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Teacher/Teacher Aides In The
Integrated Early Childhood Classroom: Teaching Practices

by

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Teacher/Teacher Aides in the Integrated Early Childhood Classroom: Teaching Practices" submitted by S. Lee Hackney in partial fulfilment of the requirements of the degree of Master of Science.



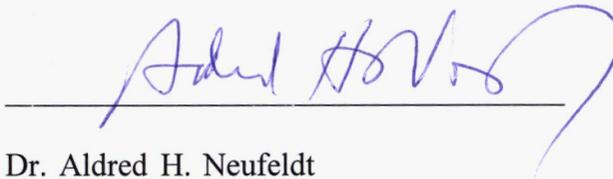
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ABSTRACT

This study examined teaching practices in the integrated classroom and found that teacher/teacher aide interaction patterns were not influenced by education or experience but were influenced by the child's level of ability/disability. Unlike past studies, the present study found that children with disabilities received more child-directed interactions than teacher-directed interactions unlike their normally developing peers. The findings also revealed that education and years of experience are not related to knowledge of or endorsement of Developmentally Appropriate Programming in the current curriculum practices of Early Childhood Education. Finally teacher/teacher aide's experiences in and perceptions of the integrated classroom had common themes that showed some differences when separated by educational backgrounds.

The current study suggests that children with disabilities in integrated classrooms are reaping the benefits of current philosophies in Early Childhood Education. They also suggest that, although differentially trained, teacher/teacher aides appear to exhibit similar behaviours (teaching styles) in the integrated classroom.

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INTRODUCTION

Integration is defined by Wolfensberger (1983) as:

"The open participation of people with other people in culturally normative amounts, settings, and activities..." (p.18).

Social integration includes interaction patterns that are normative in their quality and quantity (Wolfensberger, 1983). This study will focus on whether teachers in integrated classrooms are offering the same types of interactions to students with mental disabilities as they offer to students who are developing normally. Integrating children with disabilities into regular education classes is one of the current philosophical trends in education. Despite this trend Canadian education, in general, remains non-normative or exclusionary in practice (Little, 1992). The one exception to this rule are Early Childhood Education (ECE) programs for preschool children. This may be because the curriculum offered in most ECE classrooms can be more easily adapted to accommodate different levels of development, or it may be that children are more easily socially integrated at an early age. Regardless of the reason integration has become the norm for children in ECE. It should be noted, however, that physically integrating children having disabilities into a classroom does not assure them of a relationship with the teacher that mirrors that of their classmates.

In Alberta, integration is recommended in the current 'Draft Kindergarten Program Statement' (Alberta Education, 1995) which includes a provision for additional support for children with disabilities 'within' the regular ECE program. Support offered

to ECE programs arrives in the form of additional funds from the Alberta Department of Education to be spent by the school as they determine. The money is most often used to buy therapy support and extra staff for the classroom, specifically personnel who are trained in Early Childhood Special Education (ECSE). This brings two teaching philosophies into the integrated ECE classroom.

ECE and ECSE have very different origins and philosophies of practice. Although there may be basic assumptions common to both schools, such as the desire to involve family, an emphasis on social interaction and the concern that each child be treated as a unique individual (Bredenkamp, 1993, Carta et al., 1993, Snider & Fu, 1990), there are crucial areas where they are at odds (Johnson & McChesney Johnson, 1993). Because ECE and ECSE staff work side by side in the integrated classroom it is important to clarify where the differences lie in theory and determine how this effects practice. It is critical to determine whether teaching staff with ECE backgrounds view children differently than teaching staff with ECSE backgrounds, and whether both groups treat children with disabilities differently than children without disabilities. In examining the differences between these two philosophies it is important to understand their contrasting historical backgrounds.

Early Childhood Education

ECE has a long history, beginning in the early 1800's. As ECE developed it evolved into 3 branches: Nativistic, Teacher-Directed/Academic and Developmentally Appropriate Programming (DAP).

A) Nativistic ECE

Frederick Froebel in establishing the first Kindergarten in Germany, based it on the idea that education should be passive as children do not gain insights through direction but through their play (Kunesh, 1990). Children were seen as constructing their own world. This first approach was referred to as the 'Nativistic' school and is maintained today through the Waldorf schools. In the Nativistic ECE program teachers do not direct the child's learning process but expect that children's natural curiosity will lead them into situations where they learn. Learning is not seen as something that can be broken down into a series of skills or concepts but a whole process that is complex and unique to each child.

The central critique of Nativistic ECE came from people such as Maria Montessori who worked with disadvantaged children. She felt that Nativistic programs may be satisfactory for some children, particularly those from advantaged homes, however they were not satisfactory for children who came from disadvantaged homes or who were developmentally delayed. These programs were not seen as stimulating enough for children who had environmental or genetic predeterminants that prevented them from taking advantage of, or muted their, exploratory nature. The need to provide better education for children who displayed delays in skills gave rise to education programs that would help them to 'catch up' or 'compensatory education' which in turn gave rise to a more aggressive approach to ECE.

B) Teacher-Directed/Academic ECE

Montessori developed a more structured and controlled program which showed

greater benefits with disadvantaged children (Elkind, 1988, Kunesh, 1990). This was the beginning of a second school of ECE that was more teacher-directed and empirically based. It stressed that children learn, for the most part, through instruction provided by a teacher. Instead of being viewed as the creators of their world as in Nativistic ECE, children in Teacher-Directed/Academic ECE are seen as the receptacles of the education they are given. Teacher-Directed ECE programs provide the advantage of well defined goals, objectives and teaching strategies which create consistency. Teacher-Directed programs also include regular assessments allowing a teacher to monitor students' progress and achievement with precision. Not all Teacher-directed/Academic ECE practices, however, have been considered positive for the development of children. Teacher-Directed/Academic ECE programs often have not recognized, or were employed by people who did not recognize, the unique nature and stage of development of each child (McCarthy, 1983). Unlike Maria Montessori, who chose tasks that were within the child's reach and appropriate for their age (Elkind, 1988), some practitioners of Teacher-Directed ECE, have advocated the teaching of 'academics' to children at very early ages (Doman, 1984).

There have been several concerns associated with this type of education for young children. For example, higher levels of stress have been found in children enrolled in Academic ECE classroom (Burts, Hart, Charlesworth & Kirk, 1990, Stipek, 1992). Katz (1987) also puts forward a criticism she refers to as the "Damaged Disposition Hypothesis". In her description of 'What Preschool Children Should be Doing', she argues that teaching academic subjects too early is a mistake. She indicates

that academics provide an aversive environment around the learning of skills, and thus damages the child's disposition or desire to learn or use these skills. Children simply lose interest in learning and in school. This also results in a reduction of the child's self-esteem and confidence that they can become a competent learner. Katz (1987) goes on to describe a state of learned incompetence that can result when "...children who cannot relate to the content or tasks required are likely to feel incompetent...(and) bring their behaviour into line with this attribution. " (p.7)

In addition there is evidence suggesting that the advantages children trained in Teacher-Directed/Academic ECE display at the beginning of their ECE or Grade One year are dissipated by the end of the year when the other children not previously exposed to academics catch up. Hirsh-Pasek (1991) studied the academic performance as well as the creativity and emotional well being of fifty-six children who were 4 to 5 years old and who had attended either an Academic or a child-centred preschool. She tested each child before and after each child's ECE year. Her results indicate that, on the Coloured Progressive Matrices (Raven, Court & Raven, 1984), used to tests a child's problem solving and reasoning skills independent of their prior education there was no difference in the child's ability regardless of their educational background. She also found that on the Torrance Test of Preschool Creative Thinking (Torrance, 1983) the more academically oriented the preschool program the less creative the graduates. On the dimension of emotional well being Hirsh-Pasek (1991) reported that on the Pictorial Scale of Perceived Competence and the Social Acceptance for Young Children scale (Harter & Pike, 1984) there was an initial difference with the more academically

trained children giving higher ratings of their own perceived competence at the beginning of the year. At the end of the year, however, this finding had disappeared. On the same dimension raters were asked to score each child on a scale of performance anxiety which had been created for the study. She found that children with academic training showed more performance anxiety than children from child-centred pre-schools. This finding should be interpreted with caution, however, as the study also found a positive correlation between maternal influence and performance anxiety. Children who attended academic pre-schools were more likely to have academically oriented mothers who placed more pressure on their children to attain skills than children who attended child-directed pre-school and who had mothers oriented toward a child-directed approach. The findings could be interpreted as resulting from maternal influence rather than educational programming although the authors indicate both are likely critical factors. While this study does not speak to the long term issues surrounding pre-school it provides a reliable and valid measure of shorter term gains and losses.

The final branch of ECE and the most recently developed addresses these issues. This philosophy stemmed from the work of Jean Piaget and others who believed that learning is not a process that comes mainly from the child as in Nativistic ECE, or mainly from the teacher as in Teacher-Directed/Academic ECE but from the interaction between the child and his/her environment.

C) Developmentally Appropriate ECE

Developmentally Appropriate Programming (DAP), represents a middle ground between the Teacher-Directed/Academic school and the Nativist school. DAP-ECE

postulates that, as children develop, they are continually interacting in new ways with the environment, which in turn influences their development and makes them interact in new ways. The cyclic nature of learning means that knowledge is continually constructed and/or reconstructed as a child grows. In Nativistic ECE, learning comes from within, in Teacher-Directed/Academic ECE, learning comes from the environment but in DAP-ECE learning comes from the dynamic interaction between the two.

The National Association for the Education of Young Children (NAEYC) adopted DAP as their recommended practice in the mid 1980's and described it in the NAEYC's document 'Developmentally Appropriate Practice in Early Childhood Programs Serving Children From Birth Through Age 8' (Bredekamp, 1987). In this document DAP-ECE is described as consisting of two elements, age appropriateness and individual appropriateness.

Age appropriateness refers to the universal patterns of development found in all children in the areas of physical, emotional, social and cognitive development. Individual appropriateness refers to the unique nature of each child regarding the pattern and timing of their developmental stages.

In DAP-ECE the teacher looks at what and how children of a particular age learn and presents challenges that are appropriate to the children's needs. DAP-ECE classrooms for normally-developing 4 or 5 year olds provide environments where the child can learn through exploration and interaction with the environment (play), each other and the teacher. For the majority of time children in the classroom are in small groups or by themselves with a limited or small amount of time spent in whole-group,

teacher-directed activities. Teachers give important input into the child's learning process by providing materials and information necessary to stimulate and challenge the child.

Teachers are facilitators, not dispensers of knowledge (Bredekamp, 1987). The teacher is present to enhance the learning experience by asking questions, offering suggestions or adding an idea or thought in a non-intrusive manner into the play experience of the child. Recommended DAP interaction patterns for teachers of children in ECE are, for the most part, child-directed in that teachers primarily respond to child-initiated questions, interests and activities (Bredekamp, 1986). Assessment of children in the DAP-ECE classroom is not done through standardized tests but through observations, recording anecdotal notes, collecting samples of children's work and sharing the information gathered with the teaching team (Greenburg, 1990). The goal of DAP-ECE is different than that of Teacher-Directed/Academic ECE in that it is not primarily to create a knowledge base for children but to create a desire to learn. Teacher-Directed/Academic ECE is more concerned with output rather than process whereas DAP-ECE is more concerned with process rather than output.

DAP-ECE is a fairly new philosophy so criticisms of the practice often focus upon the zeal of DAP-ECE proponents. In addition DAP-ECE is a philosophy without a strong empirical base. Although many ECE practitioners agree on the logic of DAP-ECE and have anecdotal evidence regarding effectiveness of DAP-ECE, there has yet to be strong research support for its long term effectiveness. Despite this, DAP is the ECE philosophy that is most commonly expounded in Alberta (Gammage, 1991).

Conclusion

ECE has been in existence for over 100 years and in that time has evolved from the Nativistic approach, through the Teacher-Directed/Academic approach to DAP-ECE. Although each school of ECE has advantages and disadvantages all currently exist in varying degrees. The most commonly found approach, however, appears to be DAP-ECE. The integration of children with disabilities into the classroom has brought a new challenge to DAP-ECE. Although DAP-ECE may have a well defined approach to serving normally developing children it was not developed considering the educational needs of children with developmental disabilities.

Children with developmental disabilities have traditionally been served by the philosophies and practices of Special Education. Like ECE which was developed solely to focus on the needs of children who are normally developing, Special Education was developed solely to consider the needs of children with disabilities. It was primarily developed from outside mainstream ECE and has a different approach to teaching and learning than the currently popular DAP-ECE. This difference has the potential to create problems when the two philosophies combine in the integrated classroom.

Early Childhood Special Education

The education of people with mental disabilities was only begun during the past 50 years. Vocational success by people with mental disabilities during World War II led the way to post-war skills training programs, offered by community groups and churches, geared to vocational pursuits (Brown & Hughson, 1987). It was not until the late 1960's, however, when a fundamental paradigm shift occurred in the way many

people viewed the rehabilitation of persons with mental disabilities, that the education system was prompted to offer instruction. This paradigm change was perhaps best interpreted by Wolfensberger (1972), who stated that rehabilitation should be done by "means which are culturally...normative" (p.18).

This philosophy led the parents of individuals with disabilities to become organized, lobby and sue for their children's right to be included in their community schools, rather than in institutions or sheltered workshops (Brown & Hughson 1987, Lovett 1985). The first school programs for children with moderate mental disabilities in the Province of Alberta were mandated in both the public and separate school systems in 1975 (Pivato, 1986). In 1978 the 'Carriere' case brought about a court decision which served as the catalyst for the integration of children who had more severe handicapping conditions (Towfighy-Hooshyar & Zingle, 1984) into the school system and in 1979 the first educational opportunities for children with multiple handicaps became available.

Although all children with disabilities were now incorporated into Alberta Education, educational philosophy in the area of Special Education has remained apart from the mainstream. Teaching strategies for children with disabilities were not taken from regular education but from the skills training programs that showed success with adults with mental handicaps. The skills training approach is a compensatory approach (similar to Teacher-Directed/Academic ECE), assessing the individual for the skills they lack and then designing a teaching program for attaining these skills. The teaching program would involve setting out measurable goals, objectives and rewards. This

approach is significantly different from DAP-ECE.

Alberta Education requires that each child who is given funding for special education will have an Individual Education Plan (IEP). The IEP is more consistent with teacher-directed programs than DAP-ECE in that it consists of assessing the child's level of development or ability, setting attainable goals for the development of a skill or skills and a teaching plan that includes objective criteria for successful completion of each step of the plan. Although a teacher-directed philosophy is not mentioned as part of the School Act, it has been speculated that the requirements of the IEP give the impression that this type of plan is expected (Ballard, 1987).

Unlike DAP-ECE, Special Education stresses teacher-determined activities, goals and strategies as well as careful control of the child's responses (Ballard, 1987, Cavallero, Haney & Cabello, 1993). Teachers with their knowledge of developmental skills, and with the assistance of parents, determine a skill that the child needs and the manner in which it will be taught. In this way ECSE is closely aligned with Teacher-Directed/Academic ECE.

Because the techniques and philosophy of ECSE are similar to Teacher-Directed/Academic ECE, the advantages, such as increased knowledge or skill level, are similar as well. Children's progress can be closely monitored and their successes documented. Close monitoring of programs also provides feedback to the teacher who can continually adjust the program to create a greater chance of success (e.g. different reinforcers, more frequent application, etc...). The criticisms applied to Teacher-Directed/Academic ECE, however, can be applied to ECSE as well.

ECSE is primarily criticized for the 'damaged disposition hypothesis' (see page 4). ECSE has been criticized for encouraging the development of a "learning style that is counterproductive" (Sheridan, 1991, p.32) for children with disabilities. Sheridan (1991) articulates this concern as it arises when students with delays are exposed to well defined teacher determined goals and expectations and are not given the opportunity to explore, determine and develop the concepts that are most relevant to them developmentally. Ballard (1987) also reflects that not only are learning processes prescribed by the teacher but student generated ideas are avoided and ignored or punished as 'off task' behaviours. Sheridan (1991) further postulates that these teaching strategies deny the individual's unique development resulting in students who will not learn to trust their own ability to contribute and/or problem solve and who will turn to others to tell them what to do. Students are not taught to think for themselves but to rely on their teacher to tell them if they are right or wrong. Both authors share the concern that the result of this teaching style, students who have a reduced desire or disposition for learning, is particularly troubling for children with disabilities.

Integration of children with disabilities into the ECE classroom, however, brings about questions regarding the future of ECSE. With the integration of children comes integration of their teaching staff and inevitably the integration of their philosophies.

Differences Between DAP-ECE and ECSE

The basic difference between DAP-ECE and ECSE is one of process versus skill level. In DAP-ECE children are provided with an environment that is stimulating and challenging for them, based on universal developmental processes experienced by most

children of their age. Each child explores and interacts with this environment at their individual level of development through self initiated activities with the teacher providing guidance and facilitation. In ECSE, specialists examine the pattern of universal 'normal development' and break it down into the skills used at each level. The child is then assessed to determine which of these skills they possess and a plan is devised to teach the child the skills they lack. The difference between DAP-ECE and ECSE is demonstrated in the way each philosophy views play. In DAP-ECE play is the medium through which children learn and therefore is a necessary condition for learning. ECSE views play as separate from learning. Hanline & Fox (1993) indicate that in ECSE play may be viewed as a necessary part of a child's life, but it is not viewed as a necessary component or vehicle of education.

These two contrasting views are often referred to as 'horizontal vs vertical' learning. Horizontal learning, such as that espoused by DAP-ECE, is learning that enriches and elaborates on concepts that the child is developing. This learning allows children to apply and alter concepts that they are developing for themselves. Vertical learning is building on steps or levels of learning most often for a future goal or concept the child might need.

An example of this difference, would be the differing approaches to toilet training a child. In horizontal learning toilet training is done when the child shows signs that they are physiologically and/or cognitively ready (ie., being aware of their need to go and expressing it with behaviour, e.g., dislike of dirty diapers, etc...). In vertical learning toilet training is done because the child is at an age where toilet training is

expected and/or it is a skill they will eventually need.

With these basic differences it is difficult to comprehend how DAP-ECE and ECSE staff can operate in the same classroom. There must be a prevailing theory in operation or at minimum some type of compromise that occurs.

Consolidation of DAP-ECE and ECSE

Different combinations of DAP-ECE and ECSE philosophies have been postulated by several people. Johnson and McChesney Johnson (1992) speculate that DAP-ECE is quite similar to ECSE in that, individually appropriate programming is stressed. They also indicate that both positions make the same mistakes in the interpretation of this 'individually appropriate' guideline. This mistake in turn makes the two philosophies appear to be more disparate than they actually are. In developing an ECE program for children aged 4 to 5 DAP-ECE sometimes includes challenges that would be appropriate for most children of the same age without individualizing the program adequately. Adapting a program to the individual's needs means that teachers need to adjust the classroom to fit the level of development of all individuals not just the majority. For ECSE the same mistake is made when IEPs are based on a predetermined vertical learning plan based on average development rather than the developmental pattern of the individual. Both schools of thought make the mistake of offering programs that are "not authentically individualized" (Johnson and McChesney Johnson, 1992, p.444).

Attempts to view the philosophies as identical or containing small or insignificant differences, however, are problematic. The desire to see more similarities

in approaches than there are may result in confusion.

An example of this confusion is the overlapping terminology. DAP-ECE and ECSE researchers/teachers often use the same language implying different meanings thus creating a 'pseudo-agreement' regarding similarities in the way they function in the classroom. For example, in DAP-ECE the term 'age appropriate' refers to offering materials appropriate to the child's developmental stage. For ECSE 'age appropriate' refers to offering materials that are appropriate to the child's chronological age (e.g. a child who is 6 will not be given infant toys to play with even if they are 6 months old developmentally, but instead will be given toys that other normally developing 6 year olds play with). Also in DAP-ECE 'individually appropriate' refers to teaching to the child's individual developmental stage or level of 'processing' whereas in ECSE, it refers to teaching to the child's individual level of 'skill'. Therefore, an ECSE researcher or teacher indicating that a classroom is individually appropriate and a DAP-ECE researcher or teacher indicating that a classroom is individually appropriate may in fact be referring to very different environments. The differences in the interpretation of terms reflect the problems associated with working in and/or examining the integration of DAP-ECE and ECSE practice in the classroom.

In addition, while there is a great deal of writing on the best possible teaching strategies for young children with and without disabilities, the majority of these writings tend to be speculative and not empirically based. What is actually happening in the integrated classroom regarding DAP-ECE teaching strategies and ECSE teaching strategies, and the effectiveness of both approaches has not been well researched

(Ballard, 1987, Johnson & McChesney Johnson, 1992, Lynch, Widley & Johnson, 1988).

Investigations into approaches that merge DAP-ECE and ECSE have focused on strategies that provide teacher-directed instruction embedded in the DAP-ECE curriculum. Fox & Hanline (1993) integrated two four year old children with developmental delays into DAP-ECE programs and used teacher-directed strategies within the free-play/centre times to teach each child new skills. Their hypothesis was that children with disabilities could benefit from the naturalistic environment and that free play time would provide, enhance and allow for the development and maintenance of specific skills. They targeted several behaviours for each child such as putting objects into a container, giving objects to peers or adults upon request, using the label 'red' and so on. A multiple baseline was used to determine the frequency of each behaviour and then the researchers initiated an intervention strategy with the goal of raising each frequency. The strategies for encouraging each behaviour followed 3 to 4 steps and ranged from a casual verbal prompt to a stronger verbal or physical command. The researchers' results indicated that both children increased the desired behaviours significantly.

Although a single subject design, this study does indicate that children with disabilities can learn within the DAP-ECE classroom using teacher-directed strategies. One might question whether other children in the classroom were taught skills in the same manner or if only the 2 children with disabilities were exposed to these techniques. If the other children were being taught by the same means it would be

interesting to determine if the effects were similar. In addition, a six month follow up on whether the children maintained their skills would speak to whether the environment continued to be supportive of their educational needs. Regardless of these concerns it appears that the authors have found a way to effectively educate children with disabilities in an integrated setting without separating them or drawing undue attention.

Another study looked at using DAP-ECE techniques with children with disabilities. Rogers and DiLalla (1991) reviewed the progress of 76 children with either autism or pervasive developmental delays and emotional disorders, who had been enrolled in a segregated DAP-ECE program over a nine year period. The average age at enrolment was 47.99 months and the average length of stay in the program was 18 months. The program studied was designed to use play as the main vehicle for learning and the authors indicated that each child was allowed to initiate and organize their own learning experiences. Each child's diagnosis was determined at the time of their enrolment by two clinical psychologists using the Diagnostic and Statistical Manual of Mental Disorders III (1980) and III-R (1987). At the same time the psychologists measured the childrens' intelligence and mental age with either the Merrill-Palmer Test of Mental Abilities (Stutsman, 1948) or the Mental scale of the Bayley Scales of Infant Development (Bayley, 1969), depending on the child's abilities. The children were then re-tested for intelligence and mental age 6-9 months after the program was completed and the pre-post scores were compared. Their results indicated that children with autism and children with developmental delays and emotional/behavioral disorders made significant gains in both intelligence and developmental age when taught using DAP-

ECE. They also found that although the children with autism were more severely disabled as shown in their intelligence test, they progressed as well as the children with developmental delays and emotional/behavioral disorders. This finding is significant in that it shows that children's intelligence and mental age can be affected positively by DAP-ECE. The advantage of this study is its longitudinal nature. The design was flawed, however, in that the Bayley Scales of Infant Development (Bayley, 1969) have norms set with normally developing infants not children with autism. The validity of this measure should also be questioned given that children with behavioral disorders may achieve low scores not because of their ability to give the correct responses but their ability to sit in one place or follow directions. As with autistic children, children with behavioral disorders may know the correct response but may not be able to express it due to factors other than intelligence. In addition there was no control group. The authors did attempt a prediction analysis by determining the child's development up to their point of entry into the program and then predicting further development based on that information. There is an assumption in the prediction, however, that children with autism have a steady and predictable rate of development which cannot be substantiated. Further study is needed to determine if using DAP-ECE with children with disabilities can be as effective as using ECSE within a DAP-ECE as described in the Fox & Hanline (1993) study.

A study by Thompson, Vitale & Jewett (1984) examined 33 third and fourth grade mainstreamed classrooms to determine if the interaction patterns for teachers and students with and without disabilities differed. Each classroom was a regular self-

contained class with four students having mental disabilities. The authors trained university students to make classroom observations on a modified version of the Brophy-Good Teacher Child Dyadic Interaction System (Brophy-Good, 1969). For the purposes of this study the authors dropped the coding category for reading and added a student response category. They also added length to the time of the observation period to standardize the measurements for all students. This was done to compensate for the students with disabilities leaving the classroom for individual instruction in a resource room. The raters were then put into the classrooms at least one day per week, in the late winter and early spring, for a minimum of 5 weeks.

Their findings indicated that children who were disabled received significantly more interactions that were initiated by their teachers than did their non-disabled peers. They also found that the interactions toward children with disabilities tended to be more 'behavioral' rather than academic in nature. This finding indicates that children with disabilities do experience different communication patterns from teachers relative to their normally developing peers.

The study had the advantage of several observers in the classroom for the full day over a five week period which meant there was a large data base. One might question, however, the finding that children with disabilities received more interactions initiated by teachers. The study did not detail whether the design was sensitive enough to pick up the difference between action and interaction. The authors examined initiations primarily and did not indicate whether the initiations lasted for one sentence or one minute. In addition children with disabilities were removed from the class for

a portion of the day. It is difficult to estimate what effect this action had on the relationship between teachers and students with disabilities. For example, teachers may have been more connected to students who remained in the class for the entire day or the removal may have been disruptive to the students with disabilities causing them to act out. Furthermore two raters situated directly in the classroom watching the teacher and recording their responses every few seconds might have effected the behaviour of both students and teachers. Despite this, the finding certainly does suggest that the communication patterns displayed by teachers overall toward students with and without disabilities differ in the 3rd and 4th grades.

File (1994) found that teachers in integrated ECE programs also tend to be more directive toward children with disabilities. File observed 28 children, 14 of whom had mild or moderate cognitive and/or speech and language delays, in their integrated preschool classrooms. She observed the children during two of their 45 minute free play periods. A self-developed observation tool that included: no involvement, involved in routines/non-play, watching, supports cognitive play and supports social play, was used to code the teacher and child's interaction. She found that teachers tended to teach/direct social situations more for children with special needs, as opposed to simply providing social support. This indicates that teachers were more directive in their interactions with children with disabilities than they were with children without disabilities. In this study, the validity of the interaction scale might be questionable as there were categories that were not precisely defined. This may be why inter-rater reliability was established at only 86%.

Brophy & Hancock (1985) also examined the interaction between teachers and children in integrated preschool settings. Over one 12 week session they examined 18 children ages 3-5 enrolled in an integrated preschool program and the manner in which they were spoken to by teaching staff. They then repeated this procedure over another 12 week period with another 16 children. In each of these sessions 8 of the children were disabled (mental disabilities, social/emotional disabilities and behaviour problems). Four fifteen minute videotapes were made of each child during the free play period of each program resulting in 1 hour of video tape per child for approximately 30 hours of tape altogether. Each teacher/student interaction was then analyzed using an interaction scale developed by the authors. The interaction scale included 17 categories that encompassed both verbal communication (e.g. asks questions) and non-verbal communication (e.g. has physical interaction to comfort or make contact). Inter-rater reliability was established at 90%. The authors found the patterns of teacher/student interaction differed for children who were disabled and non-disabled. In particular, children with disabilities were asked more questions and these questions tended to be closed or requiring a 'yes' or 'no' answer only. They also found that teachers tended to give more orders to children with disabilities suggesting that teachers are more directive with children having disabilities. Children without disabilities received more explanations. (e.g. it's cold outside so you need to wear your coat) and conversation (about topics of interest to the child) than children with disabilities.

The use of the 'free play' time was an effective way to measure the nature of teacher-student interactions. 'Free play' time in most classrooms is the time when

teachers are expected to behave in a child-centred manner, unlike 'circle time' where their behaviour is more directive. In free-play teachers are expected to be facilitators rather than disseminators of knowledge. During this time teachers are less bound by the specific information they need to convey and are free to react to the children as they deem appropriate. The scale used by the authors (Brophy & Hancock, 1985) was comprehensive in that it took verbal and non-verbal communication into account. It also accommodated the unique circumstances surrounding children with disabilities. For example it included a category for 'control' physical contact as well as 'comfort' physical contact. As with earlier studies examining teacher/student interaction, however, there is a concern regarding the validity of the scale. Although there is certainly face validity the scale does not appear to have been tested previously. In addition, children with social and emotional problems were included in this study which may have influenced the results. Their problem behaviour may have solicited more directive verbal interaction, not as a reflection of teaching philosophy, but to prevent injury to themselves or other students. It might have been interesting had they separated out the data from children with behaviour problems to see if the findings stood. In addition there was not a comprehensive description of how intrusive the videotaping was to teachers and students. It could not be determined from reading the study whether the camera was within three feet of the teacher at all times or in one corner of the classroom. This would certainly make a difference in the way the teacher behaved. Finally, the authors reported frequency of interaction types but did not analyze it statistically to see if any of the differences were significant.

Conclusion

Most of the earlier studies in this area report similar findings ie. children with disabilities receive more directive interactions than children without disabilities. These studies, however, record teacher behaviours not teacher/student dyads during the free-play period which, while providing information on what is happening overall, may be influenced by factors other than teaching style. For example, if the classroom is set up with activities geared to only the normally developing children, then children with disabilities will be less engaged in the activities and be more likely to act out requiring directive interaction. It may also be that if there are very few teaching staff then the teacher may feel pressure to be directive with children who are lagging behind in achievement. These studies may also reveal a teacher's behaviour when they are moving around the classroom spending only a few seconds of their time at each centre. These pitfalls may be avoided by looking at teacher-student dyads of at least 1 minute duration. These periods of time when the teacher is working one-on-one with a student should be examined separately to determine if a teacher behaves differently when interacting with a particular child.

The observation of teachers is critical to finding out what is happening in integrated classrooms. It is equally important to assess the teachers' philosophical orientation to teaching. Asking what these philosophies are and how they develop will reveal the role an individual's education, knowledge, beliefs and/or experience play in informing their practice.

Teacher Education

The education of ECE and ECSE personnel is routinely different. ECE teachers get an overview of the 'normal' development of children with little focus on special education, while ECSE teachers are trained in special education techniques with little focus on the normal development of children (Odom & McEvoy, 1990). In addition, ECE teachers, while receiving a rich mixture of philosophies, are currently educated in the use of DAP while ECSE teachers are not. Miller (1992) points out some of the pitfalls of keeping the two types of teacher education separate by suggesting that this practice perpetuates the idea that children need teachers who are;

"trained in discrete bodies of knowledge and pedagogy accessible only to members of the specialized fields of expertise." (p.39).

Teacher education may train teachers to interact with either a child with a disability or a child who is developing normally but not both. This disparity in educational backgrounds leads to a lack of understanding of the others' point of view or knowledge base. Snider & Fu (1992) performed a study of seventy-three early childhood teachers to determine if their knowledge of appropriate practice was connected to their educational backgrounds. Teachers, after filling out a questionnaire on their academic and employment background, listened to 12 audio-taped vignettes of teachers and students interacting. Each vignette had been chosen and then screened by five experts in the field of DAP-ECE to determine how appropriate each interaction was. Each subject was asked to indicate whether they thought the vignette exemplified developmentally appropriate or inappropriate practice. The authors found that subjects

who had some training in 'child development' scored better on the test than those who did not. One concern relating to the study was that content validity of the dependant measure depended upon five 'experts', however, there was no indication who the experts where. Even with this limitation, however, the study did indicated that DAP-ECE was dependant on knowledge of the normal patterns of child development which ECSE teachers lack.

Butera (1993) interviewed ECSE practitioners at a 'Best Practices' seminar individually and in groups with each session lasting about 2 hours. Many of these practitioners expressed concern regarding their classroom practice in integrated settings, specifically, the effectiveness of teacher-directed methods versus child-directed methods. The qualitative report of practitioners' experiences showed them to be in conflict regarding the different knowledge bases underlying ECSE and DAP-ECE and which practice they should be following.

Teacher Knowledge

Given the difference in training it is important to determine whether ECSE teachers entering the DAP-ECE classroom have a well defined concept of development and, therefore, DAP-ECE. Miller (1991) asked 169 ECSE professionals 14 open ended questions designed to elicit their demographics as well as their philosophy and theory of teaching. The results showed that when teachers were asked what 'primary theory of development or learning' they based their individual programs on, forty-seven percent of the participants left the question blank or indicated that they did not know. One might question what a teacher then bases his/her practice upon. It may be that

teachers were unable to express a theory concisely enough for it to fit into a questionnaire and this may, in fact, reflect a flaw in the design of the study (re: Miller, 1991). A theory of development, unless identical to a theory such as Piaget's (in which case the subject could say 'Piagetian') can encompass a large body of knowledge. It might have been more prudent to ask questions requiring shorter, less comprehensive answers.

Stahlman et al. (1989) examined 32 Education students (16 ECE practitioners and 16 ECSE practitioners) who were attending a summer institute in ECSE at Cleveland and Kent State Universities. A pre-post test of knowledge was developed by the author of the course text and was administered on the first and last day of the five week course. The authors found that ECE practitioners had a much better understanding of early childhood development than did their ECSE peers.

Teacher Beliefs

Beliefs are often held more strongly than knowledge (Pajares, 1992). Odom and McEvoy (1990) proposed that the beliefs expressed by teachers, however, most often reflect their professional association's beliefs at the provincial and/or national levels. This would result in ECE teachers supporting DAP-ECE for the most part and ECSE teachers supporting beliefs about the teacher-directed approach to teaching.

Stated beliefs, however, have not always been shown to reflect practice. In the study done by File (1994) discussed earlier (p. 20) teachers were asked to complete the Peer Relation Rating Scale (Ladd & Muth, 1990) and an Assessment of Teacher Role Scale (developed for the study) to determine teachers' beliefs about children. Each

teacher's responses to the rating scales were compared with their interactions. File found that teachers were more likely to support the cognitive features of children with disabilities' play than the social features despite their stated belief that children with disabilities are delayed in social skills. Drawing the conclusion that teachers do not act on their beliefs is premature, however, in that the current scales may not have taken into account competing belief systems such as the those of the school administrator and/or boards of education. For example, it may be that although teachers believe that children with disabilities lag behind in social skills the school policy requires them to act primarily on the children's cognitive lag. It may also be that while teachers believe children with disabilities display both cognitive and social skills delays, the cognitive delay is of more concern so they are more likely to act on it. A less rigid more exploratory investigation into teacher beliefs might reveal not only stated beliefs regarding children but also the more complex issues surrounding the teacher's belief system and it's interaction with parental and school administration belief systems.

Teacher Experience

Feeney & Chun (1985), have speculated that the more experience a teacher has the more effective they are; however, it has been demonstrated that this is not always the case. As discussed earlier Snider & Fu (1990) found that length of employment in child care and education had no significant effect on the teachers' knowledge of appropriate practice. Investigations in this area should also focus on how the teacher's experience affects their pattern of interaction with children.

Summary

There are several issues surrounding practice in the integrated classroom. The central issue involves the integration of two very different philosophies ie., DAP-ECE and ECSE. DAP-ECE and ECSE have areas of practice that are mutually exclusive and efforts to combine them have, for the most part, been difficult. It is critical that the teaching environment in integrated classrooms be examined to determine how differentially trained teachers apply these two philosophies in the same integrated classroom. Earlier studies have examined the integrated classroom to see how teachers behave toward students but most have looked at communication by the teacher over the entire free play period not at the teacher/student dyad. These behaviours need to be examined more closely to determine if the findings of earlier studies ie. that students with disabilities received more teacher directed encounters than their normally developing peers, are reasonable in the context of teacher/student dyads. It is also important to put these behaviours in the context of the teacher's education, knowledge, beliefs and experience to determine if one or more of these factors are responsible for the different treatment of children reported in the earlier studies.

Determining the teachers' philosophies with regard to teaching and learning in the integrated classroom is also essential. Determination of what teachers consider their role to be in the education process and what they believe the goals of education are (e.g. developmental vs. skill) may also help explain the differences and/or similarities in interactions with students.

The Current Study

The current study will examine teacher/student interactions in integrated classrooms to determine the nature of such interactions using both quantitative and qualitative analysis. The quantitative analysis will involve examining teacher/student dyads and categorizing the interactions as either teacher-directed, student-directed or other. It will also include a survey of teacher's stated beliefs and of their knowledge of DAP-ECE. The qualitative analysis will examine teaching philosophy through the analysis of the discourse engendered by two statements designed to elicit the teachers' views of what it means to succeed and fail in the classroom. The qualitative analysis will attempt to provide structure for the quantitative data and if possible connect these structures to the hypotheses of this study.

It is predicted that:

- Hypothesis 1: Teacher/student interactions with normally developing students in the integrated classroom will be more consistent with DAP-ECE than will the teacher/student interactions with students who are disabled.
- Hypothesis 2: Teachers trained in ECE will interact with students, regardless of ability/disability, in ways that are consistent with DAP-ECE while teachers trained in ECSE will interact with students in more teacher-directed ways in the integrated classroom.
- Hypothesis 3: Teachers trained in ECE will know more about DAP-ECE than teachers trained in ECSE.

Hypothesis 4. Teachers who have more experience working in an integrated classroom, regardless of training, will have more knowledge of DAP-ECE and engage in interactions that reflect DAP-ECE.

METHOD

Sites

The research Sites consisted of two private, non-profit E.C.S. programs in the City of Calgary. Both programs have ‘integrated’ classrooms that combine children having mental and physical disabilities with children who are normally developing. The E.C.S. programs at both Sites are half day programs with most children attending either the morning or the afternoon class.

Site A

Site A is an integrated E.C.S., daycare and nursery program in south-west Calgary. It also provides some segregated classes (classes solely for children with disabilities) as one component of some children’s program. There were a total of 190 children in the program at the time of the study with 57 of these being E.C.S. students (Appendix A). Site A provides a full time nurse, occupational therapists, physiotherapists, speech therapists and a psychologist who can be accessed for the children in the nursery, daycare or E.C.S. programs. Site A also provides a parent support program for parents of children with disabilities and provides outreach services to community daycares that have children with disabilities.

Site B

Site B is an integrated E.C.S. program serving 3 different geographical locations in North Calgary. Each location provides a similar service supplemented by the services of occupational therapists, physiotherapists, speech therapists and a psychologist. Two of the geographical locations were used in the present study (Appendix A). Site B will

be treated as one site despite the two geographical locations because the small number of subjects at each site would not allow for a statistical analysis that compares their data.

Subjects

Ten teachers and 29 teacher aides were approached by the researcher and asked if they would agree to participate in a study of teaching strategies in the integrated classroom. Each teacher/teacher aide was informed that their choice to participate would be voluntary and were asked to sign a consent form if they chose to participate (Appendix B). Eight teachers (3 from Site A and 5 from Site B) and 14 teacher aides (7 from Site A and 7 from Site B) agreed to take part (N=22). Four teacher aides from Site B were male and the remainder of teachers and teacher aides from both Sites were female. An 'Education and Work History' form similar to that used by Snider and Fu (1990) was employed. This questionnaire asks teacher/teacher aides to detail their post-secondary education and work/practicum history (Appendix C). Eight teacher/teacher aides were trained in ECSE, 12 were trained in ECE and 2 had no training in either area. Each teacher and teacher aide was observed with both their morning and afternoon classrooms whenever possible (3 teachers and 6 teacher aides worked half days only). Sixteen half-day classrooms of children were used (4 from Site A and 12 from Site B).

The classrooms for Site A consisted of two morning and two afternoon classes which included; 11, 12, 17 and 17 students. The classrooms in Site B contained 10, 14, 15, 15, 16, 16, 19, 20, 21, 21, 22 and 23 students and consisted of six morning classes and six afternoon classes. Most of the children attended E.C.S. for one half day only;

however, some of the children attended one class in the morning and another in the afternoon (13 children from Site A and 2 children from Site B). Each child who attended for a full day (who participated in the study) had different teachers and teacher aides in the morning and afternoon classes.

There were a total of 268 children employed in the present study. Each child's parents were sent a consent form and cover letter (Appendix D) asking if they might participate in the study. Parents were assured that if they chose not to have their children participate the camera would be turned off when their child was in view so they would not be seen on any of the videotapes. Of these children, 236 returned signed consent forms (52 from Site A and 185 from Site B). At Site A, 24 (46%) of the 52 children who participated had disabilities, as did 43 (30%) of the final 142 children at Site B. For the purposes of the study the term 'disability' is defined by 'Alberta Education Criteria for Eligibility for Program Unit Grants' (Appendix E).

Teacher/Student Interactions

Teacher/teacher aide interactions with students were videotaped using a Sharp 'Viewcam'. This is a small video camera that provides the operator with a 4 inch video-screen instead of an eyepiece with which to view the subject. The researcher was, therefore, less intrusive in recording interactions as she could look downward at the camera instead of through an eye-piece in the direction of the subject. A small microphone (transmitter) was placed on the teacher/teacher aide allowing the audio signal to be recorded from up to 30 feet away. This, in addition to the camera's telephoto lens, allowed the researcher to stand in a corner, away from the predominant

activity areas of the class.

Each teacher/teacher aide was videotaped during the 'free-play' section of each of their classes over a 2 day period. Free-play is a time when children move at their own pace to whichever 'activity centre' they choose. These centres are set up around the classroom and may include but are not limited to activities such as; sand box, water table, craft tables, building blocks, a playhouse, and a reading area. During this time teachers and teacher aides move about the classroom to different centres and different children (wherever they feel they are needed most) to facilitate learning experiences. Teacher/teacher aides spend more time interacting with students individually during this time of the day.

The videotapes were then examined for segments that displayed a continuous interaction between a teacher/teacher aide and a student (a dyad) lasting a minimum of 1 minute. A minimum of one and a maximum of two one minute segments per dyad were extracted, the first one from the beginning of class and the second from the end of class if possible. This was accomplished by connecting the camera to a Mitsubishi U36 VHS Video Recorder and recording the individual minutes chosen onto a VHS tape. Thirty seconds of tape was left blank between each minute on the tape. The minutes were placed on two videotapes, 84 on one tape and 85 minutes on the other tape, in random order. The tapes were then examined by raters, who were 4 graduate students in the Department of Educational Psychology.

Raters each participated in approximately 30 hours of training. The first 10 hours were spent training raters on the use of the scale (Table 1) and the remaining 20 hours

Table 1
Teacher Observation Scale

Category	Description
Listening	Attending to the child's verbal and/or nonverbal communication in a nonjudgmental manner.
Closed Question	Questions asked by the teacher/teacher aide that have a right or wrong answer.
Open Question	Questions asked by the teacher/teacher aide that do not require an answer from the student or that do not have a right or wrong answer.
Information	Lecturing or making comments or analysis on content or process.
Requests or Commands	Requests, commands or behaviour to which the student is required to comply.
Maintenance or Monitoring of Play	Teacher/teacher aide is not interacting with student but providing materials for the continuation of play or watching children play.
Acceptance/ Play	Accepting students' ideas/action, praise, reward or encouragement.
Storytelling	The teacher/teacher aide reading or telling story to the student.
Answering Questions	The teacher/teacher aide gives information/opinion in response to a child's question.
Caretaking	The teacher/teacher aide performing caretaking behaviour with the student e.g. dressing the student.

were used to practice. The 'practice' videotapes employed teachers and students who were not participating in the study.

The raters viewed the interactions on videotape using a 12 inch Sony KV1206 colour television and a Sony SV0140 video cassette player with a remote control. Each

one minute of tape was rated, in 5 second intervals, using the 'teacher observation scale' (Table 1).

The scale was derived by using revised categories from the Flanders Interaction Analysis System (Flanders, 1970) and a scale used by Brophy and Hancock (1985). The Flanders (1970) scale, which was developed for teachers and children from grades one to twelve, is primarily one of verbal interaction (Appendix F). It includes categories of teacher interaction which are used in conjunction with categories of student interaction to determine a teacher/student interaction pattern. As teacher/teacher aide behaviour is the focus of the present study the student categories were deleted.

The Brophy and Hancock (1985) scale is more specific to E.C.S. classrooms (Appendix G). It includes 'behavioral' interaction patterns such as 'care-taking' that are characteristic of teachers of younger students.

Table 1 describes the categories for the teacher interaction scale used in the present study. Categories for 'child-directed', 'teacher-directed' and 'other' categories were determined by consulting with the NAEYC guidelines (Bredekamp, 1987) and by consulting an expert in the field of DAP-ECE. Listening, open questions, answering questions, praising and maintenance or monitoring of play (L,O, Q, P and M) were defined as strategies aimed at developing child-directed learning as outlined in the NAEYC guidelines for DAP. Closed questions, information and requests or commands (C, I and R), were defined as strategies that were associated with teacher-directed learning as outlined in the NAEYC guidelines. The other behaviours observed fell into the 'other' category; story telling and caretaking as these interactions could not be

viewed as characteristic of either child-directed or teacher-directed behaviours.

While the raters were watching the videotape a 'beep' sounded every five seconds. At the sound of the 'beep' raters categorized the interactions they had viewed in the previous five seconds. Raters were allowed to use more than one category to rate interaction for each 5 second interval.

The categories were then totalled for each minute and the number of child-directed, teacher-directed and other responses were determined for each minute. Scores were then collapsed for each teacher/teacher aide due to the unequal amount of videotape on each teacher/teacher aide. Collapsing was performed by averaging each teacher/teacher aide's score, using the total number of responses in the category (child-directed, teacher-directed or other) over all minutes rated, divided by the total number of minutes.

Teacher/Teacher Aide Beliefs

Teacher/teacher aide beliefs were examined using the 'Primary Grades Teacher Questionnaire' developed by Kenneth Smith (1992) (Appendix H). This questionnaire was developed using the NAEYC guidelines for Developmentally Appropriate Practice (Bredekamp, 1987) and contains statements of both Developmentally Appropriate Practice and more traditional directive practice. The Primary Teacher Questionnaire contains 42 items, 18 reflecting Developmentally Appropriate Practice and 24 reflecting the Teacher-Directed/Academic approach. Each item was judged on a four point Likert scale.

Teacher/Teacher Aide Knowledge

Teacher/teacher aide knowledge was measured using a semi-structured interview where teacher/teacher aides were asked the following questions:

1. Are you familiar with the term 'Developmentally Appropriate Practice'?
2. What does the term 'Developmentally Appropriate Practice' mean to you?
3. What is the developmentally appropriate teaching strategy for the average 4 and 5 year old?
4. What is the developmentally appropriate teaching strategy for the 4 and 5 year old with a mental disability?
5. What do you think the learning process is like for children with disabilities compared to children without disabilities?

Teachers' Views

Teacher/teacher aide views about teaching were ascertained by asking each teacher/teacher aide to respond, in writing, to two statements.

1. Write an account of a single experience, something simple and straight forward, when you felt **most** fulfilled as a teacher/early childhood educator and thought you were most being a teacher/early childhood educator. As much as possible stick to a descriptive language. You do not need to include interpretations of your writing. Don't lose yourself in factual details. It all begins with the lived experience and that is what you should try to describe.
2. Write an account of a single experience, something simple and straight forward, when you felt **least** fulfilled as a teacher/Early Childhood educator and thought

you were **least** being a teacher/early childhood educator. As much as possible stick to a descriptive language. You do not need to include interpretations of your writing. Don't lose yourself in factual details. It all begins with the lived experience and that is what you should try to describe.

These statements chosen had been employed in earlier research (LaGrange & Keogh, 1995) at the University of Calgary. Researchers and instructors had used responses to these statements to ascertain perceptions of a teacher's role held by caregivers and teachers in the ECE programs. These statements were adapted from earlier research relating to the role of nurses in the health care field (Tymieniecka, 1986). The statements were also chosen because they required responses that revealed a teacher/teacher aide's personal views of what is and is not important in their occupation versus responses that reflect their profession or their employer's philosophical position.

RESULTS

Due to the small number of subjects and to unequal sample sizes non-parametric statistics were chosen for the quantitative analyses. The Mann Whitney W was chosen for unrelated samples (Howell, 1989, Siegel, 1956). The Sign test was employed in the comparison of related samples (Siegel, 1956). An alpha level of $p < .05$ was used for all tests of statistical significance.

Teacher/Teacher Aide Interactions

Rater Agreement

Inter-rater agreement for the videotaped dyads was computed by dividing the number of ratings where both raters agreed, by the total number of ratings, and multiplying the result by 100 to arrive at a percentage agreement. Only those ratings where both raters agreed were included in the statistical analyses.

The videos taken in the classroom over the three month period yielded 2060 minutes of videotape. From the 2060 minutes, 161 minutes (teacher/teacher aides interacting with one child for a one minute period) were extracted (Table 2). Due to technical difficulties (ie., lack of sound) 6 minutes were discarded leaving 155. As each minute of video tape was separated into 5 second intervals for scoring, each minute produce 24 ratings (12 per rater). The 155 minutes, therefore, resulted in 3720 data points. Of these, 3452 data points were agreed upon by both raters. Reliability for the overall data was 95%.

Due to the elimination of ratings which were not agreed upon by the raters, each minute of video tape produced from 8 to 12 ratings per minute. The majority of the

Table 2

The Total Number of Videotaped Minutes Provided by
Teacher/Teacher Aides as a Function of Classroom Position and
Type of Training

CLASSROOM POSITION	TRAINING	NUMBER OF MINUTES WITH NON-DISABLED CHILDREN	NUMBER OF MINUTES WITH DISABLED CHILDREN
TEACHER	ECE	20	5
	ECSE	22	15
TEACHER AIDE	ECE	22	40
	ECSE	5	7
	NONE	18	7

minutes (147 or 95%), however, yielded either 10, 11 or 12 points (19%, 41% and 34% respectively) and these 147 minutes were used in the analyses for the present study (Table 3).

Of the 22 teacher/teacher aides studied, 16 produced suitable minutes of tape (one minute sections where they had interacted with a single student). Table 4 presents the number of minutes of video tape produced by each teacher/teacher aide. Due to the inequity in the total number of minutes per teacher/teacher aide the data were averaged as discussed above.

The dependant variable for the analyses of the dyads (interactions) was the frequency of each category of teacher behaviour derived from the teacher observation

scale (Table 1); e.g., 'child-directed interactions', 'teacher-directed interactions' and 'other' interactions.

Table 3

The Number of Videotaped Minutes Used in the Quantitative Analyses Provided by Teacher/Teacher Aides as a Function of Classroom Position and Type of Training

CLASSROOM POSITION	TRAINING	NUMBER OF MINUTES WITH NON-DISABLED CHILDREN	NUMBER OF MINUTES WITH DISABLED CHILDREN
TEACHER	ECE	20	5
	ECSE	21	15
TEACHER AIDE	ECE	20	33
	ECSE	4	7
	NONE	15	7

Educational training (ECE versus ECSE), years of experience (1-10 or 10-20 years), child's ability (typically developing or disabled) and classroom position (teacher versus teacher aide) were examined to assess their impact on teacher/teacher aide interaction. Site (A versus B) was also examined to determine if the organization influenced the teacher/teacher aides' interaction in the integrated classroom. Number of minutes per teacher/teacher aide, was examined first to determine if it was a factor influencing the raters scores.

Total Minutes Per Teacher/Teacher Aide

The data were examined to determine if the number of minutes a teacher/teacher aide contributed to the study affected the manner in which the raters scored their interactions (Table 4).

Table 4

Total Minutes of Videotape Per Teacher/Teacher Aide

Subject Number	Total Minutes
1	6
2	9
3	17
4	15
5	4
6	5
7	8
8	7
9	12
10	7
11	13
12	6
13	10
14	3
15	14
16	11

This was accomplished by comparing teacher/teacher aides with 1-8 minutes of usable observations (N=8) with teacher/teacher aides contributing 9-17 minutes of usable

observations (N=8) (Table 5). The results of the Mann Whitney W (n1=8, n2=8) revealed no significant differences between the groups for the child-directed (W=106, p = .64) or the teacher-directed (W=88 p = .33) interaction categories. The 'other' category could not be included as the teacher/teacher aides in the '1-8' minutes group produced no responses in this category.

Table 5

The Means and Standard Deviations for the Child-Directed, the Teacher-Directed and the Other Interaction Categories as a Function of the Total Number of Videotaped Minutes Provided by Each Teacher/Teacher Aide

NUMBER OF MINUTES	CHILD DIRECTED	TEACHER DIRECTED	OTHER
1-8 N=8	M=6.00 SD=2.14	M=4.75 SD=1.83	M=.00 SD=.00
9-17 N=8	M=6.12 SD=.84	M=4.75 SD=.89	M=.33 SD=.50

Training

Teacher/teacher aides were separated by their training, either (E.C.E. or E.C.S.E.) to determine if the training an individual receives impacts the types of interaction they have with children. The Mann Whitney W (n1=5, n2=9) revealed no significant differences for the child-directed (W=70, p = .78), the teacher-directed (W=65, p = .78), or the other (W=60.50, p = .62) interaction categories (Table 6).

Table 6

The Means and Standard Deviations for the Child-Directed, the Teacher-Directed and the Other Interactions Categories as a Function of Teacher/Teacher Aide Training

TRAINING	CHILD DIRECTED	TEACHER DIRECTED	OTHER
ECE N=9	M=6.44 SD=1.59	M=4.44 SD=1.23	M=.11 SD=.31
ECSE N=5	M=5.80 SD=1.92	M=5.00 SD=1.87	M=.25 SD=.50

Within-group differences were examined to determine if teacher/teacher aide training affected the amount of child-directed versus teacher-directed interaction each group produced. The Sign test (Siegel, 1956) was employed to make this comparison. The Sign test uses sets of data where differences exist. In cases where the teacher/teacher aide had the same score in both the child-directed category and the teacher-directed category the teacher/teacher aide was excluded from the analysis. This reduced the number (N) of teacher/teacher aides used in the Sign test analyses. The Sign test for teacher/teacher aides trained in ECE revealed no significant difference (N=8, d=1, $p = .06$) (Table 7). For those trained in ECSE the low number of teacher/teacher aides (N=4) who obtained a different score in the child-directed than they did in the teacher-directed category, precluded the use of the Sign test.

Table 7

The Means and Standard Deviations for the Child-Directed and the Teacher-Directed Interaction Categories as a Function of Teacher/Teacher Aides' ECE Training

TRAINING	CHILD-DIRECTED	TEACHER-DIRECTED
ECE N=8	M=6.50 SD=1.60	M=8.00 SD=1.30

Experience

Teacher/teacher aide data were examined to determine if number of years of experience had an effect on teacher/teacher aides' interaction patterns. The Mann Whitney W (n1=3, n2=13) revealed no significant difference for the child-directed (W=107, p = .67), the teacher-directed (W=115, p = 1.00), or the other (W=75 p = .57) interaction categories (Table 8). A Sign test for within group differences was not possible due to the low number of subjects (N=3).

Table 8

The Means and Standard Deviations for the Child-Directed, Teacher-Directed and the Other Interaction Categories as a Function of Years of Experience

YEARS OF EXPERIENCE	CHILD DIRECTED	TEACHER DIRECTED	OTHER
1-10 N=13	M=5.84 SD=1.28	M=4.92 SD=1.32	M=.20 SD=.11
11-20 N=3	M=7.00 SD=2.65	M=4.00 SD=1.73	M=.00 SD=.00

Ability/Disability

Interaction patterns for teacher/teacher aides were examined to determine if there was a difference in the way they interacted with children with and without disabilities. Each teacher/teacher aide's minutes of observation were divided into two groups; minutes with a child with a disability and minutes with a child without a disability. Each of these groups was then averaged, giving the teacher/teacher aide two sets of data, one for their interaction with children without disabilities and one for their interaction with children with disabilities. Not all teacher/teacher aides produced videotaped interactions with both types of children (2 teacher/teacher aides produced videotape of interactions with children having disabilities only and 4 other teachers/teacher aides produced videotape of interactions with normally developing children only), therefore, 6 teacher/teacher aides had only one score.

Sign tests using the data sets of each teacher/teacher aide who had worked with both children with and without disabilities were then performed. The Sign test compared each teacher/teacher aide's sets of data for a difference in the frequencies of child-directed, teacher-directed and other interactions. The results indicate that the number of child-directed ($N=12$, $d=6$, $p = .5$) and teacher-directed ($N=10$, $d=4$, $p = .38$) categories were not significantly different for children with and without disabilities (Table 9). The other category could not be analyzed as the Sign test only uses scores where difference has occurred and in the 'other' category this occurred only 3 times.

Table 9

The Means and Standard Deviations for the Child-Directed and the Teacher-Directed Interaction Categories as a Function of Ability

ABILITY LEVEL	CHILD DIRECTED N=12	TEACHER DIRECTED N=11
NON-DISABLED	M=6.20 SD=1.99	M=5.20 SD=2.40
DISABLED	M=5.18 SD=1.38	M=5.55 SD=1.75

A Sign test was performed to examine the difference between the amount of child-directed versus teacher-directed interaction experienced by children without disabilities. All teacher/teacher aides who had interacted with children without disabilities were included. The Sign test revealed no significant differences (N=11, d=5, $p = .5$), indicating that children without disabilities received the same amount of child-directed interaction as teacher-directed interaction (Table 10).

Table 10

The Means and Standard Deviations for the Child-directed and the Teacher-Directed Interaction Categories for Non-Disabled Children

ABILITY LEVEL	CHILD DIRECTED	TEACHER DIRECTED
NON-DISABLED N=11	M=5.91 SD=2.12	M=5.27 SD=1.35

The Sign test was then performed for children with disabilities using data from each teacher/teacher aide who had worked with children with disabilities. The results showed that children with disabilities experienced significantly more child-directed interaction than teacher-directed interactions ($N=13$, $d=3$, $p = .05$) (Table 11).

Table 11

The Means and Standard Deviations for the Child-Directed and the Teacher-Directed Interaction Categories for Children with Disabilities

ABILITY LEVEL	CHILD DIRECTED	TEACHER DIRECTED
DISABLED N=13	M=6.15 SD=2.58	M=4.69 SD=2.02

Classroom Position (Teacher versus Teacher Aide)

Data for teachers and teacher aides were separated and compared to determine if classroom position influenced their interactions with children. No significant differences emerged on the Mann Whitney W ($n_1=6$, $n_2=10$) between the two groups for the child-directed ($W=50$, $p = .96$), the teacher-directed ($W=50$, $p = .96$), or the other interaction ($W=58$, $p = .30$) categories (Table 12).

A Sign test was performed to examine the within group difference for the child-directed versus teacher-directed interactions with teacher aides. Teacher aides showed no significant difference in the amount of child-directed to teacher-directed interactions they engaged in ($N=7$, $d=2$, $p = .23$) (Table 13).

The Sign test was not possible for teachers as there were not enough who obtained a

different score in the child-directed category relative to the teacher-directed category (N=4).

Table 12

The Means and Standard Deviations for the Child-Directed, the Teacher-Directed and the Other Interaction Categories as a function of Classroom Position

POSITION	CHILD DIRECTED	TEACHER DIRECTED	OTHERS
TEACHER N=6	M=6.00 SD=.89	M=4.67 SD=.52	M=.33 SD=.52
TEACHER AIDE N=10	M=6.20 SD=1.87	M=4.80 SD=1.75	M=.10 SD=.32

Table 13

The Means and the Standard Deviations for the Child-Directed, the Teacher-Directed and the Other Interaction Categories for Teacher Aides

POSITION	CHILD DIRECTED	TEACHER DIRECTED
TEACHER AIDE N=7	M=6.43 SD=2.23	M=4.43 SD=1.99

Site

Site was used as an independent variable to investigate whether the organization a teacher/teacher aide worked for made a difference in their

interaction with children. The Mann Whitney W ($n_1=5$, $n_2=11$), revealed no difference for the child-directed ($W=59$, $p=.06$), the teacher-directed ($W=39.5$, $p=.78$) and the other ($W=43$, $p=1.00$) interaction categories (Table 14).

Table 14

The Means and Standard Deviations for the Child-Directed, the Teacher-Directed and the Other Interaction Categories as a Function of Site

SITE	CHILD DIRECTED	TEACHER DIRECTED	OTHER
A N=5	M=7.2 SD=1.64	M=4.2 SD=1.48	M=.2 SD=.45
B N=11	M=5.64 SD=1.29	M=4.46 SD=1.22	M=.18 SD=.41

A Sign test for within group differences for Site A was not possible due to the small number of subjects who produced a different score in the child-directed relative to the teacher-directed category ($N=4$). The data from Site B ($N=7$, $d=2$, $p=.23$) was analyzed (Sign test) but were not found to be significant, indicating that children at Site B experience a similar amount of child-directed and teacher-directed interaction (Table 15).

Table 15

The Means and Standard Deviations for the Child-Directed, the Teacher-Directed and the Other Interaction Categories for Site B

SITE	CHILD DIRECTED	TEACHER DIRECTED
B N=9	M=5.11 SD=2.32	M=5.44 SD=1.88

Teacher/Teacher Aide's Beliefs

Nineteen 'Primary Grades Teacher Questionnaires' were completed and returned. All 42 statements on the questionnaire were responded to by the teacher/teacher aides on a Likert scale with four response categories: (A) strongly agree, (B) somewhat agree, (C) somewhat disagree and (D) strongly disagree. The 18 statements reflecting DAP-ECE answers were scored by giving; A a value of 4, B a value of 3, C a value of 2 and D a value of 1. The 24 statements reflecting Developmentally Inappropriate Practice were scored by giving: A a value of 1, B a value of 2, C a value of 3 and D a value of 4.

Training

The questionnaires were examined to determine if there was a

difference in scores between the teacher/teacher aides trained in ECE versus the teacher/teacher aides trained in ECSE. The Mann Whitney W ($n_1=7$, $n_2=10$) revealed no significant difference ($W=74$, $p = .13$) (Table 16).

Table 16

The Means and Standard Deviations for the Scores on the 'Primary Grades Teacher Questionnaire' as a Function of

Training

TRAINING	'QUESTIONNAIRE' SCORES
ECE N=10	M=124.50 SD=9.83
ECSE N=7	M=132.57 SD=10.24

Experience

Teacher/teacher aides were separated into two groups; those who had 1 to 10 years of experience and those who had 11 to 20 years of experience. The Mann Whitney W ($n_1=4$, $n_2=15$) showed no significant difference ($W=151$, $p = .96$) between these groups (Table 17).

Classroom Position

The questionnaires were separated by classroom position, teacher versus teacher aide, to determine if one group had more commitment to

DAP-ECE than the other. The Mann Whitney W ($n_1=8$, $n_2=11$) again showed no difference ($W=80$, $p = .24$) (Table 18).

Table 17

The Means and Standard Deviations for the Scores on the
 'Primary Grades Teacher Questionnaire' as a Function of
 Experience

YEARS OF EXPERIENCE	QUESTIONNAIRE SCORES
1-10 N=15	M=128.13 SD=10.31
11-20 N=4	M=127 SD=12.25

Table 18

The Means and Standard Deviations for the Scores on the
 'Primary Grades Teacher Questionnaire'
 as a Function of Classroom Position

CLASSROOM POSITION	QUESTIONNAIRE SCORES
TEACHER N=8	M=131.00 SD=10.00
TEACHER AIDE N=11	M=126.18 SD=11.43

Site

The questionnaires were separated to test for differences between Site. The Mann Whitney W (n1=8, n2=11) showed a significant difference (W=45, $p < .01$) with Site B showing more commitment to DAP-ECE than Site A (Table 19).

Table 19

The Means and Standard Deviations for the Scores on the 'Primary Grades Teacher Questionnaire' as a Function of Site

SITE	QUESTIONNAIRE SCORES
A N=8	M=120.75 SD=7.89
B N=11	M=134.30 SD=9.19

SEMI-STRUCTURED INTERVIEW

The 8 teachers and 14 teacher aides were interviewed and asked to respond to the same basic questions (Table 20). The researcher asked everyone the same question but clarified and reworded the questions if (i) the teacher/teacher aide so requested or if (ii) the researcher determined that the teacher/teacher aide did not understand the question (e.g. they discussed their organization's policies on the topics). The interviewer also asked further

questions to elicit more detailed responses when necessary (e.g. can you explain what you mean when you say 'appropriate' activity).

Table 20

The Number of Teacher/Teacher Aides Participating in
the Semi-Structured Interview as a function of Site,
Classroom Position and Type of Training

SITE	CLASSROOM POSITION	TRAINING	NUMBER OF INDIVIDUALS
A	TEACHER	ECE	0
		ECSE	3
	TEACHER AIDE	ECE	6
		ECSE	1
B	TEACHER	ECE	3
		ECSE	2
	TEACHER AIDE	ECE	3
		ECSE	2
		NO TRAINING	2

In response to the question 'Do you know what Developmentally Appropriate Programming is?', 19 teacher/teacher aides responded 'yes' and the remaining 3 answered 'no'. Of the three who answered 'no', two were trained in E.C.S. and the other in ECSE, two were from one Site A and the

third was from Site B. The three subjects who responded 'no' to this question were excused from answering all further questions with the exception of question 5.

In response to the second question 'What does Developmentally Appropriate Programming mean?', all answers fell into 2 discrete categories; child-directed teaching strategies and activities or teacher-directed teaching strategies and activities. Seventeen teacher/teacher aides described child-directed teaching strategies and activities, such as;

"...ensure the centres meet each child's developmental needs..."

"...providing child with activities at the level they work at..."

"...not language arts..."

Two teacher/teacher aides described teacher-directed teaching strategies;

"...based on parents and program philosophies..."

"...activities should be geared to child's skills..."

When separated by Classroom Position, Site and Training no differences in responses were noted.

In response to the next question 'What is the Developmentally Appropriate teaching strategy for the average 4 or 5 year old?', except for one respondent who indicated they did not know, the responses fell into three discrete categories; child-directed, teacher-directed or DAP-ECE as outlined

by the NAEYC. Eleven teacher/teacher aides responded with child-directed strategies,

"...creative play, learning through experience..."

"...opportunities to explore..."

"...support the experience and expand it..."

One teacher/teacher aide responded with teacher-directed strategies

"...consequences of positive and negative activities should be set out for them eg. not going to desired activity until they are done their current project..."

"...verbal and physical cuing..."

and 6 teacher/teacher aides responded in accordance with the NAEYC guidelines of primarily child-directed strategies with a limited amount of teacher-directed strategies.

"...combination of teacher and student directed..."

"...most teaching is through play, have short circle times..."

When split by Classroom Position 5 of the 6 who knew about DAP-ECE as defined by the NAEYC were teachers. When split by Training, 5 of the 6 who knew about DAP-ECE as defined by the NAEYC were ECE graduates and one was trained in ECSE. When split by Site all who knew about DAP as defined by the NAEYC were from Site B. There was no difference found

between teacher/teacher aides who had under 10 years experience and teacher/teacher aides who had over 10 years experience

The next question asked was 'What is the Developmentally Appropriate teaching strategy for the average 4 or 5 year old with disabilities?'. With the exception of two teacher/teacher aides who did not know, most teacher/teacher aides were split on their answers as to what the appropriate strategy should be, often giving two answers. For example, 14 teacher/teacher aides indicated that they thought DAP-ECE for 4/5 year olds with disabilities should be the same as for 4/5 year olds without:

"...the very same..."

"...same as other kids..."

Eight of these 14 teacher/teacher aides, however, went on to describe strategies differing from those they had applied to children without disabilities. For the most part they were more teacher-directed;

"...lots of prompting and cuing..."

"...more intervention..."

"...hand over hand..."

The remaining three individuals who answered the question indicated that teacher-directed strategies were appropriate for children with disabilities;

"...more guidance on how to put things together..."

"...more hand over hand..."

These answers were split evenly among Classroom Position, Training and Site.

The fifth and final question was not planned but was asked when it became apparent in the first interview that the teacher/teacher aide was having difficulty responding to the previous question. The question was 'What do you think the learning process is like for children with disabilities compared to children without disabilities ?' All teacher/teacher aides were asked this question and although their responses were quite diverse they all fell into 4 discrete categories; the same but slower, somehow different, the same or different, and don't know. Nine individuals indicated it was the same but slower;

"...slower learning but they do learn..."

"...just takes longer..."

Four indicated that it was a different type of process;

"...retention is different and sequence of learning is different..."

"...don't catch the details..."

and 7 indicated that it may either be the same or different depending on the unique characteristics of the child and their disability;

"...depends on disability...receptive or expressive..."

Two teacher/teacher aides indicated that they had no idea how the processes differed (neither of these teacher/teacher aides were the same as those who answered 'don't know' on the first question). All of the responses to this question were split evenly among: teacher/teacher aides, ECE/ECSE Training and Site.

TEACHER/TEACHER AIDE ROLE PERCEPTIONS

Twenty-two teacher/teacher aides responded to two questions regarding their most and least fulfilling experiences as a teacher/early childhood educator. One response was not sufficiently completed and had to be discarded. Data was extracted from the remaining 21 teacher/teacher aides by uncovering the naturally emerging patterns in the teacher responses and reporting them (Stainback & Stainback, 1988, Walker, 1985). The researcher then analyzed the themes using the moderator variables used for the quantitative analyses (Stainback & Stainback, 1988). The researcher examined the data for differences in responses with regard to DAP-ECE and ECSE philosophies as well as teacher/teacher aide Experience, Training, Knowledge and Beliefs. Patterns that emerged were noted and in some cases quantified.

The narratives from teacher/teacher aides who contributed data for the quantitative analyses (N=15) were then examined to determine if the general themes that emerged when viewing all narratives (N=21) emerged in this

group.

Seven respondents were teachers, 14 were teacher aides, 11 were trained in ECE, 8 were trained in ECSE, 2 had no training in either ECE or ECSE, 9 were from Site A and 12 from Site B.

MOST FULFILLED EXPERIENCE

From accounts where the teacher/teacher aide felt most fulfilled, the first theme to emerge (in 16 out of 21 narratives) was one of 'achievement and connection'. These narratives described an achievement of a child who had been working on something over a period of time ending in success.

"...One particular experience...entailed one full school year. It involved a child that could not communicate verbally. I therefore began to teach (along with the teacher) this child to use sign language.

The child's vocabulary increased so dramatically over the year that by June - this child was able to convey thoughts, needs & wants like any other child.

What a wonderful feeling to be a part of "breaking the communication barrier". A major hurdle in a child's life."

This theme could be further seen to include two different components of achievements, skill and connection. Of these 16 narratives, 15 described moments when a child showed a new skill or ability;

"We were matching cut out Easter eggs...one child who tends not to attend...matched it correctly to the egg on the line...he sat down and smiled...patted a peer on the leg, smiled and pointed at his accomplishment."

and, in 11 of the same 16 narratives, the experience also included the children making an emotional connection with the teacher/teacher aide or another child;

"Having worked with a child with "AUTISTIC TENDENCIES" for a third of the year (one who two years ago...screamed... and...would speak echo but still no spontaneity..came to me..., held my face with his hands and brought it to meet his (noses touching) and then wanted me to laugh with him, made me feel so fulfilled!...Not only had he grown a lot since last year, but he made me feel like he actually enjoyed my company..."

In the narratives describing the most fulfilling moments the teacher/teacher aide often saw the experience as confirmation of their ability to teach.

"...Working with a little girl with cerebral palsy, we were working on daily stretches to her achilles tendon to prevent surgery. One day we were playing some games to try to encourage...(specific skill). She was able to do this. This was very exciting but more so in the sense

that I felt our interactions and activities were very motivating. This seemed to be more of the learning experiences and was very satisfying to be able to motivate someone to learn or try something difficult."

The second theme to emerge among the narratives related to 'ability level of the child'. In more than half of the responses, the most fulfilling moment involved working with a child with a disability. When broken down by Training this theme was more common among those trained in DAP-ECE than those trained in ECSE.

When only using the narratives from teacher/teacher aides who had provided teacher/student dyad data for the quantitative analyses of interaction (N=16), 15 narratives were found to be complete enough to compare. The results did not differ for this group with all 15 discussing situations in which a child achieved a goal after spending some time working toward it. Eight of these individuals included both; goals related to new skills or abilities and the goal of a human connection as part of the achievement. Five of this group saw the child's achievement as confirmation of their ability to teach and 8 of the 15 referred to events including a child with a disability.

LEAST FULFILLED EXPERIENCE

Of the narratives that required the teacher/teacher aides to indicate when they felt least fulfilled, only 7 respondents referred to experiences

directly related to the failure of a child to achieve or a teacher to reach a child.

"...a child has discovered something wonderful at centre time. He is excited and wants to share with me. I am doing something else and my thoughts are elsewhere. Instead of sharing the child's experience. I barely acknowledge and continue on with my own work."

" On several occasions I have to deal with a particular child. At times I feel like I'm succeeding and we've past this non connecting stage when he begins to react...He acquires all my...attention and will always continue to (rage). After 8 months - nothing has changed when he enters into a rage. That situation in particular is least fulfilling."

Instead the first theme that appeared in the unfulfilling moments was one of 'lack of professional support'. The majority of moments (14), while often involving a child, were primarily related to problems in other areas of the job such as parents, management, other staff and the public at large.

"...I had worked incredibly hard with a child on toilet training. Through a period of 1 year we had come a long way and this particular child was toileting themselves totally independently. This child had gone on holidays for a short time and just this small break in the norm had disrupted one whole years work. It was very

discouraging to not have your efforts transferred or carried over into the home."

Nine teacher/teacher aides described situations where they were unappreciated by management and other staff.

"...Supervisors...who had less education treated me as a babysitter which made me think all the time you spend learning and trying to help these kids with so little appreciation isn't worth it - the hassle. In this field you seem to Always get crap for something You don't do perfect but never credit for things you do well."

Neither 'least' or 'most' fulfilled themes showed a large difference as a function of Training or Classroom Position. One 'least fulfilled' theme did, however, show a difference as a result of Site with 8 of the 9 teacher/teacher aides who felt 'unappreciated' by others coming from Site A.

Narratives about the least fulfilling moments reflected the same theme as most fulfilling moments in that they showed differences related to the ability level of the child. Almost all of the least fulfilling moments from teacher/teacher aides from Site A and half of those from Site B involved issues surrounding working with children having disabilities. The frustrations voiced concerning children with disabilities, however, were not related to the children directly but to issues surrounding working with children with

disabilities such as support from coworkers, parents and administration. Half of teacher/teacher aides trained in DAP-ECE discussed this frustration compared to only 1 individual trained in ECSE.

When examining the individuals who were included in the quantitative analyses of interactions, again the results did not differ. Only 3 of the 15 narratives mention experiences directly related to the failure of a child to achieve a goal or a human connection to another child or teacher. Eight of the 15, however, do refer to the failure of the systems surrounding the classroom such as parents, government and administration. About half (7 of the 15) refer to issues relating to working with children with disabilities.

DIFFERENCES BETWEEN LEAST AND MOST FULFILLING EXPERIENCES

The most striking theme emerging between the most and least fulfilling moments was the respondent's 'sense of empowerment'. In 17 out of 21 'most fulfilling' responses the responsibility for the moment was primarily perceived as the teacher/teacher aides'. In 15 out of 21 'least fulfilling' narratives the ownership of the moment was primarily seen as external to the teacher/teacher aide. All four of those who described both moments as under their control were DAP-ECE trained and from Site B.

In examining the narratives of the 15 teacher/teacher aides who

contributed to the quantitative analyses, 13 felt their 'most' fulfilling moment was a result of their efforts and 13 felt their 'least' fulfilling moment was not.

DISCUSSION

Although there have been attempts to study teaching strategies in segregated classrooms for children with and without disabilities (e.g. Morsink et. al, 1986), there have been few attempts to study teaching strategies in the integrated classroom. Because different teaching philosophies are combined in the integrated classroom, it is important not only to determine what should be happening from a theoretical perspective but what is happening. This study examined teaching strategies in integrated settings using teacher/teacher aide-student interaction patterns (dyads). Education, Experience, Knowledge and Stated Beliefs were also examined. The present study further examined teacher/teacher aide knowledge of and commitment to current DAP-ECE practice.

The hypothesis that teacher/student interactions with normally developing students would be more consistent with DAP-ECE than teacher/student interactions with students who are disabled was not supported. In fact, the opposite was demonstrated. Although the present study demonstrated that children without disabilities received about the same amount of child-directed and teacher-directed interaction, children having disabilities were found to receive a significantly greater amount of child-directed interaction. It seems that children with disabilities are being taught

using DAP-ECE teaching strategies in the integrated classroom. This finding may reflect the present study's attempt to reduce/eliminate classroom management concerns/influences by studying only one-on-one interactions of at least one minute duration (classroom management interactions would typically be shorter than one minute). In earlier studies (Brophy & Hancock, 1985, File, 1994, Thompson, Vitale & Jewett, 1994) a single student who had difficulty interacting in a group setting (emotional or social handicap) could create a situation where the teacher is 'bound' to be more directive in order to keep the classroom safe and calm. This may not, however, have reflected the teacher's interactions with other students with disabilities, nor would it have given an accurate portrayal of how the teacher would interact in the absence of classroom management concerns. In addition, issues such as classroom design and teacher/child ratio may cause classroom management problems which again may result in children with disabilities acting out and being reacted to in a more directive way. There are many classroom management factors which influence specific teaching styles which must be eliminated if teachers' individual styles are to be examined. This issue was not addressed in earlier studies and is likely the reason for the contrasting findings reported in the present study (ie., children with disabilities received more child-directed than teacher-directed interaction).

The second hypothesis was that teachers trained in DAP-ECE would be more child-directed than teachers trained in ECSE. Interactions were not, however, split according to Training. Although ECSE teacher/teacher aides are trained to interact with children in a more directive manner and DAP-ECE teacher/teacher aides are trained to interact with children in a more child-directed manner these training differences were not visible in the integrated classroom. Overall, children are receiving the same amount of teacher-directed and child-directed interactions.

It should also be noted that the style of teaching observed did not necessarily reflect DAP-ECE practice which would encourage more child-directed than teacher-directed interaction. Also it did not reflect ECSE practice which would be more teacher-directed than child-directed. It appears that there may have been a melding of teaching styles. The combination of DAP-ECE and ECSE may have resulted in an evening out of teaching interactions with neither child-directed or teacher-directed styles taking precedence in the integrated classroom.

The third hypothesis was supported in that Training did influence the teacher/teacher aides' knowledge of DAP-ECE. Five of the 6 individuals who were able to define DAP-ECE according to the NAEYC were trained in DAP-ECE. This was the expected result and is consistent with earlier

research. The sample of individuals who articulated DAP-ECE practice, as outlined by the NAEYC, was small, however. When examining teacher/teacher aide responses the lack of ability to describe DAP-ECE in accord with the NAEYC definition is not surprising. Many teachers responded with only child-directed strategies for children age 4 and 5 which is, for the most part, accurate. It is understandable that most teacher/teacher aides would articulate the practice they employ for a majority of the day and neglect to include the small portion of their day spent in whole group activities in their response. If the individuals who reported only child-directed activities were included with those giving the more complete answer (the NAEYC definition) they would total 17 of the 18 respondents. It could be said, therefore, that most teacher/teacher aides responded in accordance with the NAEYC definition. This is an unexpected outcome in that teacher/teacher aides who were trained in ECSE most often do not receive training in DAP and, therefore, were not expected to be able to articulate child-directed strategies as well as DAP-ECE trained teacher/teacher aides.

The fourth hypothesis was not supported since teacher/teacher aides who had more experience working in an integrated classroom did not demonstrate greater knowledge of DAP-ECE and did not engage in more child-directed interactions.

The only significant quantitative difference found in the area of teacher/teacher aide belief was for the Site variable. Site B teacher/teacher aides clearly stated a greater belief in DAP-ECE than did Site A teacher/teacher aides. Site B teacher/teacher aides also displayed a greater knowledge of DAP-ECE than did Site A teacher/teacher aides through the semi-structured interview. All of the individuals who knew the NAEYC guidelines for DAP-ECE were from Site B. It appears that the workplace milieu has more to do with the individual's knowledge and stated beliefs than the individual's education or experience. It was also noted by the researcher that, although both Sites have been integrating children for many years and have had time to work through many of the issues surrounding the implementation of integration, they have done so in different ways. In observing the classrooms the researcher noted that teacher/teacher aides from Site A apply DAP-ECE to all children while teacher/teacher aides from Site B apply DAP-ECE to all children, for the most part, while at the same time taking children with disabilities aside during free play and engaging in specific learning programs. Given that the teacher/teacher aides from Site B indicate a greater belief in and knowledge of DAP-ECE relative to the teacher/teacher aides from Site A it is surprising that this does not impact the teacher/teacher aides behaviour (didactic interactions) in the integrated

classroom.

Another unanticipated finding was the confusion regarding the development and education of children with disabilities at both Sites across ECE and ECSE trained individuals for all levels of experience. There was a lack of consensus revealed regarding the way in which teachers believed children with disabilities learn. Of those who responded when asked 'how children with disabilities learn', 45% indicated the same way children without disabilities learn only more slowly, 35% indicated it may be the same or it could be a completely different process altogether and 20% indicated that children with disabilities learn in a different way altogether than children without disabilities. This means that at least 55% of teacher/teacher aides asked, believe that children with disabilities may learn in a completely different manner than children without disabilities. Without agreement regarding the learning patterns of children with disabilities teacher/teacher aides cannot be expected to formulate an effective teaching strategy for them. It also explains why there were no clear themes or clearly consistent answers regarding what the Developmentally Appropriate teaching strategy should be for children with disabilities.

The qualitative analysis was performed with the expectation that the teacher/teacher aides' responses regarding the experiences that made them

feel most and least like a teacher would provide more information about the integrated classroom and clarify some of the quantitative findings. For the most part, qualitative responses accomplished both goals.

The finding that most teacher/teacher aides saw their most successful moment as one of "connection" for the child was also revealed in an earlier study by Kahlich & Dorminey (1993). An open ended questionnaire asking about the roles of teachers was distributed to 31 student teachers with little experience, 23 student teachers who had almost completed their education and 10 practising ECE teachers. Kahlich & Dorminey (1993) found that all groups saw their most important role as falling into an affective category such as friend, listener, communication, and emotional development. In almost all cases cognitive development came in second. This finding may be one of the reasons there was no difference noted in the interaction patterns of most teachers in the present study. It may be that, although teacher/teacher aides have different teaching strategies, it is difficult to detect the differences given their focus on social and emotional concerns. Teacher/teacher aides did not even mention teaching strategies, for the most part, instead concentrating on their accomplishments and connections. What appears to be most important to teachers is not the 'strategies' by which they reach a child but the 'connections' they have made.

Another interesting finding was that teacher/teacher aide training had an effect on the way they perceived their success and failure. ECE teacher/teacher aides were more likely to give their most fulfilling teaching experiences as those including children with disabilities. This is significant given that these individuals have attended training programs which focus upon the education of normally developing children. This finding may be related to the tangibility of the teaching experience for each type of child. For example, the accomplishments achieved by children with disabilities are more visible (walking, saying a first word, making a first contact with a peer or a long awaited "connection" with a teacher) than the accomplishments of normally developing children. Children who are normally developing at the age of 4 or 5 quite often are achieving milestones in their development that are more subtle and, therefore, less dramatic in nature. This is partially supported by another qualitative study performed by Marchant (1995). She interviewed 10 ECE teachers regarding their role, their time allocation and the challenges and the joys associated with teaching in the integrated preschool. The narrative data was analyzed using qualitative methods and one of the major themes that emerged was that every ECE teacher indicated that children's progress and development was a major source of joy in their teaching. The more tangible milestones of children with disabilities may

provide the ECE teacher/teacher aides in the present study with a more visible accomplishment and, therefore, fulfilment as a teacher.

The ECSE teachers in the present study on the other hand appeared to take pride in activities where the children were excited about learning.

"...the children were excited about what they were doing and actually taking part. To me it was exhilarating to watch the children take part without prompting, motivational cues or incentives. They were learning because they wanted to learn...."

It may be that, as discussed in the introduction, children with disabilities have developed a lack of motivation or disposition to learn and therefore ECSE teacher/teacher aides are more often exposed to students who resist their efforts at teaching. Being exposed to a group of children who are enjoying school would, therefore, be a more rewarding experience for them and be the experience where they most felt like a teacher. It is interesting that each group of teacher/teacher aides felt most like an educator when they were with the children they were not trained to educate.

The qualitative analyses also revealed that, the moments the subject felt least like a teacher were related to a lack of support: both parental and supervisory. Most teachers felt unappreciated by one of these groups and with Site A it was most often their supervisors. There were differences between

the Site A and Site B management structures that might account for this. Site A had more levels of management between the Executive director and the classroom staff. Site A also had a union which could be considered another layer between staff and directors/supervisors. The management structure at Site B was quite flat. Teachers had more control over their classes and more freedom to make choices. This finding was also reflected in the Marchant (1995) study discussed earlier. Teachers' biggest frustrations in the classroom were found to be related more to the system (parents and administration) than to the children themselves.

In viewing both the quantitative and qualitative findings it appears that the connection teacher/teacher aides work to develop with children may be an overriding factor in their interaction patterns and may be the reason that the only difference found in interactions relates to level of ability of the child. In the Kahlich and Dorminey (1993) study, teacher/teacher aides saw their primary role as a friend/listener (child-directed interaction) who is there to attend primarily to the child's emotional challenges. Teacher/teacher aides in the present study also indicated in the qualitative data that the emotional connections children make are of primary importance. If teacher/teacher aides then view this as their primary role it would be expected that children who face more emotional challenges in the integrated classroom, children with

disabilities, would receive more child-directed (friend/listener) interactions as was found in the quantitative analysis of interaction. By looking at the entire free play period, previous studies, revealed that emotional challenges for children with disabilities were met with more directive interactions possibly to keep things operating smoothly. By isolating specific one-to-one interactions, however, the present study demonstrated that teacher/teacher aides are not merely trying to 'maintain control' but are working to develop a connection with these children in their classroom.

This 'connection' is described by most teachers and teacher aides in the qualitative data regardless of their Training, Experience, Work Site and Stated Beliefs.

Summary

The present study demonstrated that Classroom Position and Experience do not effect teacher/teacher aide interaction patterns, stated beliefs or knowledge of DAP. The results also demonstrated that while Site and Training do not have an effect on the way teacher/teacher aides interact with children, they do have an effect the way teacher/teacher aides view their success and failure in the classroom. For the most part the differences between teacher/teacher aides in the integrated classroom appear to relate more to the way teacher/teacher aide's think rather than the way they behave.

The results from this study reveal that teacher/teacher aides do not treat children with disabilities in a more teacher-directed manner, rather they provided children with disabilities more child-directed interaction.

Neither DAP-ECE nor ECSE interaction patterns were found to occur in the integrated classroom. What is instead offered to all children is a compromise between the two with neither child-directed nor teacher-directed interactions taking priority.

Finally, it was demonstrated that regardless of the staff's training, experience or knowledge, children with disabilities in the integrated classroom are being offered equitable social interaction in that they experience the same balance of interaction types as their normally developing peers.

REFERENCES

- Agne, K.J., Greenwood, G.E. & Miller, L.D., (1994). Relationships between teacher belief systems and teacher effectiveness. The Journal of Research and Development in Education, 27, 141-152.
- Ballard, K.D., (1987). The limitations of behavioral approaches to teaching. Some implications for special education. The Exceptional Child, 34, 197-213.
- Barton, L., (1988). The Politics of Special Educational Needs. London:Farmer Press. Berkeley, T.R. & Ludlow, B.L., (1989). Toward a reconceptualization of the developmental model. Topics in Early Childhood Special Education, 9, 51-66.
- Bredenkamp, S., (1984). Accreditation Criteria and Procedures of the National Academy of Early Childhood Programs. Washington:NAEYC
- Bredenkamp, S., (1993). The relationship between early childhood education and early childhood special education: Healthy marriage or family feud?. Topics in Early Childhood Special Education, 13, 258-273.
- Bronson, M.B., (1985). Manual for the Bronson Social and Task Skill Profile. Chestnut Hill MA: Boston College.
- Brophy, K. & Hancock, S., (1985), Adult-child interaction in an integrated preschool programme: Implications for teacher training.

Early Child Development and Care, 22, 275-294.

- Brown, R.I. & Hughson, E.A. (1987). Behaviourial and Social Rehabilitation an Training, Arundel, Sussex: John Wiley & Sons Ltd.
- Burton, C.B., Higgins Hains, A., Hanline, M.F., McLean, M. & McCormick, K., (1992). Early childhood intervention and education: the urgency of professional unification. Topics in Early Childhood Special Education, 11, 53-69.
- Burts, D.C., Hart, C.H., Charlesworth, R. & Kirk, L., (1990). A comparison of frequencies of stress behaviours observed in kindergarten children in classrooms with developmentally appropriate versus developmentally inappropriate instructional practices. Early Childhood Research Quarterly, 5, 407-423.
- Butera, G., (1993). Practitioner perspective of early childhood special educators; Implications for personnel preparation. Unpublished Manuscript.
- Cavallaro, C.C. Haney, M. & Cabello, B. (1993). Developmentally appropriate strategies for promoting full participation in early childhood settings. Topics in Early Childhood Special Education, 13, 293-307.
- Carta, J.J., Atwater, J.B., Schwartz, I.S. & McConnell S.R., (1993).

- Developmentally appropriate practices and early childhood special education: A reaction to Johnson and McChesney Johnson. Topics in Early Childhood Special Education, 13, 243-254.
- Chomicii, S. & Kysela, G., (1993). Teacher attitudes towards mainstreaming: What do they think and what do they need? A literature review. Exceptionality Education in Canada, 3, 61-79.
- Clarke, M.A., (1990). Some cautionary observations on liberation education. Language Arts, 67, 388-398.
- Doman, G.J., (1984). How to Multiply Your Baby's Intelligence. New York: Doubleday.
- Elkind, D., (1988). The wellsprings of early childhood special education. Early Childhood Education, 22, 6-10.
- Elkind, D., (1989). Developmentally appropriate practice: VX and practical implications. Phi Delta Kappa, 71, 113-117.
- Feeney, S. & Chun, R., (1985). Effective teachers of young children. Young Children, 41, 47-52.
- File, N., (1994). Children's play, teacher-child interactions, and teacher beliefs in integrated early childhood programs. Early Childhood Research Quarterly, 9, 223-240.
- Fox, L. & Hanline, M.F., (1993). A preliminary evaluation of learning within

- developmentally appropriate early childhood settings. Topics in Early Childhood Special Education, 13, 308-327.
- Fraad, S.H., Morsink, C.V., Kramer, L.R., Algozzine, K. & Yarbrough, J., (1986). Teacher competencies in the mainstreaming process. Journal of Classroom Interaction, 22, 31-40.
- Galen, H., (1994). Developmentally Appropriate practice: myths and facts. Principal, 73, 20-22.
- Gammage, P., (1991). Changing ideologies and provision in western Canadian primary education. Comparative Education, 27, 311-323.
- Goffin, S.G., (1989). How well do we respect the children in our care?. Childhood Education, 46, 68-74.
- Greenberg, P., (1990). Ideas that work with young children. Young Children, 46, 70-80.
- Hanline, M.F. & Fox, L., (1993). Learning within the context of play: Providing typical early childhood experiences for children with severe disabilities. Journal for the Association for Persons with Severe Handicaps, 18, 121-129.
- Harter, S. & Pike, R., (1984). The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children. Child Development, 55, 1969-1982.

- Hirsh-Pasek, K., (1991). Pressure of challenge in preschool? How academic environments affect children. New Directions for Child Development, 55, 39-46.
- Johnson, J.E. & McChesney Johnson, K., (1992). Clarifying the developmental perspective in response to Carta, Schwartz, Atwater, and McConnell. Topics in Early Childhood Special Education, 12, 439-457.
- Kahlich, P.A. & Dorminey, J.J., (1993). Role Perceptions of Early Childhood Teachers, Unpublished Manuscript.
- Katz, L. G. (1987). Early education: What should young children be doing? Unpublished Manuscript.
- Kunesh, L.G., (1990). A historical review of early intervention. Unpublished Manuscript.
- LaGrange, A., & Keogh, J. (1995, May). Listening to the sounds of care in childcare. Paper presented at the Canadian Child Care Federation Conference, Calgary, Alberta.
- Little, D.M., (1992). The muddle of mainstreaming: Cross-Canada currents - policy and practice of inclusive education. Exceptionality Education in Canada, 2, 9-48.
- Lovett, H. (1985). Cognitive Counselling & Persons with Special

Needs: Adapting behavioural Approaches to the Social Context, New York: Praeger Publishers.

Lupart, J.L., (1992). Toward a unified system of education: where do we go from here?. Exceptionality Education in Canada, 2, 1-7.

Lynch, E.C., Widley, R.R. & Johnson, J.R., (1988), Teacher language styles in early childhood education. Teacher Education and Special Education, 11, 20-24.

Mallory, B.L., Is it always appropriate to be developmental? Convergent models for early intervention practice. Topics in Early Childhood Special Education, 11, 1-12.

Mangione, P.L., (1992). Teachers; reports on implementing developmentally appropriate practice. Unpublished Manuscript.

Marchant, C., (1995). Teachers' views of integrated preschool. Journal of Early Intervention, 19, 61-73.

McCarthy, J., (1983). Curriculum in early childhood education: The state of the art. Contemporary Education, 54, 275-278.

McChesney Johnson, K. & Johnson, J.E., (1993). Rejoinder to Carta, Atwater, Schwartz, and McConnell. Topics in Early Childhood Special Education, 13, 255-257.

McLean, M.E. & Odom, S.L., (1993). Topics in Early Childhood Special

Education, 13, 274-292.

- Miller, P.S., (1991). Linking theory to intervention practices with preschoolers and their families: Building program integrity. Journal of Early Intervention, 15, 315-325.
- Miller, P.S., (1992). Segregated programs of teacher education in early childhood: immoral and inefficient practice. Topics in Early Childhood Special Education, 11, 39-52.
- Morsink, C.V., Soar, R.S., Soar, R.M. & Thomas, R., (1986). Research on teaching: opening the door to special education classrooms. Exceptional Children, 53, 32-40.
- O'Reilly, M.R., (1989). "Exterminate...the Brutes" - and other things that go wrong in student-centred teaching. College English, 51, 142-147.
- Odom, S.L. & McEvoy, M.A., (1990). Mainstreaming at the preschool level: Potential barriers and tasks for the field. Topics in Early Childhood Special Education, 10, 48-61.
- Pajares, M.F., (1992). Teachers' beliefs and education research: cleaning up a messy construct. Review of Educational Research, 62, 307-332.
- Pivato, E. (1986). A quiet revolution in Alberta. The Mental Retardation and Learning Disability Bulletin, 14, 1, 50-69.
- Raven, J.C., Court, H.H. & Raven, J., (1984). Coloured Progressive Matrices.

London:H.K. Lewis.

- Rogers, S.J. & Dilalla, D.L., (1991). A comparative study of the effects of a developmentally based instructional model on young children with autism and young children with other disorders of behaviour and development. Topics in Early Childhood Special Education, 11, 29-47.
- Seifert, K.L., & Handzuik, D., (1993). Informal theories of the child among early childhood educators. Canadian Children, 18, 21-25.
- Sheridan, M. K., (1991), Increasing self-esteem and competency in children. International Journal of Early Childhood, 23, 28-35.
- Siegel, S., (1954). Nonparametric Statistics For the Behavioral Sciences. New York:McGraw-Hill.
- Smith, K. E. (1992). The Development of The Primary Teacher Questionnaire: A Teacher Beliefs Scale Based on the NAEYC Guidelines for Appropriate Practice in the Primary Grades.
Unpublished.
- Snider, M.H. & Fu, V.R., (1990). The effects of specialized education and job experience on early childhood teachers' knowledge of developmentally appropriate practice. Early Childhood Research Quarterly, 5, 69-78.

Spidell Rusher, A., McGrevin, C.Z. & Lamboitte, J.G., (1992). Belief systems of early childhood teachers and their principals regarding early childhood education. Early Childhood Research Quarterly, 7, 277-296.

Stahlman, J.I., Safford, P.L., Pisarchick, S.E., Miller, C.A. & Dyer, D.B., (1989). Crossing the boundaries of early childhood special education personnel preparation: Creating a path for retraining. Teacher Education and Special Education, 12, 5-12.

Stayton, V.D. & Miller, P.S., (1993). Combining general and special early childhood education standards in personnel preparation programs: experiences from two states. Topics in Early Childhood Special Education, 13, 372-387.

Stipek, D., (1992). Characterizing early childhood education programs for poor and middle-class children. Early Childhood Research Quarterly, 7, 1-19.

Thompson, R.H., Vitale, P.A. & Jewett, J.P., (1984). Teacher-student interaction patterns in mainstreamed classrooms. Remedial and Special Education, 5, 51-61.

Torrance, E.P., (1983), Preschool creativity. In K.D. Paget & B.A. Bracken (Eds.), The Psychoeducational Assessment of Preschool Children, Orlando, Florida: Grune & Stratton.

- Towfighy-Hooshyar, N. & Zingle, H.W. (1984). Regular-class students' attitudes toward integrated multiply handicapped peers. American Journal of Mental Deficiency, 88, 6, 630-637.
- Tymieniecka, A., (1986). The moral sense in the communal significance of life. Analecta Husserliana, The Yearbook of Phenomenological Research, 20, 125-158.
- Widerstron, A.H., (1986). Educating young handicapped children: What can early childhood education contribute? Childhood Education, 62, 78-83.
- Wolery, M. Huffman, K., Holcombe, A., Martin, C.G., Brookfield, J., Schroeder, C. & Venn, M.L., (1994). Preschool mainstreaming: Perceptions of barriers and benefits by faculty in general early childhood education. Teacher Education and Special Education, 17, 1-9.
- Wolery, M. (1991). Instruction in early childhood special education: "Seeing through a glass darkly...Knowing in part". Exceptional Children, 58, 127-135.
- Wolfensberger, W. & Thomas, S. (1983). Passing: Program Analysis of Service Systems' Implementation of Normalization Goals. North York: Community Newset.

APPENDIX A

NUMBERS OF CLASSROOM STAFF AND STUDENTS

SITE A AND SITE B

SITE A

CLASS #	POSITION	# OF NON DISABLED CHILDREN	# OF CHILDREN WITH DISABILITY	TOTAL CHILDREN IN STUDY
1	1 TEACHER 2 TEACHER AIDES	3	8	11
2	1 TEACHER 2 TEACHER AIDES	9	1	10
3	1 TEACHER 2 TEACHER AIDES	10	2	12
4	4 TEACHER AIDES	12	7	19

SITE B

CLASS #	POSITION	# OF NON DISABLED CHILDREN	# OF CHILDREN WITH DISABILITY	TOTAL CHILDREN IN STUDY
1	1 TEACHER 2 TEACHER AIDES	7	3	10
2	1 TEACHER 3 TEACHER AIDES	11	3	14
3	1 TEACHER 4 TEACHER AIDES	10	5	15
4	1 TEACHER 3 TEACHER AIDES	13	3	16
5	1 TEACHER 3 TEACHER AIDES	14	5	19
6	1 TEACHER 4 TEACHER AIDES	16	4	20
7	1 TEACHER 3 TEACHER AIDES	18	3	21
8	1 TEACHER 3 TEACHER AIDES	18	3	21
9	1 TEACHER 3 TEACHER AIDES	16	6	22

APPENDIX B

INFORMED CONSENT FORM FOR TEACHER/TEACHER AIDE
PARTICIPANTS

Teacher Consent For Research Participation

I, _____, hereby give my consent to participate in the research study being conducted by Lee Hackney, under the supervision of Dr. Mosley, the general plan of which has been explained to me, including anticipated benefits, risks, and potential complications. I understand that this project is not expected to involve risks any greater than those ordinarily encountered in daily life. I also understand that it is not possible to identify all potential risks in any procedure, but that all reasonable safeguards have been taken to minimize potential risks.

I understand that I am being asked to:

- * be videotaped while in the classroom
- * fill out a demographic questionnaire
- * fill out a teacher belief questionnaire
- * submit to a semi-structured interview

I understand that my participation is completely voluntary, and that I am free to withdraw from the study at any time without penalty.

I fully understand that I may withdraw from this research project at anytime by notifying the principal investigator.

I understand that part of the videotape taken of me in the classroom will be used for the research project and part of the videotape may be used to train raters (research assistants).

I understand that the results of this project will be coded in such a

way that my identity will not revealed. I understand that the videotape recorded for this project will be destroyed at the conclusion of the project.

I understand that if at any time I have questions, I can contact the researcher at 249-4157.

Date

Signature of Participant

Participant's Name Printed

APPENDIX C

TEACHER EDUCATION AND EXPERIENCE FORM

Teacher Education and Experience Form

1. List all past and present positions that you have held in the child care industry, give a brief description of the position and the length of time you held that position.

Position: _____

Length of time you held the position: _____

Duties: _____

Position:

Length of time you held the position:

Duties:

Position:

Length of time you held the position:

Duties:

Position:

Length of time you held the position:

Duties:

Position:

Length of time you held the position:

Duties:

Position:

Length of time you held the position:

Duties:

2. Check the education/academic degrees completed:

High School Diploma/GED: _____

Early Childhood Development Certificate: _____

Early Childhood Development Diploma: _____

Rehabilitation Certificate: _____

Rehabilitation Diploma: _____

B.A. Rehabilitation: _____

B.A. Developmental Psychology: _____

B.A. Other: _____:

Bed. Special Education: _____

Bed. Early Childhood Education: _____

Bed. Other: _____:

Other: _____

3. Please check all content areas covered in the courses you have taken.

general education (English, Math, Social Sciences, Humanities)

child growth and development

values issues

legal issues	_____
advocacy	_____
philosophy of early childhood education	_____
psychological foundations	_____
social foundations	_____
ethical issues	_____
staff relations	_____
public policy	_____
administration	_____
family relations	_____
community relations	_____
licensing requirements	_____
curriculum planning	_____

curriculum implementation	_____
curriculum evaluation	_____
appropriate content for early childhood	_____
selecting materials	_____
creating learning environments	_____
planning for special needs	_____
curriculum models	_____
observation record taking	_____
developmentally diverse children	_____
child health	_____
child safety	_____
nutritional education	_____

4. Did you have a supervised practicum or field work or student teaching experience? _____

APPENDIX D

INFORMED CONSENT FORMS FOR PARENTS OF
CHILDREN INVOLVED IN THE STUDY

Consent Form for Children's Participation in Research

Dear Parents;

I am a student in the Masters program in the Rehabilitation Studies Department at the University of Calgary under the supervision of Dr. Mosley. I am conducting research at (SITE A OR B) on teaching styles used by teachers in the ECE programs. The research will take place between February 28, 1993 and April 15, 1994.

During the research period teachers will be videotaped in the classroom interacting with children and although the focus of the project will be on the teachers your child might be included on the videotape as well. It is for this reason that I am asking permission for your son/daughter to be videotaped in the classroom.

Students will not be identified to the researcher or her assistants and all persons involved with the study have signed an oath of confidentiality. The researcher, her supervisor and her assistants are the only people who will have access to the video tapes and all video tapes will be destroyed on the completion of the study.

Participation in the project is completely voluntary and refusal to consent will not result in any penalty for yourself or your child. If you should choose not to participate, the researcher will merely turn the video camera off when your child is near the teacher being videotaped. Furthermore should you give permission for your child to participate you are still free to withdraw your child from the study at any time.

The research has been approved by the Executive Director of (SITE A OR B) and the University of Calgary Education Joint Research Ethics Committee.

Your cooperation in the study would be appreciated. If you have any questions regarding the study or the manner in which the videotaping will take place please feel free to contact me at 249-4157 or my supervisor, Dr. Mosley, at 220-6287.

Thank you for your cooperation.

Sincerely,

Lee Hackney

PLEASE RETURN THIS PORTION

1. I understand that my child may be videotaped as a part of a research project involving the teachers at (SITE A OR B).
2. I understand that the videotape will in no way be used to evaluate my child.
3. I understand that the videotape will only be seen by the researcher, her supervisor and her assistants and that all of the above have signed oaths of confidentiality not to disclose any information about my child.
4. I understand that all videotape will be destroyed at the end of the research project.
5. I understand that my child's participation in this project is purely voluntary and that they will receive no penalty for not participating.
6. I understand that I may withdraw my child from the project at any time.

I hereby consent _____

I hereby do not consent _____

to allow my child, _____ to participate in the research project at (SITE A OR B) conducted by Lee Hackney under the supervision of Dr. Mosley, of the Department of Educational Psychology at the University of Calgary.

Date

Parent/Guardian Signature

Parent/Guardian Name Printed

APPENDIX E
ALBERTA EDUCATION CRITERIA
FOR
DETERMINING ELIGIBILITY FOR PROGRAM UNIT GRANT

CRITERIA FOR DETERMINING ELIGIBILITY FOR PROGRAM UNIT GRANT

1. Descriptions of Handicapping/Disabling Conditions

(a) Deafness

- (1) Congenital conductive and/or sensori-neural hearing loss resulting in "clinical" deafness.
- (2) Absence of speech and severe communication problems precluding hearing as a learning mode.
- (3) Characteristics of severe emotional disturbance arising from frustration and isolation.
- (4) Presence of autistic-like behaviours.

(b) Blindness

- (1) Visual impairment results in "legal" blindness which optical aides will not correct enough to provide any useful vision.
- (2) Characteristics of severe emotional disturbance arising from frustration and isolation.
- (3) Presence of tactile defensiveness.

(c) Physical Disability

Normal body movement and function impeded or prevented by physical and/or medical disorders such as:

- (1) genetic absence of limbs;
- (2) para/quadruplegia;
- (3) generalized hypotonia;
- (4) spina bifida;
- (5) incontinence;
- (6) progressive debilitating disease such as arthritis or cancer;
- (7) trauma as a result of extreme injury such as third degree burns or car accident;
- (8) uncontrolled or poorly controlled grand mal seizures;
- (9) delicate health (sometimes referenced as medical fragility).

- (d) Multiple Disabilities
 - (1) Effects of multiple disabilities result in a functioning level as low or lower than that which is associated with a severe primary disability such as blindness, deafness or severe spastic quadriplegia.
 - (2) The combining effect of two or more disabling conditions resulting in a high level of dependency.

- (e) Dependent Handicap
 - (1) Extreme difficulty in dealing intelligently with any aspect of the environment.
 - (2) Inability to initiate meaningful play.

- (f) Severe Expressive and/or Receptive Language Delay
 - (1) Little, if any, expressive or receptive communication skills.
 - (2) Autistic characteristics, extreme hyperactivity, perseveration, echolalia and/or aphasic behaviours.

- (g) Severe Behavioural Disorder
 - (1) Bizarre behaviours including self-stimulation, self inflicted injury, hallucination and/or destructiveness, high levels of distractibility and/or destructive behaviour.
 - (2) Presence of autistic like behaviours, perseveration, echolalia and/or aphasic behaviours.

APPENDIX F
FLANDERS SCALE OF INTERACTION ANALYSIS

Flanders Interaction Analysis

The following are taken from 'Analyzing Teaching Behavior',
(Flanders, 1970).

- Category 1: "Teacher statements which accept and clarify an attitude or feeling tone of a pupil in a non-threatening manner." (pg.40)
- Category 2: "Praise and encouragement are statements which carry the value of judgement of approval." (pg.41)
- Category 3: "The teacher can respond to ideas the pupil expresses by (a) acknowledging...(b) modifying...(c) applying...(d) comparing...(e) summarizing..." (pg.42)
- Category 4: "Questions asked by a teacher which serve to move the conversation to a next step..." (pg.44)
- Category 5: "Lecturing, expressing opinions, giving facts, interjecting thoughts and of-hand comments..." (pg.45)
- Category 6 & 7: "Both of these categories are use for statements which are intended to produce compliance." (pg.47)
- Category 8 & 9: "Pupil talk is coded with these two categories." (pg.48)
- Category 10: "When there is a pause in the classroom communication or when there is noise and confusion." (pg.50)

APPENDIX G

BROPHY & HANCOCK SCALE OF INTERACTION ANALYSIS

Brophy & Hancock Scale

The following is taken from 'Adult-child interaction in an integrated preschool programme: Implications for teacher training', (Brophy & Hancock, 1985).

- "
1. Responds to child initiated verbal interaction...
 2. Responds to child initiated nonverbal interaction...
 3. Makes no response to input or request, verbal or nonverbal, from child; Adult does not acknowledge or react, just ignores the child.
 4. Facilitates an interaction between child and a peer...
 5. Has physical interaction to control behaviour...
 6. Has physical interaction to comfort or make contact...
 7. Attempts to involve child with materials...
 8. Is involved with child in child initiated fantasy play.
 9. Is involved with child in teacher initiated fantasy play.
 10. Orders...
 11. Explains
 12. Asks questions...(open or closed)...
 13. Describes; makes note of what child is doing...

14. Has conversational interaction...
15. Maintenance; Adult is doing a caretaking action for the child...
16. Monitors: Adult watches with no interaction.
17. Has proximity but no interaction." (pg.282-283).

APPENDIX H

PRIMARY GRADES TEACHER QUESTIONNAIRE

PRIMARY GRADES TEACHER QUESTIONNAIRE

The purpose of this questionnaire is to find how much you endorse a number of statements about childhood education. This is not a test; there are no right or wrong answers. You are asked to give your honest opinion of the degree to which you agree with these statements. Record your answers on the answer sheet provided.

- A) STRONGLY DISAGREE WITH THE STATEMENT
- B) SOMEWHAT DISAGREE WITH THE STATEMENT
- C) SOMEWHAT AGREE WITH THE STATEMENT
- D) STRONGLY AGREE WITH THE STATEMENT

1. The child is best viewed in terms of a group norm determined by chronological age and grade level.
2. Curriculum should respond primarily to grade level expectations.
3. The school should be organized so that the individual teacher integrates instruction across areas of the curriculum.
4. Instruction should consist mainly of reading groups, whole-group activities, and seat work.
5. In the child's acquisition of literacy, the teacher's role should be to guide children toward an increasing competence primarily through individual approaches.

- A) STRONGLY DISAGREE WITH THE STATEMENT
 - B) SOMEWHAT DISAGREE WITH THE STATEMENT
 - C) SOMEWHAT AGREE WITH THE STATEMENT
 - D) STRONGLY AGREE WITH THE STATEMENT
6. Curriculum should primarily facilitate the child's meeting of group expectations as defined by grade level.
 7. The teacher's primary goal regarding children's behaviour should be to establish and maintain teacher classroom control.
 8. A child's progress should be reported relative to the performance of other children within grade level.
 9. Teachers should deal with parents mainly through formally scheduled meetings and conferences.
 10. Learning materials should be symbolic and representational.
 11. Instruction should be clearly divided into separate subject areas.
 12. Curriculum should respond primarily to individual differences in ability and interest.
 13. Teacher preparation time should be used primarily to prepare the materials used in seat work and teacher-assigned activities.

- A) STRONGLY DISAGREE WITH THE STATEMENT
- B) SOMEWHAT DISAGREE WITH THE STATEMENT
- C) SOMEWHAT AGREE WITH THE STATEMENT
- D) STRONGLY AGREE WITH THE STATEMENT

- 14. Learning materials should be concrete and relevant to the child's life.
- 15. Instruction should consist mainly of projects, learning centres, and lay managed primarily by children.
- 16. Children with special needs should receive special instruction outside the regular classroom whenever possible.
- 17. Opportunities for work-focused peer social interaction should predominate over whole-group and individual experiences.
- 18. Staff assignments in the primary grades should be available only to teachers with specialized training in early childhood education.
- 19. For most of the time children should be encouraged to work cooperatively in formal small groups.
- 20. Grades are a better motivater of children than is the acquisition of competence.

- A) STRONGLY DISAGREE WITH THE STATEMENT
- B) SOMEWHAT DISAGREE WITH THE STATEMENT
- C) SOMEWHAT AGREE WITH THE STATEMENT
- D) STRONGLY AGREE WITH THE STATEMENT

- 21. Children should be retained or placed in a transition grade if they have not mastered basic skills at grade level.
- 22. Teacher observation is the most valid way to monitor children's performance.
- 23. Children should be allowed to use space flexibility to pursue a variety of learning activities alone or in small groups.
- 24. The most effective way to organize instruction is to have a class size large enough to allow for efficient whole-group approaches.
- 25. Teacher preparation time should be used primarily to prepare the physical learning environment for hands-on activities.
- 26. Teachers should deal with parents mainly informally, encouraging them to participate in the school, classroom and at home.
- 27. Children should move at their own pace in acquiring important skills in areas such as reading and math.

- A) STRONGLY DISAGREE WITH THE STATEMENT
- B) SOMEWHAT DISAGREE WITH THE STATEMENT
- C) SOMEWHAT AGREE WITH THE STATEMENT
- D) STRONGLY AGREE WITH THE STATEMENT

- 28. Teachers can most effectively promote children's social-emotional development by consistently using rewards and praise to give feedback about the appropriateness of children's behaviour.
- 29. The classroom group should vary frequently in size and age range depending on the needs of the children.
- 30. The classroom group should be determined primarily by chronological age and should vary little after the beginning of the school year.
- 31. In the child's acquisition of literacy, the teacher's role should be to diagnose and correct errors in a specified body of subject matter content and skills.
- 32. A test is the most valid way to monitor children's performance.
- 33. Teachers can not effectively promote children's performance.
- 34. Children should be expected to keep pace with the group in acquiring important skills in areas such as reading and math.

- A) STRONGLY DISAGREE WITH THE STATEMENT
- B) SOMEWHAT DISAGREE WITH THE STATEMENT
- C) SOMEWHAT AGREE WITH THE STATEMENT
- D) STRONGLY AGREE WITH THE STATEMENT

- 35. For most of the time children should be expected to work quietly on their own and in teacher-led small groups.
- 36. Primarily, teachers should motivate children's behaviour through the careful use of rewards and punishments in the classrooms.
- 37. Curriculum and instruction should primarily develop the child's individual self esteem, sense of competence, and positive feelings towards learning.
- 38. The child is best viewed as a unique person with an individual pattern and timing of growth and development.
- 39. Curriculum should be primarily designed to develop the intellectual domain stressing the acquisition of carefully defined discreet skills.
- 40. Primarily, teachers should build on children's internal motivation.
- 41. Staff assignments in the primary grades should be available to any teachers with elementary certification.

- A) STRONGLY DISAGREE WITH THE STATEMENT
- B) SOMEWHAT DISAGREE WITH THE STATEMENT
- C) SOMEWHAT AGREE WITH THE STATEMENT
- D) STRONGLY AGREE WITH THE STATEMENT

42. Children should be assigned permanent personal space such as a desk where they are expected to work quietly by themselves.

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