INCLUSION: A DESCRIPTION OF THE LEARNING EXPERIENCES OF STUDENTS WITH SPECIAL NEEDS IN MAINSTREAM CLASSROOMS

BY

L. JANICE ROLLAND DE DENUS

A Thesis
Submitted to the Faculty of Graduate Studies
in Partial Fulfillment of the Requirements
for the Degree of

MASTER OF EDUCATION

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ABSTRACT

This study was a disciplined inquiry, " conducted and reported in such a way that the [description of the educational experience of mainstreamed students, with special needs] could be painstakingly examined" (Cronbach & Suppes, 1969, p. 15). Five randomly chosen elementary students with special needs (see Glossary) from a suburban Winnipeg School Division were observed in regular classroom settings then interviewed using an open-ended, interview format. The classroom teacher, two randomly chosen student peers and one peer nominated by the teacher were interviewed for each student with special needs. The observation will be a continuous record of the classroom actions and interactions of the student with special needs, the classroom teacher and student peers in close proximity.

The observational and interview data were then organized, reduced and placed in matrices as well as analyzed using the Non-numerical Unstructured Data, Indexing, Searching and Theorizing (NUDIST) computer software program (Richards, Richards, Mc Galliard & Sharrock, 1992). The computer program and matrices were used to sort, code and reduce the data to identify and explore emerging themes, consistencies and hypotheses. A picture of daily classroom experiences emerged as the product of this study available for rigorous scrutiny by researchers and teachers.

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I have many friends and colleagues and want to express my gratitude for their caring, loyalty and support.

DEDICATED WITH LOVE

TO MY

HUSBAND GERALD

AND MY SONS

GREGORY AND MICHAEL

WHO WITH THEIR LOVE,

ENCOURAGEMENT AND APPRECIATION

OF LEARNING

GAVE ME TIME TO GROW

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CHAPTER 1

INTRODUCTION

"No one should have to pass anyone's test or prove anything in a research study to live and learn in the mainstream of school & community life"

(Stainbach & Stainbach, 1990, p. 7).

Purpose of the Study

The purpose of this study was the focused in depth investigation and description of the educational experiences of students with special needs who received their education while they were included in regular classrooms. This investigation was a disciplined inquiry, "conducted and reported in such a way that the [description of the educational experience of mainstreamed, students with special needs] could be painstakingly examined" (Cronbach, & Suppes, 1969, p. 15). The students in this study were those "who are administratively defined as being in need of special services because of learning problems, either specific or general" (Madden & Slavin, 1983, p. 522). Each student had an Individualized Educational Plan (IEP) and received funding grants from Manitoba Education and Training at either Level II or Level III (see Appendix K). The IEP outlined the student's special needs and educational goals. The funding grants support the personnel necessary for the implementation of the

IEP. The students' learning problems resulted from physical and cognitive challenges which will be detailed in the description of the subjects.

Thesis Organization

In the remainder of this chapter, the main threads of educational research relevant to the topic are introduced and background information is provided. The purpose of the study and the research questions are stated. This is followed, in Chapter II, by a detailed review of the literature on mainstreaming in the context of the Regular Education Initiative (REI). The REI literature is critically examined with respect to: a) historical and legal background, b) the REI process c) efficacy research, d) mainstream programs, and e) the REI debate.

The literature review is followed by Chapter III, in which a detailed description of the qualitative method used to explore the research questions is described. This includes a description of the subjects and data collection procedures, samples of instruments and the method of data analysis. The results and detailed descriptions of daily educational experiences in mainstream classrooms are reported in Chapter IV and the conclusions discussed in Chapter V, as well as recommendations for teaching in inclusive classrooms and future research.

Overviews of much of the literature reviewed are provided in tables and figures. Definitions of terminology are provided in a detailed glossary following the appendices.

Background Information

There has been a move, over the last twenty years, to educate students with special needs in the mainstream of regular education. The inclusion of all students in mainstream classrooms regardless of their physical or learning characteristics has become an issue in contemporary education, referred to as the REI debate.

"Camps of parents and professionals have developed differing positions about what should comprise the education offered to children with disabilities" (Smith, & Bassett, 1991, p. 149). Proponents of the REI believe that all students, without exception, can receive an appropriate public education in regular mainstream classrooms that are carefully redesigned and supported to enable inclusion of all students. Those who oppose the REI strongly support the retention of separate special education classrooms and instructional programs for some students with "a wide range of severe disabilities requiring extensive modification of their educational programming" (Manitoba Education and Training, 1989, p. 3). The societal, legal and educational changes discussed here

provide a context for the REI debate. This began with changes in American law.

"The Individuals with Disabilities Education Act (IDEA), originally titled the Education for All Handicapped Children Act (EMCA), [Public Law 94-142] guarantees all students with disabilities, a free appropriate public education" (Osborne, 1992, p. 488). In the early 1980's schools were attempting to make the substantial changes necessitated by the implementation of this law. The IDEA mandates "that all handicapped children have available to them ... a free, appropriate public education ... in the least restrictive environment compatible with their handicap. This means, that if they can receive an effective program in a regular setting they should not be placed in a special class" (Kirk & Gallagher, 1985, p. 25). In Canada during the same period, the Provinces reviewed and/or revised policies or Public Schools Acts to include legislative provisions for exceptional children.

In Manitoba, the policies and procedural guidelines for the education of students with special needs are designed to be "consistent with the Canadian Charter of Rights and Freedoms, Section 15 and .... support the education of students with special learning needs in regular classroom settings whenever this is in the best interests of the students" (Manitoba Education & Training, 1989, p. 12). There is controversy in Manitoba schools about what constitutes the best

interests of the students. This controversy often centers on issues such as the categorical labeling of students, special education funding and appropriate placement.

These issues can be interpreted differently by educators and may result in different student placements and programs across schools. The school division in suburban Winnipeg, from which the students in this study were drawn has policies in support of inclusive schooling for all students. Special education students in the division were gradually being included in mainstream settings. There has been considerable advocacy for inclusion by proponents of the REI (e.g. Davis, 1989; Gartner & Lipsky, 1987; Gersten & Woodward, 1990; Miller, 1990; Reynolds, Wang & Walberg, 1987; Sapon-Shevin, 1987; Stainback & Stainback, 1984, 1990; Will, 1986) who propose the restructuring of general and special education to a "unitary educational system, which if carefully designed and implemented, would allow for a more effective and appropriate education for all students" (Davis, 1989, p. 440). A more cautious approach to including all students in regular education classrooms has been expressed by other educators, (Fuchs & Fuchs, 1991; Gerber, 1988; Hallahan, Kauffman, Lloyd, & McKinney, 1988; Jenkins, Pious, & Jewell, 1990; Kauffman, Gerber, & Semmel, 1988; Keogh, 1988). These authors "support the preservation of the

cascade of services ... to all children with disabilities, which is the promise made to their parents in [IDEA]" (Fuchs, & Fuchs, 1991, p. 243). That is, depending on the child's needs, some separate instruction and/or special education class placement may be necessary to fulfill the child's educational needs. This debate in the educational literature around the REI is creating a body of work examining the many issues that have emerged as more students are included in regular, mainstream, community based classrooms. There is also related research in the area of classroom programs, practices and approaches, and the efficacy of these in mainstream or inclusive classrooms and schools.

Research Questions

The literature examining the REI debate, placement efficacy and classroom environmental or instructional factors suggested a need for further description and analysis of the educational experiences of students with special needs. This study was designed to begin meeting this need.

The research questions are:

1) What are the daily educational experiences of students with special needs who are included in the mainstream?

2) How are classroom teachers and student peers affected by the inclusion of students with special needs?

3) What are the benefits and drawbacks of inclusion for students with special needs, their teachers and peers?

4) Are students with special needs who are included in regular classrooms experiencing inclusion in the broader community?

5) Are the observed daily experiences of students with special needs in mainstream classrooms congruent with the perceptions of these experiences as reported by teachers and student peers?

The research of these questions included individual open-ended interviews and classroom observations by the researcher.

CHAPTER II

LITERATURE REVIEW

This review examines and analyzes the mainstreaming literature that has been an integral part of the educational movement from segregationist to more inclusive educational practices. The literature is first reviewed and analyzed, followed by a synthesis of the emerging themes related to this research study. Because of the number, complexity and diversity of the research articles in the area of mainstreaming (more than 1800 articles appear in an ERIC search using the descriptors mainstreaming and elementary) selected exemplary reviews are analyzed for particular subtopics followed by an examination of the primary research following the reviews. Commentary before, and research following the implementation of the Individuals with Disabilities Education Act (IDEA), originally titled the Education for All Handicapped Children Act (EHCA), are discussed. The historical and legal issues framing the Regular Education Initiative (REI) are stated. The REI literature is examined in detail beginning with the passage of IDEA. Subsequent efficacy and implementation research and the ensuing polarization of educators supporting or opposing the Regular Education Initiative are analyzed.

Much of the REI debate is opinions, pro and con. These opinions

provide a rich and varied literature that has called for and generated, field based research. This debate and the ensuing research provided the foundation from which this research proposal has been developed.

Data Collection

Research articles in the area of mainstreaming, inclusion and the REI were sought and then examined in a critical manner. Abstracting services as well as ERIC searches were employed. The bibliographies in the articles were examined and further citations located using the ancestry and decendancy approaches (Cooper, 1982). The most frequently used sources were:

1. Exceptional Children
2. Journal of Learning Disabilities
3. Remedial and Special Education
4. The Journal of Special Education

The resulting literature was then reduced to approximately 80 sources cited in this review. The criteria for inclusion was: research articles reviewing or examining issues relevant to mainstreaming in the context of the REI debate, from the mid 1970's to the present. Sentinel articles published earlier were selected to provide historical and legal background.

Historical and Legal Background

Prior to the late 1960's and early 1970's many individuals with physical, cognitive and/or emotional special needs lived and were educated in residential facilities administered by provincial or state bureaucracies. Children in these institutions did not learn the social norms of the general population and because they were hidden from public scrutiny were often abused and/or deprived both physically and cognitively. As public attention was drawn to the adverse effects of institutionalization (Wolfensberger, 1972) and the inhumane conditions in many institutions (e.g., Blatt, & Kaplan, 1966: Rivera, 1972) the normalization movement was launched. Handicapped children were placed in community based facilities where their life experiences could more closely parallel "the norms and patterns of mainstream society" (Nirje, 1969, p. 181). As these children returned to home or community residences, court decisions and laws began to ensure their educational rights. The American Rehabilitation Act, Section 504 (1973), "guaranteed the rights of persons with handicaps in ... educational institutions that receive federal moneys" (Stainback, Stainback, & Bunch, 1989, p.9). The passage of IDEA, spurred the passage of state laws supporting and "subsidizing public school programs for students with disabilities. In addition, several national associations for regular educators passed resolutions

in support of mainstreaming; and many states began requiring regular class teachers to take coursework to prepare them for mainstreaming" (p.9).

Parallel actions in Canada, contributing to legislation protecting the rights of handicapped individuals can be "attributed to the patriation of the Constitution, the parents of handicapped children, the handicapped themselves, the Council for Exceptional Children (CEC) and the United States Public Law 94-142" (Kirk, & Gallagher, 1985, p. 17).

Advocacy for and lobbying by parents, the handicapped, and educators resulted in Bill C-141(1983), amending the Canadian Human Rights Act, to enshrine the rights of the handicapped in human rights legislation. Parents' organizations like the United Cerebral Palsy Association and the Association for Children with Disabilities obtained legislation in Canada providing for additional programs, personnel and research to support handicapped students in the mainstream. The Charter of Rights and Freedoms in the Canadian Constitution of 1981, guaranteed equal protection and benefit of the law without discrimination, implying the right to equal educational opportunity for all children, including the disabled. Kirk and Gallagher (1985) noted that the Canadian Committee of CEC "completed two nationwide surveys, set standards for teacher training in special education and set out principles to guide the

formulation of legislation" (p.18). The surveys of 1969 and 1970 confirmed that, despite the lack of clear and unequivocal legislation, all provinces had developed special education programs for the more than one million exceptional Canadian children. The report on the Standards for Educators of Exceptional Children in Canada (SEECC, 1971), recommended that children's learning characteristics should determine educational programming, qualified support (resource) staff should be in every school and teacher education should include a compulsory special education component.

This advocacy began with the first American challenge to segregation in special education classes. In 1968 Dunn published the now classic indictment of special class settings. He stated that:

> a) no available evidence suggested that the academic progress of mentally retarded children in special, separate classes was better than the academic progress of mentally retarded children in regular classrooms,
>
> b) labels accompanying special class placement were stigmatizing,
>
> c) regular education was capable of providing effective individual instruction to slow or mentally retarded pupils, and
>
> d) self-contained classes for mentally retarded children also tend to segregate black children from white children, as black children were

> disproportionately enrolled as a result of virtually complete reliance on IQ testing for placement decisions (Dunn, 1968).

Following this period was an era "dominated more by directives against special classes than by proposals of recommended alternatives" (Polloway, 1984, p.23). Hammonds (1972) in his review of education of the mildly retarded concluded: "Special education must now be at a crossroads of conflicting courses of action... where professionals must reckon with the forces of change, channeling them into courses of action beneficial to the improvement of education for all handicapped populations" (pp. 233 - 234). The passage of the IDEA required the states to establish procedures to assure,

> that to the maximum extent appropriate, handicapped children, including children in public or private institutions or other care facilities, are educated with children who are not handicapped and that special classes, separate schooling, or other removal of handicapped children from the regular education environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids cannot be achieved satisfactorily (Section 612-5).

Legal precedents following the passage of the IDEA served to define the parameters of educational programs for handicapped students. Lehr and

Haubrick (1986) stated that:

> The law itself does not provide any significant statements on the nature or substantive aspects of what an appropriate education should be; rather the law has established a set of processes through which parents and professionals can begin to establish the substantive meaning of an appropriate education. These processes include (a) the right of notice to parents; (b) the right to an evaluation; (c) the development of an individualized education program (IEP); (d) parent approval for program placement; (e) the recognition of a least restrictive environment (LRE) concept related to placement of the child; and (f) the right of a parent to appeal various aspects of the process described in the law (p.358).

The concept of "appropriate education" in the context of the IDEA was defined in Board v. Rowley (1982), the Supreme Court's first special education case. "That definition seeks to define appropriate education by a process that looks first to the child and second to the means by which an appropriate education is to be provided "(Turnbull, 1986, p. 347). The criteria for determining which related services were required under the IDEA were provided by the U.S. Supreme Court in the next related case, Irving Independent School District v. Tatro, 1984. "The Tatro decision affirms judicial review of the

appropriateness of a handicapped child's IEP .... and broadens the related services construct to include not only services to benefit from education but obtain access to beneficial educational services" (Vitello, 1986, p. 355). In these and similar cases up to the present the parameters of the IDEA "continue to be defined and redefined as conflicts and challenges to the law continue to present themselves.... But the legal process interacting with the complex needs of ... handicapped students will continue the same way that teaching and programming for these children evolves; into a dynamic state of change" (p.364).

In Canada most cases were settled out of court with agreements by the authorities to change policies and services for groups as well as the specific individuals involved in the litigation. "From the 1950's through the 1970's Canada did not develop the mandating of services through court decisions to the same degree as did the United States" (Stainback, Stainback & Bunch, p. 9). Individual parents did, however, challenge local exclusionary clauses. For example, in 1978 the Supreme Court of Alberta directed Lamont County to provide for the education of Shelley Carriere, a multiply handicapped eleven year old. By the late 1970's handicapped students were gradually moving from special to regular education classrooms for at least partial integration, often in

neighborhood schools. Special Needs classrooms were instituted at this time, in the neighborhood schools of the local division serving the students of this study. These were non-catagorical placements in which students with a variety of special needs (e.g. educable mentally handicapped (EMH), behavior disordered (BD), language impaired) could receive a half day segregated and a half day integrated instruction. This allowed for education of students in neighborhood schools and began the inclusion process with partial mainstreaming.

The Regular Education Initiative

The many questions relating to the education of pupils with special needs continued to be raised following the passage of the IDEA. "Perhaps one of the most important events in the raising of such questions was a meeting held at Wingspread ... in September of 1981" (Lloyd & Gambatese, p. 5). At this conference, proponents of what would later become known as the Regular Education Initiative identified issues of concern for special educators. These were the "indefensible labeling of students, inappropriate funding systems, development of miniature bureaucracies serving each of the various categories of students, adaptations of regular education learning environments, [and] extension of services to children who were not officially identified as handicapped" (p. 5).

Other academics and researchers (Biklen, 1985; Gartner & Lipsky, 1987; Stainback & Stainback, 1984; Wang, Rubenstein, & Reynolds, 1985) affirmed these concerns and were supported by Madeline C. Will, then Assistant Secretary of Education in the United States. She asserted at a second Wingspread conference in 1985 that "special programs and regular education programs must be allowed to collectively contribute skills and resources to carry out individualized education plans based on individualized education needs" (Will, 1986, p. 413). She referred to the language of "separation, of fragmentation, of removal .... the eligibility requirements and screening procedures which can exclude many of these students .... the tendency to equate poor performance with a handicap .... [and the reality that] special programs frequently address failure rather than prevention" (p. 412).

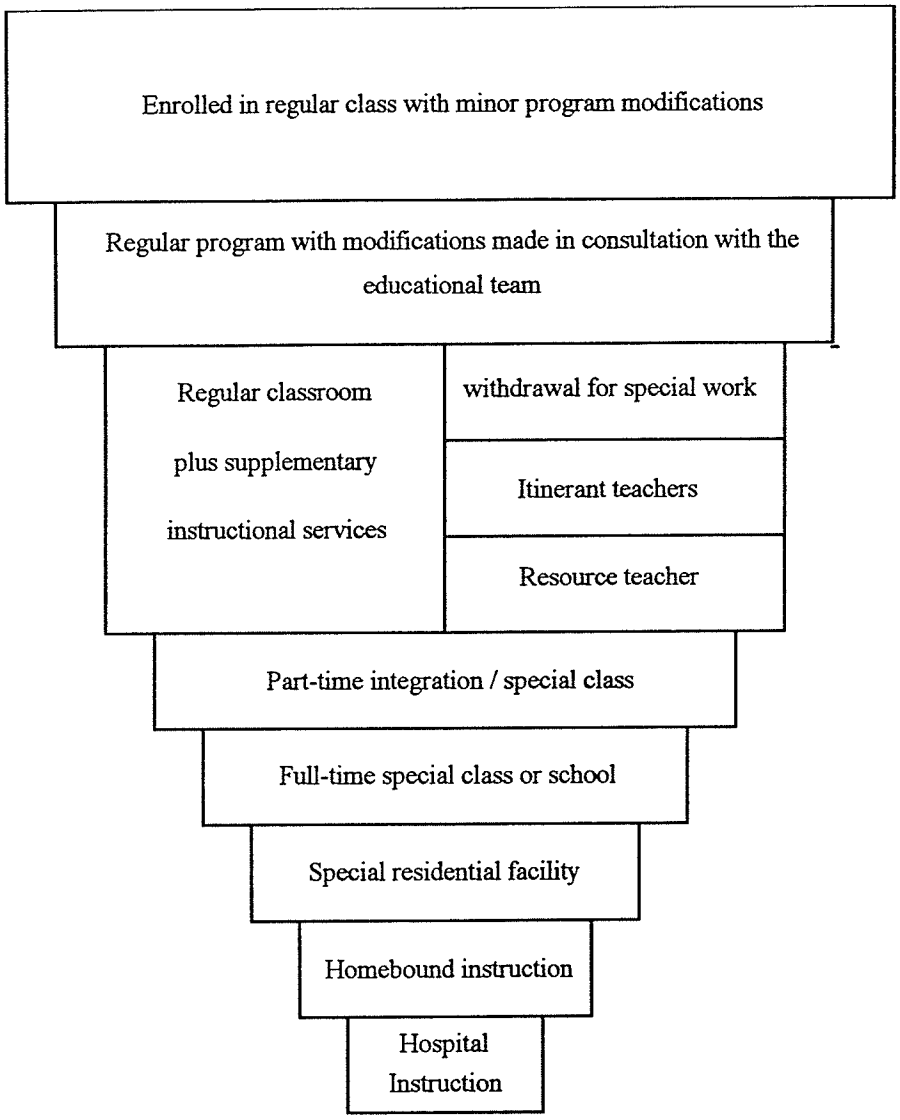
These concerns have become issues of debate among both proponents and opponents of the REI, and have led to research examining the efficacy of special education placements as compared to inclusive, regular classroom placements.

Review and Analysis of Efficacy Studies

Of the many questions and issues framing the REI debate "none throws off heat like the question of whether to eliminate or preserve the continuum of

Figure 1

Cascade of Services



Source: Adapted from Deno (1970) and Special Education in Manitoba (1989).

services and, implicitly the notion of the least restrictive environment" (Fuchs & Fuchs, 1991, p. 241). The least restrictive or most enabling environment attempts to bring the student with special needs into an educational setting that is as close as possible to a regular mainstream classroom. To retain, replace and/or restructure the cascade of services (see Figure 1) is described by Fuchs & Fuchs (1991) as a pivotal question that "creates a meaningful divide among many of the major players in the REI debate: abolitionists, who argue for elimination or dramatic diminuation ... and conservationists, who wish to preserve special education's current structure as well as the least restrictive environment principle" (p. 241).

The usefulness and structure of special education programs has been questioned since the 1930's. During the 1970's and 1980's a body of literature was produced which is often called efficacy research, "studies of the effectiveness of different systems for delivering educational services to pupils with handicaps" (Lloyd, & Gambatese, 1991, p. 5). The differing interpretations of these studies by proponents (abolitionists) and opponents (conservationists) of the REI has helped frame the commentary of the REI debate. In the following section, selected, exemplary reviews of efficacy research up to 1984 are discussed and primary source efficacy research from the mid 1980's to the

Table 1

Early Efficacy Reviews

Authors	Review Questions or Issues	Studies Reviewed	Conclusions
Carlberg, & Kavale, 1980	Is the mainstreaming movement justified?	Meta-analyses of 50 primary research studies of special versus regular class placements	Special classes found to be significantly inferior to regular class placements for students with below average IQ's and superior to regular classes for ED/BD, & LD children
Leinhardt, & Pallay, 1982	Does the type of setting influence academic growth?	Reviewed studies of the effects of full time special education, part-time regular education and full time regular classes 150 studies cited	Setting itself is not the primary variable affecting performance. Othe intervening variables are: class size, content, instruction, time, teacher, management, self esteem, and handicapping condition
Madden, & Slavin, 1983	Careful examination of the effects of mainstreaming or not mainstreaming students with mild academic handicaps		The research favors placement of mildly handicapped students in regular classes using individualized instruction with resource support. Special classes are more appropriate for low IQ students.

present are analyzed.

Early Efficacy Reviews

Teams of educators (Carlberg & Kavale, 1980; Leinhardt & Pallay, 1982; Madden & Slavin, 1983) reviewed the early efficacy literature. Primary sources of these reviews have been examined. The review syntheses are analyzed because this literature is extensive and the reviews are exemplary. Carlberg & Kavale (1980) reviewed primary research that compared special versus regular class placements for students with below average IQ's, behavioral disorders, emotional disturbances and learning disabilities. Leinhardt & Pollay (1982) reviewed "The educational and emotional impact of restrictive (isolated) educational settings on children who were in the lowest quartete of achievement" (p. 557). Madden & Slavin (1983) reviewed research on the effects of placing students with mild academic handicaps in full-time special education classes, part-time regular classes with resource support, and full-time regular classes. [They also reviewed] research on the effects of programs designed to improve the achievement, social-emotional adjustment, and social acceptance of academically handicapped students (p. 519).

The conclusions (see Table 1) show the inconsistent and equivocal nature of the research. Mainstreaming was shown to be effective for some

students with special needs (mildly academically handicapped, low IQ students, educable mentally handicapped, learning disabled) but not others (learning disabled, low IQ students and emotionally/behaviorally disturbed); with Leinhardt & Pallay (1982) finding that setting was not the primary variable affecting performance. These reviews raised more questions than they answered. If setting was not the primary variable affecting performance, why are students segregated in special classes? How can segregated and inclusive settings be advantageous for both learning disabled (LD) and low IQ students? Who are the populations of students categorized by the many labels for handicapping conditions? What are the primary variables affecting performance of handicapped students and how do these variables interact with the instructional setting? What is the educational experience of mainstreamed students? These questions as well as others were pursued in the efficacy research after 1983.

Wang and Baker (1985) in their meta - analysis of eleven empirical studies "that focused on the student outcome effects of mainstreaming" (p. 505) published from 1975 to 1984 began an examination of some of these fundamental questions. They reported that mainstream students consistently outperformed non-mainstreamed students with comparable special education

classifications. They also identified some of the programming characteristics, congruent with the effective teaching literature, associated with positive mainstreaming outcomes. These were: "the use of continuous assessment, alternative routes and a variety of curriculum materials, individualized progress plans, student self-management, peer assistance, instructional teaming, and consulting teachers" (p. 518).

The teams of researchers, (Carlberg & Kavale, 1980; Leinhardt & Pallay, 1982; Madden & Slavin, 1983; Wang & Baker, 1985) raised questions about design problems and the validity of the research reviewed. Carlberg & Kavale (1980) concluded that "the conflicting and equivocal findings of efficacy studies can be attributed to reasons of lack of treatment effect, power, and validity" (p. 304). Comparative analysis of studies was confounded by labeling inconsistency and unclear definitions of comparable handicaps. When 'matched' samples of students were compared between regular and special placements these studies shared a characteristic bias. "There are always systemic reasons (e.g. achievement level, IQ, behavior problems) that one student is put in full - time special education while another is mainstreamed" (Madden & Slavin, 1983, p. 522). Many of the studies reported limited outcome data, used indirect measures of student outcomes and non-random sampling from a limited pool of

disabled students (Wang & Baker, 1985).

Efficacy Research: Instructional Factors

The efficacy research that followed these reviews focused on specific instructional factors in mainstream classrooms and examined specific instructional interventions. The interventions discussed here (similar to those identified in Wang & Baker, 1985) are: cooperative learning, peer mediated instruction, consultation, individualized or direct instruction and prereferral interventions. Four reviews of the literature in this area were examined and then followed by analyses of primary research, studying these classroom instructional factors.

Reviews: Instructional Factors.

Reviews of the primary efficacy research in the area of classroom instruction were completed during the 1980's and early 1990's, (Ault, Wolery, Doyle & Gast, 1989; Lloyd, Crowley, Kohler, & Strain, 1988; Madden & Slavin, 1983; Tateyama - Sniezek, 1990). These reviewers showed some congruence in their analyses of the efficacy of selected instructional interventions (see Table 2). Madden & Slavin (1983) reviewed more than three dozen methodologically adequate experiments of cooperative learning methods, conducted over periods ranging from 2 weeks to 2 years. They found positive

outcomes in achievement and self-esteem using cooperative learning strategies with academically handicapped students. They did however, stress the need for longer term follow - up studies. Lloyd et al. (1988) and Tateyama - Sniezeck (1990) in subsequent reviews supported Madden & Slavin (1983) in the area of social-emotional gains but found equivocal results in the area of academic gains. Tateyama - Sniezek (1990), reviewed studies of cooperative learning in elementary schools "that included a) special education students in the sample; b) achievement as a dependent variable, and; c) cooperative learning methods as an independent variable" (p. 427). Six of twelve studies reviewed "reported significant effects favoring cooperative learning" (p. 434). Ten of the twelve studies did not use control groups, or were confounded by problems of generalizability, subject selection, external validity, collateral effects, or short term intervention. The details and interaction of task and incentive structures also required investigation. Lloyd et al. (1988) reviewed 8 articles published in the mid 1980's that reported the outcomes of cooperative learning research in elementary schools, using non handicapped (15 to 474 subjects) and handicapped/disabled populations (15 to 117 subjects).

> The research indicated the value of cooperative learning in alleviating problems of social rejection.... However, the evidence does not show

> that achievement under cooperative learning in regular education settings is greater than, equal to, or less than, achievement is under desirable instructional conditions in general, resource... or special education settings (p. 44).

Further well designed, longer term research comparing cooperative learning between groups and across settings was suggested.

Equivocal results have also been reported in the area of consultation by Lloyd et al. (1988) and Madden & Slavin (1983). Lloyd et al. (1988) briefly commented on 10 recent studies of consultation processes in elementary schools. They found that "most of the evidence about consultation efficacy currently available comes from studies of programs implemented by school psychologists" (Lloyd, et al., 1988, p. 47). It is not known if these findings can be generalized to consulting resource teachers or identify the specific effects of consultation for students with special needs in mainstream classrooms. The studies reviewed used inadequate comparisons, non-random assignment, studied unevenly implemented programs and/or lacked control of intervening variables. Three studies of elementary school consultation models designed to assist regular class teachers meet the needs of mildly handicapped mainstreamed students were reviewed by Madden & Slavin (1983). They reported

inconclusive findings and suggested further research to examine consultative competencies, roles, expectations and outcomes for mainstreamed students. Another area of research has been pre-referral systems.

Pre-referral systems are designed to access school support services instead of making immediate referral for a special education assessment and/or placement. In reviewing three studies of pre-referral systems in urban elementary and secondary schools, these systems were found effective in reducing the number of referrals to special education (Lloyd et al., 1988). Many questions do remain about the role definitions, parameters of team members' responsibilities and efficacy of pre-referral teams. If fewer students were referred to special education, were their educational needs met in the mainstream? What were the true goals of pre-referral intervention? Were these appropriate programming for students, the reduction in special education placements or were other goals apparent? How can the educational experiences of those referred and not referred be described? "What are the long term prospects for students who are not referred and placed in special education programs" (p. 46)?

Peer mediated learning is another instructional approach frequently used in mainstream classrooms with handicapped and nonhandicapped students.

Table 2

Reviews: Instructional Factors

Authors	Research Questions	Subjects	Method	Results	Limitations
Ault, Wolery, Doyle, & Gast, 1989	analysis of research comparing 2 or more instructional strategies	31 studies reviewed	identified articles were coded in terms of age, diagnosis of subjects, target tasks, trial sequences, procedural variables & effects	all strategies investigated were effective in at least some of the studies	secondary source insufficient number of comparative &/or replication investigations insufficient # of subjects heterogeneity of subjects lack of identification and control of intervening variables

Authors	Research Questions	Subjects	Method	Results	Limitations
Lloyd, Crowley, Kohler & Strain, 1988	review of efficacy research on cooperative learning, prereferral teams, consulting teachers, peer tutoring		meta-analysis of recent studies	cooperative learning can alleviate problems of social rejection	no comparison of achievement in cooperative learning across settings
				prereferral systems can reduce special education referrals	no data about collateral effects
					no study included a control group
				consultation found to be effective with school psychologists but equivocal with resource teachers	most research is in the area of psychology
					diversity of mediators and students confound comparison
				peer mediation is generally successful	

Authors	Research Questions	Subjects	Method	Results	Limitations
Madden & Slavin, 1983	reviews research on the effects of program design	studies in the areas of consultation, cooperative learning, individualized instruction	integrative review	consultation models at an early stage with equivocal results cooperative learning had positive effects on student achievement, time on task & self esteem individualized instruction produces positive social & academic outcomes	problems of generalizability no long term follow-ups concerns for external validity of in class observations

Authors	Research Questions	Subjects	Method	Results	Limitations
Tateyama - Sniezek, 1990	review evaluating cooperative learning to promote academic competence of handicapped students	12 studies	meta-analyses of studies	equivocal opportunity for students to study together does not guarantee gains in academic achievement cooperative learning can improve the interactions and relationships between mainstreamed and non-handicapped students	short time periods for most studies only 2 studies used a control condition

Lloyd et al. (1988) reviewed seventeen studies of peer mediated interventions with mildly handicapped elementary students. The research suggests that peers, can serve as intervention agents by sharing reinforcement, by managing, tutoring or modeling academic or social behaviors for targeted handicapped students. Lloyd et al. (1988) provided description but not analysis of the seventeen studies of peer mediated learning. The questions raised by the researchers were similar to those developing from the cooperative learning research. What were the benefits for all students involved in peer mediation? What were the most efficacious procedures, real cost and time savings, for students and teachers over time? Future research should examine these questions and the recurring theme; What is the educational experience of students with special needs?

Ault et al. (1989) and Madden & Slavin (1983) reviewed efficacy research of direct instruction. Ault et al. (1989) examined thirty-one studies that directly compared two or more direct instruction strategies with "students who display moderate to severe handicaps" (p. 346). They identified thirteen effective direct instructional strategies that include variations of, a) error manipulation, b) response prompting, c) naturalistic teaching, and d) stimulus modification (see Glossary). They concluded that "of the strategies investigated, all were effective in teaching students new behaviors [academic and social] in at

least some of the studies" (p. 352). Madden and Slavin (1983) examined four studies measuring the "outcomes of individualized and whole class instruction on achievement and social acceptance of mildly academically handicapped elementary students in regular classes" (p. 552). They reported that handicapped students "in carefully constructed individualized [direct] instruction programs gained markedly in social acceptance .... [made] dramatic improvements in behavior .... [and had] significantly greater achievement .... than for those in traditional group - paced programs" (p. 554). Questions of which strategies produced which effects with which category of students with special needs remained to be explored. Replication of these kinds of investigations using well controlled, exemplary methodology like random selection, comparison, interaction of strategies, and/or control of intervening variables was suggested. The question arises whether the complexity of learning interactions can be examined discretely and controlled entirely? "Education is social. We learn 'in context' with people. People may not learn what we think we are 'teaching', but they do learn" (Stainbach, Stainbach, & Forest, 1989, p. 250).

In summary, the instructional efficacy research reviewed (Ault et al., 1989; Carlberg & Kavale, 1980: Leinhardt & Pallay, 1982; Lloyd et al., 1988; Madden & Slavin, 1983; Tateyama - Sniezek, 1990) suggested that placement

may or may not be the primary variable affecting the social and academic performance or outcome of elementary students with special needs. The findings were equivocal and dependent upon peers' and students' learning characteristics, type of students' special needs, instructional techniques and arrangements, class size, content, context, and teaching practices.

Many questions have been raised by the reviewers discussed here. These include a desire for better description of the populations and programs for students with special needs. Who are these students? What and how do they learn in differential educational settings? What are the most effective instructional strategies across settings and over time? The reviews cited challenge previous examinations of different instructional techniques and arrangements. Questions synthesize around the recurring themes of identifying "best teaching practices" and describing the experiences of students' with special needs in mainstream/ inclusive classrooms. How do these appear and evolve in every day teaching and learning?

Primary Research: Instructional Factors

Recent primary efficacy research examined instructional factors to determine which teacher practices and instructional arrangements resulted in positive social behavior and academic achievement for students with special

needs (see Table 3). The research discussed here was structured to identify successful, essential, and/or exemplary teaching practices (Baker & Zigmond, 1990; Cannon, Idol & West, 1992; Giangreco, Edelman & Dennis, 1991; Jenkins & Leicester, 1992; Johnson & Pugach, 1991; Nowacek, McKinney & Hallahan, 1990).

Jenkins & Leicester (1992), "sought to characterize how classroom teachers in one elementary school planned for, tailored, and executed specialized instruction for individual students in their classrooms who were experiencing reading difficulties" (p. 560). They used curriculum based measures to determine the success of particular teaching interventions like, motivation, and how or what was taught, to measure changes in academic performance of elementary students mainstreamed in an urban school. They found that "teachers were moderately confident about their ability to design effective interventions and then diagnose a student's reading problem, select an intervention, and implement it" (p. 555). They did not however find large changes in students' reading achievement when special teaching procedures were introduced. Johnson & Pugach (1991) examined the effects of teacher peer collaboration as a means of assisting classroom teachers in developing and implementing alternative teaching interventions. They studied 44 elementary

Table 3

Primary Research: Instructional Factors

Authors	Research Questions	Subjects	Method	Results	Limitations
Baker & Zigmond, 1990	to obtain data for understanding of daily practices in traditional regular education settings and resources and supports necessary for full time mainstreaming	urban elementary school of 266 black students with 22 LD students preparing to mainstream	case study design using observation, interview of teachers & questionnaires for teachers, students & parents	description of school & institutional programs fundamental changes in instruction must occur if the REI is to succeed	1 school homogeneous population only LD boy mainstreamed
Cannon, Idol, & West, 1992	what are the essential teaching practices needed by regular & special educators in general classrooms		Delphi panel survey with 2 rounds of responses analyzed using descriptive statistics	of the 93 statements 73 were essential for general & 82 for special educators differences in ratings were reflected in differing role assignments	misconstrued statements on the survey ceiling effects

Authors	Research Questions	Subjects	Method	Results	Limitations
Canon con't.	are different practices required of each to effectively educate mildly handicapped students in general classrooms do ratings of teaching practices differ with rater's university or field base and discipline		teaching practices rated above 3.5 on the 4 point Likert Scale & achieved above 75% consensus were judged essential		
Giangreco, Edelman, & Dennis, 1991	description of the prevalence of seven practices believed to interfere with delivery of services for mildly handicapped students special needs students	585 respondents from 17 states including parents, teachers, administrators & support personnel	15 item questionnaire, T tests & 1 way ANOVA	96% response common professional practices related to support services may be of questionable value more collaborative alternatives for service delivery are desirable	some respondents commented on desirability of practices instead of frequency of occurrence non-random participant selection

Authors	Research Questions	Subjects	Method	Results	Limitations
Giangreco con't.					potentially idiosyncratic interpretations unknown reliability between reporting & actual behavior
Jenkins, & Leicester, 1992	analysis of teacher's approach to and success with individualized instruction	12 elementary classroom teachers 10 target students and 10 control students	reading proficiency scores using classroom texts teachers rated confidence in designing specialized instruction 3 questions on a 5 point Likert scale	no significant change in confidence ratings and relation between diagnosis & instructions no significant change in reading performance of students	target students selected by teachers small number of subjects short term 5 weeks interaction of different interventions and target student differences

Authors	Research Questions	Subjects	Method	Results	Limitations
Jenkins & Leicester, con't			data collected on teachers' diagnoses of problems, selection of interventions & implementation 8 week data collection		validity of teacher diagnoses and classification of interventions is unknown
Johnson & Pugach, 1991	identify ways in which teachers describe classroom problems examining changes in description after peer collaboration examine how the process affected teacher tolerance for ranges of student performance	intervention & comparison groups of 48 & 44 teachers	training of teachers in peer collaboration data collection included questionnaires, descriptions of problem students & the Teachable Pupil Survey recording of peer collaboration sessions	shifts in expectations of intervention teachers were significant with improval of problems	participants volunteers

Authors	Research Questions	Subjects	Method	Results	Limitations
Johnson & Pugach, con't.			three split-pilot ANOVAS		
Nowacek, McKinney, & Hallahan, 1990	frequency of teacher behaviors in regular & special education identify behaviors that produce high on-task & low off-task performance of students	matched samples of beginning teachers 60 general 60 special ed elementary 37 general 37 special ed secondary	observational using Classroom Performance Record (CPR) & Teacher Interaction Scale (TIS)	(TBS) Special ed teachers used more praise & monitoring & less negative regard for students	reliability & validity of observations lack of control for intervening variables effecting teacher/student interactions

teachers in southeastern Wisconsin and central Illinois. The researchers found positive student outcomes that they attributed to the strategic thinking and problem solving that is associated with teacher collaboration.

Cannon et al. (1992) surveyed two hundred educational "experts" to identify essential teaching practices. These experts were professionals who had national reputations through publication and/or research, participation in a national teacher consultation network or supervised preservice teachers at selected universities. Of ninety-three statements of teaching practices included in the survey seventy-three were identified as essential for general educators and eighty-five for special educators. Giangreco et al. (1991) surveyed 585 educators, parents and related services personnel from across the United States to determine the prevalence of related service practices that were believed to interfere with the provision of educationally related services to students with special needs in public schools. Baker and Zigmond (1990) conducted a case study in an urban elementary school (K - 5) of 266 black students. This descriptive study of a full time mainstream program identified instructional factors related to school climate, order and atmosphere in the classroom, organization of instruction, and accommodation of differences, in apparently inclusive classrooms. The results of the study suggested that "fundamental

changes in mainstream instruction must occur if the REI is to work in this school" (p. 526). Nowacek et al. (1990) used Teacher Behavior and Interaction Scales with 1083 beginning teachers in Virginia, to determine the frequency of occurrence of specific teaching behaviors of effective teachers across grade levels (K - 6, 7 - 12) and types of classrooms (regular and special education). The exemplary instructional factors that were repeatedly identified by these researchers (Baker & Zigmond, 1990; Cannon et al., 1991; Giangreco et al., 1991; Nowacek, 1990) are presented in Table 4.

In both concise and exhaustive listings, the teams of researchers were attempting to identify and describe those instructional practices necessary for inclusive teaching (see Table 4). This research departed from that of the efficacy reviews in both design and focus. The more recent primary research cited here, identified and described positive teaching practices rather than attempting to determine their efficacy by isolating, controlling and comparing approaches. A rich and complex literature is developing that uses more subjective language like atmosphere, climate, order, accommodation (Baker & Zigmond, 1990). The methodology was survey based or qualitative using description and/or, observation (Baker & Zigmond, 1990; Jenkins & Leicester, 1992; Johnson & Pugach, 1991; Nowacek et al., 1990). This research was also limited by design

constraints. Survey questions and directions can be misinterpreted (Baker & Zigmond, 1990; Giangreco et al., 1991; Cannon et al., 1992). Subjects were often inadequately described, drawn from a homogeneous population, were gender biased in sampling only boys, used non-random assignment, or volunteers (Baker & Zigmond, 1990; Giangreco et al., 1991; Jenkins & Leicester, 1992; Johnson & Pugach, 1991). Observations were limited or used questionable instruments and/or reported perception from secondary sources, rather than direct observation (Baker & Zigmond, 1990; Johnson & Pugach, 1991).

Further research was suggested to determine the criteria and effects of teacher collaboration, (Johnson & Pugach, 1991), and identify which classroom practices inhibit or facilitate the REI. Baker & Zigmond (1990) and Giangreco et al. (1991) suggested future qualitative interviews and observations to "shed light on how and why professionals engage in various behaviors that they believe facilitate or interfere with the integrated delivery of [support] services" (p. 23). In summary, similar teaching practices/behaviors were identified in four of the studies (see Table 4). The National Joint Committee on Learning Disabilities (1991) affirmed some of these practices and made suggestions for more system wide adaptations. The report recommended that education agencies should:

- establish system-wide and school based plans ...

Table 4

Instructional Factors: Effective Teaching Practices/Behaviors

Assessment	descriptive & analytical for the purpose of program adaptation
	identifies strengths and weaknesses
	provides appropriate placement in curricula
Instruction	active learning
	direct instruction with feedback
	clearly stated objectives and expectations
	skill development
	questioning, practice, redirection
	modified instruction and expectations
	well structured and organized
	maximizes success
	encourages critical thinking and student accountability
Behavior	uses praise, and positive regard
	enlists student cooperation

	focus on student responsibility
	immediately responds to inappropriate behavior
	uses positive, redirective interactions
Management	positive, interactive communication and climate
	orderly
	organized
	expectations articulated
	accepting and accommodating differences

Sources: Baker & Zigmond (1990); Cannon et al. (1992); Giangreco et al. (1991); Nowacek (1990).

- establish mechanisms for the development of collaborative partnerships
- establish instructional conditions and environments that allow teachers to capitalize on the strengths and ... compensate for the weaknesses of students ...
- ensure the availability of [support] services ...
- provide time and support for planning ...
- ensure the involvement and participation of the regular classroom teacher [in IEP development] ...
- establish a system wide plan for [student] ... transitions ...
- conduct district and school building level program evaluations ...
- require inservice programs for all school personnel ... (pp.. 331, 332).

Instructional factors or practices occur within a specific context, the learning environment. An examination of the interaction of the instruction in context is necessary for understanding of their mutual influence.

Efficacy Research: Environmental Factors

A description of students' learning experiences must account for interaction with the environment.

Instruction is complex, and instructional outcomes are dependent on a complex interaction of many factors, only some of which are student

> characteristics or specific to instructional tasks. Recognition of this fact led to efforts to assess the qualitative nature of students' instructional environments (Ysseldyke & Christenson, 1987, p. 18).

Both instructional and environmental factors interact with student characteristics to frame the child's learning experiences. Researchers and reviewers (see Tables 5 & 6) have examined the learning environment and developed comprehensive lists of environmental factors that influence the educational experiences of students with special needs (Christenson, Ysseldyke & Thurlow, 1989; Cooper & Speece, 1990; Truesdell, 1988; Wang, 1987; York, Vandercook McDonald, Heise-Neff & Caughey, 1992). While these lists were indicators of positive environmental factors they were "not very helpful unless ... organized into something that can be implemented by the educator" (Christenson et al., 1989, p. 21). The relationships between learning environments and student outcomes were examined by Christenson et al. (1989) and Wang (1987). Christenson et al. (1989) made an extensive review of the literature on effective instruction to integrate with their own research on the "quantity and quality of instruction for different categories of mildly handicapped students" (p. 21). They identified 10 factors important for student achievement. Wang (1987) discussed the "implications of findings from the past decade of educational research aimed at

Table 5

Reviews: Environmental Factors

Authors	Research Questions	Subjects	Method	Results	Limitations
Christenson, Ysseldyke, & Thurlow, 1989	integrative review on effective instruction and implications for instructing handicapped students		identified 10 factors important for student achievement & reviewed the literature investigating each factor	hallmark of an effective learning environment for mildly handicapped is degree to which it is constructively active	secondary source
Wang, 1987	literature review of research aimed at improving the quality of schooling particularly for students with special educational needs presentation of recommendations of types of data required by schools seeking improvement and inclusion		examination of the design and implementation of school learning environments	identified specific features of adaptive instruction and kinds of classroom processes & outcomes	

Table 6

Primary Research: Environmental Factors

Authors	Research Questions	Subjects	Method	Results	Limitations
Cooper, & Speece, 1990	to present a longitudinal perspective on school placement outcomes to analyze whether specific instructional arrangements modify the risk of experiencing school failure	103 Grade 1 students identified at risk by Teacher Assistance Team comparison group of 87 Grade 1 students	school placement data collected at end of each of 4 years by questionaire observations using code for Instructional and Student Academic Response hierarchical cluster analyses of observational data	majority of special placements in 2nd year results for specific ecological arrangements with respect to placement were not significant except for independent work opportunities for assistance & corrective feedback are NB results suggestive but not conclusive	correlational design not a matched comparison limited observation of 2 - 30 minute occasions small sample sizes

Authors	Research Questions	Subjects	Method	Results	Limitations
Truesdell, 1988	how do schools maintain their primary task while providing for the individual needs of students in special education	1 school with a mainstreaming team & 30 special education students in the mainstream	participant observation interviews with staff, parents & students analyses & coding of field notes, documents & questionaaires	described mainstreaming supports of funding, administrative support & barriers of class size concern for order, grouping patterns & scheduling mainstreaming provided acceptance through contact between regular & special students mainstreaming inaccessible, inappropriately scheduled, &/or arbitrary	specific to one urban school

Authors	Research Questions	Subjects	Method	Results	Limitations
York, Vandercook, MacDonald, Heise-Neff, & Coughey, 1992.	to obtain information from general educators, special educators & classmates without disabilities about the inclusion of middle school students with severe disabilities	2 suburban schools 11 general educators 7 special educators 181 students without disabilities	survey and interview	data indicated that integration was positive for teachers & students & they recommended that it continue	teachers selected not sampled for positive attitudes to integration 2 schools only subjective interpretation of information

improving the quality of schooling ... especially for those who are hardest to teach" (p. 26). The research reviewed included 49 empirical studies of adaptive instruction and the effects of instructional interventions for mainstreaming students with special needs in regular elementary classes. Each review listed in detail (see Table 7) key features that determine "the degree to which the environment is constructively active" (Christenson et al., 1989, p. 28) (see Figure 2). The reviewers both suggested the necessity to gather further "information on the specific features of school learning environments that are effective in maximizing all students' chances for schooling success" (Wang, 1987, p. 31). Well designed research examining the previously mentioned or newly determined environmental factors that can be effective "in creating learning environments that not only foster basic skill development but also prepare students to make educational, occupational and professional choices" (p. 32), could make a significant contribution in enabling teachers to modify or maintain an appropriate classroom ecology for inclusion.

Primary research has also examined the environmental factors of mainstream classrooms. Truesdell (1988) examined the effects of school organization and climate on the mainstreaming experience of middle school students over a period of 3 years. The school was a large magnet middle school

(Grades 4 - 8) in a large city in the american northeast. About 30 special education students were mainstreamed, each year, of the 3 year study. This reduced the school's special education population by about 90 students after 3 years. As a participant observer the researcher found "increased frequency of mainstreaming ... contributed to greater acceptance of special education among regular educators. [And] in most mainstream classrooms, the students had equal status and pursued common goals" (p. 54). Open-ended interviewing was used by York et al. (1992) to study the educational environment and experiences of teachers and student peers of handicapped students in two middle schools (1200 - 1500 students) in suburban Twin Cities, Minnesota. The study was conducted at the end of the first year of integration of 18 and 24 students with severe disabilities. These researchers received positive feedback from regular classroom teachers and special education teachers as well as the students' peers. It was perceived that the handicapped students had positive academic and social outcomes including learning more appropriate social behaviors and acquiring more desirable interpersonal characteristics. Their peers "indicated learning that [students] with disabilities were more alike than different from themselves" (p.253). In both studies (Truesdell, 1988; York et al. 1992) barriers to integration were present. "Institutional barriers embedded in the school's belief

Table 7

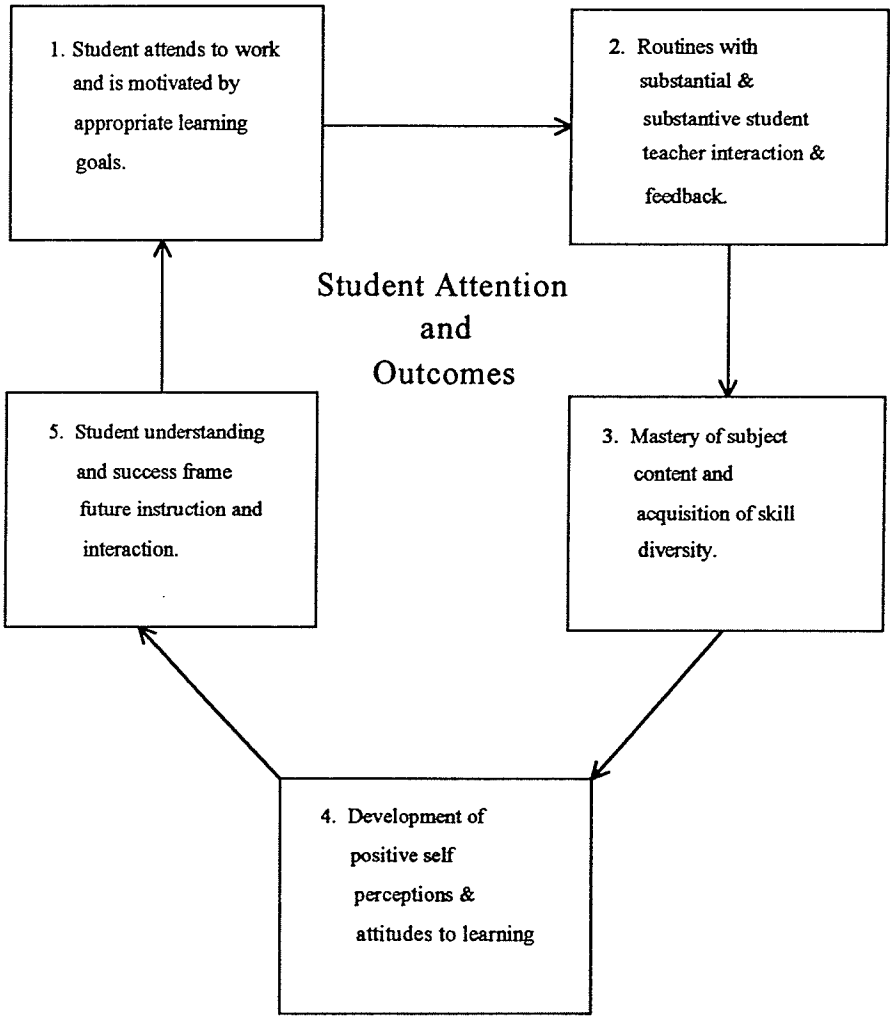
Features of Effective Learning Environments

- A sense of "positiveness" in the school environment
- Common language, purpose and commitment from the staff
- Teaching and learning goals are clearly stated and understood by all students
- Instructional content is well organized, and essential to further learning as well as effective school functioning
- Learning experiences provide ample time, instructional support, active monitoring of progress and understanding
- Student responses are high and performance leads to accomplishment of articulated goals and tasks
- Collaboration of teachers and students encourages help and enables students to obtain assistance

Source: Adapted from Christenson et al. (1989) and Wang (1987).

Figure 2

A Constructively Active Environment



Source: Adapted from Christenson et al. (1989) p. 28 and Wang (1987) p. 31.

system and its practices related to orderliness, funding, homogeneous grouping and the need for students to 'fit' ... limited access to mainstreaming" (p. 53). Positive environmental factors like administrative support, staff commitment and high levels of communication between regular and special educators as well as differential instructional groupings and arrangements appeared to mitigate some of the barriers. These studies were limited to descriptions of specific learning environments but the tentative, positive outcomes for both, despite environmental barriers may indicate some agreement between the two.

Cooper & Speece, (1990) studied "the individual characteristics and classroom environments of children considered to be at risk for school failure" (p. 117). The study was conducted with 103 first grade children considered to be at risk for school failure in two, large, Washington D.C. public school systems. The children had not repeated First Grade and were not referred for special education services. The researchers attempted to determine the role of classroom environments, interacting with student characteristics, in modifying school failure. It was found that students "without opportunities for corrective feedback during their independent reading-related practice tasks" (p. 125) were more significantly at risk for failure than those who received consistent corrective feedback through peer and/or adult tutoring. The practical problems

in allocation of instructional resources were acknowledged without suggestions for improvement. The effects of academic "down time" were not unequivocally determined in this study but possible harmful effects of a classroom environment that promotes "down-time" was suggested. The study was limited by small sample size (103) and the short observation time of two, thirty minute occasions. It differs from Truesdell (1988) and York et al. (1992) in methodology, using a correlational design which raises questions about the reliability of the conclusions.

This primary research (Cooper & Speece, 1990; Truesdell, 1988; York et al., 1992) began to explore the complexity of the interactions between the student, the instruction and the environment. While it was limited by design, limited comparisons and observational time as well as applications specific to single school environments, descriptions of teachers' and students' experiences in mainstream classrooms were emerging. Further research is necessary to determine the environmental variables critical for successful inclusion, and strategies effective in developing appropriate behaviors and attitudes in mainstream students, their peers and the adults around them.

In summary, the efficacy of instructional and environmental factors in mainstream classrooms has been associated with differential student achievement

and social behavioral outcomes. The quality and quantity of instruction and degree to which an environment is constructively active can substantially influence the educational experience of students with special needs.

The more global questions arising from this research include:

a) Which student outcomes can be expected from which school and classroom learning environments?

b) How can exemplary learning programs and environments for students with special needs be described?

c) How can students' ability to function as active learners be improved in differential environments?

d) How can schools become more effective in creating learning environments that not only foster basic skills development but prepare students to think critically and make choices?

e) How can the positive interdependence of students with special needs and students who are not disabled be facilitated in mainstream classrooms and beyond?

f) How can the systemic and structural barriers to full inclusion be modified or mitigated?

g) How can the daily learning, teaching, and student/teacher/peer interactions in regular mainstream classrooms be described and understood?

These questions remain to be pursued in classrooms over the next years as greater numbers of students with special needs are integrated into the mainstream. School and/or province (state) wide programs are being developed to facilitate mainstreaming and provide a context in which to examine different mainstream environments.

Mainstream Programs

A number of mainstream programs (see Tables 8 & 9) have been developed and evaluated during the 1980's and early 1990's (Affleck, Madge, Adams & Lowenbraun, 1988; Borich & Nance, 1987; Deno, Maruyama, Espin & Cohen, 1990; McDonnell, McDonnell, Hardman & McCune, 1991; Slavin, Stevens & Madden, 1988; Villa & Thousand, 1990; Wang, Peverly & Randolph, 1984; Zigmond & Baker, 1990). Each research team described a different yet similar mainstreaming program. The evaluation methods included formal and informal measures of teacher attitudes and attributes as well as student achievement and behavior. Descriptive, (Deno et al., 1990; Wang et al., 1984)

comparative, (Affleck et al., 1988; Deno et al., 1990; McDonnell et al., 1991; Slavin et al., 1988; Zigmond & Baker, 1990) or case study (Villa & Thousand, 1990) designs were used, some with random sampling within volunteer groups or schools chosen for their willingness to implement a particular program (see Table 9).

The results of these program evaluations were sweepingly positive, generally indicating that "handicapped students can be effectively integrated ... if the regular classroom program is designed to accommodate student differences" (Slavin et al., 1988, p. 64). The accommodation generally suggested is the program evaluated in each study. Lists and definitions of school and classroom practices that support integration of handicapped students (see Table 10) were provided (Deno et al., 1990; McDonnell et al., 1991; Villa and Thousand, 1990). These programs will not be individually described because all have similar elements that include, i) an adaptive learning environment that provides equal access to instructional resources and opportunities to succeed ii) individualized instruction varying in time and amounts to meet all students' diversity iii) instructional provisions for special learning needs by regular and support staff iv) diverse adaptive instruction v) integration of services and responsibilities for all staff.

Table 8

Mainstream Programs

1. Adaptive Learning Environments Model (ALEM)
2. Cooperative Integrated Reading & Composition (CIRC)
3. Homecoming Model Project
4. Integrated Classroom Model (ICM)
5. Mainstream Experiences for Learning Disabled Students (MELD)
6. Minnesota School Effectiveness Project
7. Utah Elementary Integration Model (UEI)

Table 9

Mainstream Program Evaluations

Author	Research Questions & Program	Subjects	Method	Results	Limitations
Affleck, Madge, Adams & Lowenbraun, 1988	efficacy of an Integrated Classroom Model (ICM) as compared to a resource room program for MH students cost effectiveness of both programs		non equivalent control group design over 3 years	no significant differences between groups ICM more cost effective	no subject description limited description and explanation of best practices not generalizable
Borich & Nance, 1987	literature review of program evaluation, concepts & approaches			developed an integrated evaluation plan for special education based on regular program evaluation methods	

Authors	Research Questions & Program	Subjects	Method	Results	Limitations
Deno, Maryuyama, Espin, & Cohen, 1990	Evaluation of Minnesota School Effectiveness Project. Examined whether reforms in general education are associated with increases in cognitive & affective development of MH students monitor of main-streaming in regular education classes	32 Minnesota Elementary Schools, urban suburban & rural 7 "target" main-streaming schools 3 studies of up to 2604 students & 756 staff	descriptive & comparative design random sample of 6 students/classroom	staff perception of school effectiveness was not a strong predictor of student achievement staff of schools integrating students rated their schools higher integrated MH students did better in integrated programs & social behavior viewed positively	not an experimental study limited control of variables validity & reliability instruments of concern

Authors	Research Questions & Program	Subjects	Method	Results	Limitations
McDonnell, McDonnell, Hardman, & McCune, 1991	Utah Elementary Integration Model (UEI)	teachers n = 6 students n = 27 in UEI model sites urban elementary schools	measures of model implementation, student adaptive behavior, level of integration and teacher satisfaction	95% implementation significant gains in adaptive behaviors increased opportunities for student participation in general education classes & peer contact teachers showed strong support for the model	no formal reliability checks no description of UEI staff training small sample size maturation may have contributed to gains schools selected for willingness to comply with model assessed quantity not quality of interactions

Authors	Research Questions & Program	Subjects	Method	Results	Limitations
Slavin, Stevens & Madden, 1988	Evaluation of the Cooperative Integrated Reading & Composition (CIRC) program in mainstream classrooms	#1 461 - 3&4 Grade students matched in 11 experimental and 10 control suburban classrooms	California Achievement Test (CAT) pre & post test and Informal Reading Inventory	overall positive effects cited with CIRC special students gaining significantly more on subtests	small sample reliability & validity issues interviewing variables
Villa, & Thousand, 1990	Description of the "Homecoming Model Project", a model for education of students with severe handicaps in their home schools	77 students aged 5 - 17 yrs. with severe handicaps	case study description of the project	of 58 students transferred from special placements all avoided re-referral to out of school placements 19 students at risk for placement were retained in home schools	the quality of individual school experiences are not described

Authors	Research Questions & Program	Subjects	Methods	Results	Limitations
Wang, Peverly, & Randolph, 1984	The degree of implementation of 12 ALEM, critical program dimensions will increase over time improvements in implementation will lead to changes in classroom processes and reduction of differences between processes for general and special education students qualitative changes in classroom processes will lead to expected levels of math & reading achievement, heightened sense of control and a more positive attitude	26 mainstream classrooms 5 urban public schools schools selected by researchers with administrators 69 students & 26 teachers students LD, EMR or SED classification	measures of degree of program implementation, classroom process outcomes & student academic & attitudinal outcomes	more than 85% implementation across criteria by spring significant changes at .001 p for most classroom process variables special students gain 1.08 in math & 1.04 in reading (GE test scores), significant at $p<.01$	no random assignment of schools teachers volunteered or were selected by administrators no description of student & teacher subjects Stanford Math a diagnostic not an achievement test reliability & validity of instruments no description of data collection process correlational study used GE for achievement comparisons

Authors	Research Questions & Program	Subjects	Method	Results	Limitations
Zigmond & Baker, 1990	Mainstream Experiences for Learning Disabled Students (MELD)	urban elementary school 13 LD students 11 boys 11 black students	measures of classroom behavior, school adjustment & achievement (CAT) baseline measures: 1st year compared with 2nd year classroom observation	more reading time and less workbook time in mainstream classrooms final grades lower overall in 2nd year	small population selected schools LD students ability to write tests of achievement school adjustment measured only suspensions and attendance no definition of LD used IQ and reading scores to describe students

Table 10

Effective School and Classroom Practices Suggested for Integration of Students with Special Needs

School Practices	
1.	School climate and structure support inclusive purpose.
2.	Supportive divisional and school level leadership.
3.	Collaborative planning.
4.	Staff development.
5.	Curriculum planning and articulation.
6.	Parent involvement.
Classroom Practices	
1.	Staff understanding and commitment to inclusive practices.
2.	Individualized teacher mediated instruction.
3.	Support services in classrooms.
4.	Flexible and cooperative learning arrangements.
5.	Transition planning.

Source: Adapted from Deno et al., (1990); Villa & Thousand, (1990).

The results of these evaluations were suspect because of possible research design flaws, questionable reliability and/or validity of evaluation and achievement instruments, incongruence of teacher perceptions and student achievement outcomes, sampling from volunteer groups and limited descriptions of subjects, sampling or data collection procedures. When authors evaluate their own programs they may be pre-desposed to report positive outcomes. These positive outcomes should be supported by studies conducted by independent researchers. The identification and description of crucial program componants that support positive student learning could validate these very positive results.

The Regular Education Initiative Debate

The debate between proponants (see Table 11) and opponants (see Table 12) of the REI has had a significant influence on the research agenda examining the inclusion of students with special needs in the mainstream of regular education. These researchers, on both sides of the debate, raised issues of concern with the policy revolution that followed the passage of IDEA and called for research to define and describe the educational experiences of students in mainstream classrooms.

The REI debate parallels the earlier mainstreaming debate in at least three ways. First, in both cases, the ethics and efficacy of special education

Table 11

Regular Education Initiative Proponents

Authors	Issues	Future Research	Comments
Davis, 1989	considers critical factors that have not been given sufficient consideration by debaters	examination of students' attitudes, feelings & opinions of their education processes	to establish what is education's responsibility to students who deviate or differ from the established norm
Gartner & Lipsky, 1987	review of mainstream literature to examine changes in the place of persons with disabilities in American society	examine alternative delivery systems	
McGill-Franzen, & Allington, 1990	special education focuses on identification and placement to garner reimbursement rather than an educational outcome of interventions	on educational outcomes of interventions	
Miller, 1990	presents two mainstream perspectives from which to view REI		suggests more collaborative action for regular and special education teachers to support change in schools

Authors	Issues	Future Research	Comments
Reynolds, 1988	challenges the system for classification and special education placement of mildly handicapped children	careful reflection and examination of the system of categorization and removal of students from the mainstream to special placements	
Slavin, 1990	description of Success for All Program and discussion of classroom instruction changes to make REI a reality	program & intervention effectiveness	
Stainbach & Stainbach, 1984	to provide a rationale for the merger of special & regular education	examine the capabilities of regular school environments to meet the needs of all students	
Teacher Education Division, Council for Exceptional Children, 1986	examining REI for its potential effects on school improvement issues and educational excellence for students with special needs	experimental trials on: a) prevention strategies in regular classrooms b) curriculum based assessment c) regular classes with individualized programs	

Authors	Issues	Future Research	Comments
Trent, 1989	response to opponents irregularities between school buildings re: LD population	how are MH students placed in the mainstream how appropriate is the instruction of mainstreamed MH students extent to which students are served in pull out programs & affects of administration do general educators desire to work with students who experience learning & behavioral problems	

Table 12

Regular Education Initiative Opponents

Authors	Issues	Future Research	Comments
Bryan, Bay & Donahue, 1988	definitions of LD	complexity of teacher student interactions with LD students	disputes REI argument that all children will respond to effective teaching behaviors, particularly for students whose mastery of prereading skills cannot be assumed
Fuchs, & Fuchs, 1991	define the issues and "players" in the REI debate		is regular education willing and able to implement the REI
Gersten, & Woodward, 1990	outlines factors leading to REI criticism of REI develop a model for reconceptualizing the REI as a set of policies, procedures & activities to support classroom teachers with difficult to teach students		

Authors	Issues	Future Research	Comments
Hallahan, Keller, McKinney, Lloyd, & Bryan, 1988	research base of REI: efficacy studies and ALEM studies	efficacy research as presently constituted will probably not yield much useful info	believe the efficacy & ALEM research base of proponents does not support REI
		emphasis on physical placement should change to emphasis on what happens in the placement	propose that a variety of services be available for students
		examine the characteristics & interactions that differentiate general education classrooms from special education settings	
		examine the relationship of the characteristics of different learning environments with methods found effective for MH students	
		how are specialists services used in regular classrooms?	
		how does and ALEM classroom differ in daily classroom implementation?	

Authors	Issues	Future Research	Comments
Jenkins, Pious, & Jewell, 1990	identify a set of 5 assumptions underlying REI	identification of specially designed instruction in mainstream classrooms	
	examine implications of these assumptions for the target population and the partnership between regular and special education	should remedial & special education retain separate status within general education	
Kauffman, 1993	keeping the issue of the place of education in proper perspective, choosing idea over image and avoiding fanaticism	reliable quantitative and qualitative research to judge the extent to which special education is having its intended results	
		evaluating the education of disabled students through experimentation with new programs, strategies and policies	
Kauffman, Gerber, & Semmell, 1988	assumptions underlying REI	how can teaching be designed to maximize student learning in a context of broad individual differences?	

Authors	Issues	Future Research	Comments
Keogh, 1988	improving service for problem learners	research on individual differences research on programs	
Lloyd, Crowley, Kohler, & Strain, 1988	examine the evidence on cooperative learning, prereferral interventions, teacher consultation and peer- mediation in regard to their effectiveness with pupils with high- incidence handicaps (LD, SED, EMR) in general education settings	do mainstream, high incident handicapped students fair better academically and socially than non-mainstreamed peers when provided cooperative learning experiences? explore the funding, administrative support for policies, and roles of team members of prereferral teams does prereferral system influence student achievement and/or behavior? role of the teacher consultant relative to academic instruction?	

Authors	Issues	Further Research	Comments
Lloyd et al. con't		effect of consultation on handicapped students? effects of peer mediation over time for mildly handicapped and non-handicapped students?	
Semmel & Gerber, 1990	will the REI result in a universal accommodation of individual differences or if some students still don't succeed will we recreate segregated facilities?	what happens to those who don't succeed?	

> practices are criticized and a new approach is proposed ... The second parallel is that both debates take place during a period of apparent reform in public education, the character of which is seen as consistent with the proposed special education reform ... The third parallel ... [is] naive pragmatism, a mode of analysis and problem resolution that is premised on an unreflective acceptance of the assumptions that lie behind social practices ... The problem with the mainstreaming, REI debates is that their criticism stops at the level of special education practices (Skrtic, 1991, pp. 149, 150).

Skrtic (1991) applies critical pragmatism to special education practices and their grounding assumptions and challenges educators to examine notions of the pathology of mild disabilities, the usefulness of diagnoses, the rationality of special education, who to integrate and what to merge. Fuchs & Fuchs (1991) frame the REI debate by identifying the proponents and opponents and defining their common ground, "especially regarding an identification of certain problems associated with special education ... [such as] the infrequency with which mainstreaming occurs ... too much testing for too little payoff for instruction ... labeling practices ... [and] accountability for student outcomes" (p. 244). Where the two differ is in the "children and adults in whom the two groups have

professional interest ... [proponents] work with persons with severe mental retardation ... [and opponents] typically do not work with mentally challenged individuals" (p. 244). The opponents work with individuals who represent a wider range of disabilities and generally advocate the retention of a cascade of support services (see Figure 1).

How has this debate framed the present and future research agendas? The efficacy research suggests the need for a detailed qualitative and quantitative description of teacher behaviors and practices, student behaviors, experiences and outcomes in mainstream classrooms. The REI debaters ask fundamental questions about how to structure and/or restructure schools and classrooms to effectively meet the academic and social needs of all students. These are the two main pillars underlying the research questions that will be pursued in this study.

In the educational literature, the qualitative descriptions of teachers' and students' experiences in mainstream classrooms were limited. Of all the studies reviewed only four contained elements of observation and/or interview (Baker & Zigmond, 1990; Cooper & Speece, 1990; Truesdell, 1988; York et al., 1992) and none of these four combined an observation and interview method. The REI debaters argue for or against the retention of the cascade of services. A

description of the experiences of mainstreamed students with special needs may clarify the need for abolition, retention and/or modification of these services. An exploration and disciplined, detailed examination of these experiences is the purpose of this study.

CHAPTER III

METHOD

Source of Data: Seven Oaks School Division #10

Seven Oaks School Division is a suburban division in Winnipeg, Manitoba, an urban center of approximately 600,000. The division serves about 9000 students in 23 schools. There are 15 elementary schools.

The division includes a diverse population. Residents vary across all socioeconomic groups. There is a rich cultural mix with more than 45 different ethnic backgrounds identified within the population. French Immersion, Ukrainian and Hebrew Bilingual Programs as well as after school Heritage Language Programs are offered in the division. No child is excluded from these programs, or a community school, if parents request full inclusion in the neighborhood school. The division does offer clustered or partial mainstream settings for multiply-handicapped students. These settings are in schools equipped with the most recent technical and physical building adaptations to ensure a safe, accommodating and potentially inclusive learning environment.

The Population

The subjects for this study were drawn from teachers and students who were in elementary classrooms, Grades 1 to 6, in the division. The subjects were

randomly selected from those individuals who receive Level II or Level III funding (see appendix K) from Manitoba Education and Training. The normal population ratio of Level II and Level III students in the division was reflected in a random choice of 3 Level II subjects and 2 Level III subjects. Students who were funded solely for behavioral challenges or who spend more than 40% of their school day in a clustered or segregated setting were excluded.

The study of students whose only special need was serious emotional and/or behavioral disturbances was beyond the scope of this study. The behaviorally disordered have been the focus of a separate body of literature that is not part of the mainstreaming, REI research that forms the basis for this study of inclusion. "Behaviorally disordered (BD) students' behavioral characteristics make delivery of specialized intervention services within regular classrooms highly problematic. The social ecologies of regular classrooms and playground settings are often hostile environments for students with behavior disorders from both teacher and peer perspective" (Walker & Bullis, 1991, p. 84). Many students with cognitive or physical special needs may also have needs in the area of behavior. These students with multiple needs including behavior, were included because they are characteristic of the populations considered in the REI debate. Also by definition, mainstreaming is the inclusion of students in regular

settings for most of the school day. Students who receive Level II or Level III funding, but spend more than 40% of their day in a segregated setting do not meet the criteria of inclusion in the mainstream, and thus are not appropriate for this study.

Five students with special needs were randomly drawn from this identified population. Their learning experiences were observed by the researcher, and they were interviewed (see Appendices C & D).

Their classroom teachers, two randomly selected peers and one teacher nominated peer were also interviewed (see Appendices A & B).

Instruments

"There are many times when we wish to know not how many or how well, but simply how" (Jaeger, 1988, p. 7). The instruments for this study were designed to respond to this question. The purpose was to observe the environment and examine the educational perceptions and experiences of students with special needs in mainstream classrooms, as well as those of their teachers and peers.

Observation Instruments

A comprehensive search of the mainstreaming literature yielded no observational instruments suitable to the purposes of this study. The

observations were included to determine congruence between secondary source, interview data and primary source, classroom observation. This relates specifically to research question #5.

> The purpose of observational data is to describe the setting that was observed, the activities that took place in that setting, the people who participated in those activities, and the meanings of what was observed from the perspective of those observed (Patton, 1990, p. 202).

A continuous observation record was made by the researcher (see Appendix D). The researcher attempted to continuously note the behaviors of students with special needs, their teachers, peers in close proximity and other support personnel, as they occur during the observation period. This formed a chronicle of the classroom experiences of students with special needs in classrooms over 4 - 30 minute time intervals. The 30 minute intervals were assigned for each student in consultation with the classroom teacher and equally distributed during mornings and afternoons over several weeks of observations (see Appendix E). Accommodations were made for schedule changes at the school. The researcher continuously noted the following, in brief descriptive, non-evaluative terms:

- behavior/activity of student with special needs

- behavior/activity of student peers
- teacher behavior/activity

Four observational periods over different days and times was used to minimize the effects of a "good" or a "bad" day. Observations of several natural classroom periods were used to show patterns of consistency and/or inconsistency in particular behaviors, actions or interactions. A habituation period of 30 minutes preceded the first observation.

Interview Instruments

The interview questions were adapted from sources in the literature (Giangreco et al., 1993; McDonnell et al., 1990; Truesdell, 1988; York et al., 1992), and modified or expanded to meet the purposes of this study. A standardized open ended interview format was used. The subjects were interviewed after observations were made to reduce the possibility of the interview questions and/or process predisposing the subjects to alter their behavior during observation. Each person was asked the same questions with probing questions placed during the interview to allow for clarification or elaboration. Interviewing after observation also allowed the researcher the opportunity to pose questions about the observed instruction and/or environment. "The basic purpose of [this interview format] is to minimize

interviewer effects by asking the same questions of each respondent" (Patton, 1990, p. 285). Interview instruments are Appendices A, B and C.

Each subject was interviewed in a private area of the school designated by the administrator. All subjects and their parents or guardians (for students) signed letters of permission (see Appendices F, G, & H) releasing the researcher to observe, interview, and tape record. The identities of all participants in the study remained confidential to the researcher. Results and conclusions of the study were written in a manner to protect the confidentiality and anonymity of all data sources. Descriptive details that could identify subjects were not included. All participants were mailed a summary of the study upon its completion.

Analysis of Data

All data from interviews, observations, audio tapes and miscellaneous field notes was analyzed using organizational matrices and the Non-numerical Unstructured Data, Indexing, Searching and Theorizing (NUDIST) computer software program (see Figures 3 to 9).

Its operations can be classified into three systems:

The **document** system provides for processing and maintenance of the on-line and off-line textual or other documents which form the basic data

of the qualitative research project.

A hierarchical **indexing system** for the documents, which includes a database of indexing data (references to text units in documents), and facilities to create, modify and inspect that database.

The **analysis system**, the most significant part of the NUDIST, is a set of facilities for manipulating the indexing database in various ways in processes of category creation designed to help the researcher define and explore research ideas, find text relevant to complex ideas, pursue wild hunches in all directions, keep the fruitful ones, and formulate and test hypotheses. Because the program's operations all revolve around manipulation of the indexing system (which represents concepts), we coined the term concept based analysis for this new approach (Richards & Richards, 1991, p. 308).

All interview transcripts were entered into the NUDIST program. Each line of transcript was coded with a particular descriptor (e.g. support for inclusion, change of routine). The data was then organized, reduced, and with the observational data, combined on matrices to identify and explore emerging themes, consistencies and hypotheses. A picture of the daily experiences of students and teachers in mainstream classrooms was formed from this data. A

more detailed description of the data reduction and analysis is provided in the results chapter.

Threats to Validity

"The most simplistic definition of validity is that it is the degree to which a test measures what it is supposed to measure" (Gay, 1987, p. 128). In this research study there was no "test" to which threats to validity could be applied, but there was observation and interviewing.

> The validity and reliability of qualitative data depend to a great degree on the methodological skill, sensitivity and integrity of the researcher. Systematic and rigorous observation involves far more than just being present and looking around. Skillful interviewing involves much more than just asking questions. Content analysis requires considerably more than just reading to see what's there (Patton, 1990, p. 11).

In this research study every attempt was made to pursue the research questions in a disciplined, diligent, rigorous as well as sensitive manner to assure, that as much as possible, the observations and interviews were a valid chronicle of mainstream, inclusive classroom experiences.

Internal Validity

History & Maturation

The observations took place over three months to reduce the probability of changes in the environment or participants. Obvious changes were noted and become part of the qualitative record.

Testing

The participants were observed before interviewing to reduce the possibility of altered behavior during observation times.

Instrumentation

A continuous observational record of subject, teacher and peer (in close proximity) behaviors was kept by the researcher during observations. Some actions, interactions, language or behaviors may have been missed during transcription.

Selection & Statistical Regression

Random selection was used to limit selection bias. Selection was of more limited concern to this study because there was no comparison of groups or individuals. The participants were described, not compared. No statistical analyses were applied.

Mortality

No subjects withdrew from the study.

External Validity

Reactive or Interactive Effects

There was no pretest to sensitize subjects and interviews occurred after observation (see Testing).

Reactive Effects of Arrangements

Since the observations occurred in the participants' natural settings there may be direct application and generalizability to real life. The interviews occurred in a less natural setting but were used to validate and expand observational data.

Multiple Treatment Effects

Four observations were necessary to obtain rich and diverse descriptive data and allow for some habituation. There was one, not multiple interviews, thus mitigating a possible cumulative effect.

Reliability

> The reliability of observational instruments has one problem not common to other .... methods, that is, rater reliability .... [This] concerns the consistency of observers in recording behavior .... If each observer

records behavior similarly, then the observers are recording consistently and rater reliability is said to be achieved (Mason & Bramble, 1978, p. 292).

The reliability of the researcher/observer was subject to an inter-rater reliability check. An independent observer observed with the researcher for the first two, thirty minute periods. An inter-rater reliability of 95% was achieved.

CHAPTER IV

RESULTS AND DISCUSSION

"No child has been 'cured' of a disability but in one small part of the world, people are recovering from the ills of separation and being restored to the good health of togetherness"

(Villa, Thousand, Stainback, & Stainback, 1992, p. 164).

The purpose of this study was to describe the daily educational experiences of students with special needs who spend most of their day (at least 60 %) in a regular mainstream classroom. In particular, the school and classroom structures and practices that either inhibit or facilitate the inclusion of students with special needs were examined. The results of classroom observations and open ended interviews with teachers and students with special needs and their peers are presented in this chapter. The subjects are described and given letter designations for identification. The processes of data reduction and organization are discussed, followed by a description of the observational instruments. The results and discussion are presented in three sections, (i) for Teachers, (ii) for Students with Special Needs and (iii) Student Peers. The teacher data is summarized in two broad categories, (i) When Teachers Struggle with Inclusion and (ii) When Teachers Achieve Inclusion. Within these two

categories the data were organized and discussed using headings (e.g. Daily Educational Experiences, Personal Issues) that identify themes and issues that emerged as the data were repeatedly read, organized and reduced. A picture emerges of each teachers' struggle with, as well as achievement of, inclusion on different occasions in the classrooms. The data for students with special needs and student peers is broadly categorized and presented as (i) Observations and (ii) Interview Perceptions with subheadings when necessary for the areas related to the broad categories. A picture of their daily life in these classrooms is drawn from their words and actions.

Reflective data collected using the Classroom Ecology Instrument (see Appendix J) was categorized and is reported as teaching actions and interactions that show (i) Personal Caring and (ii) Pedagogical Caring (see Glossary). Also included are summaries of teachers' (i) Preparation for Inclusion, (ii) Supports for and Barriers to Inclusion and (iii) Recommendations for teachers who may be developing an inclusive classroom for all students. These summaries are followed by Chapter V, Conclusions and Discussion.

Subjects

The subjects for this study were five Early Years Classroom Teachers, A, B, C, D, and E (see Glossary); five Students with special needs a, b, c, d, e; and

their classroom peers ap, bp, cp, dp, ep. Student with special needs a was taught by Teacher A with classroom peers ap. The same designations were used for teachers, students with special needs and their peers B, b bp through E, e, ep. The teachers, students and school sizes and locations were representative of the division's diversity. There were large (450 students), medium sized (250-300 students) and small schools (180 students) representing all three geographical areas of the division and the program diversity of single and dual track schools. The students with special needs reflected the natural distribution of students reviewing Level II and Level III funding. Three of the students were severely challenged, receiving Level II support and two required the intensive Level III support to achieve inclusion.

Descriptions A, a, ap

Teacher A was a teacher in an Early Years classroom with 16 years of teaching experience. The class was in a larger school (approximately 450 students) with a heterogeneous mix of students, many of whom were challenged by socioeconomic needs. Student a received Level II funding for both learning and behavioral challenges. There were 18 students in the class and a paraprofessional was assigned to the class for about 1½ to 2 hours daily. The paraprofessional provided clerical support and worked with individuals and small

groups of students under the direction of the teacher.

Descriptions B, b, bp

Teacher B had 6 years of experience. The classroom was located in a dual track, medium sized elementary school (280 students), in an urban area on the fringe of the inner city. Student b was in the English program track and received Level II funding for epilepsy and very serious behavioral needs related to preschool emotional trauma. A very high percentage (about 50%) of classroom peers had their own behavioral and learning challenges. There were 25 students in the classroom as well as a full time paraprofessional. The paraprofessional was most often directly involved in supporting, focusing or redirecting Student b in the classroom and on the playground.

Descriptions C, c, cp

Teacher C had 10 years of teaching experience. The classroom of approximately 25 students was in a smaller school (180 students) in an urban area, on the fringe of the inner city. Student c received Level II funding support for physical and learning challenges associated with spina bifida. The student peers were a heterogeneous mix, including a child who received Level II funding support for serious behavioral needs. A paraprofessional was assigned to the classroom for support of Student c for about 1½ to 2 hours daily.

Descriptions D, d, dp

Teacher D was an exchange teacher from Britain teaching in the English program in a medium sized (approximately 300 students), dual track suburban school, in a class of about 25 students. Student d received Level III funding support to enable inclusions because of learning and communication challenges associated with autism. The classroom ecology was affected by conflicts among peers and the inclusion of several students with behavioral and academic challenges. The interview process included oral questions and simplified written questions to accommodate d's communication needs. The full time paraprofessional who worked closely with d, identified as d para, also contributed information and provided encouragement to d during the interview.

Descriptions E, e, ep

Teacher E had 20 years of experience. The classroom of 21 students was in a medium sized school (approximately 250 students) with a mixed urban and suburban population and high incidence of students with special needs. Student e received Level III funding support for multiple, physical and learning challenges. Student e communicated with gestures, noises and facial expressions, and spent most of the day in a wheelchair. The classroom peers were a heterogeneous group, that included another child with serious challenges

associated with Downs Syndrome. The interview data was provided by the paraprofessional, e para, who worked full time in the classroom, most closely with e.

These students with special needs and their teachers were drawn from large, medium and small schools, from the three different geographical areas of the division, and from single and dual track schools. They also reflected the cultural and socioeconomic diversity of the division.

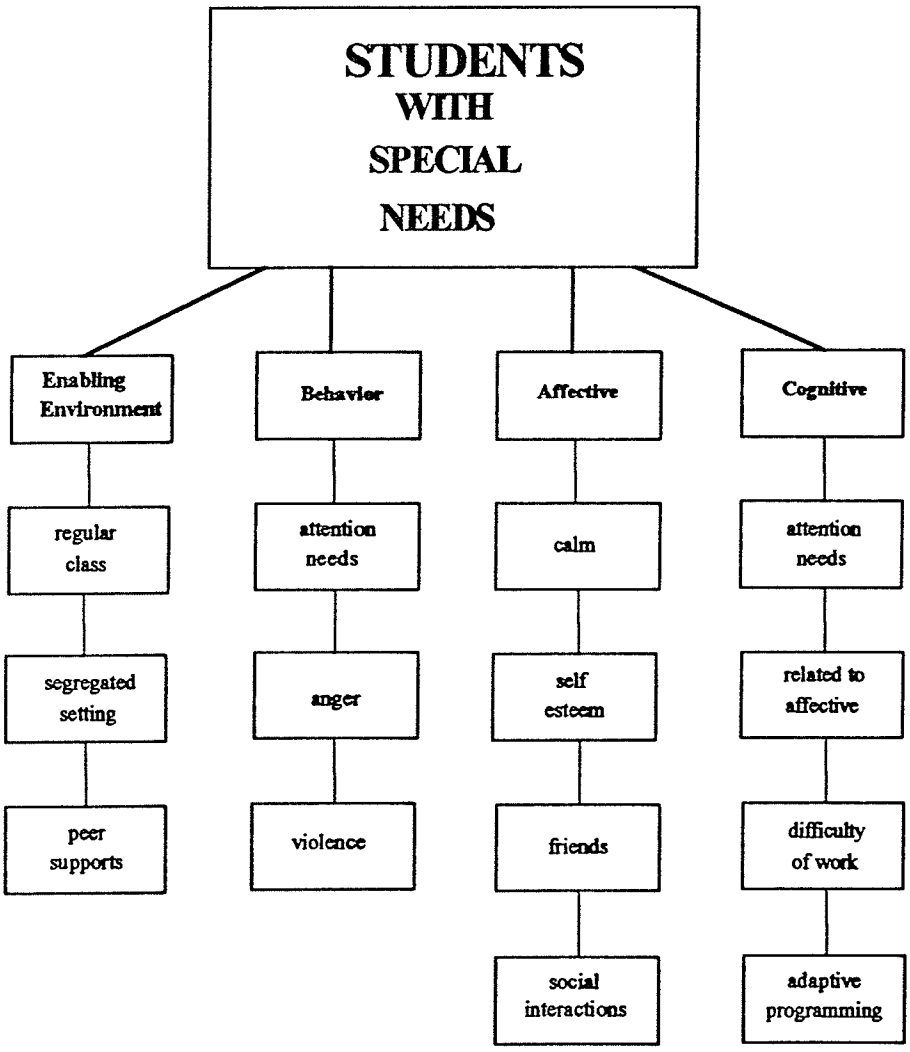
Data Organization and Reduction

The interview and observational data were organized and reduced so that salient information, key issues, themes, consistencies and inconsistencies could be examined. The data were read repeatedly in a search for " 'recurring regularities'. These regularities represent patterns that [were] sorted into categories" (Patton, 1990, p. 403). These categories were then judged by the two criteria of internal homogeneity and external heterogeneity. "The first criterion concerns the extent to which the data that belong in a certain category hold together or 'dovetail' in a meaningful way. The second criterion concerns the extent to which differences among categories are bold and clear" (p. 403). In the process of data organization and reduction both the data and classification systems were explored back and forth "to verify the meaningfulness and

Figure 3

Indexing System, Typical Diagram of One Node

Effects of Inclusion for Students with Special Needs



accuracy of the categories and the placement of data in the categories" (p. 403).

Coding and Indexing

The interviews were transcribed and entered into the NUDIST computer program (described in Methods section). The transcripts were then number coded line by line, with reference to an indexing system of nodes, that evolved during this process (see Appendix L). The data were then reorganized by collecting and printing the lines that were coded with nodes of the same number. That is, the data from all of the interviews was recombined and printed under specific headings like, (i) Daily Educational Experiences of Students with Special Needs or; (ii) Barriers to Inclusion.

The processes of coding and indexing enabled the development of complex *maps* of ideas and concepts that was the first step in constructing meaning as it emerged from the interview data (see Figure 3).

Matrices

The indexing process stimulated thinking about the meaning of the data and enabled the identification of emergent themes. These themes were used to frame several matrices that were used as tools to again reorganize the data into categories, and related factors for teachers, students with special needs and

Figure 4

Perceptions of Students with Special Needs

	Daily Educational Experiences	Likes Dislikes	Taught Learned	Recess Play	Peer Interactions
Perceptions of Educational Experiences					

Figure 5

Observations of Students with Special Needs

	Daily Educational Experiences	Peer Interactions
Non-acceptance Drawbacks		
Acceptance Benefits		

Figure 6

Teacher Interview Perceptions

	Daily Educational Experiences	Student Behaviors	Classroom Instructional Environmental Factors	Personal Issues	Time Issues
Struggling with Inclusion					
Achieving Inclusion					

Figure 7

Teacher Observations

	Daily Educational Experiences	Student Behaviors	Classroom Instructional Environmental Factors	Personal Issues	Time Issues
Struggling with Inclusion					
Achieving Inclusion					

Figure 8

Perceptions of Student Peers

	Daily Educational Experiences	Peer Interactions	Recess Play	Likes Dislikes	Taught Learned
Perceptions of Educational Experiences					

Figure 9

Observations of Student Peers

	Daily Educational Experiences	Peer Interactions	Effects of Inclusion
Non-acceptance Drawbacks			
Acceptance Benefits			

student peers. While working through the interview and observational data, specific issues and themes were identified and placed in the various categories of the matrices (see Figures 4 - 9). This process differed from the coding and indexing in two specific ways: (i) The data remained separate for teachers, students with special needs and student peers. The coded data was combined for all subjects, and; (ii) The interview and observational data were both included. Only interviews were coded.

This approach was used so that both separate and combined interview data could be analyzed. The observational data was used to confirm or show differences between perceptions as stated in the interviews and the observations made in the classrooms. The observations occurred before the interviews.

Classroom Ecology Instrument

A Classroom Ecology Instrument (CEI) was developed as a synthesis of Tables 4, 7 and 10 as well as Figure 2. These Tables and Figure list the attributes, factors and practices that were identified in prior research as affecting the inclusion of all students in the teaching learning process in the regular classroom. These relate to both instruction and classroom environment (see Appendix J). This instrument was completed for each teacher at the conclusion of the final observation. The instrument served a reflective purpose, enabling

the observer to make brief anecdotal comments for each of 28 factors listed. These data became part of the field notes for each classroom (see Figure 10). All five were then collated and combined for each factor or category. This resulted in a synthesis of all the factors so that consistencies and differences could be identified, reported and analyzed.

Results

The results of the observations and interviews are reported and described in three sections, for teachers, students with special needs and student peers. The data and descriptions of experiences are reported collectively to protect the identities of all of the participants in the study, as much as possible. The Classroom Ecology Instrument data (CEI) are discussed separately in relation to the observation and interview data.

Teachers

The qualitative information collected from teachers included five, one-half hour classroom observations during which detailed running records of observations were kept (see Appendix D). The observations were followed by an interview using an open ended format (see Appendix A). The focus of both the observations and interviews was the collection of descriptive information and perceptions so that the day to day school experiences of students with special

Figure 10

Sample Classroom Ecology Instrument

CLASSROOM ECOLOGY INSTRUMENT

Teacher Name_____Student Name_____Date_____

1. sense of positiveness/climate • firm but caring voice • students engaged and smiling	**2. clearly stated learning goals** • yes - do this for that
3. organization of instructional content • teach, send • re-teach send • work with group at round table	**4. time allowed** • lots of time with back up activities for faster workers • homework support by parent
5. instructional support • for student with behavioral needs as well as physically challenged students	**6. monitoring by teacher** • close, almost constant • do 2 or 3 questions, then check with classroom teacher
7. monitoring by other(s) • only observed monitoring by classroom teacher	**8. down time** • none observed

9. routines established • obvious that students knew what to do and when • schedule and reminders on the board	**10. teacher feedback** • continuous with different students • walking around the room constantly interacting with students
11. student self-esteem • high - students were polite and generally respectful	**12. understanding of instruction** • repeated until understood
13. students' attention • high • looked at teacher during instruction • knew what to do	**14. active teaching** • one to one at the table • with individuals when walking around the room • large, medium, small group and individuals
15. direct instruction • with individuals at the round table	**16. clearly stated objectives** • not observed
17. questioning • used to direct the learning and activities	**18. practice** • teach • practice • reteach • focus, etc. • students provided with adequate practice

19. redirection • used for behavior	**20. modification of instruction** • modification of expectations more than instruction
21. structure • lots of movement by teacher around the room attending to students' needs • highly structured • teacher well prepared • whole and small group teaching	**22. organization** • highly organized • tidy • students followed routines
23. critical thinking • not observed	**24. student accountability** • observed in questioning • accountable for listening, learning, finishing practice
25. praise/positive regard • verbal praise • smiling • hugged students • touched on shoulder • quiet talk aside with student	**26. student responsibility** • given jobs • student with special needs helped to do for herself
27. responses to inappropriate behavior • firm NO • redirection • quiet firm talk	**28. accepting of differences** • shown through classroom teacher and student's helping in a matter of fact, non-condescending manner • doing with, not for

needs and their teachers could be "painstakingly examined" (Cronbach & Suppes, 1969, p. 15).

The information from teachers was organized in matrices (see Figures 6&7). The data from each category on the matrices for occassions when teachers were struggling with inclusion and achieving inclusion will be reported, followed by a synthesis of the key factors found in the data. All five teachers struggled with and achieved inclusion at various times in their classroom. All of the observational and interview data were analyzed and then dichotomized as a behavior, practice or interaction that indicated the teachers' struggles to include, that may not be completely successful and those that indicated successful inclusion in the classroom. This was completed for the various factors (e.g.. Daily Educational Experiences, Student Behaviors) for both the interview and observation matrices. Teachers also provided pertinent information regarding: (i) their preparation for students with special needs in their classrooms; (ii) roles of support personnel; (iii) barriers to full inclusion and; (iv) recommendations for other teachers who are working to include students with special needs in the mainstream. These data were synthesized in the coding and indexing process and will be reported following the data from the matrices.

When Teachers Struggled with Inclusion

The general observations and perceptions of teachers were categorized as Daily Educational Experiences, Time Issues and Personal Issues. There were a number of indicators of the struggle for inclusion that were used to categorize the data. These were either reported or observed. Teachers reported funding cutbacks that have lead to a reduction in paraprofessional support (Level II students previously received half time and now receive one third paraprofessional time in the classroom). They reported this reduction as affecting the time they could spend with individual students. Teachers showed and reported more indications of stress or frustration when the classrooms were: (i) larger (more than 22) or; (ii) when the classroom included more than one student with special needs or; (iii) when the classroom included other students with behavioral challenges. The indicators of stress included the teachers' reporting of feeling tired, or not having enough time for the students or worrying about meeting all students' needs. Some were also observed struggling to remain calm during episodes of students' challenging behaviors or when many students simultaneously competed for the teacher's attention. Particular instances are reported in the following descriptions.

Daily Educational Experiences. In the struggle to achieve inclusion teachers reported personal frustrations. Teacher B said ....

"It's frustrating, it's tiring and it seems to be going nowhere sometimes. You think I have 18 or 19 or 20 more children, what about them?"

The frustration was evident in this teacher's facial expression of exasperation and tense body language, her rigid shoulders and closed hands. Her voice was an exercise in controlled calm, but the inability to proceed with instruction obviously frustrated and concerned her. She continued,

"I felt very out of control some times with him and at a loss for what to do. All the time not really feeling any bad feelings towards him or blaming or 'This is your fault,' or whatever. But feeling that in another situation he might be a lot easier to handle."

There were also concerns for the frustrations experienced by the students with special needs. Teacher B stated,

"He doesn't understand that when they're playing a game, soccer or something, and he doesn't get the ball, that that sometimes just happens. He gets really frustrated running after them and just chasing."

The same teacher said ....

"when he is in distress and there isn't somebody to help him immediately

he will refuse to do work, he will say I don't have to do it, he'll rip pages out of work he's completed and he will wander. He will basically say, 'Make me'."

There were also concerns for the frustrations of the student peers and the students with special needs. Teacher B reported ...

"There's times too when if he's in a mood and we don't worry about it, then the other [students] say 'How come he doesn't have to and I do?' "

These frustrations were specific to Student b, with significant behavioral needs complicating a medical condition. While the attentional needs were identified by all five teachers, they were usually qualified by a statement of each child's significant progress in the regular classroom. Teacher C noted,

"Well when we started off at the beginning of the year, I felt at times that it was like a ninety percent output on my part and a ten percent output on her part so it was a lot of work .... So she does need lots of monitoring, not as much as she did in September when she had to be followed and constantly monitored."

When there were a number of students with special needs in one room or the classroom ecology was complicated by behavioral or social needs, teachers expressed reservations, about the effects of inclusion or their ability to include.

Teacher C was concerned for all of the students, stating,

> "There is a high ratio in here. It concerns me that I'm not meeting everybody's needs, even I'm not challenging the higher level kids and I haven't enough help for the children who are really having difficulty, and that's my concern."

Teacher B shared these concerns,

> "When the child goes over to relax away from the academic demands, then there's social demands that he's not capable of handling."

She was referring to Student b's difficulties in interacting appropriately with peers, even during non-work times. His interactions often included teasing, whining or hurting.

Teacher C continued,

> "I think not so much having her mainstreamed, but having three [students with special needs] in one classroom has been really difficult. If you could either limit class size, if you're going to have a lot of mainstreamed children in a classroom, or definitely have more supports, that would be helpful and not just because of the three children .... These three are so different in terms of planning with a [paraprofessional] it's really difficult.

Teachers also worry about meeting every child's academic needs ...

"I know that some of them could have gone further academically than they did with him in the class, but social skills are so extremely important to us as we grow older and to them they will be. I'm not sure, I'm really not sure."

Teacher E supported this concern,

"In the whole classroom the most difficult aspect is meeting the needs of every individual child. In this classroom I have some very needy needy kids."

As did Teacher B,

"I tried groupings at different times but I found that I was just running from group to group settling social problems. No instruction was taking place."

Some noted they had to extend themselves significantly to ensure that all needs were met ...

"You hate to say that [other students loose out] because you try so hard to make sure that they don't. Like if anything, I get more determined to make sure that everyone else gets my time. But I think it just makes it hard for everyone sometimes. To be honest, it's scary too; because, considering the trend, we've gone from half time to now a third time for

Level II funding. And what's gonna happen next year or the year after?"

The observations were generally congruent with teachers' perceptions. The child who seemed to have the most significant attentional needs from the teacher, presented a very serious challenge as Teacher B struggled to include him. Student b was observed interrupting group instruction almost continuously. He would call to the teacher, make noises or throw objects like pencils. He moved almost continuously, touching or distracting other students. The teacher remained calm, ignored much of the calling out, and immediately gave him praise and attention when his hand was raised. When he exploded in distress, she patiently talked with him or assisted the paraprofessional as he was temporarily removed. The attention seeking behaviors and emotional distress appeared to affect the other students. They appeared either excited or distressed by his emotional outbursts. When he was removed the teacher had a real challenge in reassuring and refocusing the remainder of the class. She spoke quietly yet firmly, refocusing where she had left her lesson. This took time away from academic instruction. This classroom environment was also complicated by a high number of students with affective and/or cognitive needs (twelve of twenty-five students). The inclusion struggle for a child with behavioral needs was less for Teacher A with a smaller class and fewer challenging students.

Teacher A stated that,

> "The class is such a very good class. They are so emotionally mature for their age and very tolerant ... So I tried to put him with children, especially at the beginning, who would be patient and tolerant of him or those that he knew rather well .... I remember at one point sitting there restraining him, and I'm going on with my lesson and the class completely ignoring the fact that I'm restraining this very upset little boy, and going on with their lessons and asking their questions. It was just amazing, but to me that was quite an effect on the environment."

In summary, as teachers struggled with inclusion, their daily educational experiences included frustrations with students' behavioral demands, concerns about meeting the academic and social needs of all students, particularly in large classes or those with higher numbers of students with challenges or special needs. They all worried about diminishing paraprofessional supports and showed evidence of very hard work and commitment to mitigate the effects of student numbers and reduced supports. All of these factors influenced teachers' abilities to include. Too many peers or students with special needs with high attentional or behavioral demands resulted in a struggle to include rather than successful inclusion.

Time Issues. Other factors influenced the struggle for inclusion. Teachers worried about providing enough time for each student. They made comments like ...

> "Time for each student is at a premium. [It would be easier] in a classroom where there weren't other distractions that were going on. I felt I didn't have the time to deal properly with what was happening with him."

and ...

> "I'd like to spend more time with her but obviously, with the class, you don't get that time."

Teacher A said,

> "I feel that he takes a lot of time away from other children. Not now so much, as at the beginning of the year."

Teacher B saw student peers beginning to model the inappropriate behaviors of the student with special needs. I asked,

> "Do you think there have been effects on classmates' learning?"

The teacher responded,

> "Yes. For getting off track on lessons and losing time. There are some children who have taken the opportunity to pick up some of these

[inappropriate] behaviors and try them out. This then adds another dimension for calming down and settling."

During each observation in this particular classroom, with Teacher B and Student b, there was at least one occasion when a student peer would watch Student b, look at the teacher to see if the behavior achieved the attention goals, and would then engage in the same behavior. This included calling out, making a "brrr" sound and leaving his/her desk to stand beside the teacher and tap her arm.

Their previously stated comment captured the essence of teachers' concerns with time. They all felt and strongly stated that they did not have enough time to devote to the student with special needs and worried about providing quality time for all students in the classrooms. During the observations, teachers used various groupings to mitigate some of these time pressures. They used whole or small group teaching and all moved constantly around the classrooms, interacting with students or the paraprofessionals. They were often observed interrupting their teaching to give direction or feedback to individuals or the paraprofessionals. Teachers B, C, D and E struggled most significantly with time issues because these classrooms were all either larger or had several students with special needs or behavioral challenges.

Personal Issues. The struggle for inclusion also raised personal issues for teachers. Teachers fully supported, and achieved inclusion for students with very serious physical challenges, but had reservations about including students with serious behavioral challenges. They shared comments like ...

> "There's no doubt in my mind that children like her [Student c] should be mainstreamed. I just think mainstreaming takes on a negative connotation when we think of the children who are just totally draining us. It's the same, but it's different in a lot of ways."

Paraprofessional support to enable the class to learn despite the interruption of a child in distress was reported as a necessity by one teacher. She said ....

> "I had a Level III, really violent kid, in a five/six class. A full time [paraprofessional] was assigned to work with him. So as difficult as this child was, there was one [paraprofessional] assigned to him, and we really could continue teaching and work with him and do as much as we could."

Another teacher felt that she was able to restrain a younger child and eventually enable a positive behavioral outcome but also at a personal cost. She was asked about the emotional toll, and responded ....

> "Physical exertion always does [take an emotional toll]. So in that way it

did. Otherwise it didn't because it always helped and I didn't have to do it that often; three times maybe and then he realized, 'Oh this is gonna happen every time. So I'll stop.' And he did."

The suggestion of a smaller separate setting was made by some teachers as an alternative to the struggle for inclusion. When asked about the regular classroom as the most enabling environment for the child Teacher B replied ....

"He is fine now but he needs and thrives on a lot of attention. He does best when he can receive a lot of attention. I think he would do best in a smaller classroom with lots of structure and direction and also with opportunities to go off and do something by himself for awhile and then come back."

During observation Student b was observed to have a wide range of attention seeking behaviors like calling out, whining or moving around the room. These behaviors generalized across teaching and working situations. Several other students modeled these behaviors or showed their own attentional needs. This comment underlines both the teacher's, student's and the classroom's needs for respite from unremitting behavioral demands but also affirms the child's need and right to be included in the classroom. The regular classroom has the models for prosocial behavior and friendship opportunities that had been successful in

including Student a. His classroom was smaller (18 students) and did not have other students with obvious behavioral challenges.

The struggle for inclusion seemed to be in balancing academic and social needs. Teacher E noted,

> "I think, in a segregated setting, if you're looking at the academics, the children actually go a little further, because you get to spend a little more time with them and it's almost like a one on one. Say I had a setting with five kids, two [paraprofessionals] and a teacher. It's a very close knit setting. If I was to compare it to the classroom, I think there are more [academic] gains that way. But now looking at a regular classroom with her integrated into it there are a lot more social benefits. She really does enjoy being with the other kids.... I think there's great benefits, not just for her but for the other kids as well.

This teacher acknowledged that school is much more than an institution in which students learn academic content and skills. It is the place where students learn to live as human beings connected to and responsible for each other.

The personal issues identified by teachers struggling to include students with special needs were, the emotional toll and negative feelings of some individuals regarding the inclusion of students with behavioral challenges. They

also questioned whether reduced class size or segregated settings were more beneficial for the academic growth of students with special needs. These questions were always qualified by the dilemma of the positive social gains of all students in inclusive classrooms.

When Teachers Achieved Inclusion

While there were issues and concerns either perceived or observed in the struggle for inclusion, there were significantly more data of teachers achieving inclusion. There were data in the areas of Daily Educational Experiences, Student Behaviors, Classroom Instructional/Environmental Factors and Personal Issues. These findings often overlapped but because of the large amount of data in each area they shall be reported separately.

Daily Educational Experiences. Daily Educational Experiences were the day to day happenings that were reported or observed in classrooms and the perceived effects of inclusion for all students. Teachers perceived gains for students with special needs and their peers. When asked if the inclusion of a student with special needs affected the other students' learning, this reply, from Teacher D was typical,

> "No. Not at all. I can't think of a way it has because it's not as if I tailor lessons to meet her needs. I tailor the lessons to meet the needs of the

class and she then has them modified ... to what she can do. So I don't think it's affected anyone at all. I'd like to think it's affected their social skills and that if they're confronted with another person with special needs they won't be bothered by it all .... The new kids at first were a bit wary of her so I'd like to think these children going anywhere else and meeting other children with special needs will be able to handle it as if it was an everyday occurrence."

When asked about effects on the classroom environment, Teacher C stated ....

"Well it's definitely not a negative effect. But it probably does positive because they're all wanting to help out, to be her peer buddy... and help her out as much as possible. And one of my other special needs students who has more of a behavior problem is actually the one who ends up [helping] her most of the time when we're going for walks and things like that."

The child with special needs has a more normal educational experience in the regular class and gains emotionally from peer contact. One teacher said ....

She really does enjoy being with the other kids. You can see that by the smile on her face when she's in a group setting. Because she's not a verbal

Table 13

Classroom Factors Affecting the Struggle for Inclusion

- paraprofessional time
- numbers of students in the classroom
- numbers of students with special needs in the classroom
- student, peer interactions and behaviors
- teacher collegial support
- behavioral needs

child it's hard to assess that a lot of the time. Her smile is the only way to assess it. I think there's great benefits, not just for her but for the other kids as well."

Teachers remarked that student peers gained self-esteem and learned the responsibility of giving and caring. They made comments like ....

"They help her get ready after gym. They help her on and off the bus. They help her at recess time. They play with her at recess. They help her at lunch time. They talk to her. They often, at times, ask if they can go and work with her and play computer games with her. I mean, most of them don't go out of their way, because she used to ignore them a lot, so they don't make a big deal of it; but now that she is responding more, they are going to her more and talking to her more. But there are several kids in the class that always did a lot for her and with her, and some of the older kids do as well.

Peers' learning of acceptance and tolerance was also shared ....

"At the beginning of the year when she screamed - I have two new kids - and when she screamed, they were the only ones who reacted. They were like looking around seeing what was going on, and for everyone else it was like they didn't hear it.

They spoke of the physical needs of students with special needs being met in a matter of fact manner.

> "It's just juggling. It's not as neat and tidy as it looks on paper where she gets a third [paraprofessional] time. But she does need the [toileting] time and other things more for physical concerns."

Even peer students' parents were reported to be understanding and supportive. Teacher B's comment was typical ....

> "I am always surprised that there isn't more of a response from parents of other children. In fact I hear parents say things like 'It must be very difficult'. The comments I get are more understanding. Not 'What is that kid doing in my kid's classroom?'".

This was shared by Teacher B who included despite the serious behavioral needs of her particular student, and several others in the class.

The daily acceptance, tolerance and patience of teachers and student peers was observed in every classroom. They ignored and/or redirected behaviors, lived with noises or space constraints of special apparatus. Teacher E said ....

> "I think the only negative part of that, is her noises. She gets too loud or the type of apparatus she's working at will be really noisy, and some of

the kids can't concentrate. That's one of the biggest complaints I've had this year."

Students who had difficult concentrating, worked in another part of the classroom, in the hall or the library. This accommodation was made naturally without negative comment to, or about, the student with special needs. Space or seating arrangements were made based on the needs of the students, not on teacher preference. Teachers shared their differing approaches to space and grouping needs ....

"Most of the year I've tried groups and then returned back to rows because the structure seems to work best for the kids."

Another stated ....

"I also always seat him so that he has lots of space around him, because he doesn't do well when he is surrounded by other children."

In summary, the daily educational experiences of teachers achieving inclusion in regular classrooms were observed and reported to include positive social and academic experiences for all students. The students learned from and about each other through this daily contact. Teaching was planned for the classroom to include instruction and experiences suited to a broad spectrum of student needs. Students were naturally helpful, accepting and tolerant, and

parents were reported to be understanding. These daily experiences included the complex yet natural behaviors of students.

Student Behaviors. Student behaviors were certainly part of classroom experiences. Those reported here were specific instances in which teachers reported, or there were observed behaviors, that enabled inclusion. Teacher E and others actively taught appropriate interactions with the student with special needs. She said ....

> "We discuss with the regular students what to expect from her or any other special needs student. We do this without the special needs student in the classroom, and we also talk about how to react to the behaviors. We do this about three times each year. You have to reinforce or come back to 'Is this a good way to respond to her?' If she starts making very loud noises, what we've done, is we have asked the children working with her to say 'No'. If she continues, then they immediately remove her from the grouping, or if she is at a different station, she'll leave for a very short period of time. Then when she's quiet they'll bring her back in. That's how we've adjusted to her behaviors."

Note that the class adjusted to her behaviors knowing her physical

challenges. Students were daily observed showing kindness and patience, holding the door, laughing and chatting with students with special needs and including them in games. One memorable example was during a gym class when several student peers, gave the ball to Student c so she could be included in the game. There was no teacher prompting to encourage this behavior. The students appeared to do it naturally, and laughed and encouraged their classmate to participate. Another noteworthy observation occurred with Student d during a novel reading period. Student d was included as the students read to each other in a small group. Her peers encouraged her and took no notice of the paraprofessional's assistance while she read. All the students in the group appeared to find the reading challenging, but all were included equally.

Teachers identified their classroom as an enabling environment for inclusion by discussing these student behaviors for both students with special needs and peers. Teacher E's comment was

> "I think [the regular classroom] enables them to do all that they can do, with the help we have. Having the other children in the classroom, I think that makes the setting a little easier .... I'll just give you an example. At lunch time she will look around at the other students especially if they have junk food. She wants to be eating the same kinds of lunches as the

other kids. And I think just being around other children is very helpful for her."

They saw positive effects for all the students, with behavior, understanding and empathy. For example ....

"I think it works both ways. I think that there are a lot of students who definitely have gained respect for her. They like to have responsibilities in helping her. They see her as a student in the classroom rather than somebody who isn't able to do what other people can do. They like the responsibility of helping."

Teachers also saw changes in peers' academic progress as the child with special needs progressed. For peers of Student a ....

"I think they have been able to go ahead faster in their academic progress since he has started behaving better. It hasn't been so punctuated with outbursts and things like that. I think they are able to treat him more equally, so behaviorally they are able to be more relaxed around him, since he's better. They like him better since he's calmed down."

Teachers also reported significant progress for the students with special needs. They shared this information. Teacher D saw ....

"Huge differences .... I mean she still doesn't talk very much but she will

answer questions. When you ask her questions she will answer them. Before it was almost as if she was completely ignoring you. It wasn't. It's just that she's developed more now, and she will ask to be taken to the bathroom now. Whereas at the beginning of the year she used to have to be taken at a regular time just in case .... Her motor skills have developed a great deal. She now plays with Zacks and Lego and things like that. At the beginning of the year that was totally out of the question. She's come a long way in her printing, and that's been a big battle; to get her just to use a pen, or a pencil, and her printing, and her coloring. She doesn't actually print words but can trace over dotted lines now; lines and circles and that kind of thing, which is a huge step. Like, she's almost within the lines now when she colors and at the beginning of the year just to get her to hold a pencil or a crayon was a big challenge. So there's a lot of improvement in a lot of ways, and socially she plays with other kids at recess now. Not all the time. But sometimes she actually initiates relationships in the playground, which is quite a big step for her."

Teacher B noted ....

"He will complete work and he feels good about completing work. He

says I've done well haven't I?'".

And Teacher C said that ....

> "We've seen an incredible change just in attitude to math for instance. Math for a lot of children with spina bifida is very very difficult to do, and she just hated it. In September it was just a struggle even to get her notebook out and her book open. I feel like we've really gotten somewhere; you know, like we're still using lots of manipulatives, and just neat little techniques to help her get the answers. But the point is, she is doing them on her own, and often she'll just say to me I'm OK I can do this.' So it's nice to see that growth. It's a lot of work, and it takes a lot of time to get to that point, and a lot of reinforcing, and there are days, when I can just see that she isn't up for the task. She'll do a few questions and then I'll just give her something else to do."

Many positive social behaviors were observed and reported by teachers. They said that ....

> "More and more children will now go and work with her and she will respond to them. Whereas, at the beginning of the year it would have seemed that she was ignoring them completely. She doesn't do that any more .... Most of them have been with her since kindergarten and they're

very good with her, they make a lot of allowances for her and it's quite amazing."

and ....

"He has some children that he gets along very well with. When he is not distressed he is a very polite, loving, caring child. And as long as he is calm and feeling good about himself, all these qualities come out. It's not just from modeling other children, that's really the way he is."

as well as ....

"She needs some mediation at times but all children do that."

Student behaviors when inclusion was achieved included very positive academic and social gains. As previously stated, students were naturally helpful and included without prompting. The students with special needs made gains in understanding content, motor development and prosocial interactions. Student peers learned how to respond well to students with special needs and appeared to enjoy and learn from the helping, working together process. No unkind or excluding behaviors were observed or reported.

Classroom Instructional and Environmental Factors. Most of the reported and observed data seemed to relate to the instruction and environment in the classroom. This included teacher behaviors, practices and how these

interact with and mediate students' learning. None of this can occur in isolation. The physical set up, nuances of communication, climate or atmosphere can all affect, and interact with, students' educational experience.

Teachers used many different physical arrangements in their classrooms and changed those readily to accommodate particular situations and students. Four teachers use groupings of student desks and one used rows. The students' learning arrangements often changed between observations. Teachers commented about physical arrangements ....

> "At first when we started out in the classroom, the arrangement was totally different than it is now. I had rows and she was included in one of those rows. And then it was suggested to me that I try grouping. So I did, and it's working out much much nicer."

And about grouping students ....

> "For a time we split into groups. When we first moved into the classroom, I had centers set up, so there would be different areas for reading, writing, puzzles and games; but this worked more for a structured free time or activity time rather than a center concept. In the classroom either everybody's receiving instruction or everybody is receiving some free time. I tried groupings at different times but I found

that I was just running from group to group settling social problems."

Programs were adapted and modified to include the student with special needs in regular learning situations. The teacher spoke of this process for Student e ....

> "She is included with a small group doing relatively simple work but pulling out any kind of adaptive programs from the subject area whether it be coloring a picture in Social Studies while the other kids are doing a project or having her do texture or tactile things in Health while the other children are actually doing a tactile activity."

and for Student d ....

> "What I've done is I've tried to adapt a program ... so that it enables her to be with the rest of the other kids doing relatively the same thing as the other kids are."

Program development was an ongoing priority that teachers discussed ....

> "To begin the year we set up a program for her. It takes about two or three weeks to observe her behaviors, to suggest different ways of handling her situation. We try speaking in firm voices, speaking in soft voices. We try various different types of music. We try just about any technique that will satisfy her or create smiles or happiness or enjoyment.

We also are very strict and regimented in routines. If she is doing computer work and is not functioning where we think she should, we're just persistent and just keep working with either hand over hand, verbal instruction, constant encouragement saying "Good job". It's just a very repetitive thing."

Repetition, structure and direct teaching were observed and reported. Teachers commented about their importance ....

"I guess just in terms of the structure, but that's always been there, I haven't made any changes really."

Direct teaching with continuous feedback was described by Teacher C as a ....

"hands on approach. I just realized how important it is for some children that that's available to them. I've always taught that way but I just realized how important it is to really do that because there are many other children who learn better through that approach."

Precise language and repetition were stressed ....

"I tend to ask questions that require a verbal response rather than a yes/no answer. I raise a question with a choice. 'Are you going to finish your work at your desk or at the table?' rather than 'Are you going to finish your work?' So I phrase things so that the child will be able to

answer what I would like him to answer and do .... So it's that kind of language with choices requiring a definite response. Repetition, saying the same thing. "I need you to sit down." repeated and repeated so it's a broken record kind of thing."

as was firm directive instruction ....

"I guess I became more like a dictator. Telling children what to do now. Like "This is what you do." It was like a strong direct instruction."

Helping students develop positive coping strategies was often reported. Teacher C reported that ....

"She's constantly loosing things so we really had to develop strategies like, "You use your pencil and then you put it in your pink box so it will be there when you want to use it again." Or otherwise, there's that constant "I can't find things." Or she was loosing things. So she does need lots of monitoring, not as much as she did in September when she had to be followed and constantly monitored."

Accommodation of different learning needs and physical challenges occurred naturally. Teachers spoke of this accommodation during teaching ....

"The strategies I use for him affect the other children. There is longer wait time between question and discussion perhaps in a dictation or in an

oral interaction of any kind there is always more wait time. He needs a lot more time to think things through to even listen."

and as part of the daily experiences in the classroom ....

"She does require more breaks and I can usually tell when she's done five or six questions that she needs to get up and get a drink of water or have that sort of break time."

and outside ....

"In the winter we use a sleigh. She's fine with that. The alternative would be that she would have to be bussed, but she prefers to be with the kids."

The classroom teachers' instruction was supported by student peers, paraprofessionals, parents and school support personnel. Students were always available and especially helpful. Teacher D said that ....

"At the beginning of the year she was not stimulated by having other students around but now she is. Having the other kids really does stimulate her. If someone comes to the computer with her she becomes more animated."

Teacher A identified the conscious planning and structuring of peer support. She said ....

"That's one place that I really planned at the beginning. I made sure about a few of the other children and what they were like and then made sure that he was sitting in a group that was close to me, and in fact grouping them the way I did was because of him, and I thought that perhaps peers might have some influence on him .... So I tried to put him with children, especially at the beginning, who would be patient and tolerant of him, or those that he knew rather well."

The dynamic of the individuals in the classroom was also a factor in the inclusion process.

"The specific class he is with has been extremely enabling for him. Enabling him to do well. And I think the class he is in, is enabling for him, because they have been so patient with him. They are very willing to work in a peer situation with him. They are able to ignore his behaviors. When he does it for attention, they are able to ignore it. A little thing that we used at the beginning of the year was, I would make a signal and that would let them know, "Ignore this." and they would just nod and look down and work away. It's just like he's with a group that is very enabling."

Students enabled inclusion, providing natural assistance, as one teacher said ....

"Often if she's not on the front carpet when the other kids are, someone will say to her, 'Front carpet'. They kind of take ownership for making sure she's where she's supposed to be which I think is kind of funny."

Paraprofessionals played a pivotal role in the classroom, working with either groups of students or individuals, under the teacher's guidance. One teacher described this in detail saying ....

"Again I think it's because she is a [paraprofessional] who has been trained. She has lots of ideas and can use her own initiative. I very rarely say, 'I want you to do this or that'. What I do say is 'Would it be possible for her to do this?' .... Really it's her training and her own initiative as a paraprofessional that enables Student d to take part. When she's joining in with the rest of the class, the paraprofessional is actually talking to her. Like, I'll be talking to the rest of the class, and the paraprofessional is relaying the question to her."

Planning for and communicating with the paraprofessional was identified as crucial by teachers. One teacher's comment was typical ....

"We work together on a lot of things and discuss them beforehand. We talk about what we are going to do with certain subjects before the day starts and often I'll go through it with the paraprofessional and say 'We're

going to do this that and the other today, and I'd like her to do this. Or it doesn't matter if she doesn't take part in that.' But this isn't every day. This is only if we are going to do something different. Or, it's something I really want her to do, or something I don't think she should be trying."

School resource teachers appeared to be in regular communication with classroom teachers. Their role was supportive, collaborating with teachers to develop appropriate programs. When asked how often there was communication with the resource teacher, one teacher replied ....

"Pretty well daily, and when there's concerns. If the resource people have something interesting, they'd like to try, we'll discuss it, and whether we think it's helpful. The speech therapist is involved as well."

In some schools everyone was involved in the process of inclusion. Teacher C believed that the ....

"willingness of everyone to help out really does include the whole staff. Everyone will help out, and she does feel like she really does belong in this school. Even in games or activities that the children play, they are willing to say, 'OK we know that the rules are not all the same.' But they make allowances, for the fact, that she can't get there as fast as other kids and, 'We're not going to make her out every time.' I think it's a real

willingness to include her."

Teachers also expected and welcomed parent support and involvement in their child's learning. These were typical comments about parent involvement ....

> "Her reading has come a long way, but any kind of writing or organizing of ideas or putting thoughts onto paper is really difficult. And I've had help from her Mom on that and I've sent work home that says "You brainstorm with her on this topic and write out the words for her." She'll dictate and we'll do a lot of the writing for her. Just in terms of thought processing she'll start off with an idea but by the time she actually gets it onto paper it's gone and she's onto something else. So she just needs that little extra help."

and ....

> "His mother is involved, as far as taking some of the parenting courses, and we contact [the parents] regularly, about once a month."

Teachers also make accommodation, when assessing their students with special needs. Anecdotal reporting was favored by most. This was described as ....

> "observing occasionally, by communicating with my paraprofessional. The paraprofessional will often bring concerns to me, and we'll talk about it. In the end it is a written assessment."

and ....

> "I kept more notes on behavior on him and details about certain things that he did. Generally I assess each child from where they are. Whether he was capable of doing what child X was doing wasn't an issue."

One teacher described the benefits of descriptive reporting ....

> "Actually what I began doing with her and two of my other special needs students is anecdotal reporting. I just found it really difficult to report on them using the traditional report cards and I found that the parents had a better idea of what exactly we were working on in school as opposed to a Needs Improvement in everything. And that's not really fair for the child anyway so I have done anecdotal reporting for those three children. And I could see how it could be valid for all."

The observational data certainly supported and expanded these instructional and environmental factors. Teachers were observed actively teaching interpersonal problem solving, using the language of mediation and encouraging student responsibility. "What did each of you do? How can you behave differently next time?" They constantly adjusted expectations and instruction. During an art class students glued wood pieces in a pattern. The paraprofessional assisted the student with special needs in gluing her wood

pieces, while constantly verbalizing and describing her actions. For a spelling dictation, the paraprofessional quietly and slowly dictated the same words that the teacher dictated to the larger group. In another instance a smaller group did a science experiment with the paraprofessional, while the teacher did the same experiment with the rest of the class.

Instructions for students with special needs were slower, and their expectations for achievement were modified. Their reading assignments were often shorter, the number of math questions fewer or simpler, the routines structured, organized and habitual. The teachers actively taught students with special needs, how to organize their world in the classroom, to facilitate their learning; to always put the pencil back in the case; to always put the notebooks in this spot, and to always sit close to the teacher during instruction.

Feedback to the students was as often and as immediate as possible. The child's hand was noticed, the response was praised simply, and then repeated for emphasis. One or two completed work questions or sentences, were given feedback and reassurance by the teacher. Instruction times were short as well. Students did not have to listen for long before working to complete assignments. Discussions involved all students taking turns with allowance for students who chose not to participate, or pass.

Every teacher provided sufficient work for all students and had a variety of additional work, or activities for students who finished quickly. This was done either through student centers, manipulative learning games, or lists of additional work on the chalkboard. All the teachers used both oral and visual cues when teaching. They said; they wrote; they demonstrated; they rephrased. They used cooperative groupings, pairs, small and large grouping depending on the activity. They constantly moved around the room during both teaching and learning times, responding to student needs. Their voices were generally quiet, firm and calm. Affection was evident in the eye contact, gentle touch to a shoulder or hug of a small child.

Responsibility was encouraged by giving classroom jobs to students with special needs as well as peers. It was obvious in the classrooms, that teachers had taken time to help peers learn appropriate responses to their peers with special needs. Many students were observed firmly saying "No." to an inappropriate touch or gesture or encouraging a student who struggled. Peers often were observed praising a correct response, or behavior of a student with special needs, as well as their peers. The personal competence and caring shown by the teachers was evident daily.

In summary, there was a broad range of environmental and instructional

factors that were observed and reported by teachers. The complexity of the classroom interactions cannot easily be captured in descriptions but the most obvious were: (i) flexible, dynamic groupings and physical arrangements; (ii) significantly modified, yet inclusive programs and expectations; (iii) direct, structured, repetitive instruction, with monitoring of learning and feedback; (iv) very high teacher student contact and interaction; (v) precise, directive language with encouragement of student responsibility; (vi) effective questioning; (vii) obvious affection and natural accommodation and acceptance of differences; (viii) supports by peers, professional and paraprofessional personnel and parents; (ix) observational assessment and anecdotal reporting; (x) varied tasks with alternatives for individual learning. Each of these factors whether separately or in combination were effective in enabling the inclusion of students with special needs.

Personal Issues. The teachers saw may personal understandings and rewards in teaching students with special needs. Teacher C's affection was obvious when she said ....

> "It's so neat to actually see her laugh and enjoying school I mean at the beginning of the year she was quite withdrawn and she would say home a lot because she wanted to go home .... And now she has lunch and

whatever lesson comes after lunch then recess, the DEAR, then home. So it's like she's going through in her mind all the things she's looking forward to before she goes home. When we go swimming, she just loves swimming. You should come and see her swimming, she doesn't actually swim, the whole time she just loves it. Just to see the pleasure she gets out of things really makes me happy. When she's happy and she's enjoying herself she lets you know."

They cared deeply for their students. Teacher A "chose" the student with special needs saying ....

"When I knew he was coming to our class I thought that out of the few special needs

kids ... (we divide up the special needs kids in our school) I would choose him in contrast to some of the others because I thought that his and my personality would match a bit better .... I faced some real challenges in the past, but they haven't been as likable as he is. So you know, to see all this in one little bundle of energy, you know the likable and the challenging, I suppose that is one thing, a learning aspect, a positive aspect."

In this school students with special needs were placed in classrooms as a result

of a consultation process between teachers and the administrators. The educators worked to provide a positive match when possible between the teaching and the students' challenges. This kind of matching is not possible in the smaller schools where there was one classroom per grade or were the two classrooms per grade were different language programs.

The teachers were willing to try many different strategies to include, regardless of the challenge. Teacher E spoke of this process ....

> "Well it just shows me that no matter what the difficulty is, whether it's a regular child or a special needs child there are always some positives to pull out of them I think you can try anything. I don't think there is a certain way to do anything. You just try anything and everything to include these kids in the program."

They recognized their uniqueness, individuality and similarity to the other students. This was captured in Teacher C's realization that ....

> "she is a child first and the disability is sort of second. Foremost she is a child. She is special but all the other children are special too. So I think you just need to see her as a child. And that's something that I learned this year too. She gets frustrated like other children, she is just like any other child and there are times when she is lazy and needs to be pushed

and she can be stubborn. You know she's just another kid."

She applauded the struggles that the students with special needs endure ....

"I also find that she is a really courageous little girl. Like the problems she's had to overcome .... When you think how it can get frustrating sometimes, "Oh you can't find you pencil again! Pat did you put it in the pink box? Where's your book?" "Oh I left it at home and I don't know where it is." And sometimes you just need to step back and say "Whoa! She's really had a lot to contend with and she's really doing OK." You sometimes get caught up on wanting to move on and get things done but then I think about what she's had to go through."

And another teacher recognized the child's complexity ....

"It's nice to see him along with the other children, because he is doing a lot better than some of the other ones are. Seeing the different parts of him come out at different times; also to reassure myself that it's not me doing this to him, and it's not him doing this to me. And just realizing that this is just a little boy who needs a lot of help."

They do not always acknowledge their skill in enabling student inclusion. They made modest statements like ....

" I think his improvement has come about maybe a little bit because of

me. I think a lot because he has grown up a year. But I hear lots of compliments about how I've been with him. I am not sure I believe them but I do believe people mean them sincerely."

but they do acknowledge their own learning in this process. One teacher had a ....

"feeling of self-confidence. He's unique in being extremely likable at the same time as being so potentially awful. So I learned. Well I guess it's been a real learning experience."

Another teacher realized ....

"that children don't do this to you. This is who they are and this is how they are behaving, and although you get upset and impatient and frustrated, they are not doing this to you. The positive thing I guess, is that I have learned something."

Understanding this aspect of the teacher and student interaction enabled this teacher to keep her feelings about the child's behavior separate from her feelings for the child and her responsibility to include and enable learning. This separation is crucial to inclusion of students with special needs.

In each of these classrooms teachers framed the environment and shaped the instruction. Students responded to, interacted and learned.

Students with Special Needs

Observational and interview data were collected from students with special needs to develop a description and understanding of their experiences in regular classrooms. These data were organized in two matrices, one for the observations (see Figure 5) and another for the interviews (see Figure 4). Each matrix will be discussed followed by a synthesis of the main features of the data.

Observations

All of the observational data and field notes were categorized by Daily Educational Experiences and Peer Interactions. The students with special needs were observed receiving and showing affection to their teachers. Their physical and academic needs were met as teachers tried different strategies to create inclusion. Their peers were never excluding but included variably depending on the degree of the challenges facing the students with special needs. The more verbal Students, a, b and c, interacted more with peers than Students d and e who were less verbal. All were included by peers but variably, depending on the activity, and the abilities and behaviors of the students with special needs.

Teachers were deeply and personally affected by the students with special needs. They showed deep affection and concern for their learning, pedagogical caring and the human caring of one person for another. They were

willing to literally try any strategy to create inclusion and grudgingly acknowledged their role in this. They applauded students' courage through many physical and emotional struggles and continued to strive to learn from these experiences. Each teacher shared the very positive outcomes of their experiences teaching students with special needs.

Observations of Daily Educational Experiences/Behaviors.

The observations of the experiences or behaviors of students with special needs showed either nonacceptance or drawbacks in the struggle for inclusion, or demonstrated acceptance by peers or benefits as inclusion was achieved. In this manner there was a parallel to teachers' struggle for, or achievement of inclusion.

The non-accepting observations of daily experiences occurred primarily for the two Students, a and b, with significant behavioral special needs complicating their other challenges. During group discussions at the front of the class, with the teacher, each of these students were observed sitting at the edge or slightly removed from the group. Student a appeared to be disengaged from the teaching/learning process as he watched his own hand movements and adjusted books on the shelf against which he was leaning. He did not make eye contact with the teacher or the other students. This continued even after the

teacher noticed this behavior and asked for his attention. In a similar situation, Student b continuously moved around the perimeter of the discussion group, touching others, rocking and calling to the teacher. He also seemed focused on his own needs rather than attending to the group or the teacher.

Other behaviors were observed that appeared to be drawbacks to inclusion. Student b was alternately seeking attention either from the teacher or his peers. This interfered with teaching and learning. He was observed wandering the classroom on several occasions using a whining or loud voice or inappropriate touch. He was distracted by, and would attend to, teacher or student movement or interactions in the classroom. Neither the teacher nor the paraprofessional could provide the total one to one attention that he appeared to seek. As his attention seeking behavior escalated so did the noise and activity level in the classroom. Other students lost focus and began to either watch his actions or joined him in the behaviors. These included rocking, jumping, throwing paper or pencils, tapping, making pencil guns and shooting noises or having a sword fight with pencils. The unremitting nature of these behaviors appeared to impede the teaching/learning process for all the students as the teacher and paraprofessional worked very calmly and diligently to focus and refocus him and the class.

These were the daily educational experiences that were observed as drawbacks to inclusion and they all related to the inappropriate behaviors of students with special needs. Much other data relating to daily experiences showed acceptance or benefits of inclusion for students with special needs.

Student c was always fully included. During a Math Olympics activity in the gym she was jumping, measuring, throwing and participating fully in every aspect of the lesson. Her jumps or throws may have been less than those of her peers, but no one commented on this, and many peers encouraged and praised her. During teaching, discussion, and working times she was given a great deal of feedback and direction from the teacher. She often worked with her teacher and other peers at a central table, while other more independent students worked at their desks. She also worked at her desk once she clearly understood expectations, freeing the teacher to focus on other students.

Student a also required and received regular feedback from his teacher. His desk was close to hers, as was Student c's. Both worked diligently and responded with smiles and a return to task when the teacher provided feedback and simple praise. They both showed the benefits of structured routines. Their working tools and books were in order and they knew where to place assignments or books, and knew what to do when work was completed.

Student b had certainly received repeated instruction for routines, and patterns of behavior, but did not appear to have been able to translate them into actions. He was two to three years younger than Students a and c. When he was close to an adult and had some or all of their attention he could focus on his work.

Students d and e worked less independently because of physical challenges. They required the almost constant attention of a paraprofessional in their daily educational experiences. Despite the significant challenges they each faced their learning paralleled that of their peers and was modified to suit their needs. Student e was observed doing art with the class. The paraprofessional did the cutting or gluing, but she could color or draw when a crayon was held in her hand by a special apparatus. During a Social Studies mapping lesson she colored a map. During Language Arts she used ear phones to hear music or a story. Her work was always an appropriate adaptation of the other students' learning experiences. She was grouped at a desk with three other students who often talked with her, eliciting smiles and noises of pleasure. When she became tired she slept at the side of the class in a bean bag chair. Students did not pay special attention to her special activities but included her naturally in their groups.

Student d also worked at parallel activities with the paraprofessional but

was able to walk more, and sometimes communicated and talked with her classmates. She was fully included in Spelling, Reading and Math, doing most of her work through a computer. Her fine motor skills were just adequate for keyboarding with one finger. When the teacher spoke, the paraprofessional wrote simplified versions for her on the computer or a paper. Written communication was her primary learning mode. She read and then typed or gave single word replies. She read a novel with a group of peers and had also learned some social behaviors. She could dress herself, stay in line with the other students and play outside on the climbing structures. Inappropriate behaviors were certainly evident, but these were redirected by the paraprofessional. They were not commented upon or really noticed by the other students. Her peers appear to accept and encourage her. Students asked to work with her at the computer.

For each of these five students, their learning experiences paralleled those of their classmates as closely as each individual could manage. If the activity was identical, the expectations were modified. None of the five students was a bystander in, or observer of , the classroom experiences. They were included and accepted as a natural member of the class.

Peer Interactions. Peer interactions were enmeshed in the daily

experiences but in some instances could be identified as an interaction that clearly showed nonacceptance or acceptance.

The distraction of student peers by the student with special needs was observed as the primary drawback to inclusion. When Student b engaged the attention of his peers they reacted either with frustration, asking him to leave, or encouragement, joining him in the distracting behavior. Both responses interfered with students' learning by diverting attention from their work. In Student e's classroom the noise of her apparatus or vocalizations distracted some students. These students interrupted their activity to move to a quieter location.

Other peer interactions showed acceptance of students with special needs or benefits for their learning. Student c asked her peers for help on several occasions and received their assistance. Both showed satisfaction by smiling at the positive results. One gained information, the other learned to give help. Student a was so much a part of the class that a casual observer would not identify his special needs. He was paired with another student for spelling as was the rest of the class. They chatted, encouraged each other, dictated their words and generally collaborated to practice some words. Their words were easier but neither they nor their peers seemed aware of, or concerned with this difference. The activity was the same and learning was apparent. They both

scored well on their respective dictations.

Student d and a peer wrote a story at the computer together, contributing alternate sentences. This occurred while other students wrote stories alone or in pairs. Their communication was comfortable and natural. They smiled and appeared satisfied with the printed results.

These peer interactions, like writing a story together, or simply holding a heavy door for another were continuously evident in the observations in these classrooms.

Interview Perceptions

After interviewing the students with special needs and the paraprofessionals of the two who could not respond verbally, the observational data were generally validated and expanded. The students shared their perceptions of Daily Educational Experiences, Peer Interactions, Likes and Dislikes, Recess Play as well as what they believed they had Taught and/or Learned From their classmates.

They all related their school experience as one of work. When asked what they did in school, typical responses were ....

"Work, Math, experiments."

or ....

"Sometimes I read books or I do L.A. or Math or Spelling or going to the Computer Lab or Journal."

When asked about what they did each day, they discussed subjects like Language Arts or Math. Paraprofessionals assisted the students with serious physical challenges. One paraprofessional said that ....

"During Science and Social Studies while the teacher is talking, I'll [the paraprofessional] write notes to her that go with her lesson, so that she can read the lesson. I'll do that on paper, not on the computer. If the teacher has an overhead, I'll make a copy of it, so that she can see it; because she has a hard time looking at different places or visual clues. When the teacher has a group discussion, all the kids come to the library corner and she will join them.

Another described the daily routines ....

"I don't know if you were able to see our schedule, because we have a schedule just like the other kids have; like a timetable that we follow, only our timetable gets blown quite often, if she falls asleep or something like that. It depends on how she's doing for the day. We have to go by that, but we do have a schedule to follow. We're always super busy. I have a hard time fitting everything in sometimes."

Student a was able to talk briefly about misbehaviors or getting "in trouble". When asked what happens when he gets in trouble, he responded that ....

"They call home.

*Q Who calls?

*A My teacher

*Q And what happens when she calls home?

*A I get grounded.

*Q Do you get grounded for long times or for short times?

*A Long times ....

*Q Do you know what [these misbehaviors] look like?

*A Yeah. Being bad and getting mad.

*Q Do you get mad sometimes?

*A Yeah.

*Q How do you show when you get mad?

*A Well I get distracted.

When he talked about this, he appeared tense, with fists clenched or rubbing his finger tips on the desk while looking downward.

When asked what they liked or disliked the students gave similar responses. They liked or disliked a particular subject or activity. They reported

liking Art, Reading and Writing. One paraprofessional identified many positive school experiences.

> "She enjoys lunch. Her favorite thing and what she does best would be the computer. Listening to music and tapes, story tapes, although that's not a big part of her day."

Students expressed dislike of particular subjects. When asked, "What's the thing you like the least in school?", typical responses were ....

> "Spelling."

or ....

> "I hate Science. It's very confusing. The teacher has to write things down and she goes fast and I just can't catch up to the word that she's on."

Challenges related to students' special needs were shared as dislikes ....

> "Music. She loves the singing and the actions that go with the songs. But I think she found it really hard this year in music because the kids have recorders and she can't take a lot of overstimulus. The recorders really did it to her."

and for another student ....

> "One thing that she doesn't like, is when we do drawing and coloring.

That is one of the things that she is not that fond of. It might be because of the device that we have for her to hold the pencil or marker in, that really bothers her. But that's the only way we can do it and it's really important."

No child voluntarily commented on liking or disliking another child in response to these questions despite some gentle probing.

Peer interactions included playing with or helping peers. Student e's paraprofessional reported her friendship with another child with special needs, and how they played together during daily free time.

"She plays with the other kids. She is really good friends with this little boy in Grade Two. They are just like best friends, you should see the two together .... As soon as he sees her he goes right up to her. He's not afraid of her, he's really taken a shine to her and she loves it when he's hanging around her. She crawls all around the room and plays with the toys."

Student c was offended by being called "dumb" by a child in the class ....

"cp always says that you're not very smart and stuff like that. He says, you're dumb.

*Q What do you say to him them?

*A I say, I'm still smart."

The students generally talked of school as work and peer interactions as play or fun. Recess play was reported as a natural part of each child's day. They all played on the climbing structure, chased each other or engaged in imaginative play. They said ....

"I play, I play on the structure ..."

or ....

"I eat my lunch and then I go to the washroom and then I go outside and play. When the bell rings I have to line up and go back inside .... Sometimes I play on the structure, on the slides. I play at the steering wheel on it or sometimes I go climbing up things or go under things. Sometimes I play with the building blocks that are X's and O's or numbers and I think that's all I remember."

Everyone had a particular friend or group they were with at recess. Student a chased girls with his best friend. Student b played with changing groups of classmates. He said ....

"We're friends in and out of school We play at recess, we play with lots of people and we chase people and we run around and we play tag together."

Student d had a special friend who is older. Her paraprofessional said ....

> "She normally sticks with the staff. She has a friend named S. and she and S. will go off and play together. S. is in Grade Five. Student d likes to pick grass apart and I think S. does a lot of talking to her while she is doing that. You often see them sitting in the playground talking."

Student e was less mobile but went out for recess and was often pushed in her chair by classmates or her paraprofessional who said ....

> "We do walk of course. I don't try to push it too much because she's usually pretty tired at that time. Winter was pretty tough because her boots are so heavy they make it hard for her to walk. She likes playing in the sand. We go on the structure and we can only go on, on our grade days, just like everybody else. She likes the swing but I can't put her on too long because she falls asleep. She fell asleep once in the winter on that. I couldn't believe it. We go for a walk where the other kids are so she can see what they're doing."

Each student with special needs engaged in play and spoke positively of the experience.

The students seemed to have difficulty identifying what they had taught or learned from classmates. The paraprofessionals believed their students have

taught classmates acceptance, patience and understanding. One also stated that ....

> "I should say impatience as well. Sometimes when she is having a bad day they'll say 'NO, NO'

and another said ....

> "Acceptance. I'd have to say acceptance more than anything. Most of these kids have been with her since Kindergarten."

The paraprofessional for Student d said ....

> "I think they have learned more patience. At first, when they were reading her a story, they would like rush through but I said to them be patient, let her look at the pictures before you turn the page. It takes her a while to see everything. I've had to show them what to do, so that this way, she can take in the pictures of the story."

Peers have been taught by students with special needs that they both can learn, grow and change. They have taught their peers how to assist and respond to children with special needs. Student e's paraprofessional shared this ....

> "Well, they've really been good. They help out, not as much at recess, they like to go off on their own then. They don't like to interrupt their play with their friends but they do help her a lot in the classroom. If she

goes to grab at them, they just move her hand back gently and say 'No.' They are really good. I like the way they have handled it. They have been pretty accepting. They really don't have a problem with her. As I said , they like to push her chair. They know I like to walk a lot with her so I don't ask a lot of them. They like to push the chair but they know I take her out. So they are very accepting and they like to help."

The students with special needs were able to learn from peers. They learned of friendship. A peer of student d said that she liked ....

"Being friends with her. I play with her sometimes. I like playing with her."

and of Student c ....

"She's nice. She does lots of stuff. She draws me pictures and she helps me with my work, with my times tables."

and the best friend of Student a said he liked ....

"Being friends with him all the time. Playing stuff with him."

One peer learned the fun of mutual play and kindness from Student c, saying ....

" We do lots of things. She likes to play with me or L. or M. I usually have lots and lots of fun. We run outside and play and she's nice to me and I'm nice to her."

The most seriously challenged students learned to be more like their classmates. Teacher E said ....

> "I think she calms down a lot quicker. Like if I know she's coming to school first thing in the morning very upset, as soon as I put her with the other students to do the calendar and those things ... As soon as I'm away from her and she's down there with those other kids she calms right down and becomes much happier. I really think she likes being with the other kids."

The students with special needs or their paraprofessionals shared many perceptions about life in their inclusive classrooms. They saw in-school interactions as subjects, work, learning and outside interactions were play. They had likes and dislikes, usually specific subjects like Math or Spelling or tasks like homework. The students with special needs found it difficult relating what they had learned from or taught their peers. Paraprofessionals readily identified patience, understanding and friendship as aspects of the learning and teaching peer interactions. They gained mutual learning and the students with special needs had generally positive prosocial peer interactions very similar to those of all children. The student peers also shared information

Peers of Students with Special Needs

Observational and interview data for student peers was categorized on matrices (see Figures 8 & 9). These were the same as for their classmates with special needs.

The data from student peers was not lengthy and overlapped significantly with other reported information. It will be reported generally as Observations, followed by Interview Perceptions.

Observations

Student peers showed the nonacceptance or drawbacks of inclusion very rarely. As reported earlier they were disturbed by inappropriate behaviors, interruptions or excessive noise. Since the students with special needs were basically well integrated into the classroom learning or had closely monitored parallel programming, no other drawbacks were observed.

Student peers were observed altering the rules of play for a game in physical education to include a challenged peer. They were observed in the classroom, helping them when seated in close proximity, communicating naturally and often. They generally did not attend to their classmates' challenges. They either ignored or redirected inappropriate behaviors and competed for opportunities to help, assist or work with the students with special

needs, particularly at the computer. Peers were often observed holding the door for Student c and working both collaboratively and in parallel with her. Student a was observed working effectively with a Spelling and Reading partner. The teachers reported that they structured these kinds of situations to enable success for the students with special needs. Students b, d and e worked with peers but only under the close supervision of the teachers or paraprofessionals.

Peer acceptance of these individuals was remarkable in its unnoticeable, natural integration, in the classroom. The day to day learning and interaction generally included every child in each of these classes.

Interview Perceptions

The student peers readily shared their perceptions of daily life in their classrooms. They do work and learn. One said that in school ....

"You do Math, Social Studies and Science."

another said ....

"We learn about the bones and everything and we usually do Math every day and we're on division."

They noticed when their peers with special needs were noisy or in trouble. This exchange is typical of several conversations ....

"*Q Did it bother you when she was yelling like that?

*A She kind of screamed like yeaaaah.

*Q Why do you think she does that?

*A Well, her paraprofessional says because she's mad about something.

*Q Does she have other ways of telling you that she's mad?

*A Sometimes she starts to cry."

Another peer noticed behaviors ....

"He'll get into temper tantrums from getting into trouble, and then he'll start yelling, and then the teacher will calm him down, and he'll be happy again."

They also noticed improvements in behavior like ....

"Before, he used to get in trouble a lot but now he's not getting in trouble that much."

or ....

"Yep. She's not so noisy.

*Q Tell me what the noisiness was about.

*A I'm not quite sure but she always used to scream and yell but now she doesn't."

or other changes ....

"He goes home for lunch some days cause he's acting out more. When the teacher says take off your hat, he just keeps it on and he says 'I'll leave it on and I won't play with it'. But then he starts to play with it again.

*Q And then what does she do?

*A She takes the hat away and then says 'You'll get your hat back later' .... He's always whining and crying cause he doesn't get his way."

They notice helpfulness,

"She's been helpful and stuff to me.

*Q How has she been helpful?

*A We go to the same Daycare. She was helping me out. She did all the boxes once.

*Q Has she always been able to help like that?

*A Not always. But she does clean up her stuff. She's been a lot nicer."

and especially how much computer time is allotted to students with special needs.

"Kind of cause she's at the computer a lot.

*Q What kinds of things does she do at the computer?

*A She has a switch that she pushes and different pictures come up.

*Q What do you think she does with the pictures?

*A She looks at them.

*Q Would you like to do something different on the computer?

*A I'd like to play games."

Their likes and dislikes were similar to those of their peers. They liked their teacher, making comments like ....

"I have the best teachers."

or ....

"My teacher, she's really nice, sometimes she lets you do stuff instead of work. Sometimes she lets us work on our art instead of Math."

They liked work. One student liked ....

"Writing stories."

and another liked ....

"Math, we're doing division right now. It's easy."

And they like friendship. When asked, What's the best thing about being in your school? one peer responded ....

"You can be with people and have lots more friends."

They didn't like other kinds of work,

"Doing Social Studies. We have this big thick book that you have to read and it's hard."

"I don't like homework."

or cleaning,

"That I can't put any more papers in my tote tray until I clean it."

"Cleaning my desk, cause it's always messy."

or bullies.

"Having L. in our class cause he's a bully."

This was the only occasion, during all the interviews when a child spontaneously expressed dislike of another.

They commented often on the peer interactions of the students with special needs in the classroom.

"He yells out and says, 'Oh Boy' like this morning. And then he yells. 'I want to stay in. I never got to eat my lunch.' "

or ....

"Me and Student d., we were doing ring around a rosie. She was laughing and stuff, and then we were going 'we all fall down'."

With Student a, one peer worked particularly hard at being kind ....

"Mostly I just talk to him and make him laugh and I tell him how funny he is .... He makes faces and he says funny things. He makes everybody laugh in the classroom.

*Q Why do you think he does that?

*A He likes us."

They are offended by unkindness. When asked if the student with special needs was teased one peer responded ....

"kids say you need a handicap buggy and everything.

*Q How do you think that makes her feel?

*A Sometimes she just doesn't know anything. She thinks they're just fooling around. She doesn't know they really mean it sometimes, and when she does, she just goes and tells."

Peers acknowledged that teasing is not always directed to students with special needs ....

"*Q Do kids only call names to kids who have physical handicaps or do they call names to other people too?

*A Like there's J. She cries over little things so they call her a crybaby and Miss Waterworks and everything."

And they also seem to know about friendship.

"Yeah, I play with [Student a] .... If you want to be friends with somebody go and ask them to be friends.

*Q How do you think he learned that?

*A He was always shy to be friends with people. Then me and M. started walking around with him and being friends. Now he knows just to go up to people and ask them if they want to be his friend."

Student a had a new best friend this year ....

"Best friends .... He comes over to my house and we play things together .... He just makes me laugh all the time."

Student d also had friends ....

"*Q How do you know that [Student d] likes your friendship?

*A Cause mostly she plays with us."

At recess time they played with the students with special needs ....

"sometimes I play Four Square and Tag with her. Like A., J. and sometimes me. Usually I can't find her cause she's always under the structure."

And at times seemed unsure of how to describe their interactions ....

"Yeah, some kids some times. They walk around with her like and

sometimes they put balls in her hands and she pushes them .... Cause she's sort of handicapped but not really. I forget the other word that we use with her."

or were simply aware of the recess activities of the students with special needs ....

"He runs around a lot and jumps on people sometimes. That's all that I know."

or ....

"She just wheels around in her wheelchair and sees what other people are doing."

A few were able to articulate what they may have taught a peer with special needs.

"*Q What do you think she has learned from you this year?

*A I help her on her spelling and I try to unscramble words for her but without telling her the answer. Like I look at the word on top of the list and then I say if there's no other word with an e then she looks and points at it and I say whether it's OK."

Another peer firmly stated ....

"He has learned that he should be good."

They spoke more of helping than teaching ....

"*Q Have you ever taught her anything?

*A Yeah, I guess. I helped her with spelling, that's basically it.

*Q Have you ever helped her outside?

*A Sometimes I help her up if she falls.

*Q When does she fall?

*A Like when she's going too fast. Sometimes she trips."

And enjoyed being a buddy ....

"Yeah, I pushed her wheelchair and sometimes I went to help her with baking. Most buddies get to help, and I'm a buddy."

Several could report what they had learned. They learned about helping,

"*Q What do you think you've learned this year from her?

*A That she needs help.

*Q In what way does she need help?

*A Like getting out of her wheelchair. Like she can walk a little but not a lot."

or another similar perspective ....

"*Q Do you think you've learned anything about handicapped people from her?

*A Yeah, like they need people to help them do stuff, like the computer and stuff."

about how they can achieve. One peer said ....

"She can play sports too. She's a very good worker."

One applauded with the teacher ....

"She's a lot smarter. When we had a spelling test, she finished her spelling test and [Teacher D] said 'Oh, Wow! What a great job!' Cause I think she got it all right."

and another noticed self control,

"because last year he couldn't control himself. This year he can stop."

and how these peers with special needs are more like them than different.

"That they are normal but it's hard for them to like concentrate and stuff.

*Q Do you think she's a regular kid or is she different?

*A She's sort of different because she's in a wheelchair, but she can still walk, but only for a while cause her legs get tired."

And that students can learn from their peers with special needs.

"She taught me how to spell.

*Q How'd she do that?

*A When I was writing a story on the computer, I spelled when, *win*.

So she deleted it, and spelled it the right way."

They learned of kindness ....

"*Q Would you like to play with her if you knew where she lived?

*A Yeah, because she's a nice girl .... Even though she cries and that, she's nice. It's hard to explain."

"I've learned you shouldn't make fun of people even though they're handicapped."

and that everyone needs friends ....

"*Q How come you decided to do that this year? [become a friend]

*A Mostly because I wanted to make him feel better about himself.

*Q Did you decide to do this yourself or did someone help you?

*A Myself."

And that these special students really aren't.

"*Q Is there anything special about your class?

*A No."

or ....

"*Q Is it hard having her in your class?

*A No, it's easy. She doesn't fight and she's nice to play with."

Classroom Ecology Instrument

The Classroom Ecology Instrument (CEI), as previously described (Appendix J) was completed for each teacher after the observations. This completion process was subjective reflection and recording of actions and/or impressions. Teacher and student actions and reactions were noted in relevant categories. A synthesis of all the CEI data is reported here.

Six categories (numbers 1, 11, 24, 25, 26, 28) referred to the more subtle affective characteristics of the learning environment, the personal caring.

Personal Caring

These teachers cared for their students as individual people and showed this caring. There was a range of caring responses that varied among the teachers and appeared dependent on the teachers' energy levels, the degree of activity or noise in the classrooms and the evidence of competing demands. The climate in each room usually radiated positive regard. The energy levels varied with the teaching/learning situations. There were certainly occasions when the teachers, except for Teacher A, appeared tired, or harried and struggled to meet the competing demands for their time and attention by all of their students. They generally used firm but caring voices and showed affection with a look, a smile or a gentle touch. Both they and the students smiled often. Praise was

simple "good job" or "I like the way you are sitting", and appropriate. When censure was necessary they referred to the action not the child. "What you are doing is disturbing us. Please stop." They spoke with respect, "I need you to sit, please." and modeled respectful behavior.

This respect and caring was also evident in student interactions. They were generally responsible and focused on their work. One child was observed gently redirecting Student e when she was spitting on her desk. He signaled the paraprofessional with his head, and began a work related conversation with her. She stopped spitting and smiled. Students had jobs in the classrooms and were responsible for their completion.

Student self-esteem varied among the students with special needs. All at times seemed frustrated by the challenges of academic tasks but showed pride when work was completed. "I did OK?" was asked tentatively, but wide smiles and a lighter, quicker step accompanied the praise of a teacher or peer. Praise was not gratuitous but a simple and direct acknowledgment of achievement.

Students were accountable for their behavior and their work. Special needs did not excuse inappropriate behavior or completion of tasks. Expectations were modified but every student engaged in the learning process.

Acceptance of differences were the most remarkable instances of

personal caring, particularly for the students with special needs. Student peers seemed not to notice a child's wheelchair, awkward gait or mannerisms. Acceptance was evident in the congruence of interactions with student peers and students with special needs. Students did not interact differently with their peers with special needs except for physical challenges. They were observed holding the doors, competing to push the wheelchair or altering the rules of a game to include a child. They showed equal impatience with noise and/or interruption regardless of the source. One child expressed it well. "Just because she has different legs than us doesn't mean she's different".

Another kind of caring is defined by Nel Noddings (1992) as pedagogical caring.

Pedagogical Caring

The teachers cared about their students' learning (see Glossary). The educational focus was on student needs, with attention to good management. Again the degree of caring varied and was dependent on the competing demands for teachers' time, energy and attention.

Learning goals were occasionally stated overtly but these classrooms can generally be characterized as highly structured, well organized, active learning environments. The instructional content was well organized. For example,

teachers taught first to the whole group, explaining then encouraging interaction. A group of students would then begin practice at their desks while the concept was re-taught and/or demonstrated to the smaller group. More students would then go to their desks for practice and the teacher would work directly with a very small group either at the front of the room or at a table.

Both learning and teaching was interactive. When not working with a group these teaches constantly moved around the room providing feedback, redirection or more varied/modified instruction.

Students a and c appeared to know the established routines of the class, the what goes where, and what to do when, of daily classroom life. Students b, d and e needed almost continuous direction and focusing by either their teacher or paraprofessional. These classes had a comfortable yet complex rhythm of teach, work, finish, back up activity, move on.

The teachers and classroom paraprofessionals monitored student learning and behavior. Teachers A, B and C would regularly check back with a particular student at short intervals to monitor progress and maintain focus. The paraprofessionals for Students d and e were with them continuously in the classroom in either individual or group situations. Every student had down time or time when (s)he was apparently not focused on instruction or learning. It

seemed that the students with special needs worked more slowly and methodically than some of their peers and required more time to think or process.

Teachers used questioning to reinforce and assess the learning process during active teaching with groups and individuals. Teaching was invariably followed by student practice and timing varied to suit the students and/or the activity.

These classrooms were all characterized by that ephemeral quality of good teaching. Good teaching is hard to describe but was immediately evident in classrooms where it happened. The lessons were well prepared, the learning goals apparent, the teaching interesting, even fun. The students were attentive to and excited by the lesson and most of them completed the practice assignments. Allowance for differences was fundamental to this process. Expectations and assignments were modified. There was sufficient time for students who needed it and other activities for those who understood or worked quickly. These students were generally not "punished" with more work but moved to independent reading, computers or activity centers. Students and teachers showed caring and concern for each other and for learning.

Preparation for Inclusion

Teachers reported preparing for inclusion of the student with special needs in different ways. Teacher A observed the student and requested his placement in her class. She perceived a match between her strengths and his learning/behavioral needs. She prepared with self talk.

> "I didn't do much official planning. Over the summer I just sort of talked myself through it psychologically saying, "You can do it. You'll be alright. He'll be a year older." and that sort of thing. And so I didn't plan officially so much as I psyched myself up."

Teachers C and E read about the child's needs and met with their teachers and parents.

> "I tried to do as much reading as I could on spina bifida and her mother passed on a book that I read in the fall. I also met with her previous teacher to discuss her programming and what they worked on and I looked at her files. So I tried to familiarize myself with her and spina bifida as much as possible."
>
> "We met with all her workers at the school she attended and with her parents. We discussed the programming that she had there and other health needs."

Teacher B reported meeting with the previous teacher to discuss the class, not Student b particularly. Teacher D, as an exchange teacher was not available for early preparation but received resource and administrative support to understand and include Student d. This variation in preparation appeared to depend on the teacher, the school situation and the child. There was more preparation for students with medical challenges and less for the students with behavioral and cognitive challenges.

Supports and Barriers

Every teacher reported a school and/or Divisional policy supporting inclusion of students with special needs and supports to enable appropriate learning.

> "They have just as much a right to learn as everybody else ....That's definitely the school's policy, to integrate them into the regular classroom. There's a lot of support for the individual teachers as far as dealing with behaviors of special needs kids. Supports in just supporting us in what we decide to do about the behavior so if we decide to have the child leave and have a time out space that is supported and someone is provided to keep an eye on the child or even for the individual teacher if they need a break themselves and administration has said over and over

'We'll be there if you need us'."

Some barriers to inclusion were perceived. Teachers were concerned about time for all students and curricular demands.

> "The other children who don't get as much as they could is one barrier, [another] might be the increasing curricular demands. I think that would be the biggest one as far as I'm concerned."

Two teachers mentioned funding cutbacks leading to diminished classroom paraprofessional support and materials.

> "The cost of having a one on one paraprofessional. I think that's the biggest problem and the special equipment that person might need."
>
> "Definitely, lack of funding. I can see that instead of feeling good about having children with challenges in your classroom, instead of looking towards the challenge, you start to feel like you're being burdened. You just feel like they are being left in your class without any support."

Another saw behavioral challenges as a barrier.

> "There's no doubt in my mind that children like her should be mainstreamed. I just think, mainstreaming takes on a negative connotation when we think of the children who are just totally draining us. It's the same, but it's different, in a lot of ways."

The primary barriers reported were behavioral challenges, time constraints and reduced funding, leading to reduced paraprofessional support. Paraprofessionals were reported and observed to be the primary support agents for students with special needs and their teachers. Alternative supports will be explored in the conclusions section.

Teacher Recommendations

The classroom teachers made the following recommendations to educators who may be beginning or struggling with inclusion. Representative comments are reported here. One teacher stated that ....

> "I think my biggest rule for myself has been to be consistent especially when I think that is one major thing that has helped me with him. He can count on me always being absolutely the same."

This consistency and structure was evident in most of the classrooms observed and appeared to support and enable inclusion because the students could anticipate routines and responses. This frees them to concentrate on learning. They affirmed the importance of supports. This comment was typical ....

> "Use the available supports, use your colleagues. I can't say limit your class size. Make leeway and concessions with the child. Forcing and wanting someone to do something that they are incapable of at the

moment goes nowhere."

All of the teachers mentioned the importance of supports. They reported paraprofessionals as the primary support agents and rarely mentioned resource teachers or colleagues. Alternative supports or teaching arrangements could be explored to examine their effects on inclusion. This teacher continued with the suggestion that teachers don't personalize student behaviors ....

"They know what is acceptable. They are going to try things, don't take it personally."

All of the teachers in this study also recommended limiting class sizes when students with special needs were included and also limiting the numbers of students with special needs in individual classes. Limiting class size was recommended by a teacher who stated ....

"I think the main thing is the numbers in the classroom. When you have children who have special needs needing attention there can only be so many children in the classroom because your time is separated. If I am used for ten minutes every hour on one child that's a minimum sometimes and with 24 other children in the class that takes away another 50 minutes and the personal time that's available for each child then gets smaller. So it's the numbers thing."

The affect of numbers was most startling when comparing the classroom of Teacher A with the other four. She had 18 students, lots of space and never appeared harried by the demands of her job. This may be related to her personality or personal strength but could also be affected by the fact that the other Teachers had larger classes (21 or 25 students) and more students with challenges in their classrooms. This difference warrants further investigation. Another teacher recommended reducing the numbers of students with special needs or increasing supports ....

> "I think not so much having her mainstreamed but having three in one classroom has been really difficult. If you could either limit class size if you're going to have a lot of mainstreamed children in a classroom or definitely have more supports, that would be helpful and not just because of the three children."

This teacher also recommended a structured environment ....

> "I've always felt that a really structured environment in the classroom works best with all children but especially with those who have special needs. I would just recommend keeping a really structured environment. In terms of kids knowing what the expectations are, in terms of behavior, in terms of what you expect and in terms of work."

As previously stated this structure was observed to be a critical factor in these classrooms. The structure provides known, easily anticipated boundaries for learning behavior and expectations. Two teachers recommended alternative environments either for respite from disruptive behaviors or a refocusing of the student with special needs in which you could assist the child in learning ....

> "What do you need to know to do this work? You need these cues and these tools and you do it this way and go through step by step with no distraction. Then the child is confident. They know how to do the work and they go back to the classroom. Remove, instruct one on one and then put back in again."

or by providing a separate program of life skills instruction for students with the severest challenges ....

> "I've never been in full agreement of totally including in the classroom where you cannot take that child out for a special program. I would recommend that a special needs child be included in the classroom but also have a pull out program."

These two teachers had very challenging classes with several students who showed challenges, learning challenges or serious medical special needs. The competition among students for their time and attention was almost continuous

and each hinted at the need for respite from these constant and unremitting demands. And a final but very important recommendation was made. It was ....

> "To not be afraid. To insist that you need a [suitable and well trained] paraprofessional. It would be easy to fall into the trap of thinking that she isn't much trouble. She is a really nice girl and if she's left on her own she will sit and read quietly. She's not much trouble but you need the one on one for her to learn. I think that's the biggest thing. I wasn't sure what I could have and what I couldn't have when I came in September. By November, I was insisting that I needed somebody specially trained ... someone who knows what to do. So that's one thing, insist that you have the equipment that you need and the staff that you need."

The efficacy of these recommendations could be studied in future research.

CHAPTER V

CONCLUSIONS AND DISCUSSION

> "My interest in coping with diversity and striving toward significant inclusion derives to a large degree from an awareness of the savagery, the brutal marginalizations, the structured silences, the imposed invisibility so present all around"
>
> (Greene, 1993, p. 211)

The purpose of this study was the description and analysis of the educational experiences of students with special needs, their teachers and peers in regular, mainstream classrooms. A very detailed description of their classroom experiences has been provided in the Results Chapter. This chapter begins with the links between this research and the previously reviewed educational literature. Conclusions emerging from the description of results, with respect to the five research questions will then be discussed. This will be followed by a summary of major findings and themes, some specific limitations of the study, recommendations for educators and for future research.

Links to Research Literature

The data were examined a final time to establish links to the existing literature. Validating data were noted as well as consistencies, inconsistencies,

possible new information and descriptions of learning experiences. The connections between the data and results of this study and the review of related literature, are reported here with respect to the Historical and Legal Background and the Regular Education Initiative literature. These headings were used in the Review of the Literature in Chapter II.

Historical and Legal Background

The Supreme Court's first special education case following the passage of IDEA, (then called the Education for All Handicapped Children Act), defined "appropriate education by a process that looks first to the child and second to the means by which an appropriate education is to be provided" (Turnbull, 1986, p. 347). In every classroom, included in this study, for every student with special needs who was observed, there was evidence that the child's needs determined and informed the educational process. Teacher A waited the extra seconds for Student a to complete spelling dictation words; provided additional guidance or instruction to ensure that a writing task was completed and could be presented with pride. Teacher B almost constantly communicated with Student b to reduce the child's frustrations and meet the very strong needs for attention and affection. She encouraged Student b when building a quiet place under a table where work could be completed. The child knew that a reduction in visual

distraction was helpful and the teacher did not insist that work was completed at a desk.

The children's needs were the foundations for modified programming and expectation for each of the five students. These students all received "services to benefit from education [as well as] beneficial educational services" (Vitello, 1986, p. 355). They all received support services from resource teachers attending to academic needs, from Child Guidance Personnel in Social Work, Psychology and/or Speech Language to assist with social-emotional, family or communication needs. These related services enabled the students with special needs to benefit from the educational inclusion process. Students also received beneficial educational services. Students d and e had weekly swimming classes to strengthen motor development. Student e had life skills classes to enhance her understanding of daily life routines. All five students received related services in the classroom that could be described as "beneficial educational services" (p. 355).

The discussion of Historical and Legal Background of inclusion was followed by the literature related to the Regular Education Initiative.

The Regular Education Initiative

There were many links to the Regular Education Initiative (REI)

literature beginning with some of the concerns raised by M.C. Will, then Assistant Secretary of Education, at the Wingspread Conferences of 1981 and 1985. Will and the teachers observed, were concerned by the "indefensible labeling of students, inappropriate funding systems ... and adaptations of regular education learning environments" (Lloyd & Gambatese, 1991, p. 5). None of the five teachers used labeling language when describing their students with special needs. These students were described as people, in the words of Teacher C. "She is a child first and the disability is sort of second .... she is special but all the other children are special too." The teachers worried about funding, "considering the trend, we've gone from half time to now a third time for Level II funding .... I find that kind of scary .... If we're gonna do this without supports is this going to be successful or not?".

The adaptations of the learning environment were evident in all five classrooms. These were all regular classrooms in which the students with special needs were fully included. The learning situations were adapted or modified by additional waiting time, modification of instruction and/or expectations, by paraprofessional support, retelling or translating instruction to simpler language or monitoring of a parallel yet related activity. All of these students were near the top of the Cascade of Services (see Figure 1) because of

the diligent efforts of teachers and support personnel who were dedicated to inclusion.

Efficacy Studies

The research supporting the efficacy of mainstreaming associated "the use of continuous assessment, alternative routes and a variety of curriculum materials, individualized progress plans, student self-management, peer assistance, instructional teaming and consulting teachers" (Wang & Baker, 1985, p. 518) with positive mainstreaming outcomes. There was evidence of all of these factors, except instructional teaming in the five classrooms. Every child with special needs had an Individualized Educational Plan that identified challenges, strengths and short and long term learning goals. The teachers used anecdotal, descriptive assessment procedures. That of Teacher D was typical. There was "a written record of everything she does, everything she sees .... of what she will and won't do in terms of motor skill development ... how much s(he) talks, the initiatives [taken]". Peer interactions and assistance were observed in every classroom and both the teachers and peers spoke of the enjoyment and positive benefits of this peer support. Teacher E noted "I think there's great benefits, not just for [Student e] but for the other kids as well." Student cp described working with Student c "I help her on her spelling and I try

to unscramble words for her but without telling her the answer." The joy and caring of Student cp were evident in her voice tone and rather serious expression.

In several instances the research raises the question of the mutual benefit in peer interactions. Certainly students with special needs appeared happy and comfortable in the regular classroom. Teachers noted the calming effects and redirection in inappropriate behaviors for the students with special needs. Every teacher expressed concern about meeting the needs of every child in the class but also identified positive peer outcomes as stated by Teacher E ....

"they like the responsibilities in helping her."

or from teacher D ....

> "I think its affected their social skills and that if they are confronted with another person with special needs they won't be bothered by it .... They help her get ready after gym ... on and off the bus ... at recess time ... at lunch time, they talk to her, they often at times ask if they can go and work with her and play computer games with her".

The teachers used many different teaching strategies, materials and program modifications to ensure that the student with special needs was "included with a small group doing relatively simple work but pulling out any

kind of adaptive program from the subject area". This description by Teacher E is typical of the five teachers' commitment to inclusive programming and learning.

The general efficacy research (Ault et al., 1989; Carlberg & Kavale, 1980; Leinhardt & Pallay, 1982; Lloyd et al., 1988; Madden & Slavin, 1983; Tateyama-Sniezek, 1990; Wang & Birch, 1985) provided mixed findings suggesting that placement may or may not be the primary variable affecting the social and academic performance or outcomes for elementary students with special needs. The teachers in this study unanimously supported and reported positive social and academic outcomes for students with special needs. The only reservations expressed and observed were with Student b because of his serious behavioral needs. "It's frustrating, it's tiring and it seems to be going nowhere sometimes. You think, I have 22 or 23 or 24 more children. What about them?". Teacher B also worried about providing sufficient attention for all students. "He hasn't received as much individual attention as I would like to have given him but that applies to a number of other children as well." The inclusion process for this class was certainly affected by the larger class size (25 students), temperament and abilities of the student peers and the behavior of individuals during instruction and work time. The teacher worked very hard and

successfully maintained a positive classroom ecology with good student learning but the personal toll for her was significant. She was often tired and frustrated by the on going, daily challenges.

The REI researchers suggested that "fundamental changes in mainstream instruction must occur if the REI is to work in [schools]" (Baker & Zigmond, 1990, p. 526). There was strong observational evidence that the five classroom teachers used the highly effective teaching practices as synthesized in Table 4 to enable inclusion of all students. Assessment was an ongoing process that informed instruction and was recorded anecdotally. Instruction was active, direct, clear, often individualized or with small groupings. The instruction and/or expectations were modified for the students and the successes were acknowledged and praised appropriately and simply. The teachers all maintained a very positive classroom ecology using praise and redirection to manage or modify behavior. Teachers spoke in a caring respectful manner and encouraged the same in their students. Teachers actively taught appropriate peer responses to students with special needs "We discuss ... what to expect from her or any other special needs student .... and we also talk about how to react to the behaviors". Peers were often observed gently yet firmly redirecting attention, noises and/or other behaviors of students with special needs. This was done in a

natural and generally unobtrusive manner.

The classrooms showed different management and teaching styles among the teachers. The classrooms of teachers B and D were always noisy, bustling places with materials comfortably accessible but not always tidy. Student talk accompanied work times but the teachers were very skilled in maintaining attention during instruction of groups and individuals. The order in these two classrooms was in the teaching, the expectations, the program adaptation and understanding of students' varying needs. The busy surface did not hide very ordered and structured pedagogy. The classrooms of teachers A, C and E were more visually ordered but also showed the serious attention to varied teaching and expectations. The variety of teaching atmospheres and styles did not affect the soundness of the pedagogy or the success of student learning.

In a study using similar observational and interview methods positive academic and social outcomes were reported (York et al., 1992). This study supported these finding. Teachers unanimously reported positive social and academic outcomes.

Some of the research literature (Cooper & Speece, 1990; Truesdell, 1988; York et al., 1992) began to explore the variables that are crucial for successful inclusion in the quality and quantity of instruction and the degree to

which an environment is constructively active (see Figure 2). These classrooms were all highly constructively active environments closely paralleling the circle of learning illustrated in Figure 2. These were exemplary teaching environments that have been described in detail.

In summary, this study was developed to provide a detailed description of inclusive learning in mainstream classrooms. The observed teaching practices and environments certainly validated those identified in the research literature (see Figure 2 and Tables 4, 7, and 10) with the exception of teaching teams. Students with special needs and their peers responded to this teaching with both observed and reported positive social and academic outcomes. As in the literature, teachers were more reserved about including students with severe behavioral challenges but wholly supported inclusion regardless of students' other challenges. The detailed description of classroom experiences described in this study extends the existing literature.

Question 1

The first research questions was: **What are the daily educational experiences of students with special needs who are included in the mainstream?** It can be concluded, from this study that their educational experiences closely paralleled those of their peers. They required modification

of both program and expectations but teachers provided this naturally, often at a high personal cost. The children in the classroom were the center, and focus of the teaching and learning, not the content or curriculum. The support for students with special needs was determined by the child's challenges and differed with the situation and expectations. The degree of support was determined by the activity in which students were engaged. For example, when Student d's paraprofessional assisted her at the computer while the class did calculation practice, one to one support achieved inclusion. Less support was used when Student d was included in a group novel study. She could read with her peers and respond simply to questions.

All of the five students were included in their classroom more than 60% of their day. Students d and e received some out of class life skills education like cooking classes or motor training like swimming. Peer acceptance varied only when the behavior of the student with special needs interfered with peers' ability to attend. This was evident in peer comments of frustration with Student b's interrupting behavior, "He has cars [or other toys] sometimes, and [Teacher B] has to yell, and it hurts my ears." Teacher E noted peers' frustration's with the occasional noises of Student e either from her apparatus or attentional needs. It can be concluded that noise and interruption can interfere with peer

acceptance and learning, but full inclusion and acceptance was evident for all five students with special needs, when they worked in harmony with the class. The teachers' skills in achieving this harmony, by developing and managing their classroom as inclusive environments, enabled each of the five students with special needs to have highly successful learning experiences.

Question 2

The second research question was: **How are classroom teachers and peers affected by the inclusion of students with special needs?** There were definite effects that were concluded from the analysis of the observational and interview data. The conclusions for teacher effects will be reported first, followed by those for student peers.

Teachers

The inclusion of students with special needs affected teachers' teaching and assessment practices, expectations of students, management of the classroom environment and collegial relationships. It also had personal effects for each teacher.

It was concluded that the teachers worked daily to include these students, by developing an understanding of their learning and physical challenges and preparing the physical classroom for inclusion. Each child with

special needs had a place with other peers, in close proximity to the teacher or paraprofessional (as for Students d and e). The teaching was not substantially different than would be expected in a regular classroom but could be described as sound pedagogy, exemplary teaching in a constructively active environment (see Figure 2). The teaching was determined by students' needs with modifications and feedback as required, expectations crafted to provide successful learning experiences, leading to positive student self-esteem and further motivation to learn. Each teacher had developed a very positive and obviously caring classroom environment through attention to the general ecology and the details of individuals' learning. This exemplary, or *constructively active* teaching was complemented by ongoing, descriptive assessment for the purpose of modifying their teaching practice when necessary.

The primary collegial relationships observed and discussed were those with paraprofessionals. The teachers engaged the classroom in learning while the paraprofessionals interpreted and supported the teaching for the individual with special needs. Professional colleagues provided materials and consultation but not active involvement in the teaching process. It was concluded that paraprofessionals provide the primary support to teachers of students with special needs.

It was also concluded that there were personal issues for teachers during the inclusion process. There was the additional preparation time to ensure students were naturally included in the teaching/learning process; there was the emotional toll and frustration when redirection of behaviors was almost constant and the unremitting worry about giving enough to meet every child's needs. These teachers showed significant pedagogical and human caring. They marveled at the students' courage and stamina in daily facing the physical and learning challenges and acknowledged their own accomplishments and learning in the inclusion process. They were all deservedly proud of their success including the student with special needs despite the personal toll for them. It was concluded that inclusion can occur when teachers are prepared to do the day to day preparation, modification, intensive teaching, enabling, and valuing, as well as celebration of student difference.

Student Peers

The inclusion of students with special needs affected student peers who became collaborators in the inclusion process. The teachers had prepared the peers with a repertoire of appropriate, caring responses to students with special needs. The peers learned acceptance of and understanding of differences. The peers of Student a learned that students can control their own behaviors and that

friendship is a powerful enabler of inclusion. The peers of Students c, d and e learned about physical challenges and how to successfully ignore or redirect behaviors or noises that were inappropriate for their particular classrooms. They learned to attend to the child and not the *handicap*, interacting naturally in the classroom and engaging in play on the school yard.

The peers of Student b shared and were observed to show some negative effects of inclusion because Student b's behavior and attentional needs interfered with the teaching and learning in the classroom. Student b was the youngest child in the study (Grade one) and was in the classroom with the highest number of behavioral and learning challenges. It can be tentatively concluded that inclusion becomes more successful as students mature, learn to be more understanding, and less reactive, and develop a more mature and complex repertoire of behaviors and strategies that facilitate the inclusion of peers with special needs. The numbers of challenges in a classroom can also be concluded as affecting inclusion. When there were fewer students with special needs or challenges as in the classroom of Student a there were no apparent negative effects for students' learning.

It can be concluded that inclusion does affect both teachers and student peers. These effects are complex and are unique to the individuals involved.

More details of the positive effects of inclusion will be related in the next section discussing question 3.

Question 3

The third question was: **What are the benefits and drawbacks of inclusion for students with special needs, their teachers and peers?** The conclusions drawn about this question overlap with those of question 2 and will be reported for here for each group.

Students with Special Needs

Benefits of Inclusion

There were significant social benefits for the five students with special needs in this study. Student a had learned that neither his peers nor the teacher would tolerate disruptive behavior and he had virtually ceased all disruptions. The classroom peers had decided that he needed a friend and consciously developed friendships with him. Student b's attentional needs were still significant but had diminished over the year. Student c did not view herself nor was she viewed by peers as *handicapped* or different. She was a person who needed some help with her physical challenges. Student d was gradually learning to communicate with her peers and Student e was calm and happy when close to her peers. The social interactions of these students were normal and

typical for children of their age. The less typical behaviors of students d and e, who had the most serious challenges, were minimal and diminishing, moving on a continuum toward the typical behaviors of peers. It can be concluded that positive social behaviors are developed by regular classroom experiences for students with special needs. The mainstream classrooms provided very few models for inappropriate or maladaptive social behaviors.

There were also observed and reported academic gains for the students with special needs. Student a worked independently doing the same work as his peers with minimal modification of expectations for his achievement. Students b and c worked with close adult monitoring and feedback but were also able to complete most of the same academic tasks as their peers. Student d could do many similar academic activities, had learned to read, respond, spell, calculate simple math and manipulate a computer to facilitate learning. Both Students d and e had developed stronger gross and fine motor abilities. Student e could participate in adult mediated, parallel academic activities. All of these students were learning as a natural member of the classroom community. It can be concluded that these students made academic gains congruent with teacher expectations despite significant physical behavioral or learning challenges.

Drawbacks of Inclusion

The drawbacks of inclusion for students with special needs were concluded to be: (i) interference for learning for all students when attentional or behavioral needs inhibited teaching and working; (ii) more limited access to the small group instruction and life skills teaching of special education classes.

Teachers

Benefits of Inclusion

The teachers all reported the positive professional growth and insight gained in the experience of learning to effectively teach and include students with special needs. It can be concluded that the experience of including a student with special needs affected the art and craft of their teaching. Their understanding of student challenges deepened. They may have been exemplary teachers before inclusion but they reported being enriched by the experience. They developed the ability to create a caring, effective and constructively active classroom environment in which all students regardless of challenges had positive educational experiences. They all reported that they were better teachers as a result of the experience.

Drawbacks of Inclusion

The primary drawbacks of inclusion reported by and observed for

teachers were the emotional and physical toll of meeting the physical, behavioral and learning challenges of students with special needs, and the reduction in teacher student interaction time for all students. Teaching students with special needs required a great deal of time, in meetings with specialist and support personnel; to prepare and modify teaching, expectations and assessment; and to manage and structure an inclusive classroom in a caring manner. It was hard work requiring significant physical and emotional energy. However, all of the teachers indicated that this expenditure of energy was worthwhile because they could observe the students' successes. All of the teachers worried that the extra time and energy required to include students with special needs reduced their contact time with other students. They all appeared tired and harried at times when there was significant competition among students for their time and attention.

Student Peers

Benefits of Inclusion

It was concluded that the benefits of inclusion for student peers were (i) learning acceptance, tolerance and patience for students with special needs and other classroom peers; (ii) developing an ethic of caring and inclusion; (iii) learning to collaborate with their teacher to develop an inclusive classroom

ecology; (iv) developing a sense of responsibility for assisting others; (v) learning to accept human diversity as a natural part of daily life; (vi) academic gain that results from working cooperatively with another individual. Both the helper and the person helped learn more and gain from the interaction; (vii) the benefits of additional adult [paraprofessional or resource] time in the classroom. It can be concluded that these benefits are significant and mitigate the reduced contact time with teachers. Alternative teaching arrangements like teaching teams with colleqgues or resource teachers could increase teacher-student contact time.

Drawbacks of Inclusion

It was concluded that there were two drawbacks of inclusion. These were (i) the decrease in teacher time available when significant time was required for a student with special needs; (ii) interruption by attention seeking behavior or the noises of students with special needs was observed and reported to interfere with the concentration of some student peers. Neither of these drawbacks were observed or reported to significantly interfere with inclusion. As previously stated, alternative teaching arrangements could mitigate these drawbacks.

Question 4

The fourth research question was: **Are students with special needs**

who are included in regular classrooms experiencing inclusion in the broader community? Conclusions for this question cannot be made because the interview and observation process occurred at school so only reported data was available.

Students with Special Needs were reported to be included as much as their physical, not behavioral, challenges allowed. Students a and b reported having both school and home friendships and community involvement. Students c, d and e, each with progressively more serious physical challenges reported some inclusion but with the environment or the communication modified to meet their needs.

Question 5

The fifth research question was: **Are the observed daily experiences of students with special needs in mainstream classrooms congruent with the perceptions of these experiences as reported by teachers and student peers?** It was concluded that the reported experiences very closely paralleled the observed experiences for students with special needs in the classrooms of this study.

Major Themes and Conclusions

There were several major themes that emerged from the observational

and reported data. These were:

- Student collaboration facilitated and contributed to the success of the inclusion process.
- Paraprofessionals were the primary support personnel for teachers including students with special needs.
- Students with special needs and their peers both experienced significant social and academic gains in an inclusive classroom.
- Classroom teachers did not generally use professional team teaching to facilitate inclusion.
- Teachers were more accepting of inclusion when the process was not complicated by students' behavioral challenges.
- Students with behavioral challenges may benefit from a different kind of inclusion process and a different support system.
- Teachers gained understanding, knowledge and positive experiences from the inclusion process.
- Teachers identified time constraints and desire to meet all students' needs as dilemmas for them when including students with special needs.
- Teacher willingness, experience and expertise as well as strong collegial and administrative support were prerequisites for successful

inclusion of students with special needs.

- Larger classrooms or larger numbers of students with special needs in a classroom resulted in a high physical and emotional toll for teachers as they struggled to include.

Possible Limitations of the Study

The limitations of the study included; (i) possible bias of the observer and/or the person observed; (ii) possible bias of the interviewer and the person interviewed; (iii) possible selection bias; (iv) generalizability beyond the five classrooms studied because of the small number of subjects; (v) interview variance; (vi) possible bias in the recording system.

There limitations were identified but were also recognized as inherent to the qualitative, observational and interview design of the study. When discussing the imperative of enhancing the quality and credibility of qualitative analysis Patton (1990), stated that,

> The credibility issue for qualitative inquiry depends on three distinct but related inquiry elements:
>
> 1. rigorous techniques and methods for gathering high-quality data that is carefully analyzed, with attention to issues of validity, reliability ...
>
> 2. the credibility of the researcher, which is dependent on training,

relationships. That is, they may have reported more positive perceptions or experiences with inclusion than really occurred. In the one instance where the interviewer and teacher worked in the same building the observational and the interview data were validated by the congruence with long time daily experience. The teacher's diligence and caring were observed daily in her classroom, not just during the observation times or as reported during the interview.

The limitation of the study to five inclusive classrooms enabled the lengthy observation and detailed description of the experiences of teachers and students. This also reduced the generalizability of the results and conclusions to other individuals and locations. The conclusions were for these five unique situations. The congruence of the data among the different situations may allow for some tentative generalizability, that could be supported by future research.

There may be some bias due to variance in interview questions. The interviews all included the same questions (see Appendices A, B, & C). The probes used, differed depending on interviewee responses and in two instances paraprofessionals responses for the students with special needs because personal communication was not possible. All the interviews were audio taped to ensure that accurate transcripts could be made for analysis.

The observations could not be video recorded because of the near

impossibility of receiving the permission of all parents in the classroom This resulted in a final possible source of bias as the researcher attempted to record all of the classroom actions of each student with special needs and their interactions with their teachers and peers in close proximity. This was a daunting task during which the observer had to select and record what appeared to be the salient actions and interactions. Some of this bias may have been mitigated over time by repeated observations so that what was typical and atypical could be noted. Observer reliability was assessed by an observer reliability check. A colleague with the same research qualifications as the observer did parallel observations that resulted in a 95% congruence in observations noted.

The credibility of the inquiry was enhanced by rigorous adherence to the data gathering method for each subject, attention to validity by repeated observation and reliability by doing an interobserver check. The researcher's credibility was enhanced by previous research experience, professional reputation and consistent presentation of a non-intrusive, positive and professional manner. A belief in and appreciation of naturalistic inquiry were fundamental to the researcher's development of this study.

Recommendations for Educators

There were recommendations made directly by the teachers of students with special needs as well as more general recommendations for educators that result from the entire study.

Teacher Recommendations

Each teacher had specific recommendations for teachers who would be including students with special needs. These were reported in detail in the results section. There were:

- be as consistent as possible in routines and classroom structures
- use the available supports
- don't take things personally, or personalize student behaviors as a reaction to you as an individual
- .limit class sizes and the numbers of students with special needs in one class
- have a safe, supervised time out and learning space for students with behavioral needs
- insist on adequate supports so the child with special needs can learn in the regular class
- provide a structured environment

- alternative programs both in and out of the class should be available; for example, swimming and life skills.

These recommendations were made as a result of teachers' experiences in their inclusive classrooms. The efficacy of these should be explored in future research. The complexity of classroom interactions makes it almost impossible to isolate the factors facilitating inclusion. However, this question could be framed: When these recommendations are implemented, are struggles for inclusion diminished and is successful inclusion observed?

General Recommendations

Some more general recommendations can be made for educators when considering the results and conclusions for this study.

The primary recommendations were to differentiate the teaching instruction and support of students with special needs in mainstream classrooms. Team teaching of classroom and resource teachers or colleagues was not observed and is a practice that could ensure more teacher contact for students with special needs as well as their peers. Creative teaching arrangements should also be explored.

Multi-age classroom arrangements could be helpful in mitigating an uneven distribution of students with special needs and/or behavioral challenges

in one single grade level classroom. This could be particularly helpful in small schools with only one or two classrooms at each grade level. It is crucial that a multi-age rather than split grade philosophy (see Glossary) frame the teaching practice in inclusive classrooms.

Other creative teaching arrangements could be family groupings (see Glossary) of two or three teachers across grade levels or team teaching between teachers at a particular grade or age level. It is recommended that students' needs for learning be the primary determinant for educational grouping rather than an arbitrary grade level. These educational groupings should also be primarily heterogeneous to ensure opportunities for co-operation, collaboration and mutual assistance.

Differentiation of support for teachers is also recommended. This could differ with the uniqueness of situations. This could be a strong cadre of parent volunteers to supervise learning groups while the teacher either manages the entire group or works with individuals. It could be additional preparation time and/or clerical support providing more time for preparation and instruction.

This must also include strong administrative support. The administration is responsible for ensuring collaboration with the teacher in determining and providing materials and personnel supports, professional development and

dialogue, in preparation for students with special needs and respite if necessary.

It is also recommended that teachers and administrators spend time preparing themselves, the student peers and the community within and outside the school when including students with special needs. Students were both observed and reported as being crucial enablers in the process of inclusion. They helped, encouraged and befriended the students with special needs. Students who were welcomed and celebrated responded very positively. Students who could be isolated, rejected or ignored may respond negatively. When inclusion flourishes, students and teachers benefit significantly. Future research could certainly explore the outcomes of these recommendations.

Recommendations for Future Research

1. There is a need for research examining the specific academic benefits of inclusion for students with special needs and their peers.
2. Future research could explore the efficacy of alternative teaching arrangements (as specified in the previous section) in inclusive classrooms.
3. The benefits of different support factors and arrangements could be studied in future research.
4. The enabling role of student peers could be explored.

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APPENDICES

Appendix A

Interview Questions: Classroom Teacher

Questions are deliberately open ended to reduce the possibility of leading the subjects to respond in a particular, possibly biased manner. Probes will be used only if the areas for probing are not included in subjects' responses.

1. How did the student (name) get placed in your classroom?

   Possible probe:

   - ☐ What were the preparations that occurred before this placement?

2. Has the placement of this student affected your teaching? How?

   Possible probes:

   - ☐ Have there been changes in your assessment practices?
   - ☐ What are your goals for assessment for students, including those with special needs?
   - ☐ Have your instructional strategies changed? If so, how?
   - ☐ How do you modify instruction and/or expectations to include your student with special needs?
   - ☐ How do you organize your classroom for diversity in instruction?
   - ☐ Has the placement of this student had an effect on your practice with respect to students' behaviors?

- ☐ Has the placement of this student had an effect on your classroom management practices?

3. Has the placement of this student affected the classroom environment? How?

   Possible probes:

   - ☐ What is the role of support personnel in your classroom?
   - ☐ Have you made any particular changes in classroom arrangement, teaching language, teaching goals?
   - ☐ How do you ensure high student motivation &/or engagement in the active teaching/learning process?

4. Has the placement of this student affected you as a person? How?

5. Do you believe this to be the most enabling environment for the student?

   Possible probes:

   - ☐ What elements of the school/classroom environment enable the student/s inclusion?
   - ☐ What changes could make the environment more enabling of inclusion?

6. Please describe the day to day educational experiences of the student

(name) in your classroom.

Possible probes:

- ☐ Are there positive educational social outcomes for the student?
- ☐ How do you ensure positive educational and social outcomes for the student?
- ☐ What does s/he do during:
  - classroom instruction times
  - independent work times
  - transition times
  - during recess and lunch times

7. What has been the most positive aspect for you as a teacher and as a person?
8. What has been the most difficult aspect for you as a teacher and as a person?
9. Describe the interactions of classmates with (name) in class and out of class.
10. What effects on classmates' learning have you seen since (name) has been included in your class?
11. What effects on classmates' behavior have you seen since (name) has

been included in your class?

12. Could you please describe the school's policy &/or philosophy regarding students with special needs?

13. Please describe the supports for inclusion in your school.

Possible probes:

- ☐ Please describe any cooaborative processes that you may use.
- ☐ Have there been any changes in the language used in the school generally since more students are included in the mainstream?
- ☐ How are parents involved in the educational processes of the student with special needs?

14. What do you see as barriers to inclusion?

15. What recommendations could you make to others who are attempting to include students with special needs in regular classrooms?

Source: Adapted from Giangreco et al. (1993); York et al. (1992); Villa & Thousand (1990).

Appendix B

Interview Questions: Student Peers

1. When and how did the student (name) come to your classroom?
2. What changes if any have you noticed in the student (name) since he/she has been in your classroom?
3. What have you learned from the student (name)?
4. What has the student (name) learned from you or your classmates?
5. What does the student (name) do at recess and lunch breaks?
6. Do you or your classmates play with the student (name) outside of school times?
7. What's the best/worst thing about being in your classroom?

Source: Adapted from York et al. (1992).

Appendix C

Interview Questions: Students with Special Needs

1. Could you tell me about what you do in your classroom?
2. What do you like to do best in school?
3. What is your least favorite thing to do at school?
4. What have you learned from the other students in your class?
5. What do you think your classmates have learned from you?
6. What do you do outside during recess and lunch breaks?
7. Who are your friends when you are at home?

Source: Adapted from York et al., (1992).

Appendix D

Classroom Observation Instrument

Time	Student with Special Needs	Teacher	Peers	Others	Comment

Appendix E

Sample Observation Schedule

	Mon	Tues	Wed	Thurs	Fri	Mon	Tues	Wed	Thurs	Fri
a.m.	c	b	a	d	e	d	e	c	a	b
p.m.	a	d	e	b	c	c	a	b	e	d

Subjects are identified as a, b, c, d, e.

Note: Participants were assigned to 2 morning and 2 afternoon observation times. The observations actually occurred over a period of three months rather than the two weeks as indicated in the sample schedule..

Appendix F

Information/Permission Letter to Subjects' Parents

Dear Parents,

I am presently engaged in a research study in Seven Oaks School Division. The study is for completion of a Masters Thesis at the University of Manitoba. I have received the permission of the Board of Trustees to complete this study in Seven Oaks' Schools. **Your child has been randomly selected to participate in this study**, from all students with special needs who spend more than 50% of their school day in the regular classroom. Attached please find a description of my study and your child's possible contribution if you choose to allow him/her to participate.

All of the information that I will collect is confidential, and will remain with me only, to complete this research study. I will not use names, locations or descriptions that could identify any individual, when I write about my study.

Participation is completely voluntary and may be withdrawn at any time. All participants will receive a summary of the study, by mail, upon its completion (Winter (1994). If you have any concerns about how I have followed the above procedures please call Mr. David Coulter, Acting Superintendant at 586 - 8061. I am available to meet with or talk to parents and answer any questions or

concerns before the process begins. I am available during the day at **334 - 4371.**

Sincerely,

Janice de Denus

If you wish your child to participate, please sign the attached informed consent form and return it to me in the enclosed stamped envelope as soon as possible.

INCLUSION RESEARCH STUDY

Informed Consent by Subjects' Parents to Participate in a Research Project

I have read the above and give permission for my child to be observed and interviewed at school, accordingly.

Child's Name _____ Date _____

Parent Signature _____

Researcher _____

Thank you for agreeing to participate in this study.

Appendix G

Information/Permission Letter to Peers' Parents

Dear Parents,

I am presently engaged in a research study in Seven Oaks School Division. The study is for completion of a Masters Thesis at the University of Manitoba. I have received the permission of the Board of Trustees to complete this study in Seven Oaks' Schools. **Your child has been selected to participate in this study**, from all the classroom peers of a student with special needs. Attached please find a description of my study and your child's possible contribution if you choose to allow him/her to participate.

All of the information that I will collect is confidential, and will remain with me only, to complete this research study. I will not use names, locations or descriptions that could identify any individual when I write about my study.

Participation is completely voluntary and may be withdrawn at any time. All participants will receive a summary of the study, by mail, upon its completion (Winter 1994). If you have any concerns about how I have followed the above procedures please call Mr. David Coulter, Acting Superintendant at 586 - 8061.

I am available to meet with or talk to parents and answer any questions

or concerns before the process begins. I am available during the day at

334 - 4371.

Sincerely,

Janice de Denus

If you wish your child to participate, please sign the attached informed consent form and return it to me in the enclosed stamped envelope as soon as possible.

INCLUSION RESEARCH STUDY

Informed Consent by Subjects' Parents to Participate in a Research Project

I have read the above and give permission for my child to be observed and interviewed at school, accordingly.

Child's Name _____ Date _____

Parent Signature _____

Researcher _____

Thank you for agreeing to participate in this study.

Appendix H

Information/Permission Letter to Teachers

Dear Teacher,

I am presently engaged in a research study in Seven Oaks School Division with permission of the Board of Trustees. The study is for completion of a Masters Thesis at the University of Manitoba. **A child in your class has been randomly selected to participate in this study.**

My research is a descriptive study of the educational experiences of students with special needs who are included for most of their school day in regular classrooms. I hope to develop an understanding of the day to day school life of students with special needs as well as their teachers and student peers. I would like to do this by observing in your classroom for one half hour on four separate occasions. I would then like to interview you, the child and three selected student peers. All interviews will take approximately thirty to forty-five minutes and will take place in the school in a quiet room designated by the principal. Both the observations and interviews will be tape recorded. I will provide you with a transcript afterwards. You may modify or eliminate any of your comments at that time.

All of the data collected is confidential, and will remain with me only, to

complete this research study. No names, locations or identifying descriptions will be used in the publication of this study.

Participation is completely voluntary any may be withdrawn at any time. All participants will receive a summary of the study, by mail, upon its completion (Winter 1994). If you have any concerns about how I have followed the above procedures please call Mr. David Coulter, Assistant Superintendant at 586-8061.

I am available to meet with or talk to you and answer any questions or concerns before the process begins. I am available during the day at **334 - 4371.**

Sincerely,

Janice de Denus

Please sign the attached informed consent form and return it to me in the enclosed envelope as soon as possible.

INCLUSION RESEARCH STUDY

Informed Consent by Subjects to Participate in a Research Project

I have read the above and I agree to be observed and interviewed accordingly.

Name _____ Date _____

Researcher _____

Thank you for agreeing to participate in this study.

Appendix I

Follow Up Letter to Teachers

October 31, 1994

Dear Teacher,

I would again like to thank you for your participation in my study of students with special needs. I have completed the transcription process and have begun the analyses of results. Attached is a copy of your interview transcript. Please advise me immediately if any changes are required or if there is information that you would prefer that I not quote.

As soon as I have completed my writing I will forward a synthesis of the findings to you. Thank you again.

Sincerely,

Jan de Denus

Appendix J

Classroom Ecology Instrument

Teacher Name _____Student Name _____Date_____

1. sense of positiveness/climate	2. clearly stated learning goals
3. organisation of instructional content	4. time allowed
5. instructional support	6. monitoring by teacher
7. monitoring by other(s)	8. down time
9. routines established	10. teacher feedback
11. student self-esteem	12. understanding of instruction
13. students' attention	14. active teaching
15. direct instruction	16. clearly stated objective(s)
17. questioning	18. practice
19. redirection	20. modification of instruction
21. structure	22. organisation
23. critical thinking	24. student accountability
25. praise/positive regard	26. student responsibility
27. responses to inappropriate behavior	28. accepting of differences

Appendix K

Guidelines for Level II and Level III Support for School Divisions/Districts

Level II and III Support funding is available for students who require and receive extensive modifications in educational programming based on a comprehensive educational needs assessment. This special needs funding is beyond the usual Clinician and Level I Support.

Level II Support

Criteria for eligibility for funding is based on the need for individualised instruction for the major portion of the school day. The following handicapping conditions are considered for Low Incidence II Support:

Severely Multi-Handicapped

Severely Psychotic

Severely Autistic

Deaf/Hard of Hearing

Severely Visually Impaired

Very Severely Emotionally/Behaviorally Disordered

Other special conditions can be considered

Level III Support

Criteria for eligibility for is based on the need for individualised instruction for

the entire school day as well as other additional specialist support which is provided by the school division and is significantly beyond the level of program intensity considered for Level II Support. This level of funding will be provided for students who are profoundly multi-handicapped, deaf or with the most profound emotional/ behavioral personnel.

Criteria for Level II Support

Severely Multi-Handicapped

The child who has a combination of two or more severe handicaps which produce severe multiple learning, developmental and/or behavioral problems. The child may have a severe mental handicap compounded by a severe physical handicap to the extent that he/she cannot respond to the usual instructional techniques as provided in special education programs for the mentally or physically handicapped; or, if not intellectually disabled, will display two or more severe physical impairments. As a consequence, the child requires intensive assistance and/or supervision on an individual basis.

Severely Psychotic

This diagnostic category includes children with severe thought disorders and associated inappropriate behaviors which are beyond control, and which do not appear to be caused by inappropriate school expectations. This child displays

highly inappropriate school expectations. This child displays highly inappropriate school behavior which is both chronic and excessive and may necessitate the child's removal from the regular program with placement in a special highly intensive therapeutic program setting.

Severely Autistic

The child exhibits autistic characteristics which are very severe inhibiting factors in his/her learning and overall functioning. Children with autistic characteristics present a combination of impairments such as: extreme self-isolation, severe language problems, hypersensitivity and/or hyposensitivity in the sensory dimensions, and ritualistic behaviors. The severely autistic child requires highly individualised special programming.

Deaf/Hard of Hearing

The child who is deaf/hard of hearing and whose hearing loss has significantly affected the development of speech and/or language and requires major program modifications to effectively participate and benefit from instruction in the educational setting.

Severely Visually Impaired

The child's vision is so severely impaired that the primary learning mode is not visual. The child's disability is such that it requires extensive modifications in the

learning environment.

Very Severely Emotionally/Behaviorally Disordered

The child exhibits very severe emotional/behavioral disorders and requires individualised special programming and supports with ongoing formal interagency involvement.

Criteria for Level III Support

Profoundly Multi-Handicapped

The child who has a combination of very severe handicaps which produce extreme multiple learning, developmental and/or behavioral problems. As a consequence, the child requires continuous individualised attention and instruction, as well as other extensive additional supports.

Deaf

The child who is deaf and whose hearing loss affects communication so profoundly that appropriate full time individual program support is required to effectively participate and benefit from instruction in the educational setting.

Profoundly Emotionally/Behaviorally Disordered

The child who exhibits profound emotional/behavioral disorders and associated learning problems requiring highly individualised special education programming

and intensive support services at school and in the community. A formal and detailed individual Education Plan with a co-ordinated multi-disciplinary 24-hour treatment intervention plan to address the profound emotional/behavioral problems must accompany the low incidence III funding request. Guidelines for the completion of a joint school division/interagency submission are attached.

Effective September, 1993

Child Care and Development Branch

Appendix L

Indexing System Headings

Abbreviations	
app't	appropriate
att'n	attention
behav/behav'r	behavior
d ed'l exp	daily educational experience
ct	classroom teacher
diff'ces	differences
diff'y	difficulty
dk	didn't know
document'n	documentation
environ't	environment
fr	from
interact'n	interaction
inst'n	instruction
limitat'ns	limitations
misunderstand'g	misunderstanding
modificat'n	modification
para/parap'l	paraprofessional
phys	physical
prob	problem
prog	program
prov'g	providing
qualificat'ns	qualifications
react'n	reaction
relat'ship	relationship
seek'g	seeking
seget'n	segregation
sp	student peer
spec'l equip't	special equipment
ssn	student with special needs
tcher	teacher

Headings

(1)	/d ed'l exp
(1 1)	/d ed'l exp/sp
(1 1 1)	/d ed'l exp/sp/affective
(1 1 1 1)	/d ed'l exp/sp/affective/fun
(1 1 1 2)	/d ed'l exp/sp/affective/friendships
(1 1 1 3	/d ed'l exp/sp/affective/all
(1 1 2)	/d ed'l exp/sp/cognitive
(1 1 2 1)	/d ed'l exp/sp/cognitive/subjects
(1 1 2 2)	/d ed'l exp/sp/cognitive/work
(1 1 2 3)	/d ed'l exp/sp/cognitive/receive help
(1 1 2 4)	/d ed'l exp/sp/cognitive/more progress
(1 1 2 5)	/d ed'l exp/sp/cognitive/no effects
(1 1 2 6)	/d ed'l exp/sp/cognitive/all
(1 1 3)	/d ed'l exp/sp/like best
(1 1 3 1)	/d ed'l exp/sp/like best/dk
(1 1 3 2)	/d ed'l exp/sp/like best/writing
(1 1 3 3)	/d ed'l exp/sp/like best/math
(1 1 3 4)	/d ed'l exp/sp/like best/reading
(1 1 3 5)	/d ed'l exp/sp/like best/play
(1 1 3 6)	/d ed'l exp/sp/like best/teacher
(1 1 3 7)	/d ed'l exp/sp/like best/all
(1 1 4)	/d ed'l exp/sp/dislike
(1 1 4 1)	/d ed'l exp/sp/dislike/dk
(1 1 4 2)	/d ed'l exp/sp/dislike/math
(1 1 4 3)	/d ed'l exp/sp/dislike/spelling
(1 1 4 4)	/d ed'l exp/sp/dislike/homework
(1 1 4 5)	/d ed'l exp/sp/dislike/work
(1 1 4 6)	/d ed'l exp/sp/dislike/bully
(1 1 4 7)	/d ed'l exp/sp/dislike/all
(1 1 4 8)	/d ed'l exp/sp/dislike/alls
(1 1 5)	/d ed'l exp/sp/with ssn
(1 1 5 1)	/d ed'l exp/sp/with ssn/compassion
(1 1 5 2)	/d ed'l exp/sp/with ssn/liking
(1 1 5 3)	/d ed'l exp/sp/with ssn/play
(1 1 5 4)	/d ed'l exp/sp/with ssn/tolerance
(1 1 5 5)	/d ed'l exp/sp/with ssn/patience
(1 1 5 6)	/d ed'l exp/sp/with ssn/assist'g

(1 1 5 7)	/d ed'l exp/sp/with ssn/distraction
(1 1 5 8)	/d ed'l exp/sp/with ssn/unkind
(1 1 5 9)	/d ed'l exp/sp/with ssn/all
(1 1 6)	/d ed'l exp/sp/recess
(1 1 6 1)	/d ed'l exp/sp/recess/play peers
(1 1 6 2)	/d ed'l exp/sp/recess/play ssn
(1 1 6 3)	/d ed'l exp/sp/recess/play home
(1 1 6 4)	/d ed'l exp/sp/recess/all
(1 1 7)	/d ed'l exp/sp/learn fr ssn
(1 1 7 1)	/d ed'l exp/sp/learn fr ssn/nothing
(1 1 7 2)	/d ed'l exp/sp/learn fr ssn/something
(1 1 7 3)	/d ed'l exp/sp/learn fr ssn/all
(1 1 8)	/d ed'l exp/sp/taught ssn
(1 1 8 1)	/d ed'l exp/sp/taught ssn/nothing
(1 1 8 2)	/d ed'l exp/sp/taught ssn/something
(1 1 8 3)	/d ed'l exp/sp/taught ssn/all
(1 1 9)	/d ed'l exp/sp/all
(1 2)	/d ed'l exp/ct
(1 2 1)	/d ed'l exp/ct/behavior
(1 2 1 1)	/d ed'l exp/ct/behavior/prov'g structure
(1 2 1 2)	/d ed'l exp/ct/behavior/caring
(1 2 1 3)	/d ed'l exp/ct/behavior/caring
(1 2 1 4)	/d ed'l exp/ct/behavior/all
(1 2 1 5)	/d ed'l exp/ct/behavior/alls
(1 3)	/d ed'l exp/ssn
(1 3 1)	/d ed'l exp/ssn/changes
(1 3 1 1)	/d ed'l exp/ssn/changes/quieter
(1 3 1 2)	/d ed'l exp/ssn/changes/calmer
(1 3 1 3)	/d ed'l exp/ssn/changes/happier
(1 3 1 4)	/d ed'l exp/ssn/changes/has friends
(1 3 1 5)	/d ed'l exp/ssn/changes/progress
(1 3 1 6)	/d ed'l exp/ssn/changes/none
(1 3 1 7)	/d ed'l exp/ssn/changes/helpful
(1 3 1 8)	/d ed'l exp/ssn/changes/
(1 3 1 9)	/d ed'l exp/ssn/changes/worse
(1 3 1 1 0)	/d ed'l exp/ssn/changes/all
(1 3 2)	/d ed'l exp/ssn/actions
(1 3 2 1)	/d ed'l exp/ssn/actions/cry
(1 3 2 2)	/d ed'l exp/ssn/actions/bothersome

(1 3 2 3) /d ed'l exp/ssn/actions/handicapped
(1 3 2 4) /d ed'l exp/ssn/actions/socially app't
(1 3 2 5) /d ed'l exp/ssn/actions/violence
(1 3 2 6) /d ed'l exp/ssn/actions/talking
(1 3 2 7) /d ed'l exp/ssn/actions/toileting
(1 3 2 8) /d ed'l exp/ssn/actions/regular
(1 3 2 9) /d ed'l exp/ssn/actions/all
(1 3 2 1 0) /d ed'l exp/ssn/actions/alls
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(1 3 3 1) /d ed'l exp/ssn/recess/with para
(1 3 3 2) /d ed'l exp/ssn/recess/play peers
(1 3 3 3) /d ed'l exp/ssn/recess/stay in
(1 3 3 4) /d ed'l exp/ssn/recess/alone
(1 3 3 5) /d ed'l exp/ssn/recess/all
(1 3 4) /d ed'l exp/ssn/learn fr sp
(1 3 4 1) /d ed'l exp/ssn/learn fr sp/nothing
(1 3 4 2) /d ed'l exp/ssn/learn fr sp/something
(1 3 4 3) /d ed'l exp/ssn/learn fr sp/all
(1 3 5) /d ed'l exp/ssn/taught sp
(1 3 5 1) /d ed'l exp/ssn/taught sp/nothing
(1 3 5 2) /d ed'l exp/ssn/taught sp/something
(1 3 5 3) /d ed'l exp/ssn/taught sp/all
(1 3 6) /d ed'l exp/ssn/classroom
(1 3 6 1) /d ed'l exp/ssn/classroom/work
(1 3 6 2) /d ed'l exp/ssn/classroom/peer
(1 3 6 3) /d ed'l exp/ssn/classroom/responding
(1 3 6 4) /d ed'l exp/ssn/classroom/in trouble
(1 3 6 5) /d ed'l exp/ssn/classroom/all
(1 3 7) /d ed'l exp/ssn/like best
(1 3 7 1) /d ed'l exp/ssn/like best/food
(1 3 7 2) /d ed'l exp/ssn/like best/work
(1 3 7 3) /d ed'l exp/ssn/like best/play
(1 3 7 4) /d ed'l exp/ssn/like best/computer
(1 3 7 5) /d ed'l exp/ssn/like best/all
(1 3 8) /d ed'l exp/ssn/dislike
(1 3 8 1) /d ed'l exp/ssn/dislike/music
(1 3 8 2) /d ed'l exp/ssn/dislike/work
(1 3 8 3) /d ed'l exp/ssn/dislike/all
(2) /affects of inclusion

(2 1) /affects of inclusion/ssn
(2 1 1) /affects of inclusion/ssn/enabling environ't
(2 1 1 1) /affects of inclusion/ssn/enabling environ't/regular cl
(2 1 1 2) /affects of inclusion/ssn/enabling environ't/seg setting
(2 1 1 3) /affects of inclusion/ssn/enabling environ't/peer support
(2 1 1 4) /affects of inclusion/ssn/enabling environ't/all
(2 1 2) /affects of inclusion/ssn/behavior
(2 1 2 1) /affects of inclusion/ssn/behavior/attention needs
(2 1 2 2) /affects of inclusion/ssn/behavior/anger
(2 1 2 3) /affects of inclusion/ssn/behavior/violence
(2 1 2 4) /affects of inclusion/ssn/behavior/all
(2 1 3) /affects of inclusion/ssn/affective
(2 1 3 1) /affects of inclusion/ssn/affective/calm
(2 1 3 2) /affects of inclusion/ssn/affective/self esteem
(2 1 3 3) /affects of inclusion/ssn/affective/friends
(2 1 3 4) /affects of inclusion/ssn/affective/social interact'n
(2 1 3 5) /affects of inclusion/ssn/affective/all
(2 1 4) /affects of inclusion/ssn/cognitive
(2 1 4 1) /affects of inclusion/ssn/cognitive/attention needs
(2 1 4 2) /affects of inclusion/ssn/cognitive/rel to affective
(2 1 4 3) /affects of inclusion/ssn/cognitive/diff'y of work
(2 1 4 4) /affects of inclusion/ssn/cognitive/adaptive prog
(2 1 4 5) /affects of inclusion/ssn/cognitive/all
(2 2) /affects of inclusion/ct
(2 2 1) /affects of inclusion/ct/teaching
(2 2 1 1) /affects of inclusion/ct/teaching/less att'n sp
(2 2 1 2) /affects of inclusion/ct/teaching/whole class
(2 2 1 3) /affects of inclusion/ct/teaching/direct inst'n
(2 2 1 4) /affects of inclusion/ct/teaching/feedback
(2 2 1 5) /affects of inclusion/ct/teaching/grouping
(2 2 1 6) /affects of inclusion/ct/teaching/structured
(2 2 1 7) /affects of inclusion/ct/teaching/repetitive
(2 2 1 8) /affects of inclusion/ct/teaching/wait time
(2 2 1 9) /affects of inclusion/ct/teaching/none
(2 2 1 10) /affects of inclusion/ct/teaching/slow pace
(2 2 1 1 1) /affects of inclusion/ct/teaching/prog
(2 2 1 1 2) /affects of inclusion/ct/teaching/all
(2 2 2) /affects of inclusion/ct/student behav
(2 2 2 1) /affects of inclusion/ct/student behav/attent'n seek'g

(2 2 2 2) /affects of inclusion/ct/student behav/accept diff'ces
(2 2 2 3) /affects of inclusion/ct/student behav/distress
(2 2 2 4) /affects of inclusion/ct/student behav/social prob
(2 2 2 5) /affects of inclusion/ct/student behav/interruptions
(2 2 2 6) /affects of inclusion/ct/student behav/jealousy
(2 2 2 7) /affects of inclusion/ct/student behav/tantrums
(2 2 2 8) /affects of inclusion/ct/student behav/require breaks
(2 2 2 9) /affects of inclusion/ct/student behav/all
(2 2 3) /affects of inclusion/ct/class ecology
(2 2 3 1) /affects of inclusion/ct/class ecology/space needs
(2 2 3 2) /affects of inclusion/ct/class ecology/phys set up
(2 2 3 3) /affects of inclusion/ct/class ecology/spec'l equip't
(2 2 3 4) /affects of inclusion/ct/class ecology/all
(2 2 4) /affects of inclusion/ct/assessment
(2 2 4 1) /affects of inclusion/ct/assessment/more document'n
(2 2 4 2) /affects of inclusion/ct/assessment/non compare
(2 2 4 3) /affects of inclusion/ct/assessment/same
(2 2 4 4) /affects of inclusion/ct/assessment/different
(2 2 4 5) /affects of inclusion/ct/assessment/all
(2 2 5) /affects of inclusion/ct/personal
(2 2 5 1) /affects of inclusion/ct/personal/frustration
(2 2 5 2) /affects of inclusion/ct/personal/blame
(2 2 5 3) /affects of inclusion/ct/personal/see growth
(2 2 5 4) /affects of inclusion/ct/personal/learning
(2 2 5 5) /affects of inclusion/ct/personal/chose ssn
(2 2 5 6) /affects of inclusion/ct/personal/accomplishment
(2 2 5 7) /affects of inclusion/ct/personal/see child
(2 2 5 8) /affects of inclusion/ct/personal/all
(2 2 6) /affects of inclusion/ct/parents
(2 3) /affects of inclusion/sp
(2 3 1) /affects of inclusion/sp/cognitive
(2 3 1 1) /affects of inclusion/sp/cognitive/lose time
(2 3 1 2) /affects of inclusion/sp/cognitive/all
(2 3 2) /affects of inclusion/sp/affective
(2 3 2 1) /affects of inclusion/sp/affective/model behaviors
(2 3 2 2) /affects of inclusion/sp/affective/ignore behaviors
(2 3 2 3) /affects of inclusion/sp/affective/all
(2 3 3) /affects of inclusion/sp/environment
(2 3 3 1) /affects of inclusion/sp/environment/noisier

(2 3 3 2)	/affects of inclusion/sp/environment/all
(3)	/language
(3 1)	/language/teaching
(3 1 1)	/language/teaching/choices
(3 2)	/language/peers
(3 3)	/language/students
(3 4)	/language/all
(4)	/policy
(4 1)	/policy/barriers
(4 1 1)	/policy/barriers/student numbers
(4 1 2)	/policy/barriers/support needs
(4 1 3)	/policy/barriers/community react'n
(4 1 4)	/policy/barriers/time
(4 1 5)	/policy/barriers/curric demands
(4 1 6)	/policy/barriers/money
(4 1 7)	/policy/barriers/physical plant
(4 1 8)	/policy/barriers/misunderstand'g
(4 1 9)	/policy/barriers/all
(4 2)	/policy/rights
(4 3)	/policy/supports inclusion
(4 3 1)	/policy/supports inclusion/with modificat'n
(4 3 2)	/policy/supports inclusion/all
(5)	/preparation
(5 1)	/preparation/meetings
(5 2)	/preparation/none
(5 3)	/preparation/self talk
(5 4)	/preparation/study
(5 5)	/preparation/all
(7)	/placement
(8)	/8 1
(9)	/supports
(9 1)	/supports/parap'l
(9 1 1)	/supports/parap'l/supervise monitor
(9 1 2)	/supports/parap'l/phys needs
(9 1 3)	/supports/parap'l/redirect
(9 1 4)	/supports/parap'l/clerical
(9 1 5)	/supports/parap'l/communicat'n
(9 1 6)	/supports/parap'l/relat'ship
(9 1 7)	/supports/parap'l/qualificat'ns

(9 1 8)	/supports/parap'l/need more
(9 1 9)	/supports/parap'l/resource teacher
(9 1 1 0)	/supports/parap'l/perceptions
(9 1 1 1)	/supports/parap'l/all
(9 9)	/supports/resource tcher
(10)	/recommendations
(10 1)	/recommendations/limit class size
(10 2)	/recommendations/use supports
(10 3)	/recommendations/stay unhooked
(10 4)	/recommendations/accept limitat'ns
(10 5)	/recommendations/behav'l seget'n
(10 6)	/recommendations/consistency
(10 7)	/recommendations/structure
(10 8)	/recommendations/segregation
(10 9)	/recommendations/all
(11)	/transfer behav'r
(12)	/peers
(13)	/snstudents
(14)	/teachers

GLOSSARY

Cascade of Services

The different types of learning environments that are available for students with special needs (see Figure 1).

Classroom Ecology Instrument

A reflective, subjective record of the researcher's impressions after observing in a particular classroom (see Appendix J).

Coding/Nodes

The process of assigning numbers to lines of text data (text units). These are referred to as **"nodes"** in the NUDIST program and relate to specific indexing categories in the program.

Critical Pragmatism

Challenges the grounding assumptions that lie behind social practices.

Disciplined Inquiry

A family of qualitative research methods in which a particular set of observations or facts become "data, arguments, and reasoning capable of withstanding careful scrutiny by other members of the scientific community" (Jaeger, 1988, p. 5).

Early Years Classroom

Classrooms of Grades Kindergarten to Grade 4.

Educable Mentally Retarded (EMR)

See Mildly Handicapped Students.

Efficacy Research

"Studies of the effectiveness of different systems for delivering educational services to students with handicaps" (Lloyd, & Gambatese, 1991, p. 5).

Error Manipulation

Reinforcement for correct responses, ignoring incorrect responses and/or providing additional information after an error occurs.

Family Grouping

A team teaching arrangement in which students from two or more single grade classrooms, of different grades (e.g.. Grades 5 & 6) recombine for teaching.

Habituation

Individuals who are being observed behave typically because they have become accustomed to the observer's presence.

Inclusion

"Inclusive schooling is the process of carrying out the operation of supportive schools ... where the needs of all members are met and people

support and accept responsibility for each other" (Stainback & Stainback, 1990, p. 4).

Inclusive Schools

"Inclusive schools do not focus on how to assist only particular categories of students, such as those classified as disabled, fit into the mainstream. Instead the focus is on how to operate supportive classrooms and schools that include and meet the needs of everyone ... An inclusive school and the process of inclusive schooling is the ultimate goal of the integration and mainstreaming process" (Stainback & Stainback, 1990, p. 4).

Indexing System

This system is used to "store references to ideas, concepts and facts that arise in [the] project, and to text units in ... on-line text that can exhibit those ideas, concepts or facts" (Richards, Richards, McFalliard, and Sharrock, 1992, p.4). The system has categories and subcategorise that evolve in a treelike fashion (like a web or semantic map). This system allows the user to manipulate the on-line data and pull together commonalties and differences from the entire body of data.

Individualised Educational Plan (IEP)

A detailed educational plan prepared by educators; support personnel

and parents that outlines in detail a child's educational needs, challenges and goals. This plan is used to implement appropriate educational programming for the child. It is also submitted to Manitoba Education and Training to access Level II or Level III funding support.

Integration

The process of including students with special needs in regular mainstream classrooms. This term is often used synonymously with mainstreaming or inclusion.

Learning Disabilities (LD)

A broad classification that identifies pupils who have not mastered expected school tasks despite exposure to regular instruction (Keogh, 1988, p. 20). Early definition of LD have included some reference to minimal brain dysfunction. There is controversial technology that is attempting to support this reference (see Bryan, Bay & Donahue, 1988).

Least Restrictive Environment

"The philosophy, supported in some legislation, [IDEA] of bringing the handicapped as close to the normal social [or educational] setting as possible" (Kirk & Gallagher, 1985, p. 473).

Level II or III Funding Support

"Manitoba Education and Training provides categorical grants to school divisions/districts for: ... Level II Support ($6,600 per student per year) and Level III support ($13,200 per student per year) to provide individualised programming for children with the most severe handicapping conditions. Level II and Level III support is provided on an individual basis upon demonstration of need" (Manitoba Education and Training, 1989, p. 8). The demonstration of need is completion of an appropriate Individualized Educational Plan.

Mainstreaming

"Is a term used to describe the integration of special education students in general education settings" (Truesdell, 1988, p. 42). Mainstreaming may be full, in which students attend regular education classes for the entire day or partial, in which students in self contained special education classrooms attend one or two general education classes daily (p. 45).

Mildly Handicapped Students

"Students who are administratively defined as being in need of special services because of learning problems, either specific or general" (Madden & Slavin, 1983, p. 522).

Multi-Age Classroom

"A classroom containing children who are at least one year apart in age, and the classroom structure is theoretically linked by [the concept suggesting] that there are 2 levels at which children can learn. At one level, children can do things on their own; at another level they need guidance. Between these two levels is ... a 'zone of proximal development' where children who receive assistance can stretch their learning beyond which they are able to do alone" (Dever, Zila, & Manzano, 199 , p. 22).

Naturalistic Teaching

"Instruction is embedded in ongoing activities" (Ault et al., 1989, p. 349).

Naive Pragmatism

Unreflective acceptance of the assumptions that lie behind social practices.

Non-Categorical Placement

A special class placement for students with a variety of handicapping labels, like learning disabled or mildly handicapped.

Normalisation

"Providing individuals with mental retardation, patterns and conditions of

everyday life which are as close as possible to the norms and patterns of the mainstream of society" (Lloyd, & Gambatese, 1991, p. 4).

On Line Text

Information, data that is transcribed and entered into the NUDIST computer program.

Paraprofessional

A non-professional staff member who provides educational and/or physical support to students with special needs under the direction of the classroom teacher.

Pedagogical Caring

Noddings' definition of the caring relationship between teacher and student is described by Coulter (1994) as relationships in which teachers are "concerned with education; they invariably help their students develop understanding and acquire worthwhile knowledge about how we have come to organise our world" (p. 3). The pedagogical caring of teachers is that unique caring for students' education and learning.

Personal Caring

The basic caring relation is defined by Noddings (1992) as "a connection or encounter between two human beings - a carer and a recipient of care" (p.15).

Regular Education Initiative (REI)

Represents a number of proposals for achieving the spirit of the EHA for students with disabilities by extending its rights and resources to all students (Skrtic, 1991, p. 149). An initiative ... advanced by the federal government and by colleagues in education to create fundamental changes in the way in which mildly to moderately handicapped students and other special needs students are educated (Teacher Education Division, Council for Exceptional Children, 1987, p. 289).

The movement advocating that the general education system assume unequivocal, primary responsibility for all students in our public schools - including identified handicapped students as well as those students who have special needs of some type (Davis, 1989, p. 440).

Response Prompting

Providing prompts while teaching before or simultaneously with learner responses. These prompts are then faded as learning occurs.

Running Record

Recording all observations as they occur on the Classroom Observation Instrument (see Appendix D).

Severely Handicapped Students

Is defined by Brown et al. (1983, p. 77) as school aged students who function intellectually within the lowest 1% of their particular age groups. This 1% includes learners who may have labels such as ... multiply handicapped; dual sensory impairment (i.e., deaf - blind); autistic or psychotic; trainable mentally retarded; ... severely, or profoundly retarded.

Special Education

An education system begun in the 1950's and 1960's in which students with academic handicaps were assigned to separate classes. These classes were taught by teachers with specialised educational training and usually had small teacher pupil ratios and specialised curricula. It was believed that segregation protected students with special needs from rejection by non-handicapped peers and provided a safe environment for alternative curricula.

Split Grade Classroom

A single classroom in which two separate Grades are taught by the same teacher.

Stimulus Modification

"Stimulus is presented in a form in which the student can respond correctly" (Ault et al., 1989, p. 349).

Students with Special Needs

Students who require a modified school program or environment because of specific learning and/or cognitive challenges. They receive funding from Manitoba Education and Training at Level II or Level III.

Team Teaching

Two or more teachers sharing the teaching responsibility of one group of students.