disabilities, the assessment of social competence is clearly an important element in any adequate evaluation of early intervention programme effectiveness - although it does need to be acknowledged that the construct of social competence is at present relatively poorly defined (Mathias, 1990). Social competence is a valuable area of study vis-à-vis early intervention for two major reasons. Firstly, the development of social competence is a major developmental task and hence can provide a sensitive index of overall functioning. Secondly, an understanding of social competence can lead to the development of useful early intervention strategies for those children whose levels of social competence fall behind their peers (Guralnick, 1989).

Bronfenbrenner (1979) has emphasized the need for children to experience a maximally responsive environment for development to occur naturally. While many if not most policy-makers regard mainstream settings as more effective learning environments for young disabled
children than segregated educational settings, it seems probable that without special supports young children with disabilities will be unable to realize the social potential within these settings. In other words, inclusion in mainstream settings may not promote social acceptance, and (without the awareness of the need for special strategies to enhance young disabled children's social integration) it may indeed actively work against it.

It has been increasingly realized that there are a number of problems associated with the "contact hypothesis" as a firm basis for policy, and a considerable number of studies have examined the efficacy of strategies designed to facilitate the social integration of preschool children with special needs in regular settings. These include structuring of play, modelling and coaching of desired behaviours, peer tutoring, "pairing" children, attitude-change programmes, and deliberate selection of particular play activities and materials.

Social-skills training programmes have indeed demonstrated some positive gains in social behaviour for young children with disabilities (Gresham, 1986; Oden & Asher, 1977; Sebba, 1983). However, such programmes have characteristically involved individualized coaching (often involving the withdrawal of children with disabilities from the ordinary classroom context) and while effective in producing improved skill levels, they have not usually resulted in increased social acceptance in the classroom
environment. It is evident that merely possessing social skills is not in itself sufficient to promote rewarding social interactions between disabled preschool children and their nondisabled peers, thus increasing the likelihood of social acceptance. A further point to be noted is that for young children with disabilities in an integrated educational setting, simply experiencing the opportunity to put into practice social skills would also seem unlikely to increase the occurrence of social interactions between them and their nondisabled peers to any significant extent.

Smith & Greenberg (1981) warned that what is needed for success in such settings is "situational structuring to realize the potential benefits of integration since spontaneous cross group interaction is unlikely to occur" (p. 96), and Widerstrom (1982) argued that interactions must be carefully planned if they are to help handicapped and nonhandicapped children to socialize successfully together. Johnson & Johnson (1982) have also noted that "classroom interventions are needed that require handicapped and nonhandicapped students to interact with each other in constructive and positive ways" (p. 212).

Cooperative learning is a type of educational experience which enables students to interact in a cohesive manner and thus offers promise as a strategy for integration. Gentile (1984) defines cooperative learning as "the type of interaction that will exist among students while working to attain a goal" (p. 139) and this type of
planned intervention (using a cooperative goal structure) has been used successfully with elementary and secondary school-aged children to promote integration among handicapped and nonhandicapped students on many occasions (Johnson & Johnson, 1980, 1981, 1982, 1983, 1986; Johnson et al, 1981; Slavin, 1983). While these research findings have not been applied to educational settings containing young children with disabilities, the encouraging results provide a rationale for cooperative learning experiences to be employed in preschool settings. Since social-skill training is an integral element in cooperative learning, and since children work collaboratively as a group in order to achieve a single outcome, it seems probable that social interactions are likely to take place naturally and effectively. It thus seems likely that social participation by preschoolers with special needs can be encouraged by adopting cooperative learning principles - utilizing the naturally-occurring free play typical of preschool settings, whilst structuring activities to embody the key elements of cooperative learning (Johnson & Johnson, 1982).

While research has indicated that cooperative learning programmes at primary school level are effective in increasing social outcomes for disabled children (without diminishing academic outcomes) no published studies have been concerned with the effectiveness of this approach in preschool settings. It seems probable that this reflects a relatively widespread belief that young
children's play levels are primarily egocentric and that interactions in a cooperative mode are not common (and maybe even nonachievable) within that age group. Moreover, when considering young children with special needs - particularly those with developmental delay, spontaneous cooperative activities seem even less likely to occur. A structured cooperative play context however, might well constitute an educational setting in which social interactions could take place in a spontaneous and satisfying manner. The development of structured cooperative play in the preschool context involves structuring the naturally-occurring free play situations by assigning roles to participants and outlining a group goal to be achieved.

The purpose of the present study was to investigate the effectiveness of cooperative learning as a strategy for enhancing the social acceptance of preschool children with disabilities included in a mainstream educational setting. The effects of a preschool programme which involved social-skills training and structured play incorporating cooperative learning principles, was compared with those of social-skills training alone, in terms of their relative influence on the social acceptance and social interactions of preschool children with disabilities in regular educational settings. It was predicted that the use of structured cooperative play combined with social-skills training would effect greater social acceptance for young children with disabilities in
an integrated preschool context than social-skills training alone.
CHAPTER 2

Review of Literature

Young Children with Disabilities

The identification and classification of young children with special educational needs continues to be problematic for parents and professionals alike. Effective special educational programmes require valid and reliable strategies to identify the population eligible for service, in order that programmes can be developed and initiated - and to enable funding, practical management and research considerations to be attended to. These difficulties are especially formidable during infancy and early childhood, when the child’s communication skills have only just begun to develop and when the likely future course of development is only faintly limned. Not surprisingly, the validity and reliability of behavioural instruments (upon which identification and classification crucially depend) are much less adequate than at any subsequent time in the child’s life. Moreover, it needs to be noted that the young child with special needs is also particularly vulnerable to the negative effects of labelling and classification in that our ability to predict subsequent outcomes based on earlier behaviour has
been noticeably poor except for those children who are seriously disabled from an early age (Bricker, 1989).

With school-age populations, the estimate of children requiring special educational services generally ranges from 12-15 percent. However, for preschool children with special needs, determining such percentages is more difficult because of variations in definitions, eligibility criteria, assessment procedures, and indeed (in view of the fact that education is not yet compulsory) in availability of services. In addition, descriptions of aspects of development requiring educational intervention have tended to focus on intellectual and sensory disorders, rather than on difficulties in emotional or social development per se (Guralnick & Bennett, 1987). This has been reflected in the broad field of early intervention research, which has traditionally emphasized the more cognitive aspects of development until recent years.

With the advent of Public Laws 94-142, 99-157 and the Individuals with Disabilities Education Act (IDEA) - Public Law 101-476 in the United States, which effectively provided education for children with disabilities in the least restrictive environment (usually the mainstream setting), attention has been turned to an area of development in which there was previously only sporadic interest - socio-emotional behaviour. As Strain, Cooke, and Apolloni (1976) have pointed out, there have been few attempts to describe the parameters of social-emotional
development for children with disabilities, and even fewer studies which evaluate the effectiveness of educational interventions designed to increase prosocial behaviour.

Several early theorists (e.g., Thorndike, 1906; Sandiford, 1936; Prescott, 1938; Beatty, 1969; Morse, 1971) have argued that not only is socio-emotional development a major concern of education but that somehow educators must also mould an emotional commitment in children to maximize their cognitive and intellectual growth. Though it appears that rather minimal attention has been directed to the social and emotional development of children with disabilities (in comparison with cognitive development), both Harbeck (1970) and Borich (1971) have attempted to expand this interest and have advocated the development of accountable and objective techniques in this area. Strain, Cooke, and Apolloni (1976) maintained that the field is characterized by a paradox - on the one hand there is widespread agreement on the importance of this aspect of development, but on the other hand, there has also been neglect of socio-emotional development - much of it due to scepticism of educational decision makers concerning the value and accountability (successful return for investment of resources) of intervention in the social behaviours of children.

Although special educational researchers and policy makers will, no doubt, continue to debate these issues, current research technology and practice (e.g., the use of video recordings of social behaviour) have probably
contributed to dramatically alter the interest in this field. Whilst it must be acknowledged that the socio-emotional development of children with disabilities has been long recognized as crucially important, it must also be acknowledged that this area of development has been largely unexplored by researchers and infrequently targetted by special educational programmes. Existing early intervention models and programme curricula oriented toward social development have failed to meet criteria of accountability, empirical validation and objective measurement until recently. However, some current research more directly relevant to the field of emotional and social development is currently being undertaken with children with disabilities and it is hoped that the use of improved research designs and methodological techniques will facilitate further developments in this area. Certainly, with the ability to accurately record children’s behaviours in natural settings, constructs such as social cognition and social acceptance may be able to be defined more precisely.

Intervention can be defined as any systematic attempt to alter the course of development from an established, or predicted path - and this may include parental and other teaching which is deliberate in this respect. The term should not, according to Clarke and Clarke (1989), be reserved only for psychological or therapeutic interventions as suggested in the definition provided by White, Bush, and Casto (1985). In this respect, settings
for educational intervention are likely to be what Bronfenbrenner (1979) describes as a child’s "microsystems" - usually home, child-care or preschool setting in the first few years of a child’s life (Boyd, Wilton, & Townsend, 1992).

An application of this broader definition of intervention has been seen in New Zealand. In 1976, the then Department of Education initiated a scheme wherein "the Director-General of Education could authorize the establishment of a special pre-school group at a kindergarten or playcentre to provide supplementary teaching for a group of educationally handicapped children" (Department of Education, 1970). This scheme extended earlier provisions of a similar nature for children with hearing disabilities. The group of children with special needs was required to be no smaller than three children and no larger than five children at each kindergarten or playcentre. A suitably qualified teacher was to be employed by the Department of Education to teach this group of children for three half days per week. The scheme included provisions for the then Education Boards to contribute towards the cost of transporting children to the special preschool groups, as these were not established in all kindergartens or playcentres. The Psychological Service (now Special Education Service) and advisers on deaf children had responsibility for the enrolment of children in these groups, and subsequently
for the provision of continuing guidance to the preschool centres involved.

At the time of the present study, approximately 40 New Zealand free kindergartens had groups of children with identified individual special developmental needs. A nationwide survey of these children (McDonald, 1985) revealed that their disabling conditions ranged widely in severity, time of onset, and type of disability, and that they typically attended kindergarten sessions for up to three mornings per week.

The policy of providing special educational intervention during children’s preschool years reflects an acceptance by special educators of the importance of environmental impact on children’s development—especially vis-à-vis early experience. Over the last few decades the view (perhaps reflecting the democratic ideals of western nations) that the earliest years of development are critical for later development has become widely accepted among educational policy makers. This view is predicated on the belief that there is continuity between early experience and later behaviour (Bricker, 1989). While the concept of continuity does not enjoy strong empirical support, however—primarily because of the inability to make accurate long-term predictions from early to later behaviour—it probably remains helpful for educational policy development to conceptualize development as a series of contiguous periods. In this respect, for example, a child’s successful social
integration into a preschool setting could thus be seen as critical to eventual successful inclusion in a mainstream primary school.

While some doubts have been raised about the enduring nature of reported cognitive gains in intervention programmes such as Head Start, research into other programmes such as the Early Training Project developed by Gray and Klaus (Gray, Ramsey, & Klaus, 1982) has tended to underline the need for longitudinal research to detail how continuity or discontinuity of development mirrors environmental change. The normalization principle (Nirje, 1985; Wolfensberger, 1972) can be and has been incorporated to argue that integration of children with disabilities at preschool level does not require empirical backing in order to justify it as an aspect of special educational policy. However, concerns about the process of mainstreaming are currently very widespread and questions regarding the appropriateness for all children with disabilities have been frequently expressed (e.g., Gottlieb, 1981; Gresham, 1982). As Zigler, Hodapp, and Edison (1990) have argued "Presently the mainstreaming issue is clouded by the fact that its basis rests on political and philosophical justification rather than on any scientific evidence regarding the best school placements for children with particular handicaps" (p. 9).

In examining long-term outcomes of early intervention studies, the importance of social factors resident in the child's ecology are being recognized increasingly as
potent indicators of successful development. For some time now the effects of preschool integration have been investigated by researchers (e.g., Dunlop, Stoneman, & Cantrell, 1980; Kohl, Beckman, & Swenson-Pierce, 1984; Odom & McEvoy, 1988; and Sebba, 1983). The majority of these studies have focussed on interaction patterns between children with disabilities and children with typical development and a major finding has been that while social integration does occur, it is enhanced when adults play an active and facilitative role. A further outcome has been the realization that when children have the opportunity to increase their levels of social competence (e.g., by being coached in specific social skills chosen for this purpose), their chances of social acceptance by nondisabled children are significantly increased.

Social Acceptance

Developmental Significance

Three major theoretical traditions have supported the importance of peers as an influence on children's development - those of Piaget (1965), Vygotsky (1934, 1978) and Sullivan (1953). From Piaget's work emerges the view that peer interaction serves to enhance development by creating cognitive conflicts for children - motivating them to examine current conceptions of the world and to
construct new versions which fit better with feedback received. Damon (1983) has pointed out that since children speak directly to one another on understandable levels, treat peer feedback seriously, and find it less emotionally threatening than adult feedback, peer-created cognitive conflict tends to act as a catalyst for change.

Piaget (1965) also believed that peers "force" one another to decenter in that children become aware of differing points of view, learn to examine their own, and finally to justify it for valid acceptance. Thus, according to Piaget, children benefit socially and cognitively from peer interaction. The social benefits include improved communication skills and perspective-taking while the cognitive benefits are demonstrated by improvements in the logical quality of their ideas.

The Vygotskian view (Vygotsky, 1934) makes strong claims about what children learn from peer encounters. Proponents of this viewpoint consider that as children are exposed to new thought patterns when interacting with peers their own thinking is influenced by the process, until the child internalizes the experiences with peers. It is also assumed that peer encounters result in the creation of specific, appropriate, problem-solving strategies which children discuss, try out and correct.

The third major traditional view of the educational effectiveness of peer interaction stems from the writings of Sullivan (1953). From this perspective the "co-construction" of ideas occurs through peer interactions
rather than from modelling the competence of others. Thus, peer relationships result in collaboration as a mode of social interaction, encouraging discovery-learning and enabling children to explore new possibilities in learning.

Extensive evidence is now available which indicates that positive interactions with peers contribute significantly to the development of children’s social and communicative skills (Hartup, 1978, 1979), and, indeed, to general psychological well-being (Townsend, McCracken, & Wilton, 1988). It has also been shown that when children have difficulties in establishing or maintaining relationships with their peers, they may experience later adjustment problems (Hartup, 1983; Parker & Asher, 1987). Whilst it is acknowledged that a child’s solitary activity may be both constructive and satisfying, and is not necessarily an indication that s/he is unable to engage in social interactions with peers, a continual avoidance of other children may have long-term adverse consequences. Perhaps the most devastating outcome of a child’s failure to develop sufficient skills to maintain effective peer interactions is social isolation. Rather than experiencing hostility or outright rejection, the child thus limits its own potential for social learning.

Concern with the social adjustment of children with disabilities arises from two sources - the stigma which may be associated with disability, and could thus mark the child as "different" in the eyes of nondisabled children,
and the possible stress suffered by children with disabilities when they are unable to perform some essential activities. Greater dependence on peers or adults in the setting may lead, it is thought, (Strain, 1985) to feelings of inferiority and to the development of inappropriate behaviour as a coping mechanism.

At present it is not possible to isolate any single factor as being crucial in determining the social adjustment of children with disabilities in integrated settings. The factors which influence such children's social acceptance are likely to arise not only from the disability itself, but from broader skills practised by children e.g., social and self-help skills which contribute to their overall level of social competence. Moreover, as Bronfenbrenner (1979) and Belsky (1980) have pointed out, it is essential to see the child as part of an environmental ecology which contributes to overall development. Elements of a child’s social environment considered to be associated with normal development include caregivers, teachers, extended family, therapists and peers. In this respect, interventions designed to effect social adjustment need to be developed with understanding of the influence of each child’s unique educational milieu.

Social Cognition

Central questions raised in the area of social-cognitive development include asking how children
conceptualize and reason about their social world, what
the developmental changes are in such concepts and
reasoning, and how social-cognitive functioning is related
to children’s social behaviour. It seems that if
theorists such as Piaget and Vygotsky are correct in
emphasizing the child’s earliest interactions with the
environment, it is probable that children who are unable
to meet the social expectations of that environment by
taking another child’s perspective at least some of the
time, may be limited in their opportunities for social
development.

Broadly defined, social cognition refers to
perception, thinking, and reasoning about humans and human
affairs (Flavell, 1985). Theories of social cognition
which have been formulated in an attempt to explain
individual social development have generally been drawn
from basic cognitive theories of development such as
Piaget’s theoretical position, information-processing
theory and attribution theory. Researchers have
frequently assumed - as did Piaget and Inhelder (1956)
that children’s concepts and reasoning about people pass
through qualitatively different stages in an invariant
order (though at varying rates) in different children.
Piaget (1963) regarded children at the preoperational
stage as being "egocentric" in their thinking, having an
inability to understand that their own perspectives differ
from those of others. The shift from "egocentric" to
"decentred" thinking was believed to occur in middle
childhood. A great number of studies have been conducted to investigate Piaget’s description of stages of cognitive development and with a few exceptions, most have found the sequence valid (Lefrancois, 1989). However, recent evidence indicates that even very young children may not be quite as egocentric as Piaget supposed, that they are often aware that other people do not see situations as they do, and that they are able to modify their behaviour in light of this awareness (Robson, 1989). Furthermore, some children well beyond the preoperational stage may still experience difficulty in taking the perspective of others (Chalmers & Townsend, 1990).

Major developmental theories such as Piaget’s have incorporated the recognition that children’s social and emotional reactions depend at least, in part, on the nature of their thinking and reasoning. Although Piaget found less clear evidence for stages of social-emotional development than in the cognitive area, he posited the construct of egocentrism (or lack of differentiation between the self and other).

Piaget’s conceptualization of a developmental shift from egocentric to other-centred behaviour (or concrete to abstract thinking) with increasing age, poses some problems according to Robson (1989). Piaget (1962) described the toddler/preschool period as evidencing less profound egocentrism than is the case in infancy but with the child continuing to construe (or assimilate) in terms of the self. Critics of Piaget’s views (e.g., Hughes,
1975; Donaldson, 1978) suggest that his research has neglected the child’s environment and that his theory overestimates the intellectual ineptness of the child vis-à-vis the social world. For example, the existence of considerable social knowledge and social skills in young children (Borke, 1983; Gresham, 1986; Guralnick, 1986) tends to undermine Piaget’s emphasis on the inabilities and biases of preschoolers. Also, it is pointed out that the attribution of self’s characteristics to another is not necessarily egocentric, provided the child recognizes differences between self and other, and not all social judgements seen as correct necessarily indicate nonegocentric functioning.

Although viable theories of social cognition and prosocial abilities in young children have been postulated (Radke-Yarrow, Zahn-Waxler, & Chapman, 1983; Shantz, 1975) major measurement problems have existed. These, according to Denham (1986) include overly restrictive operational definitions, developmentally inappropriate measures requiring responses which young children cannot provide, and inattention to embedding tasks within the child’s social context. Consequently, it would appear that the sophistication of young preschoolers’ social cognition and prosocial behaviour has often been underestimated. It is worth noting that this caveat may also apply when young children with special educational needs are considered.
Information processing concepts such as schema have also been incorporated within social cognition theory. Fiske and Taylor (1984) have proposed four types of social schemata which guide perception, memory and inferences about social events - person, self, role and event schemas. For young children with intellectual disabilities, distortions or delays in development may seriously affect perceptions and inferences about social interactions.

Attribution theory involves assumptions about the reasons not only for one's own behaviour but also the actions of other people. From this perspective, attributions are viewed as affecting our perceptions of a person's responsibility for his/her actions and on the basis of such attributions, assumptions may be made (for instance) about whether certain behaviours are accidental or deliberate. Accordingly, studies of young children's social development must include an appreciation of children's knowledge and understanding of their social world - the world of people which includes themselves and their social relationships with others.

Peer Relationships

Particularly for babies who do not have siblings, interaction with other children usually does not begin until the child enters an alternative care setting, an informal play group or a preschool programme. Recent societal changes have produced a situation where
increasing numbers of children now spend much of their
time with peers. Secular influences such as the
increasing proportion of women in the paid workforce,
nearly half society's families being managed by a single
parent, and increasing numbers of teenage mothers all
point to the likelihood of children spending a larger
proportion of their daily time with peers rather than
adults.

According to Hartup (1983) young infants lack the
social skills required to sustain social interaction.
Mueller and Lucas (1975) have argued that peer interaction
has its roots in patterns of interaction with objects.
These authors maintain that late in the first year of
life, children treat one another in much the same way as
they treat toys, but that over time pairs of children
begin to pay attention to the same object simultaneously,
then to interact directly with one another. They also
note that relatively complex and elaborate interaction
with peers is uncommon before the end of the second year.

At the same time, other investigators have cast doubt
on the notion that peer interaction emerges from
interaction with objects. A number of studies (e.g., Hay,
Pedersen, & Nash, 1982; Hay, Nash, & Pederson, 1981a,
1981b, 1983; Vandell, Wilson, & Buchanan, 1980) have
shown that infants can engage in limited but harmonious
social interaction with other infants as early as six
months of age, and that the social interactions of younger
infants are apparently less reliant on object mediation
than the play of toddlers. It is generally accepted, however, that by 12 months of age (e.g., Zahn-Waxler & Radke-Yarrow, 1982), most children show prosocial behaviour, although clearly there are substantial individual differences in the extent to which such behaviour is manifested. Moreover, as early as three months of age, infants' peer-directed reactions are distinguishable from those directed to mothers (Fogel, 1979) and to the infants' own mirror images (Field, 1979). It seems possible that the stages described by Mueller and Lucas (1975) may derive from a coding scheme which fails to detect some subtle aspects of early peer responsiveness.

As might be expected, Becker (1977) and Mueller and Brenner (1977) have shown that experience with peers facilitates the growth of interaction skills in infants and toddlers - presumably by allowing interaction with many individuals who have various social styles. Children who are in regular play-groups or in preschool or day-care settings appear to be somewhat more socially competent with peers than do their age-mates who are cared for at home (Field & Roopnarine, 1982; Finkelstein, Dent, Gallagher, & Ramey, 1978; Harper & Huie, 1985; Roopnarine, 1985). It has also been found that children who participate in play-groups interact with their parents at a higher rate than do infants and toddlers who have been raised exclusively at home (Vandell, 1979).
Several studies suggest that as a result of interactions with their parents, infants develop characteristic social styles and orientations toward people (e.g., Als, 1982; Stone & Chesney, 1978). These styles appear to affect the infants' willingness to engage in interactions with persons other than parents, as well as the likelihood that the infants will benefit from those interactions. Parents, also, may play a part in initiating and monitoring children’s social relationships during their preschool years. Ladd and Golter (1988) have suggested - particularly for preschool boys, that higher levels of parental initiations of social contacts and indirect forms of parental monitoring were associated with higher peer status in kindergarten.

The degree of a young child’s social competence is manifested in one of the most important aspects of social development during the preschool years - social relationships with peers. Recent research (Guralnick 1986; Hartup, 1983; Rubin & Ross, 1982; Schneider, Rubin, & Ledingham, 1985) has yielded a new data-base in this research area including descriptive information on the developmental course of children’s relationships with their peers, as well as the behavioural processes, individual behaviours and particular social skills which seem closely connected to important aspects of peer-related social competence (Corsaro, 1979; Krasnor & Rubin, 1983; Wright, 1980).
One such behaviour is that of responsiveness which has been a central construct in developmental psychology for many years. Indeed, while the construct of responsiveness itself may take many forms, many prominent theorists have suggested that when the child's social environment is responsive, this creates a generalized sense of efficacy for social interactions (Guralnick, 1989). Consistent with this, it is generally believed (by special education policy makers) that in general, children in mainstreamed settings will be more responsive to the initiations and responses of children with disabilities than in settings containing only children with disabilities.

Variables Influencing Acceptance

Strichart and Gottlieb (1975) have demonstrated that the more competent the behaviour displayed by children with disabilities, the greater the likelihood that their nondisabled peers would both imitate them and choose them as partners in future games. Similarly, Gottlieb, Semmel, and Veldman (1978) showed that both teachers' and pupils' perceptions of the aggressive behaviour of children who are mildly intellectually disabled were significantly related to social-rejection scores, while peer perceptions of the children's academic competence were significantly related to their social-acceptance scores.

Guralnick and Groom (1987, 1988a) in a study of mildly-delayed and normally-developing 3- and 4-year olds
in a regular preschool, concluded that the delayed children were rarely used as models or resources by the other children and were least preferred as partners in games. It is interesting to note, however, that in spite of these findings, the delayed children (in particular, the 4-year olds) did make successful contact with their more-competent peers. For example, on 60 per cent of occasions when the delayed children took part in group games, they were partnered by nondisabled children. Moreover, during parallel play, the delayed children were physically closer to the nondisabled children, thus having greater opportunity to observe them and imitate their behaviour. One possible result of the contact of children with disabilities with other children was that the former group spent a higher percentage of their time in constructive rather than simple repetitive or functional play in comparison with their play pattern in the segregated early intervention classroom (Guralnick & Groom, 1988b).

In a review of the literature on peer-models and behaviour change, Schunk (1987) concluded that children tend to imitate the behaviour of competent models - whether those models are adults or children. However, similarity of age can serve as a cue for children to identify appropriate behaviour to imitate. It may be argued, therefore, that the experiences of children with disabilities who are integrated into regular preschools are likely to be enhanced if age differences between them
and their normally-developing peers are minimised. It is also worth noting from Guralnick and Groom's (1988b) study that most of the somewhat limited contact between the children with disabilities and the nondisabled children involved the older-aged (4-year old) rather than the younger (3-year old) nondisabled group and that the younger nondisabled children in their study appeared to lack the skills needed to maintain an exchange with their peers with disabilities. These findings suggest that effective interaction between mildly delayed and nondisabled children is substantially dependent on the level of social skill development among the nondisabled group. Indeed, as noted by Townsend (1992), the major handicap of children with an intellectual disability is the behaviour and attitude of their nondisabled peers.

White and Watts (1973) concluded from their study of preschool children that the most critical skill which distinguished "competent" from "incompetent" preschoolers was the ability to obtain information and help from adults. At the same time, it is obvious that the ability to interact socially with peers is also important for personal development and it could be that for preschool children with disabilities these two characteristics are related.

There is some evidence that teachers can have an important influence on the status and acceptance of children with intellectual disabilities (Gottlieb et al., 1978) and can actively intervene to help increase the
acceptance of a child with disabilities in an integrated setting (Walter & Vincent, 1982). It needs to be noted however, that teachers have been shown to have positive attitudes toward integration only when additional teaching duties or competencies are not required (Center, 1987). Consequently, it seems likely that if integration policies are to be successful, positive teacher attitudes and contributions will need to be achieved together with specific preparation of the child with disabilities.

In terms of Allport's (1954) notion of distinctiveness, the "difference" of the child (vis-a-vis peers) will need to be minimized (e.g., identifying specific areas likely to draw attention and focusing on these), and in terms of the competent child model (White & Watts, 1973) there is a clear need for training in those behaviours known to distinguish "high competence" and "low-competence" children (e.g., using adults as a resource). Available research on observational learning (Bandura, 1986) indicates that there is a need to help the child with disabilities to acquire peer-modelling skills, especially with respect to attending to others' behaviours, retaining the memory, and producing the observed behaviour. In other words, either prior to, or concurrent with physical integration, socially at-risk children should be helped to acquire relevant knowledge and skills (such as daily routines, use of action and language and specific preschool behaviour) to facilitate
their acceptance by both teachers and children without disabilities.

Young Children With Disabilities

A number of writers (e.g., Gresham, 1986; Guralnick, 1989; Madden & Slavin, 1983) have observed that mainstreamed students with disabilities are generally not well accepted by their nondisabled peers. Although relatively few surveys have been made of the extent of adverse behaviour towards children with disabilities who are included in regular educational settings, data from sociometric studies and studies of teachers' observations suggest that indifference and social isolation are likely to be greater problems than hostility and persecution (Horne, 1979). In some cases, curiosity might arise initially but where this does occur it can generally be dispelled with planned information programmes. On the other hand name-calling and teasing would be likely to adversely affect the children's self-esteem.

By the time young children are ready for preschool they have usually developed an extensive array of social and communicative skills which are likely to maximize their chances of interacting successfully with others in the environment. In contrast, it is probable that young children with disabilities would often experience extraordinary difficulties in their efforts to establish social relationships with their peers. This appears to be especially the case for heterogeneous groups of
developmentally delayed children (Crawley & Chan, 1982; Field, 1980; Guralnick & Weinhouse, 1984; Mindes, 1982). Studies such as those conducted by Guralnick & Groom (1988a) reveal that the inability of these children to obtain satisfactory or appropriate responses from peers to their initiations is most noticeable. Overall, Guralnick & Groom suggested that attempts to gain attention from peers were successful only one-third of the time and this finding has been replicated by research with other disability groups (e.g., Markovits & Strayer, 1982; Vandell & George, 1981).

Consequently, despite a widespread acceptance of inclusion as a viable concept in the provision of special education for young children with special needs, it can not be assumed that physical integration will, in itself, result in increased interaction between children with disabilities and nondisabled children, or indeed that the interactions which do take place will enhance the acceptance of children with disabilities. Social interactions between children with disabilities and nondisabled children may vary in quantity and/or quality (Hartup, 1978), and an integrated setting does not in itself necessarily reflect an educational context which facilitates social learning.
Social Competence

One of the principal arguments mounted in support of including young children with special needs in mainstream educational settings is that contact between nondisabled and children with disabilities will result in beneficial consequences such as reduction of "strangeness", understanding of disability and increased social acceptance (of the children with special needs). A series of studies was undertaken by Goodman, Gottlieb, and Harrison (1972) to test the relatively simplistic version of Allport’s (1954) "contact hypothesis", (in this case the hypothesis that normal children will come to "like" children with intellectual disabilities as a result of familiarity through enrolment in regular classes). The studies yielded no support for this hypothesis. In a subsequent study, Gottlieb and Budoff (1973) found that integrated pupils in fact had lower social status than segregated pupils - regardless of the school in which they were enrolled. This study also confirmed the finding of Goodman et al. (1972) that in general nondisabled children enjoy more favourable social status than do either partially integrated or segregated children with intellectual disabilities. Thus, neither of these studies provides support for the claim that increased contact per se between children with intellectual disabilities and nondisabled children results in increases in the social acceptance of the children with disabilities.
The implications of research such as this are that contact alone between children with disabilities and their nondisabled peers will not act to enhance the social acceptance of those with disabilities, and there is a strong suggestion that unless such children can be taught to display social behaviour which is acceptable to their peers, (i.e. to actively increase their levels of social competence) increased social acceptance is unlikely to occur.

The Construct of Social Competence

A considerable body of scholarly writing has focussed on the construct of social competence. Despite this attention, it is still generally accepted that social competence remains an ill-defined construct which as yet appears to have no generally accepted definition. Zigler and Hodapp (1986) have suggested that the goal of any early intervention programme should be to promote social competence in the children concerned, and that broadly defined, "social competence involves the child’s degree of success in meeting societal expectations (which differ at different ages) and the child’s self-actualization or personal development" (p. 175). However, they also pointed out that this construct has proved difficult to apply in practical terms, with disagreement over the definition and criticism of the vagueness being articulated. At best, research to date has indicated that certain behaviours are at least correlates of social
competence. Guralnick (1989) has argued that the construct of social competence should be a vital element in both the design of early intervention programmes, and in their subsequent evaluation. Despite the difficulties in adequately defining or measuring the construct, Guralnick (1989) maintained that the central features comprise interpersonal social problem-solving, the use of developmental resources to accomplish goals, a dynamic-sequential nature, and less static measurement than is associated with cognitive ability.

Social competence appears to have its roots in early experience in the home setting, where behaviours become stabilized within the family group. Intervention in settings where children interact with peers is thus likely to be most successful when behavioural correlates of competence derived from the home setting are used as a basis for programming and for subsequent evaluation of such settings.

Assessment of Social Competence

Social competence is a noticeably difficult area of functioning to assess - a factor made more complex when young children exhibiting special needs are involved. However, in order to identify children at-risk of poor social acceptance and provide interventions to enhance social integration, various types of assessment have been developed.
Interviews and Questionnaires. One strategy traditionally found to be useful for exploring people's perceptions of social relationships is the interview. Children's beliefs about their own social abilities may be recorded during structured interviews, and may also be compared with the beliefs of peers, parents or teachers. As Townsend (1992) suggests, the attitudes and behaviours of nondisabled peers constitute one of the critical factors in the social acceptance of a child with disabilities, and as such, are important to ascertain. Questionnaires (sometimes with Likert scale items) are frequently used for this purpose.

Sociometric Measures. Sociometric methodology has been widely used to ascertain the extent of social acceptance of children with disabilities in mainstream settings - the two most widely-used measures being peer-nominations and peer-ratings. Sociometric techniques have also been extensively used to study the behavioural correlates of peer acceptance (Hartup, Glazer, & Charlesworth, 1967) and the effectiveness of social-skill training with socially isolated children (Oden & Asher, 1977).

It is important to note that sociometric measurement reflects only the stated perceptions of group members and as such, may not predict actual attitudes or behavioural interaction on the part of the group concerned. Increasingly, the need to incorporate observational data and teacher ratings to complement these measures has become obvious (Ray, 1985).
Sociometric techniques involving the use of nomination measures have frequently had unsatisfactory test-retest reliability with preschool children (Ray, 1985). Improved test-retest reliability scores of children using a rating-scale technique has been reported by Asher, Singleton, Tinsley, and Hymel (1979). In that study, the authors used a modification of the peer-nomination technique especially designed for preschool children. The children were shown photographs of other children and were requested to rate their peers on a scale (rather than to simply use positive and negative nomination measures). The results of this study demonstrated that the rating-scale sociometric measure was a more reliable index of sociometric status for preschool children.

The literature concerning sociometric measures of peer acceptance indicate that poor sociometric ratings in early and middle childhood have predicted later social, educational and mental health problems for the children concerned. However, there is a notable lack of data to suggest that low rates of peer interaction in early childhood either predict or even concurrently relate to social competence (Asher, Markell, & Hymel, 1981). Indeed, when Rubin (1982) examined the social, cognitive and social-cognitive correlates of nonsocial play, his analyses indicated that the nonsocial-functional (sensorimotor) and dramatic activities generally correlated negatively with measures of competence, whereas
parallel-constructive activities generally correlated positively with the various measures of competence. The data from this study indicated clearly that not all nonsocial activity is associated with negative developmental prognosis and that some nonsocial activity is associated with peer popularity and teacher ratings of social competence. In this respect, a qualitative assessment of nonsocial behaviour is likely to be more useful to identify children who are at-risk.

**Peer Nominations.** The most common sociometric technique is the peer-nomination method developed by Moreno (1953), which requires children to nominate other children in the setting according to criteria such as "most preferred" or "least preferred" as playmates. Sociometric nominations may be either given, received or made reciprocally. Traditionally, up to three names only were required but recently some researchers have allowed children to nominate as many peers as they wished (e.g., Taylor, Asher, & Williams, 1987). Scores are then allocated to children according to the number of positive and negative nominations they receive - the scores indicating the degree to which that child is perceived by others as being "desirable" as a playmate. When children nominate their peers on negative criteria, a rejection score is obtained. This procedure, however, raises concerns in that many researchers (and others concerned
with children) question the ethics of asking young children to nominate peers they dislike.

While nomination scores for children of primary-school age have been found to be reasonably reliable over substantial periods of time (Roff, Sells, & Golden, 1972), preschool children's nomination scores tend to be much less reliable (Bronfenbrenner, 1944; Busk, Ford, & Schulman, 1973). McCandless and Marshall (1957) modified the nomination technique in an attempt to make it more appropriate for younger children. Children were shown photographs of their classmates, instead of having to name them, and were asked to point to pictures of their best friends. However, even with this modification, the reliability of the technique has remained variable, with only moderate average test-retest correlations being reported (Hartup et al., 1967; Moore & Updegraff, 1964).

**Peer Ratings.** Another sociometric method which is increasingly being used with preschool children, is the rating-scale sociometric measure (Singleton & Asher, 1977). Ray (1985) has pointed out that "the majority of studies detecting differences between children with disabilities and nondisabled children have employed rating scales, of which sociometric ratings are the most frequent" (p. 57). On this type of measure, children rate each other on a Likert-type scale according to specific criteria (e.g., how much they would like to play with a particular child). With children of primary-school age,
this measure appears to be more reliable than the nomination technique. Oden and Asher (1977) found median test-retest correlations ranging from 0.69 to 0.84, and suggested that the greater stability of rating-scale scores is due to the fact that each child's score reflects the average rating received from other children. If one or two children's perceptions of the child change over time, this will have relatively little effect on the overall mean score. In contrast, nomination scores are greatly affected by children gaining or losing one or two nominations.

Other advantages of peer-ratings over peer-nominations include the finding that small increases or decreases in acceptance are more easily detected, as peer-ratings have been shown to be more sensitive to change (Gresham, 1982).

**Behavioural Observations.** Greenwood, Walker, and Hops (1977) maintained that teacher-ratings, sociometric-ratings and direct observation were the three most-used methods used in schools to evaluate social ability. However, Gottlieb and Davis (1973) in a review summarizing measures used, indicated that in the overwhelming majority of studies sociometric rating-scales were employed with only one study incorporating direct observations of social functioning. Since the stated goals of intervention are typically behavioural in nature, it seems essential that direct behavioural measures of social acceptance be
employed. An extension of this practice would be an indication of the rate of agreement of two or more different types of measures of social acceptance, in order to establish concordance and thus to indicate validity of measures used.

Teacher Ratings. According to Guralnick and Groom (1985), child characteristics shown in ratings of social adjustment and social competence by teachers, are linked with various aspects of peer interactions. An example is provided by the study by Behar and Stringfield (1974), where teacher-rated social adjustment was found to be correlated with aspects of social interactions and play with peers, even when mental age was partialled out. Those children rated as less well adjusted were found to be unoccupied more often, and were more often engaged in nonsocial play activities of a less mature level (Rubin, 1982).

Ray (1985), in a comparative study of three methods used to evaluate social ability, revealed that children with disabilities were viewed as less socially acceptable by both teachers and peers, but did not differ from their nondisabled peers in actual amounts of positive and negative social interaction in which they engaged. This finding, Ray suggested, is subject to two interpretations. Firstly, children with disabilities may be perceived to function socially in a manner which differs from that of nondisabled children, whereas their actual functioning is
appropriate and within a normal developmental range. If this is found to be the case, efforts regarding social integration may need to be directed towards changing the perceptions of teachers and regular classmates rather than (or in addition to) changing the social skills of the child with disabilities. A second interpretation of Ray's (1985) finding is that the social functioning of children with disabilities may be significantly different from that of their nondisabled peers but the techniques used to assess and describe this behaviour are limited and insufficiently sensitive to detect the difference. Further research in this area is required in order to clarify these points and in addition, it seems that a desirable alternative strategy might be to attempt to find out why the children's social acceptance is lower than that of their peers, and then to institute an intervention to counteract this.

The study by Asher et al. (1979) suggests that the use of rating-scale sociometric techniques with preschool children results in more reliable measures than the use of peer-nomination techniques. Also, the ethics of asking young children to provide "negative" nominations of peers has been questioned. A further concern is that of the need for alternative measures to complement sociometric techniques. As Ray (1985) has pointed out, complementary data is necessary to validate sociometric data, and consequently it would seem useful for observational data on preschool children's interactions with their peers to
be gathered to supplement sociometric data and teachers' ratings of the level of social competence of the children in examinations of intervention programmes in integrated educational settings.

**Play**

**Development Through Play**

No definitive theory has yet been formulated to explain adequately the mechanisms through which young children learn and develop through the activity of play. Probably the greatest influence on educational practice in this area has been the Swiss psychologist, Jean Piaget. In terms of Piaget's theoretical position (1963), the preschool child at kindergarten would normally be functioning within the preoperational period of development - a phase characterised by the active young learner struggling to make sense of the world while representing it through language, all the while attempting to achieve harmony with his/her environment. In Piaget's view the child's sense of disequilibrium causes him/her to engage in adaptational behaviour (assimilation and accommodation in response to new experiences and information). Some aspects of the situation will be assimilable within existing schemas, while others will be only partially assimilable and the expansion of existing schemas or the development of new schemas will be
required. From this perspective, children are thus stimulated to learn through the challenges of their environment, and both social interaction and stimulation via the preschool environment are thought to be essential components for the development of intelligence (Sigel, 1969).

Some of Piaget’s propositions (1963) are generally consistent with the policy of inclusion of children with special needs in mainstream preschool environments, for example:

"The human being is immersed right from birth in a social environment which affects him just as much as his physical environment. Society, even more, in a sense, than the physical environment, changes the very structure of the individual, because it not only compels him to recognise facts, but also provides him with a ready-made system of signs, which modify his thought." (p. 156).

This position seems concordant with the view that focussing attention on the importance of peer group participation as a means of developing new skills should be part of the regular objectives of the preschool curriculum. Clearly some preschool children are likely to have difficulties in establishing and maintaining relationships with their peers because of their special needs. In such cases, the need for other people in the setting to accept responsibility for ensuring that social interactions between children with disabilities and nondisabled children are facilitated would seem implicit in such a view.

Central to Piaget’s conception of the young child in the preoperational period (or earlier) was his perception
that the child’s view of the world tends to be egocentric - i.e., that s/he is unable to adopt the viewpoint or role of others. Despite much cross-cultural research supporting Piaget’s sequence of stages of cognitive development, (Lefrancois, 1989), recent research has cast doubt on the view that the preschool child is as egocentric as Piaget believed (e.g., Borke, 1983; Donaldson, 1978). Such studies have indicated that provided the task is meaningful, the children understand the instructions and are given a suitable means of responding, preschool children are indeed capable of a degree of "decentering" and of taking (at least in part) the view of another person. Light (1979) has argued that the social context of the preschool plays an important part in helping the child to decenter, and similarly, Sigel (1969) maintained that when children are confronted by social agents such as peers, teachers, or parents as well as the inanimate environment, they acquire an objectified view of themselves and the world around them.

Goffman (1976) has observed that the function of play has been commented on for many centuries but to little avail. Everyday observations tell us that virtually all healthy children enjoy and engage in play, and cross-cultural studies have revealed that children’s enjoyment of play appears to be universal with play patterns containing many common elements across cultures. Ethologists, biologists and comparative psychologists have argued that these play activities have a purpose in terms
of species survival, and virtually all developmental psychologists would accept the view that play has a purpose in the child's life (Cohen, 1987). However, in spite of extensive research endeavours, it seems likely that Goffman's rather pessimistic generalization (1976) holds true. Sutton-Smith and Kelly-Byrne (1984) have argued that researchers have supported the concept of play rather than having defined it carefully. It would appear, then, that the meaning of play is more complex than can be explained in any simple theory of social learning.

Functions of Play

Various "great" educators have had definite and influential views on the role of play, based rather more on their philosophies and theories of education and society than on any systematic empirical observations, (e.g., Steiner, Montessori, Froebel, and Rousseau). Groos (1898) was probably the first theorist to suggest that play leads to learning by allowing the 'pre-exercise' of skills needed in adulthood, and with some exceptions (e.g., Montessori) it seems likely that this view of play as an "enhancer" of cognitive development is generally accepted today. There is clear evidence that learning and problem-solving take place during exploratory play, and these activities probably underpin what Sylva, Roy, and Painter, (1980) have described as complex play - involving concentration, goal-directedness and the acquisition of new skills.
Other researchers (e.g., Garvey, 1983; Hutt, 1970; and Sylva et al., 1980) have focussed on play as an aid to social development in noting that children learn to interact with one another and form relationships through play. It has been suggested in recent years that children who play on their own without frequently interacting with peers, may be at-risk for later social and social-cognitive problems. These suggestions arise from both theoretical and empirical sources. Piaget in his early work (e.g., 1932) argued that the reciprocal nature of peer relations (involving peer conflicts) promotes the development of moral, judgmental, discursive and perspective-taking skills. Other theorists have maintained that peers serve as social learning models and as social reinforcers in the development of social and cognitive skills (Allen, 1976; Hartup, 1979), and on this basis, developmental psychologists have frequently predicted negative developmental outcomes for children who have inadequate peer interactive experiences.

It is widely accepted that young children can gain a sense of mastery through being able to control the behaviour of others during imaginative and fantasy play (Garvey, 1983). Other researchers have argued that this type of play has value for children because it allows the expression of affect (Hutt, 1970). Research into the social aspects of play was instigated by Parten (1932) who formulated the notion of social-play hierarchies. Parten described social participation among preschool children in
terms of six sequential categories - unoccupied behaviour, solitary play, onlooker behaviour, parallel play, associative play, and cooperative play. The results of her study showed that the preference of 2:0 to 2:6-year olds was predominantly solitary play, 2:6- to 3:6-year olds parallel play and 3:6-year olds to 4:6-year olds associative play. This description is still generally accepted and her scale is generally regarded as a useful tool for assessing the social maturity of early peer interactions. Few authors have attempted to replicate or expand Parten’s work - two exceptions being Barnes (1971) and Rubin (1980). The replication study by Barnes (1971) suggested that 3:0 and 4:0 year olds displayed significantly more unoccupied, solitary and onlooker activity and significantly less associative and cooperative play than Parten had described. Rubin, Maioni, and Hornung (1976) utilized the social-play categories of Parten (1932) and the cognitive play schemes developed by Smilansky (1969) to observe preschoolers during free play. The results of this study indicated that middle-class preschoolers engaged in significantly less parallel and functional play, and significantly more associative, cooperative, and constructive play than did their lower-class age mates.

A further early source of information about children's play behaviours evolved from Piaget’s (1962) classification of stages of development during the sensorimotor period. The gradual shift to symbolic
representational thought from primarily sensorimotor activities is reflected in a variety of cognitive activities, including fantasy play (Flavell, 1985). Smilansky (1968) elaborated on the original Piagetian categories to describe four cognitive levels of play in young children - functional play - consisting of simple, repetitive movements; constructive play - being the manipulation of objects in order to "create" something; dramatic play - where imaginary situations are created; and games with rules - the adjustment to prearranged rules in games. Rubin and Maioni (1975), used these cognitive classifications of play, and found that preschoolers engage in significantly more functional and constructive play than either dramatic play, or games with rules. Moreover, the authors' hypothesis that play preferences are related to cognitive competence was supported when the incidence of dramatic play was found to be positively correlated with spatial, relational and classification skills. A negative correlation was found to exist between functional play and the same cognitive measures.

Rubin (1980) suggested that in future studies, researchers should incorporate both social and cognitive categories of play when investigating the play behaviour of preschoolers in a wide variety of settings. Play has also been described as a means of socialization and development of values (Hartley, 1971) and the development of sex-role stereotyping may well take place within this milieu.
Smilansky (1968) described other levels of play, maintaining that some children play at an inferior level, thus manifesting a 'play deficit' - a view based on his work with socially disadvantaged children in Israel. The view had also developed that play is a skill which can be taught and several studies have focussed on the tutoring of play skills designed to increase the children's level of development. Smith and Syddall (1978) concluded, in a review of research in this area, that improved performance can be brought about with young children through the close adult-child interaction supplied in tutoring sessions. This conclusion would be consistent with the view that for the child with special needs who has been included in a mainstream setting, profitable use could be made of available adults in the setting to coach specific play or social skills in order to enhance the possibility of successful social interactions with other children.

Context for Interactions

An important index of young children's social competence is their ability to engage in sustained social play. Significant developmental changes in the social aspects of play occur as children move from predominantly solitary and parallel play towards cooperative and interactive play (Parten, 1932; Smith, 1978). However, the extent of solitary play appears to be independent of the level of social participation and this type of play is often highly constructive and educative in form. In
contrast, parallel play **does** appear to be related to group play in that it remains relatively stable across the preschool period (Smith, 1978) and can be described as play which is \"... often functioning as a springboard to play with others...\" (Guralnick & Groom, 1985).

Thus far, relatively little research attention has been paid to the play of preschool children with disabilities. However, the trend towards \"inclusion\" has provided the impetus for some studies, a number of which have highlighted the importance of spontaneous play for children with special needs. Staff in early childhood settings may often need to be reassured that children with disabilities do have the ability to engage in free play, although the prevailing philosophy of the particular preschool will, of course, determine the value placed on such activities. Special educational provisions have traditionally tended to utilize direct teaching methods, perhaps undermining the importance of allowing play to develop naturally in the preschool setting.

A recurrent theme throughout the research literature on play and exceptional children, is the need for adult intervention, with virtually all researchers reporting that it is essential to initiate play with children who have special needs. Such initiation may involve simply initiating the play session and then withdrawing, but it may also require adults in the setting to become involved in the entire play session. Programmes designed to increase the present level of play skills of the young
child with disabilities may begin at the most elementary interactive level, moving over time to the highest level of Smilansky’s (1968) play skill hierarchy - the preschool child’s involvement in symbolic play. This type of play is seen as an important requisite for expressive language.

There is evidence (Pieterse & Cairns, 1987) that preschool children with disabilities in integrated settings are able (at least at times) to successfully initiate interaction with their nondisabled peers, but that they often lack the skills needed to maintain the interaction, and are dependent on the nondisabled children to continue the interaction.

Integration and Play

The importance of play in the preschool years is now widely accepted and recognized, and the growth of such awareness in parents and professionals has been accompanied by increased support for the belief in the possibility of facilitating the course of cognitive growth through the provision of early intervention programmes involving play activities. Various classifications of levels of play have been postulated. As mentioned earlier Parten (1932) for example categorised children’s play into solitary, parallel or group, depending on the degree of involvement of children’s peers. The involvement of preschool children at the highest levels (sociodramatic interactive play) has been considered to have a very favourable effect on the social, emotional and
intellectual development of the young child (Singer, 1973; Slobin, 1964; Smilansky, 1968). Dansky and Silverman (1973), drew upon Piaget's (1962) view of the link between play and creativity, and demonstrated that free play with objects led to an increase in associative fluency in children. Freyberg (1973) successfully trained disadvantaged 5-year old children to play more imaginatively, and claimed that the enhanced fantasy play was associated not only with increased verbal abilities, more creative use of play material and increased attention span, but also with more positive emotional expressions—all features likely to enhance the quality of interactions between peers.

Techniques based on operant/social learning principles (Bandura, 1969), particularly involving social reinforcement in the form of attention and praise, have been found to be successful in increasing the play-levels of young children, and these procedures have also been used with children with severe learning and behavioural problems (Devoney, Guralnick, & Rubin, 1974; Guralnick & Kravik, 1973).

Inclusion in Mainstream Educational Settings

Rationale for Inclusion

An increasing number of preschool children with disabilities are now placed in integrated educational
settings in both Australia and New Zealand, reflecting the belief that they will thus be educated in the most "normal" environment possible. Public kindergartens are one type of preschool educational setting which enrols young children with disabilities in their regular sessions. The New Zealand Special Education Service (previously the Psychological Service) currently offers both philosophical and material support (e.g., in the form of visiting special teachers) for this policy.

Many ideas have supported the philosophical transition which has taken place in public special education policy development in recent years. The first major factor is the principle of normalization as outlined by Nirje (1969, 1985) - a principle which has found increasing acceptance, and has had a major influence on the provision of services for all people with disabilities. This principle prescribes the rights of all people with disabilities to experience settings, activities, programmes, and social experiences which are developmentally appropriate for them and which enable them to participate as fully as possible in the local community. In an attempt to ensure that integration is an enduring and quality experience for the individuals concerned, Nirje (1969, 1985) included social integration as one of what he believed were six critical dimensions of normalization, with significant outcomes being the reduction or removal of stigma, and competency-enhancement in the child.
A second factor which has provided support for integration policies is the belief that integration enables children without disabilities to develop sensitivity to and understanding of their peers with disabilities. This belief is linked to the principle of normalization - in that depriving ordinary children of experience with peers with disabilities could be regarded as educationally restrictive. However, it is important to note that this principle is based on the assumption that direct contact between children with disabilities and nondisabled children will result in a fostering of their social acceptance and a lessening of the possibility of stigma associated with the rejection of children with disabilities (the so-called "contact hypothesis" - Allport, 1954).

A third consideration is the fact that integration into regular preschools is (at least in theory) developmentally sound, in that it provides "normal" learning opportunities. Children learn by experiencing activities which provide them with opportunities to interact with other preschoolers - to observe and imitate the actions and speech of other children and adults (e.g., Bandura, 1986). In this sense, enrolment of children with disabilities in regular preschools should provide better opportunities for learning than is possible from segregated home-based or centre-based early intervention programmes.
Guralnick (1976) has pointed out several other potential advantages of integration/mainstreaming. One positive aspect of integration strategies is the increased understanding and sensitivity to individual differences that not only nondisabled children, but also their parents and teachers can develop, as a result of their increased involvement with young children with special needs. A second aspect is the benefits to teachers which arise from the opportunities they would have in integrated classrooms to work with a discernibly "mixed" (children with and without disabilities) group - thus providing them with a wider framework for gauging child behaviours within a developmental context. The third aspect which has been focussed upon in research, is the potential benefit accruing to children with disabilities from observing and interacting with more developmentally advanced peers - a learning situation which could be regarded as providing optimal social stimulation.

**Learning Environments**

Apolloni and Cooke (1975) have argued that both peer play and peer interaction are essential to the normal growth and development of the young child. Interaction with an increasingly demanding environment is important for all children, but could be seen to be even more critical for children with disabilities, in that their disabilities might otherwise preclude them from exposure to, or exploration of, cognitively/socially demanding
settings. The practice of integration in preschool settings has the potential to provide a "normal" responsive environment which would assist in the continued development of the behavioural repertoire of children with disabilities (Bricker, 1978). The question of interest, however, is whether children without disabilities are more responsive to those with disabilities in mainstream settings as opposed to specialized settings.

Various studies to date have provided evidence that, in general, children in mainstream settings are likely to be more responsive to the social initiations of children with disabilities than are children in specialized settings (Guralnick, 1990; McWhirter, Wilton, Boyd, & Townsend, 1990). In particular, the available research indicates that an unusually low rate of social interactions among children with intellectual disabilities occurs in specialized settings (Gresham, 1982; Guralnick, 1986) - a rate lower than would be expected on the basis of children's developmental levels. Children with disabilities are also less likely to get a social response to their social bids in a specialized setting because all of the children in these settings could be expected to have some social difficulties. When settings are altered by the inclusion of nondisabled children, some clear changes in responsiveness occur - especially when combined with explicit training activities focussed on peer activities (Bierman & Furman, 1984; Donder & Nietupski, 1981; Hill, 1989).
An important point arising from this, is that when examining studies which describe children with disabilities who have been integrated into preschool settings, it is crucial to distinguish between "traditional mainstreaming" and "reverse mainstreaming". The traditional model involves placement of children with disabilities into preschool programmes designed for nondisabled children, whereas the reverse mainstreaming model involves enrolling nondisabled children in a preschool setting where the programme has been designed for children with disabilities, and where the nondisabled may be fewer in number than those with disabilities. While evidence on the optimal ratio of disabled to nondisabled children in integrated programmes is currently unavailable, it is evident that the ratio will alter markedly between these models, and should be considered when evaluating effectiveness of programmes.

According to Hartup (1978), children without opportunities to interact with others may have difficulties in communicating effectively with peers, moderating aggressive feelings, accommodating to social demands for appropriate sexual behaviour, and in forming a coherent set of moral values. Alternatively, social inclusion with peers may include such advantages as providing resources for development, participation in different activities and exposure to alternative values and perspectives. As well as this, available research findings indicate that peer interactions have unique
features which facilitate social learning and provide children with social experiences which are constrained in different ways from child-adult interactions (Gottlieb & Leyser, 1981).

It is generally expected that the social experiences of children with disabilities which derive from integration will result in increased frequency and complexity of verbalizations, higher cognitive and social levels of play (as a result of modelling and peer reinforcement), and more frequent positive social interactions with nondisabled children - all important developmental consequences for young children with special needs. Such peer group experiences seem likely to promote the social and communicative development of young children with disabilities, and the experiences may in turn also influence their cognitive development.

In general, while settings containing both children with disabilities and nondisabled children, (usually referred to as "integrated" or "mainstreamed" settings), would probably be regarded as providing a more socially responsive learning environment than would the traditional segregated settings (special class or special school), it is possible that difficulties in establishing friendships may occur for young children with special needs within these settings. As Strain and Kohler (1988) have observed, the ability to get along with peers, to make friends, to learn from others, and to cooperate, are all hallmarks of socially-skilled children, but conversely the
absence of these skills is a major defining characteristic of the social context of young children with disabilities.

The Social Context

Roopnarine and Field (1984) have noted that in general children with friends are more socially interactive with their peers (i.e., that they show a higher rate of interactions per unit of time). It has also been found that the interactions of socially accepted children are reciprocated with more positive, reinforcing and neutral behaviours (Masters & Furman, 1981), that more fantasy play is participated in, and that the social interactions generated are of greatest complexity (Howes, 1983). While friendships are likely to serve similar functions for young children with disabilities, there is reason to believe that they are less likely to establish such relationships in integrated settings unless they receive direct encouragement to do so. A number of authors (e.g., Gresham, 1986) have argued that over time, a social-skills deficit and an absence of support for social-skill development can produce emotional responses in children which are as limiting as the primary disability itself. If this is indeed the case, potentially positive social benefits which might otherwise accrue from an integrated setting may be negated - not simply unused. When children do not seek out others as play companions, neglect to use them as resources for play, fail to show affection, or make no efforts to
influence other children’s behaviour, they will be unlikely to either establish or sustain peer-related social interactions (Guralnick & Groom, 1988a, 1988b).

It is frequently assumed that the level of language development of children with special needs is likely to be a major barrier to their involvement in productive social play. Guralnick and Groom (1985), however, have shown that this is not necessarily the case. In their study, an attempt was made to determine the correlates of peer-related social competence of developmentally delayed preschool children. It was found that although the children’s cognitive levels correlated with the extent of their social play, and although their language and cognitive development were also highly related to each other, the level of their language development did not correlate significantly with any of the measures of social participation used.

In general, the available research evidence indicates that children with special needs often lack the skills to participate in interactional play settings (e.g., Allen, 1980; Burstein, 1986; Gresham, 1982; Herink & Lee, 1985; Madden & Slavin, 1983), and this problem is likely to be exacerbated in integrated settings because of the developmental differences between the children with disabilities and other children. It is obvious that there is nothing magical about children with special needs being placed in the regular classroom and Baxter (1988) has pointed out that "osmosis" alone does not maximize results
and that open settings do not necessarily guarantee higher levels of social interaction. Indeed, if such children's needs are not being met in the regular classroom the placement therein could, conversely, turn out to be highly detrimental.

Effects on Nondisabled Peers

An assumption which has generally underpinned integration/mainstreaming special educational policies is that integration is also beneficial to nondisabled children in the setting. Since nondisabled children are, in all likelihood, future service-providers and parents, shared educational experience with children with disabilities has been considered to be highly desirable for these reasons alone. To date, relatively few studies have been conducted in which the effect of integration policies and programmes on nondisabled children has been directly assessed. Those findings which are available have generally indicated that integration is not detrimental to nondisabled children. A study by Odom, Deklyen and Jenkins (1984) is illustrative in this regard. In that study, tests of intelligence, language, academic and social skills were administered to preschool children in an integrated setting and to a comparable group in a setting which contained no identified children with special needs. No developmental differences between groups of nondisabled children were found, thus suggesting that in these developmental areas at least, the
integration of peers with disabilities had not been detrimental to the nondisabled children. Integration may, indeed, also have positive outcomes. For example, in a recent study in New Zealand (Townsend, Wilton & Vakilirdad, 1993) it was found that nondisabled children developed more positive perceptions about children with intellectual disabilities and were more likely to engage in social activities with them, in schools where integration policies were pursued more vigorously. However, it needs to be noted that these studies of intact groups do not provide good controls for internal validity threats, and that design problems of this type are characteristic of studies in this area - where ethical problems associated with random assignment are characteristically encountered.

Sasso and Rude (1987) evaluated the social effects on nondisabled children of a peer initiation programme in an integrated preschool. Using a peer-nomination sociometric index the degree of social status change with both high- and low-status nondisabled children was assessed. The results indicated that students who participated in this type of integration programme gained in social status, and that this technique served both children with disabilities and nondisabled children positively.

Assumptions Underpinning Inclusion

The trend towards integration in Australian and New Zealand special education in recent years appears to have derived from two related assumptions. Firstly, that
integration will increase the probability of social interactions between nondisabled children and those with special needs, and secondly, that the social acceptance (by other children) of the children with special needs will be enhanced by their placement in an integrated educational setting. Both of these assumptions have been seriously challenged by Gresham (1982). This author has noted that the policy of mainstreaming (in the United States of America) is based in part upon three assumptions - each of which he claims is faulty. Firstly, that physical placement of children with disabilities in regular classrooms will result in an increase in social interaction between those children and nondisabled children; secondly, that placement of children with disabilities in regular classrooms will result in increased social acceptance of those children by their nondisabled peers; and thirdly, that children with disabilities who are mainstreamed will model or imitate the behaviour of their nondisabled peers as a result of increased exposure.

While a considerable body of research does provide support for the policy of integrating preschool children with disabilities (e.g., Guralnick, 1976; Ispa, 1981; Peterson & Haralick, 1977; Sebba, 1983), a number of studies have indicated that interaction between children with disabilities and nondisabled children is unlikely to occur unless settings are carefully structured to encourage such interaction (e.g., Devoney, Guralnick, &
Rubin, 1974; Dunlop, Stoneman, & Cantrell, 1980). Gresham (1982) maintained that mainstreaming efforts have, for the most part, been misguided because children with disabilities have been placed in regular classrooms without the requisite social skills which are crucial to achieve peer-acceptance. Moreover, once placed in the regular setting, no specific provisions have generally been made to foster the social skills of the children with disabilities - a policy which is likely to result in the increased social isolation of those children and in the transformation of a potentially responsive learning environment into a more restrictive one.

In brief, it is important to realize that a simple contact experience does not automatically result in the acceptance of children with disabilities by their peers (Allport, 1954). In reconsidering the "contact hypothesis" we must conclude that many variables have been found to exert an influence on the social acceptance of preschool children with disabilities. It is also important to realize that the extent to which these variables are accommodated will also ultimately determine the effectiveness (or otherwise) of the integrated preschool as an educational setting for children with disabilities and their peers.
The Integrated Setting

In support of the realization of the need for specific interventions to support the social integration of young children with special needs, a burgeoning body of literature is emerging which documents strategies to promote social acceptance through integration - with varying levels of effectiveness. These techniques include peer-tutoring (Donder & Nietupski, 1981; Kohl, Moses, & Strettner-Eaton, 1983; Sasso, Mitchell, & Struthers, 1986); programmes designed to provide cognitive information about the disabilities of children with special needs (Sasso, Simpson, & Novak, 1985); "paired children" programmes (Voeltz, 1982); attitude-change programmes (Voeltz, 1980; Sasso, et al., 1985); nondisabled peer interventions, such as those which teach nondisabled children to initiate social interactions with peers with disabilities; and those focussing on careful selection of social-play activities and related games and materials (Dunlop, Stoneman, & Cantrell, 1980; Quilitch & Risley, 1973).

Jenkins, Speltz, and Odom (1985) have identified four types (models) of involvement by nondisabled children in the education of peers with disabilities in integrated preschools. The first is a simple "proximity model" in which no special programmes or strategies are in operation. The second is what Jenkins et al. (1985) call a "cooperative model", where children with and without
disabilities are given tasks that require positive interdependent interactions to reach mutual goals - as opposed to competitive or individualistically-structured goals (Johnson & Johnson, 1986). A third strategy is the systematic "imitation model", in which nondisabled children are prompted to demonstrate specific behaviours in an organized way to children with disabilities (e.g., Apolloni & Cooke, 1978). The fourth is a "confederate model: where nondisabled children are trained and reinforced for performing specific behaviours such as peer-tutoring, initiating play, etc.;

**Structuring the Context**

The contact hypothesis, (Allport, 1954), upon which the policy of inclusion appears to have been substantially predicated, is consistent with a policy of providing increased opportunities for children with special needs to interact with nondisabled peers. Several factors indicate the need to continue efforts to develop intervention strategies to improve the social status of young children with special needs. For example, although it is widely believed that there is a high potential for social interactions with nondisabled peers in an integrated setting, many studies indicate that "quality" contact will not occur without some structuring of activities and/or changes of behaviour within that setting, (Boyd, 1991; Devoney, Guralnick, & Rubin, 1974). It is worth noting that whilst a considerable amount of research supports the
mainstreaming of young children with special needs (e.g., Allen, 1980; Jenkins, Odom, & Speltz, 1989; Sebba, 1983), other researchers have cautioned that the placement of such children into regular preschool settings requires further examination and consideration.

Cole, Mills, Dale, & Jenkins (1991) designed a study to examine the effects of integration and segregation in a special education preschool programme for children with mild to moderate disabilities. The authors suggested that previous studies had failed to focus on the relationship between children’s pretest functioning and the effect of classroom integration, and that the need for research on individual differences in reactions to integration was critical, since young children may well respond differentially to integration depending on their specific developmental characteristics. Cole et al. (1991) pointed out that a strategy of examining only group mean differences between children in integrated and segregated settings could mean that important differences in the effects of integration on different children would not be identified. Using multiple regression analyses with their data, these authors found that higher performing children gained more from integrated classes, while lower performing students tended to gain more segregated classes. This finding suggests that there is a need to examine each child’s functioning carefully to ensure that placement in a particular setting will be of most benefit.
Several problems have also become evident vis-à-vis policies which have been based on the "contact hypothesis" (as generally interpreted). Advocates of such policies usually maintain or assume that mere placement of young children with special needs in a mainstream setting will ensure increased social acceptance by normal peers. However, recent studies clearly support the need for planned and structured interventions in this area. Burstein (1986), for instance, found that environmental settings differentially affected the integration of children with disabilities. While a formally structured setting was found to facilitate the accomplishment of physical integration, it was also apparent that instructional and social integration were both limited for those children.

While overall structure per se may not necessarily facilitate the social integration of preschoolers with special needs, social interactions have been found to increase when play activities are systematically structured. A study which illustrates this finding was conducted by Devoney, Guralnick, and Rubin (1974) who examined a children's play situation which was systematically structured, using nondisabled preschool children to promote social interactions. It was found that a marked increase in the quality of play of children with disabilities occurred as a consequence of this intervention. These results indicated that there was a positive effect on the social interactions of young
children with disabilities, when activities and events in
the setting were structured in a manner designed to
promote both high-level play and positive social
interactions with peers.

Modelling

One argument advanced by those advocating inclusion
of young children with special needs within mainstream
settings, is that the children with disabilities will tend
to imitate or model the appropriate social and academic
behaviours of their nondisabled peers (rather than those
of their classmates with disabilities as is the case in
segregated settings). It seems probable, however, that
modelling is unlikely to occur simply through mere
exposure (Bandura, 1969, 1977) and several applied studies
provide support for this point (Apolloni & Cooke, 1978;
Peterson, Peterson, & Scriven, 1977; Snyder, Apolloni, &
Cooke, 1977). For modelling effects to occur, children
must attend to the relevant stimuli, retain the process
which was modelled, have the motor ability to reproduce
the modelled behaviour, and have an incentive or
motivation for performing the observed behaviour (Bandura,
1977). It is obvious that many young children with
disabilities do not have the requisite attentional, memory
and motor skills to replicate observed behaviours, and it
is also questionable whether most regular classrooms are
structured in a manner which would allow optimal
observational learning to occur.
A study by Wintre and Webster (1974) indicated that modelling play behaviours by nondisabled children was not sufficient to change the play behaviour of preschool children with special needs. However, when modelling of a more informal, dynamic and interactive type was introduced by nondisabled children, this was found to be more effective in developing the social-play behaviour of preschool children with special needs. It would appear that few children with disabilities derive beneficial modelling effects through observation only of nondisabled peer models, unless they are instructed, prompted, trained and reinforced for doing so (Gresham, 1982). Moreover, as Burstein (1986) has noted, informal settings do not necessarily promote spontaneous socialization between children with disabilities and nondisabled children, and "free-play" in itself, is unlikely to promote integration unless the teacher actively encourages it.

It would appear, therefore, that when modelling exists as an integral part of a structured learning programme, it is likely to be a useful technique for young children. Goldstein, Sprafkin, Gershaw, and Klein (1980) point out that in social-skills training programmes, four components of the process are essential: modelling (demonstrating) the desired behaviours; role playing or behavioural rehearsal; feedback (evaluation of the rehearsal or performance); and transfer of training using a variety of procedures. They point out that the last
element is simultaneously the most important and most difficult of the four, in that if the learned behaviour does not carry over to other settings, a lasting and meaningful change in behaviour targeted in the training setting is unlikely to occur. Whilst the majority of their research has been done with adolescent children, it seems likely that the principles involved in the process of social-skills training will also apply to those children of preschool age.

Peer Tutoring

Peer learning is claimed to confer unique benefits for participating peers, in that it can bolster self-esteem, enhance school achievement and foster prosocial behaviour (Damon, 1983). There is, indeed, an increasing body of evidence supporting the use of peer- or cross-age tutoring as a strategy to deal with difficult educational problems (e.g., individualization of student learning, and social integration of students with disabilities). In a meta-analysis of the efficacy of peer tutoring programmes, Cohen, Kulik, and Kulik (1982) came to the conclusion that in general a significantly positive effect for academic achievement is discernible with the strongest effects resulting from short and structured programmes, and significantly positive effects are experienced by the tutors themselves. While the results of the meta-analysis support Folio and Norman (1981) who argued that all participants in the process benefit from peer tutoring,
the question remains equivocal of whether it is the specific process of peer-tutoring or the ensuing incidental peer collaboration which occurs that enhances social integration.

Furthermore, most research on peer-tutoring is focussed on school-age children and on academic outcomes, rather than on aspects of development such as social competence. One study which did involve preschool children was that of Rose (1981), who noted an increase in associative and cooperative play between children with moderate intellectual disabilities and nondisabled children, following a peer-tutoring programme which involved discussion, training-sessions and matching of volunteers with children with disabilities for play sessions. The absence of a control group in this study, however, does preclude the identification of a causal relationship, and the possibility cannot be ruled out that the improvement in interaction could have been the result of increased contact per se rather than peer tutoring. Nevertheless, the improvement in interaction supports the widely-held belief that providing structured opportunities for young preschool children with disabilities to play and socialize alongside their peers is likely to result in more productive interactions with those peers.

Cooperative Learning

Cooperative learning procedures originated with efforts to encourage interracial interactions and were
subsequently developed to foster social acceptance among students. The procedures, in general, are designed around classroom activities which require cooperative endeavour by students to attain a common goal. While cooperative learning may take a variety of forms (e.g., group projects, jigsaw-groups, peer tutoring and student team learning - Margolis & Freund, 1991), there is a common factor underpinning these methods (viz., that of interdependence or mutual dependence), in that the goals are structured so that individual success rests upon the group's success. Obviously, the key to success in this respect is designing participation within groups so that each student is able to contribute in an effective manner.

Most cooperative learning studies have focussed on academic performance of students, and Slavin (1987) has reported that in 33 out of 38 studies significantly greater achievement was found in cooperatively-taught classes. The finding that cooperative learning also promotes interpersonal and small-group skills has also been documented in several studies (e.g., Johnson & Johnson, 1986) and in a meta-analytic review of many studies, Johnson, Maruyama, Johnson, Nelson, and Skon (1981) concluded that cooperative learning procedures positively influence social behaviour. Successful social relationships are rightly considered to be critical for the successful integration of students with disabilities - the impact being seen in their self-esteem as well as in
their ability to interact with others outside of an academic environment.

Cooperative group programmes are believed to be influential in enhancing the social acceptance of group members but as Madden and Slavin (1983) noted from a study with third, fourth and fifth graders, the number of friendships of the children with disabilities was not increased even though social acceptance improved overall. Lloyd, Crowley, Kohler, and Strain (1988) have also pointed out that there is little information on the collateral effects of cooperative-learning procedures, or on the impact on social performance per se. At the same time, as Slavin (1983) has noted, "the preponderance of the evidence including the evidence from race relations and mainstreaming studies ... support(s) the conclusion that cooperative learning improves positive relations between students" (p. 117). It can thus be seen that there are substantial indications from research studies of the value of cooperative learning in alleviating problems of social rejection.

The importance of intervening to create specific situations in which cooperative behaviour can take place has been demonstrated in a series of studies by Johnson and Johnson (1980, 1981, 1983, 1986). These authors have suggested that opportunities for interaction should be structured, so that all members of the group can succeed in a task, thus promoting mutual liking between children rather than each child acting in an individualistic or
competitive manner. It has also been found that cooperative conditions yielded greater interpersonal attraction between students with disabilities and nondisabled students than did competitive conditions (Armstrong, Johnson, & Balow, 1981). This study also revealed that more verbal interactions occurred between students with disabilities and nondisabled students in the cooperative situation, and that these interactions were more likely to extend to free-time, as well as more likely to be perceived positively by the participants. Similar results have been found in a series of studies conducted in New Zealand, covering a range of ages and conditions of disability (Townsend, Boyd, & Wilton, 1992).

A further study by Johnson and Johnson (1983) also supports the contention that cooperative learning can have positive social effects for children with disabilities in mainstreamed settings. It was found that although the overall self-esteem of students with disabilities was lower than that of their nondisabled peers, the self-esteem of all students was enhanced in the cooperative condition. Moreover, a meta-analysis of 26 studies (Johnson & Johnson, 1986) confirmed the proposition that cooperative learning experiences promote greater interpersonal attraction between peers with disabilities and nondisabled peers than either competitive or individualistic experiences (Johnson & Johnson, 1986).

Techniques based on cooperative-learning principles as formulated by Johnson and Johnson (1983) have been
found to reduce rejection of academically-disabled students in a cooperative mathematics learning programme, - an effect which was not evident in a focussed instruction programme (Madden & Slavin, 1983). It was noted, however, that sociometric ratings demonstrated that the use of cooperative learning techniques did not increase the choice of students with disabilities as friends or desired workmates.

It seems possible that cooperative-learning principles could be applied to play settings and thus might be useful in providing a mechanism through which small-group play could provide maximal opportunities for positive social interactions. In this connection, Hill (1989) has described the successful use of cooperative games in preschools as a medium for promoting social competence. Thus far, however, cooperative learning has not been examined as a strategy for facilitating the integration of preschool children with disabilities. There are several possible reasons for the noticeable dearth of research in the area. Firstly, there has understandably been a prior focus on school-age children and thus on academic learning outcomes, - probably because mainstreaming policy was first put into practice in regular school settings (where attendance is compulsory). A further reason could be that it has been widely believed on the basis of research and writing by influential theorists such as Piaget (1962) and Parten (1932), that most preschool children are not actually capable of
engaging in genuinely cooperative activities or of embracing the social perspectives of others, and thus of benefitting from cooperative learning strategies. It needs to be noted that New Zealand has a well-developed preschool system, of which the most-used service is that of free kindergartens. Activities which would appear to be cooperative in nature are incorporated into the daily programme in most of these settings. While these activities are not highly structured or focussed specifically on the integration of preschool children with disabilities, it seems likely that these daily events would provide a context in which social learning opportunities for young children with disabilities could be enhanced - through the incorporation of cooperative learning strategies.

Social Skills Coaching

A sizeable body of research indicates that social skill acquisition is a prerequisite for increased social acceptance (Gresham, 1982). One alternative for facilitating the acquisition of more mature social behaviour is direct instruction. In this connection, Asher, Oden, and Gottman (1977) have suggested that teachers and peers should coach social skills in order to increase peer acceptance. The three components which they included in a description of coaching technique included: providing a standard of behaviour, providing opportunities
to practise the skill, and providing opportunities for feedback and improved performance.

Direct instruction seems likely to be a useful adjunct to incidental learning, because many young children with special educational needs are, in fact, unaware of the need to improve their skill levels (Gresham, 1986). A combination of modelling, coaching and reinforcement techniques used to train social skills in a natural setting thus seems more likely to be effective in these circumstances.

It is worth noting, however, that although the possession of appropriate social skills appears to be a prerequisite for peer acceptance, it is unlikely that simply possessing such skills would be sufficient to achieve peer-acceptance or to maintain social relationships with other children. Likewise, generalization of social skills across settings and over time following training has proved difficult to achieve with preschool children with disabilities (Hundert & Houghton, 1992). Accordingly, it seems probable that further strategies will be required to complement social-skill training in order to enhance peer acceptance.
The Present Study

On the basis of research to date on the integration of children with disabilities, it has become clear that it is important to avoid what Gresham (1982) describes as "misguided mainstreaming" - attempts to place children with disabilities into regular classrooms without the requisite social skills crucial for their acceptance by nondisabled peers. It also seems clear that it is critical that young children with disabilities have opportunities in integrated settings which by their nature are structured to allow these children to develop and practise the social skills which will enable them to interact successfully with their nondisabled age-mates. When the goal for young children is "true social integration" rather than mere placement (Gresham, 1984), enhanced social acceptance must be an integral component of this goal. In order to minimize the above-noted problems of transfer and generalization, it would appear that social-skills training should be undertaken (as far as possible), in situ - i.e., during naturally-occurring play and social interactions in the preschool environment. An intervention of this nature could thus be seen to embody two components of the model of Jenkins et al. (as discussed earlier), since the use of structured cooperative play with peers contains both cooperative and social-imitation components.
In the present study the effectiveness of a strategy not previously used with children of preschool age - that of structured cooperative learning was investigated. A treatment condition consisting of carefully constructed play situations based on the Jigsaw cooperative learning principle (Johnson & Johnson, 1981) was conducted in integrated preschools. The treatment was specifically designed with the purpose of enhancing the social integration of children with disabilities enrolled in the preschools. The structured cooperative-learning programme incorporated group-based contingencies and also included a social-skills training programme. The trained social skills were then practised within a series of structured activities designed to incorporate cooperative-learning principles.

The effects of this treatment were compared with those of a second treatment condition which involved the use of only the social-skills training component, conducted within the usual preschool programme. The social-skills training in both treatment conditions involved specific teaching of social skills (using incidental teaching, modelling, positive reinforcement and behavioural shaping techniques). In the social-skills treatment condition the trained skills were then practised in social learning situations which occurred naturally (but were not specifically structured for this purpose) during the normal preschool programme. In brief, in the
cooperative learning experiences would enhance the effectiveness of social-skills training in increasing the social acceptance of preschool children with disabilities.
CHAPTER 3

Method

Subjects

Data for the study were gathered in six (of the eight) public kindergartens (preschools) in metropolitan Auckland which contained designated special needs groups. The additional two kindergartens which contained special needs groups were available for study, but were excluded from consideration because they were specialized units for children with hearing and visual disabilities and it was felt that their unique nature would preclude direct comparison with the other characteristic groups which had children with varying treatment conditions. Each special needs group contained a minimum of three and a maximum of five children, and a special education teacher attached to each group who worked specifically with the children with special needs.

A total of 21 children aged between 3:8 years and 5:3 years took part in, and served as subjects in the study. Each subject was selected on the basis of their attendance at one of six special needs groups attached to public kindergartens in metropolitan Auckland. All the children had been identified as having special educational needs by educational psychologists from the Special Education Service. The children experienced a wide range of
disabilities, including language and developmental delay, intellectual disability, Down Syndrome, brain tumour, spina bifida, cerebral palsy and visual and hearing impairments. A summary of the children's gender, age and disabilities (within groups) is presented in Table 1, p. 87.

Prior to the study a home interview was conducted by the researcher during which the parents' informed consent was sought from the parents in each of the families who had children with special needs. All parents visited consented to their child's participation in the study. Observations were made of the subjects' interactions with all other children, adults and teachers who were present in the kindergarten settings at that time. The other children attending the kindergartens were within the 3:5 - 5:0 years age range. The length of time which the subjects had spent at kindergarten (recorded at the onset of the study) ranged from four to 11 months, with a mean attendance of 6.0 months for the children in the combined group, 6.7 for the children in the social-skills group, and 6.8 for the children in the control group.

There were three treatment conditions - experimental social-skills training plus cooperative learning (combined programme), experimental social-skills training only, and a control condition (regular preschool programmes). Each of the six kindergartens was assigned at random to one of the three treatment conditions, so that two kindergartens were allocated to each condition. The special education
TABLE 1

Descriptive Data for Children with Disabilities in Experimental and Control Groups

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sex</th>
<th>Age#</th>
<th>Nature of Disability</th>
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<td>Combined Group</td>
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<tr>
<td>1</td>
<td>M</td>
<td>3:8</td>
<td>Intellectual Disability</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>4:7</td>
<td>Spina Bifida</td>
</tr>
<tr>
<td>3</td>
<td>M</td>
<td>3:11</td>
<td>Hearing Impairment</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>4:8</td>
<td>Language Delay</td>
</tr>
<tr>
<td>5</td>
<td>M</td>
<td>4:5</td>
<td>Cerebral Palsy</td>
</tr>
<tr>
<td>6</td>
<td>M</td>
<td>4:2</td>
<td>Developmental Delay</td>
</tr>
<tr>
<td>7</td>
<td>F</td>
<td>4:6</td>
<td>Developmental Delay</td>
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Social-Skills Group

<table>
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<th>Sex</th>
<th>Age#</th>
<th>Nature of Disability</th>
</tr>
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<td>8</td>
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<td>4:3</td>
<td>Language Delay</td>
</tr>
<tr>
<td>9</td>
<td>F</td>
<td>4:0</td>
<td>Down Syndrome</td>
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<tr>
<td>10</td>
<td>F</td>
<td>4:6</td>
<td>Spina Bifida</td>
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<tr>
<td>*11</td>
<td>M</td>
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</tr>
<tr>
<td>12</td>
<td>F</td>
<td>4:9</td>
<td>Cerebral Palsy</td>
</tr>
<tr>
<td>13</td>
<td>M</td>
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<td>14</td>
<td>F</td>
<td>4:10</td>
<td>Developmental Delay</td>
</tr>
<tr>
<td>15</td>
<td>F</td>
<td>4:2</td>
<td>Developmental Delay</td>
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Control Group

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<td>17</td>
<td>M</td>
<td>4:4</td>
<td>Brain Tumour</td>
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<td>18</td>
<td>F</td>
<td>4:3</td>
<td>Developmental Delay</td>
</tr>
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<td>19</td>
<td>F</td>
<td>3:10</td>
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<td>20</td>
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<td>Developmental Delay</td>
</tr>
<tr>
<td>21</td>
<td>F</td>
<td>4:3</td>
<td>Spina Bifida</td>
</tr>
</tbody>
</table>

# Age given is in years:months at the onset of the study
* This child was out of New Zealand for posttest measures
teachers had agreed to accept overall responsibility for the administration of the experimental programmes - including provision of social-skills training for four of the groups who received such training. In two of the kindergartens the children with disabilities received cooperative learning programmes as well as social-skills training (the combined programme). These programmes were implemented by all of the teachers in each kindergarten - including the special education teacher. The children with disabilities in the control condition continued to receive their regular kindergarten programme during the course of the study but were visited for pretest and posttest sessions.

Pilot Study

The feasibility of conducting social-skills training within the context of cooperative play with preschool children was examined via a pilot study in the year prior to the present study. Three regular kindergartens were included in this initial study but none of the children in the pilot study sample were included in the final study. Each kindergarten had a minimum of three 4-year old children enrolled whose special educational needs had been identified by educational psychologists. In the pilot study one kindergarten conducted a social-skills training programme, a second the combined programme while the third acted as a control group.
Prior to implementing these 4-week programmes, several meetings were held between the primary researcher and teachers from the kindergartens involved. The aims of the project were discussed and a list was compiled of the social skills which were regarded by the teachers as being most helpful for children with special needs in their interactions with other children. A series of cooperative play tasks on two levels was also developed during these meetings.

A sociometric instrument was devised which originally involved each kindergarten child nominating the three peers they would most like to invite to their birthday party, and also nominating the three peers they would least like to have at their party. However, it should be noted that subsequently this procedure was not used in the study itself. After experiencing some discomfort during the pilot study as a result of asking young children for negative peer nominations (a measure of social rejection), it was decided to abandon this procedure. Accordingly, a peer-rating system was adopted for the final study. Although peer rating scales are more difficult to administer with younger children, they have been shown to provide more reliable sociometric data with this age-group than other measures (Asher, et al, 1979; Ray, 1985).

An attempt was made to involve the parents of the children with special needs by requesting them to continue social-skills training in the home environment for the duration of the pilot study, and to undertake social
skills assessments. In several cases the data on social-skills competence from several of the parents was found to be unreliable and/or unavailable - probably because the high levels of stress being experienced by these parents tended to minimize the amount of energy they had available for this task.

The results from the pilot study, (summarized in Table 2) indicated that, in general, social-skills training - whether undertaken alone or combined with cooperative play - yielded increases in positive nominations on the sociometric measure for the children with disabilities. Interestingly, only the combined programme resulted in a decrease in negative peer nominations.

The use of cooperative play and social-skills training programmes seemed, therefore, to be feasible in preschool classrooms, and the results of the pilot study also indicated that such programmes are likely to be accepted and enjoyed by both teachers and children in preschool settings. In addition, there was an indication of successful outcomes for both programmes in terms of increased social acceptance for preschool children with disabilities in integrated settings. The most significant finding, however, was the suggestion that the elements of cooperative play provided beneficial effects which did not occur when only a social-skills training programme was used. A major investigation of the possible unique advantages of cooperative play as an adjunct of social-
skills training with young children in integrated settings thus seemed worthwhile.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
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<tr>
<td>Combined</td>
<td>1.67</td>
<td>2.00</td>
<td>5.67</td>
<td>4.33</td>
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<td>Social Skills</td>
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<td>2.00</td>
<td>2.33</td>
<td>3.00</td>
</tr>
<tr>
<td>Control</td>
<td>2.00</td>
<td>1.33</td>
<td>1.00</td>
<td>1.33</td>
</tr>
</tbody>
</table>
Instruments

Social Acceptance

Sociometric Rating Scale. A sociometric rating-scale technique using photographs of the children was used to assess the extent of peer social-acceptance of the special needs subjects. This technique has been found to yield a more reliable and thus more useful index of sociometric status for preschool populations than those derived from positive and negative peer nomination scores (Asher, Singleton, Tinsley, & Hymel, 1979). All children present in the kindergarten were shown photographs of their peers who were enrolled for the same sessions, and they were asked to "post" each photograph into a posting box with three designated slots representing how much they liked to play with that peer (Appendix). These photographs were randomly ordered for each child (to avoid any systematic bias) and children were told that each of the photographs was of a child at their particular kindergarten. Each child was then asked to indicate to the observer how much s/he liked playing with that particular peer - by posting the photograph into the "happy face" slot if they liked playing with him/her a lot, into the "neutral face" slot if they sometimes liked playing with the child, and into the "sad face" slot if they didn't like playing with that child at all. The observer pointed to the slot as s/he explained the instructions. A photograph posted in the "happy face" slot was subsequently termed a positive rating; one posted in the "neutral face" slot was termed a
neutral rating, and the placing of a photograph in the "sad face" slot was termed a negative rating. This information was recorded by the observers on a sociometric recording form which contained one column to record the names of the children making the ratings and columns for each of the special needs group subjects (Appendix).

The children who attended kindergarten sessions during the pretest and posttest sessions completed sociometric ratings for all children on their kindergarten rolls. However, only data for children with disabilities (i.e., the subjects in the study) were analyzed and ratings completed by the subjects themselves were also not used since the objective was to assess the level of social acceptance of children with disabilities, recorded by nondisabled children.

Each subject received a rating (positive, neutral or negative) from the nondisabled children in the kindergarten and 20 of these ratings were randomly selected, then averaged, to find a mean rating for each child (with special needs) in each category, i.e. positive, negative and neutral ratings. Subsequent to this, the individual mean social acceptance ratings (in each category) were combined for the subjects in each group (combined, social-skills and control) to provide group means. These group data which represent the average number of ratings received by all subjects in each treatment condition are detailed in Table 3, p. 114.
A total of 40 ratings was gathered for each subject in each condition (combined, social-skills and control) - 20 during pretest data collection, then 20 during posttest data collection. While every effort was made to ensure that the children whose ratings were selected during the pretest were available to repeat the ratings during the posttest session, because of factors such as illness, families moving away from the area, or children's transfer to other preschool centres, a small number of the children who had supplied pretest scores were unavailable during posttest sessions. In these cases, other children present at the particular kindergarten session were randomly selected to substitute for the original raters. The number of children who completed both pre- and posttest ratings for each condition were as follows:

**Combined Group**: Kindergarten 1 18/20, Kindergarten 2 16/20; **Social-Skills Group**: Kindergarten 3 17/20, Kindergarten 4 18/20; **Control Group**: Kindergarten 5 17/20, and Kindergarten 6 16/20.

**Behaviour observation measures.** The scale used to record observations of play and social behaviour was derived from an instrument devised by Ispa (1981) who was concerned with the social interactions between children with disabilities and their nondisabled peers in integrated preschools. The scale was further refined during the pilot-study previously discussed. The data collected included several preselected behaviours, the
format having been developed on the basis of Ispa's (1981)

scale which was modified during the pilot-study trials.

The pre- and posttest measures were each collected

over a 2-week period consisting of six morning

kindergarten sessions (each of three hours' duration).

Two observers conducted observations in each kindergarten

with each observer covering all subjects (randomly) to

reduce the likelihood of observer-bias. The researcher

was also present at a minimum of 15 per cent of the

observations in order to assess inter-observer

reliability.

During both pre- and posttest sessions, the children

were each observed for 30 minutes (i.e., 60 minutes in

total during the study), the observations in each session

consisting of 15 separate, randomly ordered 2-minute

intervals. Within the 2-minute duration of each interval,

the observers completed six, 20-second, consecutive

observations of each child - in each case observing and

recording behaviours during the 20 seconds as outlined

below. After the pilot-study was completed, a decision

was made to link the six 20-second observations into a 2-

minute interval in order to better capture the flow of

conversations which were occurring, and thus to describe

more accurately the nature of social interactions which

were taking place.

The first behaviour recorded during the observation-

interval was a rating of the cognitive and social levels

of play (if play activity took place during that
interval). To describe the cognitive level of play, four categories were employed, using Smilansky's (1968) definition. Play was rated by observers (who circled the preprinted level which was applicable) as either functional, constructive, sociodramatic or games with rules. These categories were mutually exclusive and were scored 1, 2, 3 or 4 respectively, to represent ascending levels of cognitive complexity.

Similarly, observers also circled the social level of play which was occurring in that interval, by choosing one of the following categories - unoccupied, solitary, parallel or group play. These categories were based on Parten's (1932) landmark study, in which she described six levels of play in terms of social interaction - unoccupied, solitary, onlooker, parallel, associative and co-operative. As a result of pilot-study trials and replications of Parten's study (e.g., Rubin et al, 1976) which showed that it is very difficult to reliably separate associative and co-operative play, it was decided to collapse these categories into the four which were used. During the pilot study the observers had noted that the onlooker/parallel categories frequently overlapped, and also that the group play category seemed appropriate to describe play with an interactive component (definitions of cognitive and social play categories are included in the Appendix). The above-mentioned four social play categories (i.e., unoccupied, solitary, parallel and group) were mutually exclusive (as was the
case for cognitive play measures), and were scored respectively 1, 2, 3 or 4 to represent increasing degrees of interactive play.

Children's play-rating scores were totalled individually for both cognitive and social categories over the 90 pretest observation intervals of 20-second length. Since play behaviour occurred at a highly variable rate across subjects during the observation intervals (range = 33% - 71% of all intervals), and a description of the quality of play rather than frequency was the primary objective, the decision was made to select randomly 20 observation intervals where play was occurring in order to calculate the cognitive and social play levels for each child. Group data were then collated to provide mean cognitive and social play ratings for each group (i.e., combined, social-skills and control). This procedure was repeated for the posttest measures.

When play behaviour was not occurring, observers circled one of the categories of other activities provided on the observation form (e.g., Transitory - child moving between activities; Reading - without an adult; Adult-directed activities - games, songs etc; Conversation; or Inappropriate). A further category was provided where behaviours other than those listed could be noted but this was rarely required. Since both Adult-directed activities and Conversations could be judged to be socially interactive in nature, these data were analysed separately. This was done by totalling the number of
intervals during which Adult-directed or Conversational behaviours were observed for each child (maximum = 90 intervals). Group data (i.e., combined, social-skills and control) were then calculated and the mean frequencies of occurrence of these behaviours during observations were determined.

The observers also recorded any social interactions which took place during the remainder of each 20-second observation interval. On the basis of pilot-study observations, pre-selected categories of behaviours (either exhibited by subjects or received by them from peers) were designated for observers to check off during each interval (see Social Interaction Record, Appendix). Whereas the categories of Activities were regarded as mutually exclusive, these interaction behaviours could be scored more than once during each interval (provided they occurred separately) and several discrete behaviours could be scored during a single interval.

The behaviours listed were divided into those which were considered to be Positive and those which were regarded as Negative in nature. Behaviours constituting Positive Interactions were those defined as being expressions of neutrality or friendliness, likely to allow social interchange without hostility (e.g., receiving or gaining attention, imitating peers, affection, attention, laughter etc.). Negative behaviours were defined as those likely to be aversive in nature and thus not likely to constitute successful social interactions (e.g., crying,
abuse, teasing, rejection etc.). Other behaviours which were unlisted were able to be added by observers during observations when necessary. In all cases, behaviours were scored only when they were exhibited or received as part of a social interchange with a minimum of two participants.

To calculate Positive Interaction and Negative Interaction scores, entries on the Social Interaction Record were totalled (in each category) for each child, thus providing a frequency score over 90 observation intervals. Data were then collated to provide group mean scores (Combined, Social-Skills and Control) for Positive and Negative Interactions for each group.

A group of nine postgraduate special education students acted as observers in the collection of the social interaction data - each of whom underwent a series of training sessions until they reached a level of reliability of at least 80% concurrence with the researcher. During the study, the observers visited the kindergartens on six occasions in the pretest period and on six occasions in the posttest period. Inter-rater reliability data were collected (by the researcher and fellow observers) on a minimum of 15 per cent of observations. In all cases, and for all behaviour categories, inter-rater reliability indices were greater than 80 per cent.
Social-Skills Rating Scale. The California Preschool Social Competency Scale (Levine, Elzey & Lewis, 1969) was used to provide an initial assessment of the extent of each subject's social skills level. This scale was developed explicitly to be used by teachers within the context of a preschool programme and to measure children's interpersonal behaviour and assumption of social responsibility within the context of preschool settings. The scale appeared to be highly appropriate for New Zealand preschool conditions. In the administration of the scale children are rated on 30 items which are "representative samples of the critical behaviours in the preschool child's social functioning" (Levine, Elzey & Lewis, 1969, p. 4), e.g., response to routine, response to the unfamiliar, following instructions, making explanations, sharing, helping others, initiating activities, giving direction to activities, reaction to frustration and accepting limits.

Each item contains four descriptive statements, representing varying degrees of competency and each item is a Guttman scale (i.e., the child is assumed to be able to perform at all the levels preceding the level at which s/he is rated). Each child's total social competency raw score is the sum of all the level ratings for the 30 items, thus the range of possible scores for each child is from 30 to 120. A child scoring 30 would be rated as performing at the lowest level of competence for each of the 30 items and conversely a child scoring 120 would be
rated as performing at the highest level of competence on all items.

In the present study, the observations by teachers of actual performance constituted the ratings (which are expressed in behavioural terms) and for each child with special needs acting as a subject, the special education teacher completed the scale twice - once during the pretest period, and again during the posttest period. The scales took approximately 15 minutes to complete, and in several cases the teachers reported that in completing the scale they had been sensitized to the particular areas requiring social-skills training for their children. Where necessary, information was also sought from the parents of the children in order to establish the skill level prevailing at the time. The completed scales were collected by the researcher at the end of each 2-week period (pre- and posttest) and were used as the basis of discussion when decisions were made regarding which particular social skills were to be trained (for children in the combined and social-skills groups).

The scale had been developed by professionals involved in early childhood education, and the manual reports reliability coefficients ranging from 0.76 to 0.86 from three studies using independent observers. Internal consistency reliability coefficients ranged from 0.90 to 0.98 (after correction via the Spearman-Brown formula), and acceptable item-total correlations are also reported.
The scale has been used extensively in the United States over the past 20 years (e.g., in the Head Start early intervention programme).

**Experimental Programmes**

**Social-Skills Training Programme.** Social skills were operationally defined in the present study as those which would help the child with disabilities to interact more successfully with other kindergarten children. The social-skills training programme involved the teaching of effective responses within given situations (by the special needs group teacher), in an attempt to maximize the production, maintenance or enhancement of positive effects for the children with disabilities during social interaction. Skills training included the teaching of such responses as sharing toys with peers, greeting others, thanking others, requesting access to groups or materials, gaining entry to play groups, establishing and maintaining conversations, competing appropriately for resources and dealing with personal disagreements and unprovoked aggression from peers. A typical session would consist of the choice of a particular skill by the special education teacher (based on current observation of behaviour in the preschool setting); withdrawal to a resource room or use of the classroom to model and coach that skill (using either the teacher or a peer for
modelling); creating the opportunity for practice of that skill with peers (or using incidental learning opportunities); providing feedback and, if necessary, further modelling to refine the skill. The special education teachers attempted to go through this process with each child (with special needs) at least once during each preschool session. The completion of this task was subsequently noted on a wall-chart by the special education teacher.

Each child was assessed initially on social-skills competence by the special education teacher, using the California Preschool Social Competency scale (Levine, Elzey, & Lewis, 1969). On the basis of this assessment of the child’s present level of functioning, up to five social skills were selected for that child’s programme of coaching (that is, different children were coached in different social skills). Techniques used by teachers for fostering social skills on an individual basis were: incidental teaching, modelling, creating social-learning situations to ensure that the child had opportunities for practising selected social skills, using praise and other forms of positive reinforcement, and shaping appropriate responses. Children were retested at the conclusion of the programme, using the same procedure as for initial assessment.
Combined Programme (Social-Skills Training and Structured Play based on Cooperative Learning Principles). This treatment condition was a combination of social-skills training (as outlined above) and a structured cooperative play programme. The present study was concerned with the possibility that cooperative learning could enhance the effectiveness of social-skills training. Accordingly, the cooperative play treatment was not designed to be totally separate from social-skills training but instead was deliberately combined with social-skills training as far as possible - so that the practice of acquired social skills could occur while the children with disabilities were engaged in cooperative play activities with other children.

Cooperative play activities, as operationally defined in the present study, were a series of carefully constructed play situations - each of which required a task or activity to be completed by all members of the play group together. During these activities, the children were encouraged to help and share with one another but were also ascribed roles and allocated defined functions within the group. Training in cooperative play involved peer-peer introductions, teacher and peer modelling, shaping of appropriate behaviours, and positive reinforcement for the group from peers and adults.

Tasks and activities designated as cooperative play were carefully selected to reflect the particular interests and competencies of the children with
disabilities in each group. Two levels of each task were outlined by teachers (Level 1 being a simpler version of the task and Level 2 being a more complex version for more able children). These tasks were assigned by teachers according to each subject’s concentration span, language and cognitive abilities. Research by Dunlop, Stoneman and Cantrell (1980) had indicated that several types of activities can be expected to foster mixed-group play, and on this basis, the cooperative play tasks were designed to be carried out during water-play, sand-play, family corner, block-building, collage/dough, trucks and cars, and music activities.

A typical session would consist of a choice of activity (joint decision shared by all preschool teachers) based on the list of suggested activities supplied and the teachers’ knowledge of each individual child’s particular interests and competencies. The following elements were also present: choice of peers to form the small group involved; allocation of roles to particular children (based on capabilities and known interests); coaching of the child with special needs on his/her role in the project; facilitating the initiation of the project, and giving feedback to the child with special needs where necessary (and/or other peers if required). Following the introduction of each task the facilitators withdrew as soon as possible so that the children could effectively complete the task on their own as a group. The structure was based on the jigsaw principle (Margolис & Freund,
1991), and the principles of cooperative learning particularly emphasized were those of social-skills training, mutual positive interdependence and the setting of group goals (Johnson & Johnson, 1983).

**Procedure**

All data were gathered over a 12-week period. In Week 1 observers visited the six kindergartens with the primary researcher to familiarize themselves with the environment, identify the children to be observed, and meet the teaching staff. During this week, photographs were taken of all children at the morning sessions, with all photographs being taken at a uniform focal distance and with uniform background characteristics. Where possible, parents were visited to acquaint them with the nature of the study, to gain informed consent, and to discuss any other details of the study they wished to clarify.

During Weeks 2 and 3 observers collected the pretest sociometric data. The photographs which had been taken of all the children during Week 1 were used to conduct the peer-rating survey. The children were required to assign randomly ordered photographs of their peers to one of three faces on a posting box. Sociometric ratings for the children with disabilities only were recorded. Care was
taken to ensure that each child understood the instructions and prompts were given or explanations repeated if the child appeared to be confused by the task.

Social-skills ratings of the children with special needs were undertaken by special needs group teachers during Week 2. Behavioural data during free-play activities were also collected over a 2-week period by the observers. Each child in the study was observed over this period for a total of 30 2-minute observations.

At the end of Week 2, the primary researcher and observers met formally with the teaching staff at each kindergarten. At each meeting, the details of the programme to which their kindergarten had been randomly assigned were discussed. Additional informal meetings between the teaching staff and the two observers allocated to each kindergarten were arranged where necessary on an ad hoc basis.

During Weeks 4-6, two of the kindergartens conducted a social-skills training programme. During this time, two of the remaining kindergartens carried out the combined social-skills and cooperative-play programme, while the remaining two kindergartens continued with their existing programmes. Care was taken to ensure that during the treatment phase the primary researcher and the observers were available for consultation regarding the administration of the programmes. In addition, each kindergarten was visited at least once per week at an unscheduled time to observe the programmes in action - in
an attempt to ensure that the designated programme was being followed.

Week 7 was a holiday break of one week, while during Weeks 8-10 the treatment phase continued with the primary researcher and the observers continuing to act in a consultative role, and visiting each kindergarten on a weekly basis.

In Weeks 11 and 12 post-test sociometric and behavioural data were collected (in the same manner as during the pretests in Weeks 2 and 3) and the special education teachers completed a further set of social-skills rating forms on the children.

Monitoring of treatment integrity took place in two ways: firstly, the principal researcher visited the preschool settings informally at irregular intervals over the duration of the programme. During these visits informal observations by the researcher took place as well as discussions about programme implementation, and any difficulties being experienced. A second method involved special needs group teachers keeping charts for each child on the preschool wall, detailing the skills designated to be learnt by each child, and leaving space for the teachers' initials and date to be put on the charts on completion of each task.
Dependent Variable Measures

Social Acceptance Data

Positive Ratings - the number of times photographs of each child with special needs were posted into the "happy face" slot in the posting box provided for the sociometric task. Twenty nondisabled children rated each child with special needs, from which a mean score was calculated for that child. For each child, the minimum score possible was 0 (no positive ratings from the 20 nondisabled children) and the maximum score possible was 20 (all nondisabled children giving the subject a positive rating).

Negative Ratings - the number of times photographs of each child with special needs were posted into the "sad face" in the posting box provided for the sociometric task. As for positive ratings 20 nondisabled children rated each child with special needs, from which a mean score was calculated for that child. For each child minimum and maximum scores were as for positive ratings.

Social Interaction Data

Cognitive Play Level - For each subject, the mean score over 20 observations on the cognitive play index (1 = functional play, 2 = constructive play, 3 = sociodramatic play, 4 = games with rules). Scores thus ranged from 4 (high) - indicating a sophisticated level of cognitive play to 1 (low) an indication of play which was mainly functional in nature.
Social Play Level - for each subject, the mean score over 20 observations on the social play index (1 = unoccupied, 2 = solitary, 3 = parallel, 4 = group play). Scores thus ranged from 4 (high) - indicating a high level of interactive play to 1 (low) an indication of activity which was noninteractive in nature.

Adult-directed Activities - for each child the total number of 20-second observation intervals spent in activities directed by adults which did not allow for free social engagement with peers in the setting. Each child was observed for 90, 20-second intervals. Scores thus ranged from 90 (maximum) to 0 (no participation in these activities).

Conversations - for each child the total number of 20-second observation intervals in which conversations (i.e., a minimum of two social exchanges with a peer or peers) took place. Scores thus ranged from 90 (maximum) to 0 (no conversations occurring).

Positive Interactions - for each child the total frequency of interaction behaviours during conversations which were positive in nature (i.e., those defined as likely to allow successful social interchanges). Since these interaction behaviours were checked off against predefined categories on the Social Interaction Record by observers it was possible to record several differing behaviours in the course of a conversation. Scores thus ranged from zero (no interactions which are positive in nature) upwards.
Negative Interactions - for each child the total frequency of interaction behaviours during conversations which were negative in nature (i.e., aversive in nature or not likely to constitute successful social interactions). As for positive interactions it was possible to record several differing behaviours during a conversation and scores thus ranged from zero (no negative interactions) upwards also.

Social-Skills Ratings

For each child the total score on the California Preschool Social Competency Scale as rated by their special education teacher. The scale contained 30 items each scored 1-4. Scores thus ranged from 30 (minimum) to 120 (maximum). A high score on this scale represents a high level of perceived social competence.

Data Analysis

A series of one-way (i.e., Groups - social skills vs combined vs. control) analyses of covariance were undertaken on the posttest scores - in each case using pretest scores as the covariate (Keppel, 1982). Where significant main effects were obtained, planned comparisons were undertaken between adjusted treatment group means with an alpha level of 0.05 being used for all
comparisons. The computer programme used for data analyses was the SAS PROC GLM procedure (SAS, 1985) held on disk at the University of Auckland Computer Centre.
CHAPTER 4

Results

The experimental results are presented in three subsections - firstly, the analyses of social acceptance measures, secondly, the analyses of social interaction behaviours, and thirdly, the data on social-skills ratings. An examination of pretest data revealed that on all three sets of measures the groups differed discernibly prior to the onset of the experimental programmes. Accordingly, within each section, the dependent variable measures were subjected to one way (groups) analyses of covariance. Raw pretest and posttest means and standard deviations for each of the social acceptance and social interaction dependent variable measures are presented in Table 3, while adjusted posttest means and a summary of between-groups comparisons are presented in Table 4.

Social Acceptance Data

The analysis of covariance of positive ratings yielded a significant main effect, \( F(2,17) = 17.93, p < .0001 \), and subsequent comparisons of adjusted post-test means (Table 4) revealed that the special needs children in the combined group received significantly more positive ratings than did
TABLE 3
Mean Pretest and Posttest Scores (Raw Data) for Experimental and Control Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Combined Group (N=7)</td>
</tr>
<tr>
<td></td>
<td>Pre</td>
</tr>
<tr>
<td>Social Acceptance Data</td>
<td></td>
</tr>
<tr>
<td>Positive Ratings</td>
<td>5.00</td>
</tr>
<tr>
<td>Ratings</td>
<td>(2.20)</td>
</tr>
<tr>
<td>Negative Ratings</td>
<td>9.75</td>
</tr>
<tr>
<td>Ratings</td>
<td>(2.82)</td>
</tr>
<tr>
<td>Social Interaction Data</td>
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</tr>
<tr>
<td>Cognitive Play Level</td>
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</tr>
<tr>
<td>Play Level</td>
<td>(0.46)</td>
</tr>
<tr>
<td>Social Play Level</td>
<td>2.36</td>
</tr>
<tr>
<td>Level</td>
<td>(0.42)</td>
</tr>
<tr>
<td>Adult-Directed Activities</td>
<td>5.43</td>
</tr>
<tr>
<td>Conversations</td>
<td>Post</td>
</tr>
<tr>
<td>Positive Interactions</td>
<td>7.86</td>
</tr>
<tr>
<td>Interactions</td>
<td>(7.29)</td>
</tr>
<tr>
<td>Negative Interactions</td>
<td>7.14</td>
</tr>
<tr>
<td>Interactions</td>
<td>(7.76)</td>
</tr>
<tr>
<td>Social-Skills Ratings</td>
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</tr>
<tr>
<td>Social-Skills Pre</td>
<td>55.88</td>
</tr>
<tr>
<td></td>
<td>Post</td>
</tr>
<tr>
<td></td>
<td>(23.77)</td>
</tr>
</tbody>
</table>

*Standard deviations are presented in parentheses
### Table 4

Adjusted Posttest Means and Significance of Between-Group Differences for Experimental and Control Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Combined Group (N=7)</th>
<th>Social-Skills Group (N=7)</th>
<th>Control Group (N=6)</th>
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<tr>
<td><strong>Social Acceptance Data</strong></td>
<td></td>
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<tr>
<td>Positive Ratings</td>
<td>9.02**</td>
<td>6.93*</td>
<td>2.89</td>
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<tr>
<td><strong>Social Interaction Data</strong></td>
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<td></td>
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<tr>
<td>Cognitive Play Level</td>
<td>1.87</td>
<td>1.96</td>
<td>1.47</td>
</tr>
<tr>
<td>Social Play Level</td>
<td>4.11*</td>
<td>3.72*</td>
<td>2.67</td>
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<tr>
<td>Adult-Directed Activity</td>
<td>6.01</td>
<td>8.09</td>
<td>10.03</td>
</tr>
<tr>
<td>Conversations</td>
<td>19.20**</td>
<td>10.44</td>
<td>0.42</td>
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<tr>
<td>Positive Interactions</td>
<td>48.32*</td>
<td>35.60</td>
<td>28.10</td>
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<tr>
<td>Negative Interactions</td>
<td>3.16*</td>
<td>3.45*</td>
<td>8.29</td>
</tr>
<tr>
<td><strong>Social-Skills Ratings</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social-Skills Rating Scores</td>
<td>77.37*</td>
<td>75.42*</td>
<td>58.59</td>
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</tbody>
</table>

* = significantly different (p<.05) from control group  
** = significantly different from both other groups  
+ = significantly different from Social-Skills group
those in either the social-skills training or control groups. It was also found that the social-skills training group children received significantly more positive ratings than those in the control group. In brief, while children in both experimental groups were better accepted than those in the control group, it is noteworthy that the children who received the cooperative learning programme in addition to social-skills training were better accepted in terms of increased social acceptance than were those who received only social-skills training.

A significant main effect was also obtained from the analysis of covariance of negative ratings ($F(2,17) = 9.68, p<.0016$). Comparisons of adjusted group means on this variable showed that the special needs children in both experimental groups received significantly fewer negative ratings than their counterparts in the control group. In contrast to the results on positive ratings, however, special needs children in the combined experimental group were not differentiated from those in the social-skills training group in terms of the number of negative ratings they received. These results indicate that the facilitative effect on positive ratings vis-a-vis social-skills training and cooperative learning was not matched by a significantly greater reduction in negative ratings, although the pattern was noticeably similar.

The analysis of neutral peer ratings also yielded a significant main effect ($F(2,17) = 6.13, p<.0099$), and subsequent mean comparisons revealed that the combined
experimental group received significantly fewer neutral ratings than did children in the social-skills training group. At the same time, neither treatment group differed significantly from the control group in terms of the extent of neutral ratings. It would appear that the combined cooperative learning and social-skills groups received a reduced number of neutral ratings in comparison with those who received only social-skills training. These data, however, seemed of less importance than the clearly positive and negative ratings data and consequently only the latter findings were included in Tables 3 and 4.

When the dependent variables associated with social acceptance (raw mean post-test scores) are examined overall, (Table 3), it can be seen that following the treatment, the children in the combined group experienced higher positive ratings, and lower negative ratings than those in the control group. The children in the social-skills training group, likewise, received higher positive ratings and lower negative ratings following the treatment than did the children in the control group. The control group children showed a sizeable decrease in positive ratings over the period during which the experimental programmes took place - and consequentially a marked increase in negative ratings.

In summary, these results indicate that training in social skills alone, or in conjunction with cooperative learning, were procedures which facilitated the social
acceptance of children with special needs by increasing positive ratings and decreasing negative ratings. However, the group which received a combination of cooperative learning procedures as well as social-skills training showed significantly greater social acceptance than did children receiving social skills training alone (i.e., the children in this group received more positive ratings than those in the other treatment groups). Thus, it appears that cooperative learning enhanced the effectiveness of social-skills training in terms of social acceptance.

Social Interaction Data

One-way (groups) analyses of covariance (with pretest scores again used as the covariate in each case) were also undertaken on each of the two ratings of children's play behaviour. The analysis of cognitive level of play did not yield a significant main effect ($F(2,16) = 3.35, p<.0610$). At the same time, it is interesting to note (Table 4) that the children with special needs in both the combined and social-skills training groups showed somewhat higher cognitive levels of play than did their counterparts in the control group.

Ratings of the children's social level of play did significantly differentiate the groups, ($F(2,16) = 3.72, p<.0471$) and subsequent adjusted mean comparisons revealed that both the combined and social-skills groups children had significantly higher levels of social play than did
the children in the control group, with the combined group mean being noticeably (though not significantly) higher than that of the social-skills group. These results do not provide firm support for the facilitative effect of cooperative learning as an adjunct to social-skills training over social-skills training alone—though the trend is in that direction for the social levels of play.

The degree of adult-directed activity in which children were engaged did not differentiate the groups \((F(2,16) = 2.96, p<.0806)\). From Table 4 it can be seen that the adjusted group mean for children in the combined group on adult-directed activity was smaller (albeit nonsignificantly) than the mean for the social-skills treatment group, which in turn was less than the mean for the control group. While the difference was nonsignificant, the trend does seem consistent with the above-mentioned results in suggesting that the cooperative learning programme tended to modify the effects of social-skills training.

A highly significant difference between groups was obtained on the frequency of children’s conversations \((F(2,16) = 9.92, p<.0016)\). Subsequent comparisons of adjusted means (Table 4) revealed that the children in the combined treatment group were more often involved in conversations than children in either of the other groups. In other words, control group children and those who received only social-skills training, shared significantly fewer conversations with others than did those who
received their social-skills training within the context of cooperative learning.

The analysis of covariance of the extent of positive interactions with other children also yielded a significant main effect \( F(2,16) = 4.14, p<.0354 \). Comparisons of adjusted means revealed that only the combined group children with special needs experienced significantly more positive social interactions than did their control group counterparts. At the same time, the adjusted mean score for the social-skills group on positive interactions was not significantly higher than that of the control group. It is apparent from these data that only the children who played within a cooperative learning structure combined with social-skills training, subsequently experienced a series of social interactions during free play which were more positive in nature than those of the children in the control group. Although this result supports the greater effectiveness of the social-skills training when combined with cooperative learning, caution must be exercised in interpretation, since the mean for the combined group was not significantly higher than that for the social-skills group.

This latter result was also found in the frequency of negative interactions. The number of negative interactions differed significantly across the groups \( F(2,16) = 4.15, p<.0353 \) and subsequent mean comparisons revealed that the control group children experienced
significantly more negative social interactions than did either of the other two groups.

**Social-Skills Ratings**

Ratings by teachers of children's social skills were also examined via analysis of covariance with pretest scores used as the covariate. A highly significant main effect was obtained on this measure, \( F(2,16) = 9.73, p<.0011 \), with the children with special needs in the combined and social-skills training groups being rated significantly higher after training on social skills than those in the control group (Table 4). An examination of adjusted group means reveals that the social skills of children with disabilities in the combined and social-skills training groups received very similar ratings by the children's teachers. It needs to be noted that these two groups of children shared the same basic training programme directed at enhancing their social skills, and that the addition of the cooperative learning treatment apparently did not further increase the children's levels of social skills as rated by their teachers.

In summary, the present results indicate that the children with disabilities in the combined cooperative play and social-skills group were better accepted by other children than were those in the other treatment groups. This finding was evident not only in their significantly higher positive ratings by peers, but also from the significantly higher levels of observed social
interactions. The behavioural data showed clearly that as well as enjoying more social interactions with their peers, the children in the combined cooperative play and social-skills programme also experienced significantly more interactions of a positive nature than those children in the other two conditions.

As was expected, the two treatment groups which had received social-skill training demonstrated significantly higher ratings of their social skills by teachers than did those children who had not taken part in such coaching. This finding was repeated when both negative ratings by peers in the sociometric scores, and negative interactions during social play were examined. Levels of social play again demonstrated the effects of social-skills training but cognitive levels of play did not differentiate the groups.

The data thus indicate that the addition of a cooperative learning programme enhanced the positive effects of social-skills training in the integrated preschool setting. Social acceptance, as assessed by sociometric and behavioural measures, was significantly greater for children who received social-skills training in the context of structured cooperative play, and these children took part in more conversations (which were significantly more positive in tone) than did the children who received only social-skills training or those who continued to receive only the regular preschool programme.
CASE STUDIES

The following case studies have been undertaken in order to illustrate some of the factors impinging on the success of the combined cooperative play and social-skill training programme used in this study. The experiences of two of the children in the combined group - for whom the programme seemed to be most effective - are described, along with details of a further two children for whom the combined programme did not appear to bring such effective results. The case studies also illustrate how the structured cooperative play events and social-skill training packages were tailored to accommodate particular children's disabilities and how the programmes in the kindergarten settings were developed for the children concerned. Rebecca and Tony were the two children whose social acceptance rate showed the greatest change after participation in the combined programme, whereas Mark and William demonstrated the least change within the combined group.

Rebecca

Rebecca gained seven positive nominations from other children in the kindergarten at the time of the pretest and then twelve on the posttest, thus showing a sizeable gain in positive social acceptance ratings - an increase
which was discernibly greater than the average gain for the Combined group (Table 3). At the same time, the changes in Rebecca's neutral and negative nominations closely resembled the pattern of the combined group means. The sizeable increase in positive nominations means that Rebecca's social acceptance by her peers in the kindergarten setting had increased by the time the study ended.

One contributing factor in Rebecca's enhanced social development was suggested by an examination of her social and cognitive levels of play. Rebecca's social play level was rated (by observers) at 52 at the time of the pretest, and this increased to 86 after she took part in the combined programme. These scores reflect the fact that at the time of the pretest, most of Rebecca's play was either solitary or parallel play. However, when behavioural observations were examined for the posttest period, it was seen that the majority of Rebecca's observed play was within (or in association with) groups of children.

Rebecca's cognitive level of play was also determined from observations. She obtained a score of 29 on the rating scale at pretest and then 34 on the posttest. The majority of instances of Rebecca's observed play during both periods showed her to be either involved in constructive play or acting out sociodramatic play, with noticeably few instances of involvement in games with rules. In other words, Rebecca's characteristic type of play did not appear to change dramatically between the
pretest and posttest sessions - a finding which was not unexpected considering the relatively short duration of the programme.

It seems likely that the substantial increase noted in the level of Rebecca's social play was the result of the implementation of cooperative play structures which suited her particular developmental needs during the programme sessions - the intent behind the individual design of these programmes. The creation of the cooperative play sessions for Rebecca was the product of all three teachers in Rebecca's kindergarten. The teachers chose three activities which were centred in areas where she frequently chose to play (the family corner, the dough-table and the music-corner). It seems likely that the success of these individualized activities derived from the "team approach" taken by the teachers in Rebecca's kindergarten setting who planned and implemented these carefully structured activities. In considering the impact on Rebecca's social interactions it seems important to note that this "team approach" was used in both of the kindergartens in which the combined programme was instituted.

An example of Rebecca's cooperative play programme was a 'family-corner' activity which included baking some biscuits during a morning session. This project involved initial discussions regarding types and choices of biscuits with a small, selected group of children during the previous kindergarten sessions. The small group of
children selected by the teachers included those children
whom they considered would be interactive and responsive
to Rebecca and who would work well with her in a small
group. The appropriate ingredients were brought to the
following session, where weighing took place (each child
being responsible for a particular ingredient), mixing was
shared around the table, as was rolling out the mixture,
and the three subgroups of two or three children were each
given a portion of the mixture to cut shapes from. Since
the dough was shared in this way, turns for cutting had to
be taken, and conversations took place about shapes and
portions. The biscuits were then cooked in the
kindergarten oven and each child then offered some to
other children attending the same session. In this way a
task was completed which involved each child having a
specific role to play, social interactions taking place,
turns being taken and the creation of an end-product to be
shared.

The cooperative play activities were structured to
create opportunities for Rebecca to take part successfully
in normal social interactions with other children.
Conversations taking place with other children were one of
the targets of the observations made during the study. A
conversation was deemed to be occurring when a minimum of
two social exchanges (conversation plus response) took
place. Rebecca’s Special Needs Teacher had previously
observed that Rebecca commonly failed to reply to other
children when they approached her, possibly because of a
lack of understanding of the meaning of the other child’s communication, or a lack of confidence in making an appropriate response. While the number of conversations which Rebecca was observed to take part in during the pretest period did show a clear increase by the posttest observation period (from 7 to 16), this type of interaction obviously continued to be problematic for her.

However, when the nature of these social interactions was examined (by rating aspects of these conversations as either positive or negative in tenor) it became evident that Rebecca enjoyed mainly positive social interactions with other children in the kindergarten setting. Qualitative ratings of conversations in which Rebecca took part revealed that those aspects of a positive nature increased from 31 at the time of the pretest observations, to 48 during the posttest period. Rebecca was observed to experience only one negative interaction during the posttest observation period (compared with three in the pretest period) and that incident occurred when she was reluctant to return a toy to the child she had ‘borrowed’ it from and thus received strong verbal comments from that child.

A further factor likely to have contributed to Rebecca’s increased social acceptance was her growth in social competence (as rated by her teacher) following the completion of the social-skills component of the combined programme. The social skills which were chosen for Rebecca’s programme were based partly on the results of
her social-skills assessment on the California Preschool Social Competency Scale. This scale was completed with the aid of the Special Needs Teacher but the final choice of the five skills to be coached was based on two factors. Firstly, items on the CPSC scale which revealed low scoring were considered, and secondly account was also taken of the Special Needs Teacher’s judgement of Rebecca’s current social skill level. Information from both these sources was used by the Special Needs Teacher in making the decision regarding the five social skills which were to be coached.

Rebecca’s overall pretest score on the CPSC confirmed that she had a lower than average level of social competence. When her score of 78 was compared with available norms (possible score range = 30-120) she obtained a percentile ranking of 29 for girls of her chronological age (4-0 to 4-11 years). However, Rebecca’s overall developmental age was obviously not equivalent to her chronological age, and if this were to be taken into consideration, norms for children 3-0 through 3-11 years (her more likely developmental age) might provide a more useful comparison. In this case, Rebecca’s percentile ranking would rise to 48. It needs to be noted that the normative group range (from 4-0 to 4-11 years) covers a wide behavioural continuum for this type of development, and that a somewhat narrower band may be more appropriate, especially when a child’s development is delayed.

However, whether developmental or chronological age norms
are used, it is apparent that Rebecca's social development was noticeably delayed in comparison with her nondisabled peers.

When Rebecca's individual item responses on the CPSC were examined, it was evident that only one item was rated at the lowest level - that of initiating involvement with other children. An equal number of the remainder of her ratings were at Levels 2 and 3, with three ratings at Level 4 (the highest level possible on the CPSC scale). Those social skills rated at the second lowest levels included using names of other children and greeting them at the kindergarten; performing tasks to completion; following verbal and new instructions and remembering instructions; making explanations to other children; borrowing and returning property belonging to other children; initiating group activities and giving direction to play; taking turns; and reactions to frustration.

The social skills selected for training by the Special Needs Teacher were designed to focus on skills which were considered to be helpful for Rebecca's successful participation in play activities with other young children. Once selected, these were detailed on Rebecca's checklist which was displayed on the staff office wall. The social skills which were selected included: using names of other children when greeting them or at play; taking turns and following group rules in a game; initiating involvement with other children;
following verbal instructions, including new ones; and remembering instructions in order to complete tasks.

During the 6-week treatment period, which comprised 18 kindergarten sessions for Rebecca, the Special Needs Group Teacher was requested to ensure that all five of the above social skills were coached each week. In order to ascertain treatment integrity, Rebecca’s checklist was monitored regularly. These checks confirmed that each of the skills was coached according to instructions. At the same time, it was also found that there had been two days when kindergarten activities precluded any social-skills coaching for Rebecca. On one of those days there was a class trip to the zoo, and on the other the taking of photographs occupied most of the day. The loss of two treatment sessions does not appear to have lessened the impact of the treatment effect in this case. Rebecca’s records also confirmed that the coaching had in fact been undertaken by the Special Needs Teacher, as previously agreed with the Researcher.

When posttest scores are examined, it is apparent that Rebecca achieved a significant improvement in social skills over the 2-month period. Her total score increased from 78 at pretest (29th percentile for her chronological age) to a posttest level of 89 (50th percentile), with no items scored at the lowest level and only six items at Level 2 (20 percent as compared with 43 percent at the time of the pretest rating). The teacher’s rating of Rebecca’s "initiation of involvement with other children"
moved from 'seldom' initiating involvement to 'sometimes' initiating involvement - a qualitative shift which seems likely to have had rewarding consequences for her in the playground. Of interest, also, is the fact that when the nine items (previously low-scoring) which increased by one scoring level were examined, it was found that eight were directly related to the social-skills coaching programme.

In summary, in comparison with other members of the combined treatment group, Rebecca was one of the most socially-skilled children prior to the onset of treatment, and she also showed the greatest gains after participation in the programme. Given that almost all the items on the social-skills scale (CPSC) which showed increases in skill level reflected the coaching Rebecca received, it seems likely that the programme was responsible for these gains. However, since Rebecca’s home context is highly supportive, the possibility cannot be completely discounted that her progress in social skill development may have been due to natural gains.

Rebecca was 4 years 6 months old when the programme began and she had been attending the special needs group kindergarten sessions for four months. Rebecca lived at home with her parents and her brother, aged 18 months. Rebecca’s mother is a full-time caregiver while her father is a clerical worker in the city. The family home is very comfortable and seemingly well-equipped for children’s play.
The kindergarten Rebecca attended was the nearest one to her home and she had been attending afternoon sessions as a 3-year-old during the last term of the previous year. This kindergarten was one of the two randomly selected to offer a combined social-skills training and cooperative play programme for the children with special needs enrolled there. Following an assessment by an educational psychologist, Rebecca was subsequently transferred to morning sessions (three times per week) to join a group of children with special needs who had a designated teacher attached to the kindergarten.

Rebecca’s parents had suspected that her development was not proceeding at a normal rate but had been unable to gain a firm professional diagnosis or advice until the previous year, when Rebecca was approximately three-and-a-half years old. At that time it was suggested that Rebecca’s language development and her general cognitive development were both somewhat delayed. Moreover, while Rebecca’s physical development appeared to be taking a normal path, her social development appeared to have been affected. It was after attending morning sessions for one term with the special needs group of children that this cooperative play programme including social-skills training was initiated in Rebecca’s kindergarten.
Tony took part also in a combined social-skill training and cooperative play programme which was implemented in the second kindergarten which had been randomly assigned to offer this type of programme. Tony's pretest positive nominations totalled seven - this score being higher than the average score for the Combined group children (Table 3) and during the posttest session, Tony's score increased by three positive nominations to a score of 10 - again higher than the Combined group mean score. In brief, as was the case for Rebecca, when posttest scores were examined, Tony showed a gain in positive peer nominations by other nondisabled children in the kindergarten. In Tony's case, the increase in positive scores was accompanied by a decrease in negative nominations (two during the pretest period but none during the posttest session). These changes suggest that by the end of the study Tony was enjoying better social acceptance and experiencing fewer rejections from his nondisabled peers - a supposition which is supported by the behavioural observations undertaken (concomitantly) in the setting.

When Tony's social and cognitive levels of play were examined, it was found that his social play was at a lower level (in comparison with other children in the Combined group) than was his cognitive play. Tony's social play level was rated by independent observers at 48 (Combined
group mean = 47) during the pretest sessions, but this increased to 70 (Combined group mean = 74) following his participation in the combined programme. In other words, Tony’s pretest score on this measure was just above the mean for the Combined group, and his posttest score was just below the mean for this group (Table 3). Tony’s pretest score reflected the fact that the majority of his play activities in the kindergarten were carried out in solitary fashion, and those involving other children took place alongside them rather than with them. In Tony’s case, it needs to be acknowledged that his physical disability restricted his opportunities to join in with other children’s play activities, and this limitation probably influenced the nature of his social play. Accordingly, in attempting to facilitate Tony’s social integration in the kindergarten setting, it appeared that group play situations needed to be devised in which he would be enabled to carry out specific tasks within group projects. It was decided, therefore, to carry out Tony’s social-skill training within the context of specifically-designed cooperative play activities (rather than in the resource room setting).

At the same time, it was also evident that at the time of the pretest Tony was playing constantly at a reasonably high cognitive level (i.e., he was, where possible, joining in games with rules, and when playing on his own he was frequently observed to be enjoying sociodramatic play). Tony’s cognitive play score of 32
was above the Combined group mean at the time of pretest, and his posttest score of 47 was also above the posttest mean for the Combined group (Table 3).

It seems likely that the increases seen in Tony’s cognitive and social levels of play are due at least in part to the efforts of the kindergarten teaching team. Because of his particular disability the provision of cooperative play activities in which Tony could be successfully involved required much thoughtful planning. Fortunately, Tony was able to sit independently with support, even though he attended kindergarten in a wheelchair, and he was thus able to sit in the sandpit and on the floor with blocks, and at the dough table in his chair. Accordingly, activities for Tony involved the use of the sandpit, the dough table and block play on a large, open floor.

An example of Tony’s cooperative play programme was one sandpit activity involving the construction of a complicated system of roading and bridges which would provide a racetrack for toy cars and trucks. A small group of approximately six children was chosen to carry out the construction. Tony’s particular role was to build a bridge with supports underneath it, and then to erect a barrier which he was to try to control during the race. Since all materials were placed in the centre of the track area, and the other children were constructing their elements simultaneously, it was necessary for Tony to ask for materials to be passed, and to ask for help when
required from the other children. It was also necessary for other children to negotiate with Tony in order to pass his barrier. Because one of the key elements of these cooperative tasks was for the children to work independently, the teachers set up this task, then attempted to gradually and quietly withdraw so that the group of children could complete the task themselves.

One of the objectives of providing the cooperative tasks in which Tony participated was to provide opportunities in the kindergarten setting for him to communicate successfully with his nondisabled peers. As was the case for all other children in the study, observations were made of conversations which occurred during both pretest and posttest periods. Tony’s mean number of conversations increased from 11 in the pretest period to 23 in the posttest period. Given that Tony enjoyed a good level of cognitive play and did not exhibit any major delay in speech or general development (apart from his physical disability), it seems likely that the experiences gained from taking part in the combined programme contributed to the increased frequency of his conversations with peers in the setting.

When actual conversations were further rated on qualitative dimension (i.e., as being either positive or negative in nature), it was found that Tony, like Rebecca, was enjoying many positive interactions with other children during kindergarten sessions. During the pretest session 26 aspects of his conversations were found to be
favourable, and five were negative. However, by the end of the programme, Tony’s conversations yielded 35 positive ratings and only three negative interchanges were identified. In brief, the proportion of positive to negative ratings increased over the programme – a pattern which characterized the children in the Combined group (Table 3).

The increased positive tenor of Tony’s social interactions with his peers may have been partly due to the social-skill training which he had received from his Special Needs teacher while participating in cooperative play activities. As was the case with Rebecca, Tony’s social competence was rated by his teacher as having improved by the time the programme ended. The social skills chosen for coaching were based on the areas of difficulty indicated in Tony’s pretest assessment on the California Preschool Social Competence scale and on his Special Needs teacher’s judgement of his current strengths and weaknesses in this area. Tony’s overall pretest score on the CPSC revealed an average level of social competence for his age (percentile level = 50), and like Rebecca his skill level was one of the highest in the Combined group both before and after the implementation of the combined programme. Despite these achievements, Tony’s Special Needs teacher considered that because of his physical disability, Tony tended to play alone frequently, perhaps because of the effort involved for him to join in with groups of typical 4-year-old children.
Tony’s CPSC pretest score of 83 contained no items at the lowest ranking, 11 scored at Level 2, 15 at Level 3 and four at Level 4 (the highest level). It was decided by his Special Needs teachers to develop the social-skills training package around several of the lower-scoring items on the CPSC - i.e., making explanations to other children, sharing, initiating involvement with other children, initiating group activities, and helping other children. Consequently, Tony’s Special Needs teacher decided to focus on the skills directly related to interactions with other children in the kindergarten, including those skills which could be coached within cooperative play situations.

Tony’s Checklist was monitored during the 6-week treatment period to ensure that all social skills chosen were coached each week. It was found that while most of the coaching sessions took place within the cooperative play activities set up in the kindergarten for Tony, two of the skills (i.e., helping others and making explanations to other children) had also been coached incidentally during kindergarten sessions. The Special Needs teacher had been able to capitalize on naturally-occurring situations with other children and chose to coach the skills during these occasions. In contrast with Rebecca’s kindergarten experience, it appeared that in Tony’s case there had been no distractions to the usual kindergarten sessions and the 18 sessions of coaching had taken place as planned.
When Tony's CPSC posttest score of 94 (percentile rank = 75) was examined item by item it was evident that 10 of the 11 items which were previously at Level 2 had increased to Level 3. In addition, one of the items previously scored at Level 3 (greeting other children) had improved to Level 4. It is interesting to note that all of the skills which had been coached had improved to a higher level of competence. The increase in social competence on the part of Tony was also highly similar to that shown by Rebecca and again peripheral social skills also appeared to improve even without direct coaching. In Tony's case these included skills such as returning property, giving direction to play, reaction to frustration and responding to unfamiliar situations.

Tony began the combined programme with an average level of social competence for his chronological age (i.e., at the 50th percentile on the CPSC). However, since the normative group used for the determination of percentile rankings did not include children with disabilities, and since Tony's age was 4 years 5 months (whereas the age range of the CPSC norms used was 4-0 through 4-11 years), there is a sense in which Tony had a high level of competence for a child with his type of disability when he began the programme. Tony's increase in ratings to the 75th percentile for his age range by the end of the programme suggests that, for him, the combined programme had offered increased opportunities to demonstrate and improve his social skills, by creating
play activities in which he could participate with other young children, rather than playing alongside them, as was his previous predominant play pattern.

It should also be noted that Tony (unlike Rebecca) did not exhibit any obvious language delay, nor was his cognitive development delayed to any noticeable degree. Despite this, Tony’s social play level was lower than Rebecca’s, both during pretest and posttest sessions. It seems likely that this was a characteristic which reflected his relative lack of mobility in the kindergarten due to his physical disability. Conversely, Tony’s cognitive level of play was higher than Rebecca’s throughout, probably reflecting the different types of disability which the two children exhibited.

Tony, also, had a home environment which contained two parents, although in his case his mother worked outside the home on a part-time basis. Tony also had two older siblings (a brother and a sister) both of whom attended the local primary school, and the family lived in average-level socioeconomic conditions. Tony’s father worked in a joinery factory, where he had been employed for several years. The family home contained a supply of books and appeared to be reasonably well-equipped with toys and activities for three young children.

The kindergarten Tony attended was not the nearest one to his home, and because of lengthy waiting lists in their own area Tony had not been able to attend afternoon sessions in his local kindergarten as a 3-year-old.
Tony's parents had received support from CCS (formerly the Crippled Children's Society) since his birth, and he had also been visited regularly by a Neurodevelopmental therapist for the first few years of his life. However, the family had experienced only limited contact with the psychologist who referred him to the special needs group at the kindergarten a short distance away, and this referral had been at the instigation of Tony's mother on advice from the local kindergarten. Tony's mother stated that although she would have preferred him to have attended the local kindergarten, she was pleased to have a placement with a special needs group teacher.

Tony had been attending the special needs group at this kindergarten for five months before it offered the combined programme to the children with special needs enrolled there. Consequently, the environment was not completely new to him at the onset of the programme. In summary, this kindergarten had been able to provide Tony with the opportunity to have his social skills practised within cooperative play structures set up specifically for him by his teachers, and the experiences provided appeared to yield discernible increases in both his social acceptance amongst nondisabled peers and his social competence ratings.
Mark

Mark was the youngest child in the Combined group, being 3 years and 8 months at the beginning of the study, and he had the most severe disability of all children in the Combined group. Mark had been attending the kindergarten with a special needs group for four months previously, but had not been enrolled at any other preschool or kindergarten prior to this time. Mark’s experiences with other children had not been extensive in the past as his Mother had found it difficult to employ what she considered to be "suitable substitute caregivers" for Mark in their home area. Consequently, Mark had a close and intense relationship with his mother who had been almost his only caregiver since birth.

The family lived a short distance from the kindergarten offering the combined programme and although it was not the nearest kindergarten to their home, Mark’s mother said she felt comfortable about leaving Mark because the Special Needs Group teacher was present at each session. Mark has a moderate to severe intellectual disability, (according to the referring psychologist’s report), and frequently exhibits repetitive behaviours (e.g. hair twirling and rocking). Mark had some early language skills according to his Special Needs Group teacher, but in general he had insufficient language skills to sustain meaningful conversations with other nondisabled children of a similar age in the kindergarten.
Consequently, although Mark used all the kindergarten play areas available, he appeared to be socially isolated with few children paying him any attention, and with the majority of his interactions occurring with adults in the setting.

Mark received only one positive nomination from the other nondisabled children in the kindergarten at the time of the pretest, and then two on the posttest - thus continuing to gain a low number of positive social acceptance ratings. This change was noticeably lower than was the case for the other children in the Combined group (Table 3) and is an indication that his social acceptance by peers was largely unchanged following his participation in the combined programme. At the same time, the amount of negative nominations received by Mark from other children in the kindergarten was highly similar to that received by other children in the Combined group, both during pretest and posttest sessions (Table 3).

When Mark’s play was examined by observers, it was found that he spent most of his time during kindergarten sessions moving from activity to activity, and only infrequently did he settle into a period of concentrated play. Moreover, Mark’s score of 35 on the social play rating reflected the fact that he was unoccupied for the majority of observations and that he played in a solitary fashion on a few occasions. This pattern yielded a low rating for his social play in comparison with the other children in the Combined group. According to Mark’s
Special Needs teacher this result accurately described his usual play pattern in the kindergarten. Mark's social play rating increased only moderately after the programme had been undertaken (a score of 41 at posttest), whereas in contrast most of the children in the Combined group showed significant increases on this measure (Table 3).

The cognitive level of Mark's play behaviour was also examined by observers and in his case, (as might have been expected), he again scored at a low level in comparison with the Combined group members as a whole (Table 3). Mark's score of 22 reflected the fact that when he was observed to be playing, he was most likely to be engaged in functional rather than constructive play. On no occasion was Mark observed to be involved in sociodramatic play, or in games with rules - activities which would require more sustained attention than it seemed possible for him to produce at that time. At the time of the posttest, Mark's cognitive play score did increase slightly to 25, but this change was again substantially less than that shown by the other children in the Combined group (Table 3).

Mark's social-skill rating by his Special Needs Group teacher yielded a score of 33 at pretest (possible range = 30-120) and included two items which she was unable to score (viz., because the Level 1 behaviour described in the scale had not then been attained by Mark). Because of Mark's delayed language and cognitive development, it was decided to choose three elementary
social skills to be coached, - learning to state clearly who he was (full name); using the names of one or two other children with whom he played; and learning to sustain participation in some activities in the kindergarten. In Mark's case it was considered that these skills were precursors to successful social interactions with other children, rather than being directly linked to social participation activities in the way that Rebecca's and Tony's coached skills were.

According to Mark's Checklist, the three social skills were coached over the 18 sessions available during the 6-week programme period. The coaching sometimes took place in a resource room but more often it was undertaken incidentally when appropriate opportunities arose with other children. The social skills were also coached within structured cooperative play activities, but because of the nature of Mark's disability these activities were more limited in both scope and frequency than for the other children in the Combined group.

When posttest scores for the CPSC were examined it was found that Mark's social skill rating had increased slightly to a score of 37 (from 33). This increase consisted of four items which were scored at Level 1 on the pretest and Level 2 on the posttest. These items were identification; using names of others; continuing in activities; and playing with others. Mark had learned to use his own name in full when asked it, but was not yet able to spontaneously offer it as identification. He was
also able to remember one or two names of other children as well as the name of the Special Needs Group teacher. Where continuing in activities was concerned, Mark had moved from wandering from activity to activity with no sustained participation to continuing in his own activity on occasions. He remained easily diverted, however, especially when noticing the activities of other children nearby. A further increase was noted in the "playing with others" category, where Mark scored at Level 1 (usually plays by himself) in the pretest session, but at the time of the posttest this behaviour was at Level 2 (plays with others but limits play to one or two children). This shift probably reflected the teachers' efforts to provide cooperative play activities which involved other children playing with Mark more frequently.

Although attempts were made to coach Mark's social skills within cooperative play activities in the kindergarten, this proved to be a very demanding task for all concerned. As stated previously, the cooperative tasks structured for Mark's participation tended to be shorter and much less complex than those for other children in the Combined group, and because of the difficulties which Mark experienced in concentrating on a task, the staff created one task per week which was repeated with different groups of children. One example which proved reasonably successful for Mark was the construction of a large clock face out of blocks, where the nondisabled children made the hours and hands for the
clock and Mark made the block circle (the outside face of
the clock). He was then able to move the hands while the
other children guessed the time, but even this activity
became a repetitive turning action for Mark within a short
space of time.

The difficulties which Mark experienced in the
kindergarten situation were reflected in the mean number
of conversations which he was observed to be participating
in over the observation periods. His frequency of
conversations was lower than the Combined group mean
(Table 3), and when conversation participants were
identified it was apparent that most of Mark's
interactions took place with either teachers or other
adults in the setting. Whereas the Combined group mean
frequency of conversations increased markedly from pretest
to posttest session (Table 3), Mark's conversations
increased only marginally, and continued to be mainly with
adults rather than children.

The definition used of a "conversational exchange"
was that a social interaction should have a response, and
in Mark's case it is probably easy to understand why many
of the approaches made to him remained unanswered.
Firstly, Mark's level of understanding prevented him from
continuing conversations except on a very minimal level
(e.g., answering "yes" or "no"). Secondly, the majority
of his exchanges with teachers were caregiving in nature,
and of necessity were structured in a functional manner.
Thirdly, Mark appeared unable to initiate conversations
with other children at that stage, so the likelihood of responses from the nondisabled children was thus minimized, as very few of them approached him to play with them voluntarily.

While the majority of Mark's observed interactions with others were positive in nature (with very few of his interactions being negative) these interactions could not meaningfully be compared with those of the other children in the Combined group, since his interactions were mainly with adults whereas their interactions were mainly with other children.

In summary, because of Mark's severe intellectual disability his behaviours were not generally conducive to positive social interactions with other children in the kindergarten. Mark's social isolation was noticeable, and his repetitive behaviours and marked language delay appeared to make it difficult for other children to play with him in a mutually satisfying manner. It became obvious that although small gains were made in both his social competence and his social acceptances, any subsequent progress made socially by Mark would be likely to be in very small steps and over a longer period of time than for the other children in the Combined group. Mark was also the youngest child in the Combined group, and when his developmental delay is considered alongside his lack of socialization experiences with other children, it is probably not surprising that he did not gain very much
from participation in the combined programme in comparison with the other children in that group.

William

William was 4 years 2 months old when the combined programme was introduced into the kindergarten he was attending in the area in which his family was living. Of the Combined group children, William had had the most lengthy previous experience at kindergarten (10 months), as he had been enrolled at afternoon sessions for two terms prior to joining the morning group of children with special needs. As a result, William was well-known to most of the children in the morning kindergarten sessions, as they had been enrolled in the afternoon sessions with him during the previous two terms.

William's family group consisted of his mother and a younger brother, aged 2 years. No father of either child, or "father-figure" was present in the home on a constant basis, and the family lived in strained economic circumstances, supported by government benefits. The family home was a small, rented flat near the kindergarten. The flat was on the second storey of a large building which comprised eight flats, with steep staircases and very little area for outside play for either of the children.

William's developmental delay had been noticed during his first term at kindergarten and he had been referred to
a psychologist for assessment at this time. He showed poor coordination, overactivity and poor attentional skills, but there was no particular identifiable etiology for his delayed overall development. William's mother stated that he had a very low weight at birth (full-term). She considered that he had been a difficult child to manage and by the age of two, felt that he was "out of control and a disaster".

By the time William was enrolled at kindergarten, several behavioural patterns appeared to be well-established and were clearly noticeable according to his teachers. William spent most of his time at kindergarten "flitting" from one activity to another, often acting destructively by destroying other children's constructions, frequently acting aggressively (hitting and shouting) to other children, and generally demonstrating very little ability to give sustained attention to any one activity at a time. The teachers had tried to give William more attention than other children, and to moderate his behaviour, but they believed that a psychologist's help was needed. In light of the above factors, it was probably not surprising that during the pretest period William received only three positive nominations from other children - and 15 negative nominations. Almost all the children knew William very well, and many of them had had negative interactions prior to this time with him. William's positive nominations did increase slightly to 5 at posttest, while his negative
nominations decreased to 12, but it is obvious that the nondisabled children's perceptions of William had changed less than they had for other children in the Combined group (Table 3).

William's play during pretest observations revealed a low social level (40) in comparison with the Combined group mean (Table 3), although this score did increase to 52 at posttest. In effect, these scores suggested that when William was observed to be playing, his play was mainly of a solitary nature, and on only a few occasions was he observed to be enjoying parallel play. In fact, because of William's difficulty in sustaining attention at one task, he was frequently observed to be wandering between activities, rather than concentrating on any particular one. It was somewhat difficult to establish accurately William's cognitive level of play because of these behavioural patterns, but it appeared that when settled into activities he was capable of playing in a constructive manner (Level 2), rather than merely operating on objects functionally (Level 1).

With the understanding that William was probably capable of constructive play (provided his attention could be retained), the Special Needs Group teacher used this source of information when selecting the social skills to be coached, and in devising the cooperative play activities involving William. William's social-skill level was assessed by using the CPSC to identify specific areas of need, and this was supplemented by information
from the three teachers in the kindergarten, all of whom knew William very well. A joint decision was made to focus on two aspects of William’s social behaviour — attentional skills (it was considered that the ability to sustain interest in a task was a minimum requirement for successful interactions with other children), and prosocial behaviours such as learning how to "turn-take", not pushing in on other children, and dealing with frustration when waiting for toys and equipment.

The CPSC score of 42 for William accurately reflected his current level of functioning according to his Special Needs teacher. However, amongst the 19 Level 1 scores, she identified several social skills which she believed were in urgent need of training for William. The four skills chosen for William included: continuing in activities, (as well as learning to verbalize his need for help when required); communicating wants appropriately to teachers and children, (as well as learning to cope with disappointment and frustration); accepting limits on activities (e.g., play space, use of materials, type of activity and changes in routine); and sharing equipment and toys with other children.

According to William’s checklist, these skills were coached regularly during the 6-week treatment period, although it could be seen that William had been absent from five of the 18 kindergarten sessions over that period. It was not the policy of the kindergarten to question absences, since attendance was voluntary, but
according to the Head Teacher, these absences were typical of William's attendance pattern. William's social-skill coaching mostly took place during cooperative play activities set up for his inclusion, but also took place in a resource room on occasions, and during kindergarten sessions when opportunities arose to coach these in context.

When considering the type of cooperative play activity which William would be most likely to enjoy, the teachers in the kindergarten realized that they needed to devise small projects which could be completed quickly, or which could be returned to for short periods. It was somewhat difficult to ascertain William's likes and dislikes, since he did not stay long at any activity. He did appear to like sand play, however, and one cooperative task took place in that setting. Another cooperative venture, which proved successful for William, was the construction of an egg-crate playhouse, where children were given specific tasks in the building process. The house was made of egg crates which were stuck together (one task which William enjoyed for a short time), while some children painted the already-dry crates outside and other painted the inside layers. Despite William's enjoyment of these activities it continued to be a challenging task to create activities in which he could participate in a worthwhile manner, and which would "anchor" him for a sufficient period of time to enable
social interactions to take place with the other children working on the same project.

When William's social-skill level was rated again by the Special Needs Group teacher during the posttest period, his score had increased to 52, although with this result he was still clearly well below the Combined group mean (Table 3). William demonstrated increased scores (one level improvement) in the following nine items: continuing in activities, performing tasks, communicating wants, borrowing, sharing, playing with others, taking turns, reacting to frustration and accepting limits.

Where two of those items were concerned (continuing in activities and reaction to frustration), the Special Needs Group teacher felt that while William had demonstrated the ability to reach the Level 2 skills, his behaviour could not be described as consistent at that level. Where continuing in activities was concerned, William had shown more frequent concentration on a single activity, but was still easily distracted from that activity. William's reactions to frustration were quite "famous" within the kindergarten, but the Special Needs Group teacher noted that whilst some evidence of tantrums continued at times, William also showed that he was able to move on to a substitute activity (with a teacher's help) without screaming, kicking, or throwing things.

A further seven items had increased to Level 2 on the CPSC and all of these could be seen to be either directly or indirectly related to the social-skill coaching
programme carried out with William. William had, according to the teacher's rating, learned to begin a task when asked to (usually) rather than ignoring such requests; learned to verbalize his wants at least occasionally, rather than acting these out by pointing or crying; had been observed to ask other children, on occasions, for toys he wanted; had been observed to share toys and equipment peaceably even though adult modelling was still required; was seen to be playing with one or two other children, albeit briefly and infrequently; was still attempting to push in during games but with less overt physical force; and was sometimes able to accept the limits set by teachers on play space, uses of material or the type of activity he was engaged in.

William's slightly increased level of social competence was accompanied by a slight increase in the frequency with which he engaged in conversations with other children in the kindergarten. During the pretest period William was observed to engage in a mean number of ten conversations with other adults and children in the setting, most of the interactions taking place with the teachers. However, by the posttest session, the frequency of his conversations had increased to a mean of 14, with a higher proportion of these conversations being with children than during the pretest period.

Of particular interest in William's case was the proportion of negative aspects of the conversations in which he took part. During the pretest period the number
of negative interactions observed totalled 17 - far greater than the Combined group mean (Table 3). On the other hand, the number of positive aspects observed was very much lower than the Combined group mean score (Table 3). Following the combined programme where William’s social skills were coached during cooperative play activities devised for him, a decrease in negative interactions was noticed (17 to 13) unlike those of the Control group children, whose negative interactions were seen to increase over the duration of the study. In addition, during the posttest period William was observed to be interacting more often with the other children in the kindergarten (although still primarily with the teachers) and the positive aspects of his conversations increased slightly (5 to 9).

In summary, it appeared that the 10 months William had already spent at the kindergarten had resulted in some established negative behavioural patterns - both with the teachers in the kindergarten and with the other nondisabled children. William’s attentional problems and his mild developmental delay did not aid him in taking part with other children in the usual activities enjoyed by 4-year-olds at the kindergarten. Although some improvements were observed in his social competence, particularly after training took place during cooperative play sessions, it was apparent that much more time (and perhaps different resources) were needed before a more substantial change in his behaviour took place. The
teachers expressed frustration following their difficulties with William, but as a result of their participation in the study they were also relieved to have formulated some specific objectives to work towards, in the hope of providing both William and his classmates with more enjoyable social interactions.

Summary

The results of the group comparisons indicate that when structured cooperative play activities are provided in conjunction with social-skills training, incremental benefits accrue to the children involved. However, when individual results are examined, it is also clear that the combined cooperative play and social-skill training programme was not equally effective for all of the children with special needs. The four case studies provide some insights into the ways in which the combined programme had variable influences on the social acceptance of the participating children with special needs. In the case of Rebecca and Tony, the case studies indicate that the programme worked very well for them, but it was noticeably less successful for Mark and William. Several factors which appeared to moderate the effectiveness of the combined programme for these four children are suggested in these data.

Firstly, there is a suggestion that the combined programme used in the present study was less effective for
children with a moderate to severe degree of intellectual disability. This finding was not entirely unexpected in view of the fact that the combined programme was offered over a 6-week period only. Available research evidence suggests that for children with severe intellectual disability, behavioural changes are likely to be less dramatic and somewhat slower over such a short period of time than for children with other disabilities, (e.g. Guralnick, 1990). A further difficulty appears to be the relatively low level of cognitive and linguistic functioning which likely limits the degree to which children such as Mark can converse meaningfully with other nondisabled children. The social-skills component of the combined programme was designed to enhance skills and thus facilitate social interactions with other children in preschool settings. However, it is difficult to achieve this goal when the response level of a child is at a very early stage of development. Moreover this is a challenging endeavour in cooperative play settings where a child needs to take on a specific role requiring interdependence with other group members. While further time spent in the combined programme may well enhance the social competence of children with serious disabilities, it seems more likely that such enhancement will be delayed until further cognitive development is achieved.

A second factor which appears to influence the success or otherwise of participation in a programme of this nature is the extent of support provided by the home
environment (i.e., both by parents and the physical/social setting) of the participating children. When stable, consistent home support is available for children, as was the case for Rebecca and Tony, it seems likely that programmes of this nature will be more effective. In Mark’s case good support was provided by the home environment, but the severe degree of his intellectual disability appeared to be the major factor which limited his participation in, and gains from, the combined programme. However, for children such as William, whose behavioural problems largely originate in their home environment, the extent of behavioural change which an experimental cooperative learning programme can make in a comparatively short time is likely to be slight. It is worth noting that when negative behavioural patterns have been clearly established before such a programme begins, the modification of these patterns becomes an additional task within the programme, and the desired attitudinal changes are thus more difficult to achieve.

A major point which emerged from consideration of individual case studies was the finding that all children in the Combined group showed increments in the social skills which were directly coached - but in addition showed increments in some skills which were not directly coached. This finding was not unexpected since it is highly consistent with the basic assumptions which underpinned the experimental intervention (Johnson & Johnson, 1986). It was anticipated that for the children
in the Combined group, their experience of being coached within a cooperative play context would provide an incremental effect in interactive social skills, as well as an increase in their level of social acceptance by nondisabled peers. The results of the group comparisons and case study data indicate that such changes did, in fact, occur. The case study data also support the notion that social skills are not discrete entities as is implied by the existence of separate items in many social-skill rating scales. Indeed, the data indicate that when one skill is coached, other similar types of skills are also affected.

In reaching these conclusions the author is not unaware of possible problems regarding internal validity. For instance, it may be argued that the results reflect teacher expectancy effects since the same teachers were involved in both coaching and assessment of social skills. However, since the changes which occurred were substantially greater in the combined group than the social-skills training group, it seems unlikely that teacher expectancy could have been solely responsible for these effects.

In brief, it is important to realize that for those children with developmental delay, mild intellectual disabilities, or with physical disabilities, the combined cooperative play programme was apparently very effective. For those children with severe intellectual disabilities, or well-established behavioural disorders, successful
social interactions proved possible, but such children may well require longer coaching accompanied by increased cognitive competence before cooperative play settings are able to be fully utilized.
Discussion

The purpose of the present study was to determine whether structured play programmes incorporating cooperative learning principles could, when combined with social-skills training, increase the social acceptance of young children with disabilities in integrated preschool settings. The results of the present study confirmed the expectation that the combined training programme (a cooperative play structure in which social skills were coached) would result in better social acceptance for preschool children with special needs. Not only were the children in the combined training group significantly better accepted than those who received only social-skills training, but they also exhibited significantly better communication skills.

It is widely held that preschool children tend to be highly egocentric and limited in their ability to take other children's perspectives (Piaget, 1962). Accordingly, from this point of view, they would be unlikely to benefit from cooperative learning, because one of the elements required when children are working together to achieve a group goal is perspective-taking ability (Johnson & Johnson, 1983). The present study
focussed on the effects of cooperative learning programmes offered in conjunction with social-skills training rather than on perspective-taking ability per se, but the finding that young children with disabilities are better accepted socially by their nondisabled peers when structured cooperative play is offered as a developmental context in which to train social skills, may indicate a link between perspective taking and social acceptance.

When children are poorly accepted in a mainstream setting, it is likely that rates of positive interaction with peers will be low (Vogel, Keane & Conger, 1988). As a number of authorities have noted, however, in order to maximize the educational opportunity (i.e., including social development gains) of the mainstreamed child with disabilities "classroom interventions are needed that require handicapped and nonhandicapped students to interact with each other in constructive and positive ways" (Johnson & Johnson, 1982, p. 212). In contrast to the positive effects experienced by the combined group in the present study (who received the cooperative play programme) was the somewhat disquieting finding that children in the control group received a significantly higher number of negative peer ratings than those in either of the experimental treatment programmes. This finding, however, seems noticeably consistent with Gottlieb's (1981) contention that children's social difficulties are likely to be exacerbated in mainstream
settings if adequate supports are not available in such educational locations.

In the present study it seems likely that the cooperative learning strategies provided social learning opportunities which are not typically available in the integrated setting as a matter of course. The cooperative play programme entailed careful structuring of play tasks to provide an overall goal and roles for all participants, (based on the principles of cooperative learning described by Johnson & Johnson, 1986), and it seems probable that these aspects enabled the young children who were disabled to participate in a more positive manner with their peers. The case study data reveal that for all the children in the Combined group, this finding holds true. At the same time, the details also suggest that some children were more able to benefit from the programme than others (e.g., those less disabled, with supportive home environments, and with no established behavioural disabilities). Further, this type of purposeful social interaction, occurring incidentally during the completion of a structured task, would appear to have provided (for young children with disabilities) better opportunities to experience peer interactions in a natural manner. In Piagetian terms, the cooperative nature of structured play may also have provided the young children (perhaps including the children with disabilities) with opportunities to develop accuracy in perspective-taking - a characteristic which has previously been thought to be
relatively limited in preschool children, thereby limiting the children's appropriate responses to one another (Piaget, 1962). According to Dodge, Murphy & Buchsbaum (1984) delayed perspective-taking behaviour is typically exhibited by poorly accepted children, who tend to misperceive the intentions of others and thus respond to them in an inappropriate manner.

The incremental effect of cooperative learning on social-skills training which was clearly seen in the social acceptance measures, was also evident in the behavioural measures. The proportion of social interactions which were positive in nature were significantly greater for the combined treatment group than for either the social-skills training or control group children. It is noteworthy that the adjusted mean score on positive interactions for the social-skills training group did not differ significantly from that of the control group. This pattern was repeated when the frequency of children's conversations was examined. Again, the combined treatment group children were significantly more often involved in conversations than were the children within the other two groups. In summary, when actual social interaction behaviours are examined, it appears that the children who took part in the structured cooperative play activities were able to use the social opportunities implicit in the integrated setting more effectively than were those children who had
simply received social-skills training, or those who had received no specific training at all. Prior to the onset of social-skills training sessions, the teachers in the preschool settings rated each child with special needs on current social skills level. As might be expected following an intensive training programme which was individually designed and monitored over the period of the study, the children who had received this social-skills training (i.e., those in the social-skills training and combined groups) were perceived to have a significantly higher overall level of skills than those children in the control group. Assuming the validity of the preschool rating scale which was used (Levine, Elzey & Lewis, 1969), it is of interest to note that the cooperative programme group did not show higher ratings than the group who received only social-skills training. It would appear that the individualized social-skills training received by all children in both experimental groups (from the special needs group teacher) took place mostly in the context of social situations which were naturally-occurring in the kindergarten setting, rather than in a resource room. Thus, despite the fact that the scale employed appeared to describe adequately the individual skills level (and subsequent changes) of each child, it had not been designed to assess influences on either the actual social interaction behaviours or the social acceptance ratings of the children - and was thus probably not sufficiently
sensitive to these dimensions of social development. It appears, then, that simply possessing social skills is not sufficient to gain improved social acceptance, and that it is only when children can practise these skills in structured cooperative activities that peer acceptance is likely to increase (Boyd, 1991).

An interesting point to note is that whereas the children experiencing the combined programme (of social-skills training and cooperative play) received significantly more positive sociometric ratings than did those who received only social-skills training, the two groups were not differentiated when frequency of negative ratings received was examined (unlike the pilot study). While no advantage was experienced by the children in the combined group over those who received social-skills training only, both were different from the control group in this respect. Thus, these findings provide support for the view that the use of a strategy designed to enhance social integration is not only likely to facilitate social acceptance for young children with disabilities, but is also likely to prevent a decline in popularity.

Two further aspects of the play behaviours of young children with disabilities were also examined in the present study. The cognitive levels of play did not differentiate the groups from one another, whereas significant differences were evident on levels of social interaction during play. Given the relatively short duration of the present study, and the fact that the focus
of the experimental programme was primarily on social
development, it is probably not surprising that the
cognitive play levels showed no discernible difference in
response to the treatments. However, if increased
acceptance in the combined programme occurred because of
increased ability in children’s perspective-taking (a
cognitive measure), a corresponding increase in cognitive
levels of play might have been expected - although the
dependent variable measure used may well have been
insufficiently sensitive to reveal such a change. Both
the combined and social-skills treatment groups did
demonstrate significantly higher levels of social
interaction during play than the children in the control
group. In other words, unlike the social acceptance
measures, no incremental effect on cognitive play
behaviour was evident when children received social-skills
training within a cooperative play structure.

The relationship between the cognitive level of
children’s play (in particular, for preschool children
with disabilities) and children’s perspective-taking
abilities is not yet clear and this seems likely to be a
potent area for future research. Children in the age
range 3 to 7 years are, according to Selman’s (1980) model
of perspective-taking relations, at an egocentric stage
with undifferentiated perspectives. Children at this
level (Level 0), are said to be capable of recognizing the
reality of subjective states of the self and other, but
frequently unable to distinguish between them (Selman,
1980). Further investigation of the types of perspective coordination occurring during children's development may well provide a more adequate understanding of these changes - not only for nondisabled children but also for young children with various disabilities.

The available evidence from the present study seems consistent with the view that integrated special educational settings are potentially stimulating from a social and communicative perspective, and that they can be more responsive to children's attempts to interact with their nondisabled peers (Guralnick, 1986). At the same time, it is important to note (as several previous studies have indicated), that the present results underline the point that mere placement of children with mild disabilities into regular settings is likely to yield relatively few gains in social acceptance (Ashman & Elkins, 1990). It is also evident that the physical presence of the children with disabilities in such settings can be expected to result in only minimal changes, if any, in the social and play interactions of the children with disabilities (Guralnick, 1989).

Moreover, as several other studies have indicated (e.g., Gresham, 1986) without special provisions, and in such circumstances, it is likely that a potentially stimulating and responsive integrated environment would be nonfunctional for most children with disabilities. Accordingly, identifying the critical variables which yield increases in the social acceptance of preschool
children with disabilities in mainstream settings would appear to be essential if the opportunities apparently resident in inclusive settings for increased social interaction/acceptance (and thus enhanced social development) for these children are to be realized.

Previous research (e.g., Cole et al, 1991) has identified several strategies which can facilitate the cognitive and social development of mainstreamed children with special needs (e.g., modelling, paired children, peer-tutoring, social-skills training, and structured play). Social-skills training is one strategy which has been strongly advocated, and a number of studies indicate that it can facilitate the social acceptance of children with disabilities (Gresham, 1986). Cooperative learning has also been used for this purpose— but not previously with preschool children. The results of the present study indicate that there is an incremental effect in the social acceptance of preschool children with disabilities when social-skills training is given in conjunction with a structured cooperative play programme. In other words, the combined social-skills and cooperative learning strategy is more useful in enhancing the social acceptance of the children with disabilities than social-skills training alone.

Difficulties in achieving successful inclusion at preschool level have been reported with emotionally disturbed children (Smith & Greenberg, 1981), visually handicapped children (Simon & Gillman, 1979), and hearing-
impaired children (Vandell & George, 1981). Despite these reported difficulties, the majority of studies in this area of research have yielded encouraging findings and provide support for the policy of developing mainstreaming programmes at preschool level (Ashman & Elkins, 1990). Very real difficulties exist in implementing mainstream policies at preschool level, and thus the descriptions of appropriate developmental and social gains in studies to date seem very promising - especially since many such studies have been carried out in community settings and have included children with a wide range of disparate disabilities (Guralnick, 1990).

The present study took place in one of the major microsystems which young children with disabilities experience (Bronfenbrenner, 1979) - the preschool, and included children with a variety of disabilities which could not be completely controlled for in group assignment, since it was necessary for intact preschool groups (rather than individuals) to be randomly assigned to treatment conditions. Given the diverse nature of the children's disabilities, the promising results obtained from the employment of structured cooperative play would appear to indicate the usefulness of this strategy for increasing the social acceptance of young children who are mainstreamed. It is important to note, however, that in terms of psychologists' referrals, almost all of the children involved in the present study had been assessed by psychologists to have either mild or moderate
disabilities - rather than more severe levels of disability. In other words, the programmes were developed for children with less severe disabilities, and were designed to increase positive social interactions with nondisabled peers in an integrated setting. For the one child in the Combined programme with more severe disabilities the programme appeared somewhat less effective, in terms of enhancement of his social acceptance by nondisabled peers.

The social-skills training programme for each child in the present study was individually designed, and was based on the child's functional skill level at the time of the pretest. Each child's current level of skill was assessed, using a standardized instrument, together with behavioural observations undertaken in the preschool setting. The provision of individualized social-skills training with these young children with disabilities was made possible through the availability of a teacher designated as a special-needs group teacher. During the preschool sessions when these teachers were employed, it was possible to either withdraw each child with special needs to coach the designated social skills, or to use incidental learning procedures to model and reinforce appropriate behaviours. It needs to be acknowledged that without the provision of aid of this type, and given the rather large teacher:child ratios which typically obtain in the ordinary preschool setting, it would probably be very difficult to implement such individualized training
as frequently or as effectively as was done in the present study.

The cooperative play programmes were also designed to focus on the most-favoured activity in the preschool setting of each child with special needs - in order to provide the children involved with the opportunity to participate fully in a genuine fashion. This individualized aspect of the cooperative play programme required the teachers to have a detailed knowledge of each child's behaviour and interests in their special needs group, and they were required to expend a considerable amount of effort in the preparation of appropriate small-group activities. This proved a more difficult challenge in the case of children with severe intellectual or behavioural disabilities, as illustrated by the case study data.

Both social and ecological validity were assumed to be important in the present study, and accordingly the decision was taken to consult widely with teachers in the field for the development of lists of cooperative play activities and social skills. The teachers who assisted in this way all expressed interest in the development of programmes, partly in light of future mainstreaming initiatives which they believed were likely to occur in their own preschool centres. The teachers involved in the operation of the actual programmes were supportive of the programmes but reported that the extra planning, monitoring and one-to-one teaching which was required of
them did entail additional expenditure of time over and above their regular programme commitments.

The preschool teachers generally agreed that providing the cooperative play structure demanded extra thought and preparation to provide appropriate activities for both the preschool children with disabilities and their peers, but without exception they expressed satisfaction at the ensuing involvement of children with special needs in the cooperative play programmes. Satisfaction was also expressed by them at the fact that all teaching staff were involved in the operation of the combined programme - especially since several regular preschool teachers had previously had little "hands-on" experience with children with disabilities. Where the programme which entailed social-skills training only was carried out, the special-needs group teacher implemented the programme on an individual basis with each child with disabilities. It is possible that the shared responsibility for programmes contributed to the obviously positive attitudes displayed by teachers, (somewhat in conflict with Center's (1987) contention that attitudes are positive toward integration only when additional teaching demands are not made). This question is probably worthy of further research investigation in order to determine whether the effectiveness of the cooperative play programme was influenced by the cooperative nature of teacher involvement.
Social Acceptance

The results of the present study appear to point in a very clear direction. The children who received the social-skills training within the context of structured cooperative play were significantly better accepted by their peers than were the children with special needs who received only social-skills training, or no training at all. As expected, those who received only social-skills training were also, in general, significantly better accepted than were the children who did not receive either of the experimental programmes. The former received more positive ratings, less negative ratings, and experienced fewer negative social interactions. This latter finding is consistent with a sizeable body of previous research in this area (e.g., Gresham, 1986; Hundert & Houghton, 1992) and provides some support for the contention that specific intervention strategies are necessary to enhance the integration of preschool children at a social level in mainstream settings.

Since both social play levels and social skills levels showed significant increments following training in the experimental conditions, there is an indication that both of these characteristics can be influenced by training. If the inherent social possibilities in an integrated situation are to be capitalized upon, it would appear that children who receive help to improve their social skills and who are enabled to practise these skills within structured cooperative play activities are likely
to benefit more from inclusion in such a situation. The fact that cooperative learning was necessary to enhance the effectiveness of social-skills training is consistent with the findings of Bierman and Furman (1984) who noted a lack of increase in sociometric status for the pre-adolescent children in their study, despite the acquisition of improved social skills. However, in the treatment group where social-skills training was combined with a peer involvement condition, general and sustained improvements in social acceptance took place. Bierman & Furman (1984) noted that as predicted, conversational skills training promoted skill acquisition and improved social interactions with peers but when experiencing this coaching combined with a cooperative peer activity, preadolescents experienced increased peer acceptance and improved self-perceptions of their social efficacy.

The present results suggest that while the acquisition of appropriate social skills is useful for young children in terms of ongoing social acceptance, wider social gains are likely to occur when these skills are learned and practised within the framework of cooperative play. Bierman and Furman’s (1984) study with pre-adolescents indicated that only those children who had received both a cooperative learning programme and social-skills training, showed enduring gains in sociometric status. While that claim cannot be made for the present results, since the focus of the study was on whether such a programme would have any effect on preschool children.
with disabilities, it is important to note that they are noticeably consistent with Bierman and Furman's (1984) findings in that there is a clear indication of the incremental effect of a cooperative learning programme on social-skills training - in this study with preschool children.

The disparate nature of the children's disabilities may have had an influence on the outcome of the present study, although the range of disabilities within each of the treatment groups does seem relatively similar (Table 1). Moreover, random assignment of preschool groups to experimental treatments should have gone some way towards controlling for such validity threats. The children with physical disabilities had less mobility in the setting, but were usually not limited in terms of communicative skills. On the other hand, several of the children with disabilities in the three groups had either language or cognitive delays, or both. Only one child (in the Combined group) was described by the referring psychologist as having serious intellectual disability. Some of those with sensory disabilities (e.g., hearing disability) were observed to participate in the interactive social process with competence and apparent understanding - although without discernible language, whilst some others seemed unable to communicate regularly with their peers in a meaningful fashion. It is perhaps also worthy of note, as the case study data illustrates, that the conspicuous behavioural disorders presented by
some children appeared to affect (adversely) their acceptance by other children more than did their disabilities per se.

Of some concern to those involved with the present study was the discovery of declining social acceptance in those children not receiving experimental programmes. It seems clear that participation in either social-skills training or in a combined programme of the nature described in this study resulted in increased social acceptance of special needs children in integrated preschool settings. It was not expected, however, that without such programmes there would be such a marked decline in acceptance. Two of the children with disabilities in the control group exhibited marked behavioural problems, and this raises the possibility that the behaviour of these children may have been largely responsible for the decline in acceptance in this group. However, inspection of the data for the remaining control group children revealed that none showed similar behavioural problems of this type, yet also showed both the downward trend in social acceptance and social behaviour. It is worth noting, also, that one of the children in the Combined group had severe behavioural disorders as well as global developmental delay, and that although his social acceptance did not decline, nor did it increase to a marked extent.

In conclusion, the results of the present study suggest that cooperative learning incorporated within
structured play settings, is potentially a valuable tool for facilitating the social integration of young children with disabilities. While individualized social-skills training is clearly useful for increasing the social participation of preschool children with special needs, (as previous research has indicated), it is evident from present results, that when such training is combined with carefully structured cooperative play activities, significantly greater benefit is obtained from social participation in integrated settings. It is also worth noting that cooperative play programmes have potentially practical advantages in that once established they could be repeated quite simply, or would need to be varied only slightly in format for further use.

The increase in both social acceptance ratings and positive social interactions experienced by those children who received either of the experimental treatment programmes suggests strongly that not only are preschool children with widely-varying disabilities able to benefit from social-skills training programmes designed to enhance their social integration in a mainstream preschool setting, but that structured play programmes incorporating cooperative learning principles have the potential to significantly enhance their social acceptance/integration. However, it must also be acknowledged that the potential for a Hawthorne effect to occur in a study of this nature cannot be entirely discounted. As mentioned earlier, all Auckland kindergartens with special needs units (except
two which catered exclusively for children with sensory disabilities) were included in the study and it was thus not possible to incorporate Hawthorne control groups.

The trend towards mainstream placement of preschool children with special needs in New Zealand brings into focus important elements which need to be considered if integrated special education is to be a successful endeavour (Boyd, 1991). While some children with disabilities in New Zealand are identified at birth or early in their lifetime, others receive no particular educational provisions until they begin primary school. Moreover, for those preschool children who are provided with special education, the delivery of such services is often unstructured and variable - a fact which implies the need for more applied research and coordinated training of early intervention personnel.

The majority of early intervention programmes in New Zealand have been either home- or centre-based, with the broad objective of eventually integrating the young child with special needs into the regular school system, and society generally. There is a sense in which the enrolment of preschool children in local preschools, is justified (at least in humanitarian terms) as such involvement is in accordance with the principle of normalisation, (Nirje, 1985). In New Zealand, special educational policy resulted in the development of special needs units in state kindergartens, where extra funding has been made available for specialist staffing. However,
because not every kindergarten has been entitled to such provisions, many preschool children with special needs have been (and continue to be) enrolled in preschools outside their local area - a situation which clearly conflicts with the principle of normalisation. A further consequence has been that because of the particular times of sessions for the "special needs group", the children with disabilities have frequently been integrated with peers who are not only chronologically older than themselves, but also developmentally "out of step". It is clearly important - in order to avoid what Gresham (1986) has called misguided mainstreaming and what Gottlieb (1981) has described as the exacerbation of social difficulties - that young children with disabilities are able to participate successfully in local preschool programmes in order to have the opportunities for physical and social integration with their neighbourhood peers.

The programmes examined in the present study were designed to increase both the frequency and quality of social interactions between children with disabilities and nondisabled preschool children, using combined techniques of social-skills training and structured cooperative play. While evidence of enhanced social acceptance and more mature free-play behaviour in other settings would clearly have been desirable, it is important to note that the present study was concerned with the possibility that such changes would occur at all in the integrated preschool setting. It would be an interesting and logical next
research step to examine the possibility of generalization effects in other settings (particularly major microsystems, e.g., the home, the neighbourhood) following participation in a combined cooperative learning and social-skills training programme.

A further aspect which also now needs to be investigated is the duration of programme effects. It is important to gather follow-up data following programme participation and to ascertain whether the gains in social acceptance and behavioural measures are maintained over time in the preschool setting. Another important issue for subsequent investigation is whether the effects obtained are, indeed, maintained across school transitions - or whether intervention programmes are required throughout at least the initial years of school attendance. For example, when children enter primary school in New Zealand, it is likely that they will be interacting with at least some new members in their peer group, under different social interaction structures and in a larger physical environment.

The quasi-experimental nature of the present study involved the use of intact groups of preschool children (rather than individuals) being randomly assigned to treatment conditions. Accordingly, it is impossible to confidently rule out several threats to the internal validity of the results - in particular history, selection bias and teacher effect. The inclusion of both a pretest and a comparison nontreatment group could be expected to
increase confidence in treatment effects, when historical factors are comparable for the groups (Heal & Fujiura, 1984, p.223), and in this respect the present study contained both a pretest (exactly similar to the posttest used) and a nontreatment comparison group. Since the pretest measure did not focus upon the children with disabilities, it seems highly unlikely that there were pretesting effects. As far as historical factors in the setting were concerned, it is true that teacher effects could not be adequately controlled for in the study. At the same time, it is widely recognized that kindergarten staff would all be trained kindergarten teachers, that children attending public kindergartens in New Zealand are likely to have highly similar experiences in terms of structure and curriculum, and that all children would attend the same number of sessions per week at the same times during the day.

Cook and Campbell (1979) have also identified five threats to internal validity which they claim cannot be controlled by using control group designs with random assignment of subjects. The first is experimental mortality of ... "the differential loss of respondents from the comparison groups" (Campbell & Stanley, 1963, p. 175), and it is their belief that the level of mortality is likely to increase as experimental demands increase. In the present study, one child in the social-skills treatment group was absent for posttest measures because his parents took him overseas unexpectedly for family
reasons. The membership of the other two groups, however, remained intact throughout the duration of the study. The threat of differential mortality could, Borg (1984) suggested, be effectively controlled by the strategy of providing an alternate control treatment which appears to be similar, and thus places similar demands on both experimental and control groups. It was not possible to provide for this in the present study because (as mentioned above) no further kindergartens with special needs groups were available for study within the research area.

The remaining four threats noted by Cook and Campbell (1979) - diffusion or imitation of treatment, compensatory equalization of treatments, compensatory rivalry by respondents receiving less desirable treatments, and resentful demoralization of respondents receiving less desirable treatments, seem unlikely to have occurred in the present study, since the teaching personnel and children involved were at different kindergartens and hence unaware of other treatment conditions until the treatment phase had been completed. However, the threat of a potential Hawthorne effect exists - and it is possible that the lack of differentiation between the combined and social-skills programmes in certain measures (e.g., negative peer ratings) may have resulted from this.

The choice of analysis of covariance as a statistical technique to analyze results was taken because the pretest social acceptance scores were manifestly non-equivalent
for the three groups of children. Since it was necessary to use a quasi-experimental design involving intact groups, random assignment of individuals to treatment conditions was not possible. Accordingly, it seemed prudent to attempt to deal with these initial differences statistically so that the posttest scores could be meaningfully compared, and on this basis it was decided that pretest scores would be employed as covariates in the analyses (Slavin, 1984).

Implications for educational settings

The results of the present study support the belief that the use of specific strategies designed to facilitate social integration in preschool children with special educational needs is more effective than merely placing such children in integrated settings - with or without social-skill training. General developmental principles can be adduced to support the practice of integrating preschool children with disabilities into such settings provided, as Gresham, (1986) pointed out, they possess the requisite social skills to enable them to interact successfully with their peers. Indeed, Guralnick (1990) has argued that one of the features of children with adequate social competence is the ability to use developmental resources implicit in such settings to accomplish goals - a feature which cooperative learning strategies would appear to embrace. In short, there is
reason to believe that integration at this age-level is a potentially valuable special educational strategy.

The results of the present study indicate, however, that certain requirements are essential if the policy of mainstreaming is to be of real value socially for young children with disabilities. Unless mainstream placement is accompanied by the use of deliberate strategies designed to enhance the social acceptance and thus social integration of young children with disabilities, it is possible that this practice may actually be detrimental to their social adjustment. The use of some training programmes (e.g., social-skills training) have been demonstrably successful in improving the social competence of young children with disabilities. However, it seems clear that from the present results that a further step is likely to be advantageous in achieving increased social acceptance - viz., programmes designed to maximize the young child's opportunities for fruitful cooperative social interactions within the integrated setting (e.g., structured cooperative play programmes). The ongoing social development of young children is dependent upon opportunities for successful social interactions with peers, these opportunities being strongly influenced by the degree of social acceptance accorded by those peers. It seems imperative that young children with special needs should be able to practise their developing social skills in an accepting and facilitative social environment, in
order to enhance their social acceptance by nondisabled children.

In brief, it would appear from the results of the present study that the use of cooperative learning principles applied to free-play settings in integrated preschools constitutes a useful social integration strategy. When utilized in conjunction with social-skills training, cooperative play can clearly facilitate social development in a positive manner for young children with disabilities in mainstream educational settings.
REFERENCES


APPENDIX

Materials Used in the Study

1. Sociometric Test Instructions

2. Sociometric Record Form

3. Definitions of Play Categories

4. Social Interaction Record

5. Social Skills Coaching Notes

6. Social Skills Checklist for Teachers

7. California Preschool Social Competency Scale

8. Structured Cooperative Play Notes

9. Cooperative Play Checklist
SOCIOMETRIC TEST INSTRUCTIONS

1. This test is designed to measure the social acceptance of children with special needs in integrated settings. As well as a photograph of each of the children with special needs in your kindergarten, there are photographs of most of the other children in each session. These are supplied to ensure that the children do not realize that we are primarily interested in the children with disabilities.

2. Please attempt to record the responses of all children at the kindergarten session, including the children with special needs (but do not record their choices). Ensure that the photographs are shuffled properly before each child posts them i.e., in random order.

3. It is important to make every attempt to ensure that each child clearly understands the task (please note any serious doubts you may have in this respect). Say the following to each child:

   "This is a photograph of a kindergarten child. I want you to show me how much you like playing with him/her.

   If you like playing with him/her a lot, then post the photo into the happy face slot (point to the slot with the happy face on it); if you like playing with this child sometimes, post it here (point to the neutral face slot); and if you don't like playing with him/her at all, post it in the sad face slot (point to this slot).

4. Record the name (Christian names only please) of each child doing the sociometric test in the first column, then note in the spaces provided, which slot each photo of the children with special needs is posted in (their names are on the top of the columns). Record these results by drawing the appropriate face sign under the name of the child with special needs.

Here is an example of how your record sheet should look:

<table>
<thead>
<tr>
<th>NAME OF CHILD</th>
<th>CHILDREN WITH DISABILITIES</th>
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<tbody>
<tr>
<td>Lucy</td>
<td>Tom</td>
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<tr>
<td>Jane</td>
<td>Kuni</td>
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<td>Julian</td>
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   (Draw appropriate face signs)


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<tr>
<th>NAME OF CHILD DOING TEST</th>
<th>NAMES OF SPECIAL NEEDS CHILDREN</th>
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DEFINITIONS OF PLAY CATEGORIES

A: Social Levels

1. UNOCCUPIED - child is not engaged in play in the usual sense (either alone or with others). Child may be merely glancing around the room, or wandering aimlessly etc. Child may be watching other children play but not entering into the activity or playing in a similar fashion her\himselt.

2. SOLITARY - child plays alone, with toys etc which may be different from those used by other children in close proximity. Although the child may be within speaking distance, there will be no attempt at verbal or social communication with any other child. The child is centred on her\hims own activity.

3. PARALLEL - child is playing independently, but the activity brings her\hims among other children. She is playing with toys which may be similar, if not identical, to those which the children around are using i.e., she is playing alongside rather than with other children.

4. GROUP - child is playing in an associative fashion with another child or children i.e., engaging in similar, if not identical activity. This type of play may or may not be rule-bound. It may be taking place in a group which is organized to make something or achieve a goal. This may be dramatizing adult life situations or playing formal games with rules.

B: Cognitive Levels

1. FUNCTIONAL - child is using simple muscular activities, i.e., repetitive movements with or without objects. Child repeats actions without attempting to create or construct anything.

N.B. - A major difference between functional and constructive play is that functional play involves a judgment that the play is merely a manipulation of something whereas constructive play involves an attempt to create something.

2. CONSTRUCTIVE - child is demonstrating the use of play materials, and manipulating objects to construct or create something.

3. SOCIODRAMATIC\SYMBOLIC - child is role playing, pretending to be some other person by imitating actions, speech, dress etc, using real or imaginary objects.
<table>
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<tr>
<th>ACTIVITY</th>
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<td><strong>PLAY</strong></td>
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<td>FUNCTIONAL</td>
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<td>CONSTRUCTIVE</td>
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<td>SOCIODRAMATIC</td>
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<td>GAMES WITH RULES</td>
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<td>If play is not occurring, circle one of the categories below. You may still need to enter ticks beside the descriptive categories</td>
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<td>Is ignored by peer(s)</td>
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<td>Is crying</td>
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<td>Is teased by peer(s)</td>
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<td>Teases peer(s)</td>
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<td>OTHER (if hostile):</td>
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SOCIAL SKILLS COACHING

Aim - is to increase prosocial behaviours of children with special needs, and to improve their interpersonal skills so that they are able to have more frequent and more positive social interactions with their peers.

Skills - each child with special needs has had her\his social skill level assessed during the first week of the study. Special needs group teachers are asked, on the basis of these ratings, and observations of the children's social behaviours, to choose a minimum of three (maximum of five) social skills to coach during the programme. Make your choice according to the present level of skill, and choose social skills which meet some, or all, of the following criteria:

- low scores on initial rating
- skills capable of improvement over six weeks
- skills which will help children to play more successfully with others in the kindergarten
- skills which are able to be modelled (by yourself or by nondisabled children)
- skills appropriate to the child's present level of skill
- skills which are likely to be rewarded by other children in the kindergarten setting (i.e., by allowing children to play with others successfully).

Coaching - use incidental learning whenever possible (i.e., use play situations which occur naturally in the kindergarten). You may choose to withdraw children for initial coaching. Model the skill where necessary, or get a child to model it for you. Ensure that the child has opportunities to practise the skills as it improves. Reinforce the child's behaviour, even though it may not be perfect at first. In this way, you may be able to shape the behaviour to the desired level of performance. Try to use the reinforcements which will be available to the children with special needs from other children in the setting also.

Recording - please record each coaching session on the Social Skills Checklist provided. The aim is to train each social skill at least once per week for each child.

THANK YOU FOR YOUR HELP
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**NOTES**

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**KINDERGARTEN**

**CHILD'S NAME**

**TEACHER**

**SOCIAL SKILLS CHECKLIST**

Skills at least once per week for each child.

Skills as needed, put your instructions in the appropriate section. The aim is to teach each child how to use each skill at least once per week. Each time a particular skill is used, check it off in the first column. Each child is responsible for the chosen social skill list for each child. Each child should be able to use each skill at least once per week. Each time a particular skill is used, check it off in the first column. Each child is responsible for the chosen social skill list for each child.

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CHILD'S NAME ______________________________ RATED BY ______________________________

PARENT'S NAME ______________________________ TEACHER ______________________________

ADDRESS ____________________________________________

OTHER INFORMATION ______________________________________

Chronological Age: Year __ Month __ Day __

A. Sex: Boy __________ Girl __________

B. Age Norm

2-6 thru 2-11
3-0 thru 3-11
4-0 thru 4-11
5-0 thru 5-6

C. Occupational Level of Major Wage Earner

☐ Low OL
Unemployed, welfare recipient, unskilled or semiskilled (building helper, janitor, farm laborer, untrained aide, clerk).

☐ High OL
Skilled worker, semiprofessional (craftsman, technician, salesman, accountant, office manager), professional and executive (lawyer, physician, engineer, minister, business executive).

The three items checked above should be carefully observed in finding the appropriate column in the correct norm table.

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577 College Avenue, Palo Alto, California 94306

Published 1968. Portions of this scale are reproduced by permission from the California Social Competency Scale, copyright 1963, by Consulting Psychologists Press, Inc. Any reproduction of this scale without written permission of the copyright holder is a violation of the law.
1. IDENTIFICATION
1. Can state first name only.
2. Can state full name.
3. Can state full name and age as of last birthday.
4. Can state name, age, and address.

2. USING NAMES OF OTHERS
1. Uses no proper names in interacting with those around him.
2. Uses the names of no more than five children or adults.
3. Uses the names of from five to ten children.
4. Uses the names of virtually all children and adults.

3. GREETING NEW CHILD
When a new child joins the group—
1. He inadvertently physically overpowers child in greeting him (i.e., hugs, bumps, pulls).
2. He makes a limited and brief physical contact (i.e., pats, pokes, rubs) with child and some verbal contact.
3. He usually makes verbal contact and sometimes touches child.
4. He nearly always makes verbal contact with child without physical contact.

4. SAFE USE OF EQUIPMENT
1. He proceeds with activity, ignoring hazards involving height, weight, and distance (climbing on unstable equipment, stacking boxes too high, jumping onto off-balance structures).
2. He proceeds with hazardous activity, sometimes seeking help and sometimes getting into difficulty.
3. He proceeds with hazardous activity but frequently seeks help when he is in difficulty.
4. He corrects hazards or seeks help before proceeding with activity.

5. REPORTING ACCIDENTS
When he has an accident (e.g., spilling, breaking)—
1. He does not report accidents.
2. He sometimes reports accidents.
3. He frequently reports accidents.
4. He nearly always reports accidents.

6. CONTINUING IN ACTIVITIES
1. He wanders from activity to activity with no sustained participation.
2. He continues in his own activity but is easily diverted when he notices activities of others.
3. He continues in his own activity and leaves it only when he is interrupted by others.
4. He continues in his own activity in spite of interruptions.

7. PERFORMING TASKS
1. He usually has to be asked two or three times before he will begin a task.
2. He usually begins task the first time he is asked but dawdles and has to be reminded.
3. He begins task the first time he is asked but is slow in completing task.
4. He begins task first time he is asked and is prompt in completing task.

8. FOLLOWING VERBAL INSTRUCTIONS
He can follow verbal instructions—
1. When they are accompanied by demonstration.
2. Without a demonstration, if one specific instruction is involved.
3. Without a demonstration, when it involves two specific instructions.
4. Without a demonstration, when it involves three or more instructions.

9. FOLLOWING NEW INSTRUCTIONS
1. He carries out one familiar instruction.
2. He carries out one new instruction the first time it is given.
3. He follows new instructions given one at a time, as well as familiar ones.
4. He follows several new instructions given at a time, as well as familiar ones.

10. REMEMBERING INSTRUCTIONS
1. He nearly always needs to have instructions or demonstration repeated before he can perform the activity on his own.
2. He frequently requires repetition, a reminder, or affirmation that he is proceeding correctly.
3. He occasionally needs repetition of instruction for part of the activity before completing the activity.
4. He performs the activity without requiring repetition of instructions.

11. MAKING EXPLANATION TO OTHER CHILDREN
When attempting to explain to another child how to do something (put things together, play a game, etc.)—
1. He is unable to do so.
2. He gives an incomplete explanation.
3. He gives a complete but general explanation.
4. He gives a complete explanation with specific details.

12. COMMUNICATING WANTS
1. He seldom verbalizes his wants; acts out by pointing, pulling, crying, etc.
2. He sometimes verbalizes but usually combines actions with words.
3. He usually verbalizes but sometimes acts out his wants.
4. He nearly always verbalizes his wants.

13. BORROWING
1. He takes objects when in use by others without asking permission.
2. He sometimes asks permission to use other's objects.
3. He frequently asks permission to use other's objects.
4. He nearly always asks permission to use other's objects.

14. RETURNING PROPERTY
When he has borrowed something—
1. He seldom attempts to return the property to its owner.
2. He occasionally attempts to return the property to its owner.
3. He frequently attempts to return the property to its owner.
4. He nearly always returns the property to its owner.

15. SHARING
1. He does not share equipment or toys.
2. He shares but only after adult intervention.
3. He occasionally shares willingly with other children.
4. He frequently shares willingly with other children.
16. HELPING OTHERS
When another child is having difficulty (such as using equipment, dressing)—
1. He never helps the other child.
2. He helps another child only when they are playing together.
3. He sometimes stops his own play to help another child.
4. He frequently stops his own play to help another child.

17. PLAYING WITH OTHERS
1. He usually plays by himself.
2. He plays with others but limits play to one or two children.
3. He occasionally plays with a larger group (three or more children).
4. He usually plays with a larger group (three or more children).

18. INITIATING INVOLVEMENT
When other children are involved in an activity which permits the inclusion of additional children—
1. He seldom initiates getting involved in the activity.
2. He sometimes initiates getting involved in the activity.
3. He frequently initiates getting involved in the activity.
4. He nearly always initiates getting involved in the activity.

19. INITIATING GROUP ACTIVITIES
1. He nearly always initiates activities which are solely for his own play.
2. He initiates his own activities and allows one child to join him.
3. He sometimes initiates activities which include two or more children.
4. He frequently initiates activities which are of a group nature.

20. GIVING DIRECTION TO PLAY
When playing with others—
1. He typically follows the lead of others.
2. He sometimes makes suggestions for the direction of the play.
3. He frequently makes suggestions for the direction of the play.
4. He nearly always makes suggestions for the direction of the play.

21. TAKING TURNS
1. He frequently interrupts or pushes others to get ahead of them in an activity taking turns.
2. He attempts to take turn ahead of time but does not push or quarrel in order to do so.
3. He waits for turn, but delays or pushes those ahead of him.
4. He waits for turn or waits to be called on.

22. REACTION TO FRUSTRATION
When he does not get what he wants or things are not going well—
1. He has a tantrum (screams, kicks, throws, etc.).
2. He finds a substitute activity without seeking help in solving the problem.
3. He seeks help from others in solving problem without making an attempt to solve it himself.
4. He seeks help from others in solving the problem after making an effort to solve it himself.

23. DEPENDENCE UPON ADULTS
He will continue in an activity on his own without having an adult participate with him or encourage him—
1. Hardly ever.
2. Sometimes.
3. Frequently.

24. ACCEPTING LIMITS
When an adult sets limits on the child's activity (play space, use of material, type of activity) he accepts the limits—
1. Hardly ever.
2. Sometimes.
3. Frequently.

25. EFFECTING TRANSITIONS
In changing from one activity to another—
1. He requires personal contact by adult (i.e., holding hand, leading).
2. He will not move toward new activity until the physical arrangements have been completed.
3. He moves toward new activity when the teacher announces the activity.
4. He moves toward new activity without physical or verbal cues.

26. CHANGES IN ROUTINE
The child accepts changes in routine (daily schedule, room arrangements, adults) without resistance or becoming upset—
1. Hardly ever.
2. Sometimes.
3. Frequently.

27. REASSURANCE IN PUBLIC PLACES
When taken to public places he must be given physical or verbal reassurance—
1. Nearly always.
2. Frequently.
3. Sometimes.
4. Hardly ever.

28. RESPONSE TO UNFAMILIAR ADULTS
1. He avoids or withdraws from any contact with unfamiliar adults.
2. He, when initially approached by unfamiliar adults, avoids contact, but if approached again, is responsive.
3. He responds to overtures by unfamiliar adults but does not initiate contact.
4. He readily moves toward unfamiliar adults.

29. UNFAMILIAR SITUATIONS
1. He restricts himself to activities in which he has previously engaged.
2. He joins in an activity which is new for him only if other children are engaged in it.
3. He joins with other children in an activity which is new to everyone.
4. He engages in an activity which is new for him even though other children are not involved.

30. SEEKING HELP
When he is involved in an activity in which he needs help—
1. He leaves the activity without seeking help.
2. He continues in the activity but only if help is offered.
3. He persists in the activity and finally seeks help.
4. He seeks help from others after making a brief attempt.

TOTAL SCORE
CALIFORNIA PRESCHOOL
SOCIAL COMPETENCY SCALE

PROFILE SHEET

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Comments and Recommendations:

Signed________________________
STRUCTURED COOPERATIVE PLAY

Definition - Cooperative play requires children to work together to accomplish a joint task or goal. The objective in using this type of activity is to increase the opportunities for children with disabilities to play constructively with the other children at kindergarten. The children will also have an opportunity to practise the social skills being coached.

Structure - Teachers are responsible for choosing a group goal or task, choosing the children to work on it, assigning roles (jobs) to each child, and initiating the activity. Teachers may need to model the required behaviour for some children with special needs, ensuring that the task is a behaviour which is capable of being performed. Please remember to give plenty of positive reinforcement, especially initially, then to gradually decrease your involvement in the activity.

Group Number - The teacher will choose the group number but research indicates that 3-5 children is an optimal number. Choose the activity according to what a particular child with special needs enjoys, and remember that water play, blocks, house corner, music, puppet play, and trucks and cars have been shown to facilitate social interactions between children with disabilities and their nondisabled peers. Choose the appropriate level of task for the child with special needs you are building the activity around.

Recording - Please initial the Structured Cooperative Play checklist after each activity for our records. The aim is to involve each child in one structured task of this nature during each kindergarten session (if possible). If the child is absent, please mark this on the checklist.

THANK YOU - AND GOOD LUCK!