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Inclusion and Support of Students through Program Modification

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INCLUSION AND THE SUPPORT OF STUDENTS THROUGH PROGRAM MODIFICATION

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Chapter I

INTRODUCTION

Gable and Evans (1993) reported increasing support for inclusive education suggesting that the barriers dividing general and special education were about to be dismantled. Reynolds (1993) charged inclusion is emerging as a dominant principle. The goal of inclusion, as cited by Hammill (1993), is full integration of individuals with disabilities into regular educational classrooms and activities as well as society in general.

One of the greatest impacts on inclusion has been the assortment of legislation directly affecting special education. This legislation includes the Rehabilitation Act of 1973 (P.L. 93-112) as amended by the Rehabilitation Amendment of 1990 commonly referred to as Section 504, The Education for All Handicapped Children Act (EHA) of 1975 (P.L. 94-142), The Individuals with Disabilities Act (IDEA, P.L. 101-478) and The Americans with Disabilities Act (ADA). These articles of legislation were designed to protect individuals with disabilities from discrimination and delineate specific rights of these individuals.

Each of these articles impact public education with reference to its delivery of services. Of all of them, however, P.L. 94-142 represents the most comprehensive federal initiative related to local education practices by mandating educational programming for all individuals from the ages of 3 to 21 regardless of severity of their disability (Schloss, 1992). Consequently, P.L 94-142 is most frequently consulted when determining delivery of service in the public schools for individuals with disabilities.

An important component of this legislation is the provision mandating educational services be provided within the Least Restrictive Environment (LRE). LRE, as described by Knickrehm (1994), requires services be provided within a regular education setting unless it can be demonstrated that this cannot be satisfactorily achieved even with the provision of supplementary supports. LRE encourages educators to demonstrate the ineffectiveness of mainstream placement prior to referral of the student for special education services (Schloss, 1992). Typically, appropriate placement is determined by a team of professionals and parents. Various options are considered beginning with the determination of what is necessary to maintain the student's placement in the mainstream.

Schloss (1992) defined the mainstream (inclusive) placement as placement in a regular classroom environment with or without accommodations. Schloss cautioned that mainstreaming and LRE are not interchangeable terms. One of the basic differences is that mainstreaming is not mandated, whereas LRE is. Mainstreaming is desirable when the regular education classroom is the least restrictive environment for an individual based on the individual's learning and behavioral characteristics.

Historically, inclusion has not always met with immediate public or professional approval. Nor does it seem to currently receive unconditional approval, particularly when considering those individuals facing the most severe challenges. Nonetheless, as Schloss (1992) explained, schools that in the past have been quite standard in their approach to education are now expected to meet the challenges of teaching a very diverse population. Included in this diversity are those individuals considered severely mentally impaired, individuals experiencing emotional and behavioral disorders, individuals who are learning disabled, and individuals considered mildly mentally impaired.

Cronis, Smith, and Forgnone (1986) defined mental retardation (impairment) as an intellectual subnormality associated with the impairment of adaptive abilities. Kidd (1979) further explained that individuals who are mentally impaired do not respond to the

demands of a regular curriculum at any level approaching normality, and their limitations expand to include learning, decision-making, and coping with their environment. Despite these limitations, students who are mentally impaired can benefit from interacting with students who are not disabled and regular education teachers as well. Some students who are mildly mentally impaired eventually function well enough to discontinue special education services (Cullinan, Sabornie, & Crossland, 1992).

Students who are mentally impaired have long been included in regular education classes. Social integration was an early goal while pursuing academic achievement for individuals who are mentally impaired is a more current, more challenging proposition. Johnson (1993) stated that educators have bowed to the call for integration without first considering the unique needs of the students considered mentally impaired. Cronis, Smith, and Forgnone (1986) expressed a similar concern implying that those individuals who were mildly disabled were incorrectly being identified as learning disabled and, consequently, becoming lost in the mainstream. Blackman (1992), on the other hand, rejected this concept, claiming that educators now possess effective strategies to offer assistance to the mainstreamed student who is mildly mentally impaired eliminating the need to remove those students to a special education setting. Schloss (1993) mentioned the existence of several specific instructional strategies for use in mainstream settings.

Within the framework of successful integration lies a solid relationship among special educators, regular educators, support personnel, and parents (Schloss, 1992). Reynolds (1993) cited that mutual trust among parents, teachers, and students may very well be prerequisite to effective teaching. Ideally, this relationship should produce solutions to instructional questions. Although the roles of those individuals do not always seem clear, what is clear is that nearly all advocates for students with mild disabilities desire effective instruction in academic and social skills, appropriate education in the least restrictive environment, necessary provision of accommodations for

individual needs, labels denoting minimal negative stigma, parental input into programming, and collaboration among all service providers (Kauffman, 1993). Unfortunately, achieving this end is not as easy as identifying it.

The purpose of this paper was to examine the research available describing various methods of adapting curriculum and environment to meet the needs of the student who is mildly disabled, including students with emotional and behavioral disorders and students with learning disabilities, as well as students who are mildly mentally impaired, while addressing the related issues of role responsibility inclusion/placement, and social stigmas placed on these students.

Chapter II

REVIEW OF LITERATURE

Stephens (1988) provided a brief look at the history of special education from the World War I era to the present time. Stephens explained that prior to World War I, most children with disabilities were either institutionalized or forced to remain at home. The descriptive terms of that era including deaf and dumb, feeble minded, idiot, moron, and imbecile are indicators of the low status given individuals with disabilities. This prevailing ignorance concerning the nature of the handicapping condition, led educators to believe these individuals were simply not educable.

The beginning of World War II saw children with disabilities receiving educational services in residential schools, special day program schools, or special classes. The Industrial Revolution was responsible for structuring mandatory schooling, but excluding most students with disabilities. By the second half of the Industrial Revolution, the growth of cities resulted in crowded urban areas, poverty, and mixed cultures. These conditions issued a cry for more education. Present day public education has roots in the urban environment of that time period.

It was not until the late 1970s with the passage of federal and state mandated legislation (e.g., P.L. 94-142 and P.L. 101-476) that free public education became a reality for these children. A strong political coalition of parents and non-educational professionals are responsible for demanding public education for all children with disabilities.

Reynolds (1993) identified approximately 70% of students with special needs as mildly disabled. Special classes for these individuals began around the turn of the century with the introduction of Alfred Binet's Intelligence Test. Binet's test was the first standardized achievement test to be given wide consideration. Students who achieved low IQ scores on Binet's test were easily placed in separate classrooms. This was done not because there was evidence these students' performance would improve when taught separately, but because they were expected to do inferior work as compared to their peers in the regular classroom.

Veterans of WW II actually helped educators and others focus attention on service models for individuals facing challenging circumstances. These veterans were not willing to accept menial tasks simply because they were challenged. For example, blind veterans had long been limited to rehabilitation programming involving piano tuning. These individuals demanded broader opportunities. The demands voiced by these veterans carried over to the school system and by the 1950s the groundwork was laid to reduce the incidence of segregated classrooms (Reynolds, 1993).

Hammill (1993) cited research conducted in the 1950s which suggested that segregated classrooms were not only ineffective, but possibly harmful to the very students they were intended to help. Reynolds (1993) expressed that the amount of time and energy spent in qualifying individuals for special services and ultimately placing labels on these students, is a costly waste of time. He emphasized there is little empirical evidence to justify categorical labeling. Cullinan, Sabornie, and Crossland (1992) cautioned that the stigmas associated with labels often lead to inappropriate behaviors and ultimate social rejection of these students. Dunn (1968), influenced by the results of these studies conducted in the 1950s, called for almost total abolishment of special classes for students who were mildly disabled. Similarly, Reynolds recommended a least restrictive placement as early as 1962, long before such was mandated, calling for a full

range of services to be provided within that environment, eliminating the need for segregated classrooms (Hammill, 1993).

Dunn's article recommending abolishment of special education classes spurred another round of research investigating the role of the special class. The results of those studies (Cegelka & Tyler, 1970; Christopolos & Renz, 1969; Garrison & Hammill, 1971; Lano, 1972) supported Dunn's position. As a result, numerous special interest groups and organizations joined together to dissolve the segregated classroom. Resource rooms and consultation programs emerged (Hammill, 1993).

Resource rooms, also referred to as pull out programs, served students by means of removing the student from the mainstream setting for the purpose of providing intensified, individualized instruction. Resource rooms differed from mainstream instruction in many ways. Instruction usually differed in both content and format. The groups of involved students were smaller. Reinforcement was provided more frequently. These strategies were employed intentionally to promote more efficient acquisition of skills (Fuchs, Fuchs, & Fernstrom, 1992).

Alple and Ryndak (1992) explained that educators initially believed intensive servicing would provide the student with more skills in a shorter time frame. In essence, it was their belief that students with disabilities would be able to catch up with the curriculum and return to the mainstream. However, in many cases, these beliefs did not become reality. If students were fortunate enough to catch up and return to the mainstream, they often failed to maintain the rate of learning they demonstrated in the resource room.

Resource rooms and pull out rooms gained popularity in the 1970s and 1980s because they allowed students with disabilities to be enrolled at least part of the time in general classrooms. Typically, students remained in the regular classroom for the teaching of the content subject (science, social studies, etc.) and were pulled out for

reading, math, spelling, and language arts. These pull out programs were viewed as a victory by professionals and parents alike who were seeking increased inclusion in a least restrictive environment. Hopes for elimination of labeling and cross categorical teaching prevailed as well (Hammill, 1993).

Hammill continued to explain that the late 1980s gave rise to a new inclusion movement. Some professionals began to consider the pull out model and self-contained classrooms (segregated settings) ineffective and a hindrance to the goals of inclusion. This group of professionals recommended all students with mild disabilities be placed in the regular classroom with the regular and special education teachers sharing equal responsibility for instruction and programming. A further recommendation called for the elimination of labeling. This movement gave birth to the Regular Education Initiative (REI).

REI was launched by government representatives and professionals for the purpose of achieving total integration (Hammill, 1993). A major component of total integration is the significant reduction of categorical programming. Fuchs and Fuchs (1994) identified three specific goals of REI.

The first goal is to fundamentally restructure the relationship between regular education and special education by merging the two into one entity. Achieving this goal would successfully eliminate the need for a qualification process. Advocates of REI argue that current placement decisions are based on the result of invalid testing instruments. Cronis, Smith, and Forgnone (1986) proposed that traditional testing provides minimal insight relevant to the determination of need. Knowledge of the disabling condition along with knowledge of the individual's environment, on the other hand, can provide vital information for making educational decisions.

The second goal coincides with Hammill's assertions that full scale, full-time mainstreaming would be put into practice. The third goal was to strengthen the academic

achievement of students with mild disabilities as well as those individuals without disabilities but who were perceived to be underachievers.

REI aims to decrease the special education classes and resource rooms (Hammill, 1993). Supporters suggest two methods to transfer the regular classroom into a socially and academically suitable environment for most students with disabilities. The first recommendation is to individualize instruction for all students. The second strategy advocates cooperative learning environments (Reynolds, 1993).

REI's overall philosophy is to strengthen and enhance the mainstream classroom environment with the infusion of the special educator's expertise. General education, however, has seemed disinterested at best. This may be attributed in part to the long history of special education existing or perceived to exist as a separate entity, or perhaps because general educators demonstrate a greater concern for academic excellence than equity. At this point in time, REI is at most a special education initiative which has resulted in some reorganization within special education, but having little impact on programming changes (Reynolds, 1994).

Reynolds maintained more attention is currently being given to the Inclusive Schools Movement. Reynolds attributed this increased attention to the word inclusion itself. Inclusion carries with it diverse meanings and expectations for interested parties. For some, the group wanting the least, it means a subtle opportunity for programming to remain status quo. For those with loftier goals, it means decentralization of power, redefinition of professional roles within buildings, and a fundamental reorganization of learning and teaching styles. To yet another group, the Inclusive Schools Movement translates that no effective transformation can occur unless special education and its continuum of placements (Appendix) are entirely eliminated. Pearpoint and Forest (1992) illustrated "The inclusion option signifies the end of labeling, special education and special classes, but not the end of necessary supports and services . . . in the

integrated classroom" (p. xvi). This is to suggest that all types of specialists would be available to any student, labeled or not, within the mainstream setting.

Whereas REI stresses enhancement of academic achievements and inclusionists seek to abolish special education, a goal common to both groups is to enhance the student's social position and begin to change attitudes of teachers and students who are without disabilities. Students who are mildly disabled are often socially rejected, unpopular, and deemed undesirable as playmates or classmates (Cullinan et al., 1992). Favorable social interactions with peers is frequently the key to success in the mainstream setting (Greshan, 1984; 1988). Proper social integration of students who are mildly disabled deserves further attention. Cullinan et al. (1992) suggested the regular classroom presents considerable opportunity to achieve social integration.

Social integration as explained by these authors, can be defined in terms of peer acceptance, friendships, and participation in group activities. Specifically, a socially integrated student is: a) accepted by peers; b) has at least one reciprocal friendship; and c) is an active and equal participant in group peer activities. Unfortunately, the reality is that students with mild disabilities typically have low participation rates and are socially rejected by their classmates. In fact, these students are more likely to be victimized in the form of stolen property and threatened bodily harm. In part, this rejection may be a direct result of the labeling process. In part, this rejection may be the result of inappropriate social behavior stemming from an inability to correctly respond to social situations.

Bryan and Bryan (1986) suggested that students who are mildly disabled often cognitively have difficulty interpreting social situations. For example, difficulty understanding non-verbal behaviors or intentions can present an obstacle to correct social performance. In addition, a student who is mildly disabled may be inclined to misinterpret a non-threatening, neutral statement or action as threatening and respond accordingly.

Studies such as those conducted by Kupersmult (1983), Rolf, Sells, and Golden (1972), Cowen, Pederson, and Babigain (1970), and Trost (1973) have indicated that such social rejection by peers at the elementary level can lead to a higher drop out rate and an increased likelihood of juvenile delinquency. Furthermore, these individuals are inclined to psychological adjustment problems as young adults. It should be noted that these studies did not specifically involve students who were mildly disbled, but present significant findings demonstrating the impact of peer relationship problems.

Gresham (1986; 1988) and Schumaker and Hazel (1984) stressed the importance of placing social difficulties into one of three categories: skill deficiency, performance deficiency, or behavioral excesses. Skill deficits are present when a student simply does not possess the appropriate pro social response. Performance deficits are present when a student knows how to perform the desired pro social response, but chooses not to or performs the response at inappropriate times. Behavior excesses are behaviors which occur so frequently or intensely that they interfere with social integration.

Cullinan et al. (1992) continued explaining that social behaviors a student does not know can be taught and behaviors a student knows but does not reliably perform can be refined. Teachers, therefore, will typically focus on skill and performance deficits when teaching social skills in the regular classroom. Cartledge and Milburn (1986) recommended that teachers also keep in mind that children may value different social behaviors than those valued by teachers. Children tend to admire classmates who are helpful, skilled at games and play, talkative, athletically inclined, non-aggressive, and academically successful. Teaching these peer valued behaviors will likely increase the acceptance of the student who is mildly disabled.

Cullinan et al. (1992) recommended a direct instructional method for teaching social skills. Direct instruction is a basic method, whereby the teacher describes the social behavior, demonstrates it, and provides the student opportunity to practice and

receive feedback. During the descriptive phase, the desired behavior is explained and appropriate situations for demonstration of the behavior are described. Explanations as to why the behavior is appropriate are also offered (e.g., "this behavior will help you get along with your classmates").

During the demonstration phase, elements of voice tone, posture, and facial expressions can be addressed. The information presented during the descriptive phase can be reiterated during the demonstration. Students should then be provided non-threatening situations in which to practice the behavior in the most realistic situation possible (Carter & Sugai, 1988) and be provided immediate and positive feedback. Careful consideration should be given to the amount of feedback provided. Too much feedback can suffocate independence. Too little can impede learning and allow the inappropriate behavior to continue. As a student gains independence with the skill, guided opportunities for practice should fade, but positive feedback should never be entirely eliminated.

Learning and behavioral characteristics typically follow a normal distribution. The majority of students will cluster around the mean (mild disabilities) with a few at either extreme. Consequently, the mainstream setting is often most appropriate for students who are mildly disabled (Schloss, 1992).

In addition to considering learning and behavioral characteristics, a fair amount of attention is currently focused on learning styles. Brandt (1990), while interviewing author Pat Guild, discussed Guild's position on the diversity of learning styles among individuals. Guild broadly defined three approaches to learning styles. The first is to focus on the individual. Within this approach the importance for educators to know themselves as well as the individual they are working with is stressed. A second approach is application of the learning style to the curriculum, both in design and instruction. Guild maintained that recognition of different learning styles would lend

itself to development of a more comprehensive model of instruction suitable to all learning styles. The third approach is described as diagnostic/prescriptive. This approach requires identification of the key elements of the individual learning style and matching instruction and materials of those differences.

For example, Brunner and Majewski (1992) described a program designed for high school students who were mildly disabled. Units of instruction were developed in the areas of social studies, math, and language arts. The goal was to provide a program closely affiliated with the regular education program. Learning styles were accommodated in a variety of ways.

Environmentally, room design needs were considered. If a student preferred a traditional setting, desks were provided. Students with a more informal preference were given a carpeted floor section with pillows. Sound, light, and temperature factors were also considered.

Emotionally, consideration was given to motivation, structure, persistence, and response habits. These factors were addressed through lesson design and instructional strategies. Students requiring structure were provided detailed accounts of schedules explaining assignment deadlines and expectations. Those prone to less structure received fewer instructions and were granted greater independence and opportunity for self-pacing.

Sociological elements were areas of concern as well. Those preferring to work alone were allowed to do so. However, many students with mild disabilities benefit greatly from working cooperatively with peers and in teams. Consequently, teachers developed and taught many small group sessions.

Physically, teachers introduced new or different information through planned activities appealing to the students' perceptual strengths. The other physical components including time of day, mobility, and intake ability were also considered.

Finally, cognitive abilities were considered. Students were either identified as global or analytical. Students considered to be global learners need to see the whole picture before they can concentrate on details. Analytical learners are successful learning one small step at a time, one detail at a time. O'Neill (1990) simplified these definitions by describing global as whole to part and analytical as part to whole.

Data for the above study were reviewed for a period of 3 years. At the beginning of the study, only 25% of the students who were mildly disabled passed the necessary local exams and state competency test to receive a diploma. During the first year, that number rose to 66% and to 91% rate the second year. That rate remained constant during the third year as well. Other benefits realized included a decreased drop out rate, perceived improved self-esteem, and a decrease in discipline referrals.

Emphasis on learning styles is not without opposition, however. A major issue facing those attempting to use learning styles as a tool for teaching is the determination as to what extent a student should be accommodated. Some opponents of the learning style concept desire a formal assessment instrument capable of diagnosing style and prescribing teaching methods accordingly. Others caution that implementation of learning styles may give way to additional opportunities for labeling. Still others maintain that learning styles is a moot point. These individuals insist that teachers have always accommodated individual differences and the key to applying style is to teach difficult and new information through a student's style but also to help that student grow by learning other styles (O'Neill, 1990).

A fair amount of skepticism exists regarding the whole learning styles theory. Kavale and Forness (1987) suggested that, although modality based instruction (the diagnostic/prescriptive method) may be intuitively appealing, research does not support it. O'Neill (1990), citing a remark by a former university professor, indicated that the increased scores may in fact be due to the student's perception that someone cares rather

than a result of accommodating style. Others argue that the successes are short lived. Kavale and Forness (1987) recommended large scale, controlled studies were necessary to prove learning styles based education is effective.

The bottom line, according to Brandt (1990), is simply that when we accept the concept of style, we accept that what is suitable for one may not be suitable for another. Excellence takes on many forms. If we can be convinced that such variations are acceptable and even desirable, we will be more likely to try to accommodate them even if they are not fully understood.

With the agreement that accommodations at some level are necessary, the issue of how to develop and implement curriculum content remains. Cohen (1990) stated that curriculum development for the student who is mildly disabled historically has been left on the back burner while instructional development received the attention. Priority has been given to alternative strategies to teach the existing curriculum effectively rather than adapting the curriculum to meet the individual's needs.

Cronis, Smith, and Forgnone (1986) insisted that the curriculum (what is taught) should not be a watered down version of the regular curriculum. These authors urged that curriculum be based on its ecological validity, giving consideration to individual needs and providing skills which will allow the student to function across their primary domains of home, school, and employment. Curriculum for the student who is mildy disabled should provide the principles and general skills students will need to become problem-solving adults.

Scruggs and Mastropieri (1992) pointed out that with certain accommodations many students with special needs can be successful in the mainstream setting. This does not mean teachers should lower their standards, but does imply that some rules may need to be adjusted for these students. Comfort (1990) explained the result of curriculum modification is the teacher's adaptation of a school's formal curriculum into learning

objectives and units of learning activities deemed most appropriate for an individual learner or group of learners. Students with disabilities can effectively receive instruction and demonstrate their knowledge with curriculum modification (Day & Sweitzer, 1990).

Hoover (1990) identified four elements of curriculum that must be considered for adaptation: a) content, b) instructional strategies, c) instructional setting, and d) student behaviors. Hoover also determined a five step process for adaptation: 1) determine the need for curriculum adaptations, 2) identify the elements requiring modifications, 3) select techniques, 4) implement adaptations, and 5) monitor progress.

Instructional methods for students with disabilities are more similar than dissimilar to those used with students considered to be higher achievers (Schloss, 1992). Schloss cited the following techniques which, when employed, allow the student to enjoy a fairly high rate of success:

a) learning strategies--the techniques that facilitate the acquisition and retrieval of information;

b) text management strategies--procedures to make textbook material more easily understood or easier to remember such as highlighting and outlining;

c) home/school cooperation--utilizing the influence and resources of the home setting to strengthen educational interventions;

d) social skill instructions--includes classroom survival skills such as appropriate time and method to request teacher assistance and learning to apologize for inappropriate behavior;

e) listening and note taking skills--such tactics as labeling note sets according to content area and date or identifying key elements on each page of notes;

f) memory skills--including categorization, visual imagery, and mnemonics;

g) prompting strategies--verbal cues, modeling, and time delay are examples; and

h) applied behavior analysis procedures--using learning theory principles to influence social and academic behavior.

Many instructional and environmental adaptations are recommended to accommodate the learner who is mildly disabled. Schloss (1992) identified several instructional interventions including cooperative learning, para assistance, peer tutoring, and home/school coordination. Consideration can be given to environmental factors as well including such things as prosthetic technology, instructional technology, and revised instructional groupings. Schloss recommended the above pre-referral interventions be implemented to avoid special education learning.

In order to benefit from instruction, students must be able to gain information from textbooks. Reynolds and Salen (1990) explained that 70-90% of teachers' classroom decisions are based on information in the textbook. It becomes imperative for teachers to involve students who are mainstreamed in strategies designed to enhance textbook comprehension. Involved strategies are either teacher directed or student mediated. Teacher directed strategies require text modification or supplementary materials as decided by the teacher. Student mediated strategies allow the student to read and understand the text without the assistance of the teacher. This is accomplished by means of a systematic approach to the text.

Examples of teacher directed strategies may include approaches such as an advance organizer or a preview of the material to be presented (Lenz, 1983). Overviews are designed to direct the student's attention to main ideas of critical concepts necessary for an overall understanding of the material. If a student has difficulty comprehending a text because of an inability to decode and read the text, it may be necessary to tape record the lessons or read it aloud to the student. Comprehension can be fostered with the timely insertion of summaries, vocabulary lessons, and requesting the student to listen for answers to specific questions (Reynolds & Salen, 1990).

Student mediated strategies require less teacher involvement although initially the strategies must be taught. The most renowned strategy is very likely the SQ3R strategy. This is a five step process involving 1) survey--scanning the entire assignment, 2) question--formulate questions to be answered, 3) read--read to answer the questions, 4) recite--answer the questions to test comprehension, and 5) review--review if necessary.

Technology and its advances have considerable implication for successfully expanding the range of programming for students who are mildly disabled (Cawley & Parmar, 1990). Day and Sweitzer (1990) offered that many students are eager to accept instruction presented through computer programs. In addition, computers offer opportunity for students who are otherwise unable to submit neatly completed work, to do so. Software also has the potential to offer variety in print or reading levels and other visual adaptations as well.

Also attributed to technological advances is the wide assortment of assistive devices available for classroom use. Assistive devices include the obvious such as laser canes for the visually impaired and wheelchairs for those experiencing mobility difficulties. Examples of other devices are sonic guides, pathsounders, orthotics, microcomputers with voice output capability, sign language and other augmentative speech devices, switches enabling those with poor motor skills to access electronic devices, word processors, spell checkers, and calculators (Wisniewski & Sedlak, 1992).

Crook (1990) commented on the positive influence literature can provide when modifying curriculum. A teacher's guided usage of literature can arouse the interest of students who are less successful and provide common background experiences to relate to when curriculum discussion takes place. Factual information can be presented in stimulating and interesting formats through fiction. Literature can serve as a means of bringing the curriculum to life.

Schwartz and MacArthur (1990) described a learning process with respect to writing, but which can very likely be generalized and utilized across domains. Elements involved in the process are ownership, response, and instruction (Atwell, 1987; Graves, 1983). Ownership refers to creating an environment where students will want to write. This is accomplished by means of providing choices and assigned responses for the end product. The teacher serves as a guide and coach. The response component requires constant sharing with and feedback from other classmates. Instruction is provided through a process itself involving modeling the writing process, conferring with students, and providing mini-lessons on specific topics and skills (e.g., sentence structure).

Spelling is another specific area subject to quick and fairly easy modification. Graham and Voth (1990), after gathering available evidence from research, suggested that spelling lessons can be enhanced by: a) decreasing the required number of words to be learned, b) daily testing, and c) daily presentation and practice of a few words. These authors cautioned that research supports that 90% of the words actually used by children and adults is limited to only 1,000 words. Consequently, when comprising spelling lists for students with mildly disabiliies, these words should embrace the core of the spelling list. In addition, the spelling list should be supplemented with words form the students repertoire that are often misspelled by the student as well as words specific to content areas.

Mathematics is an area of the curriculum also very amendable by modification, but sometimes more difficult to accomplish. In part, the difficulty in adapting mathematics curriculum is due to the nature of mathematics textbooks. The textbooks are often sequential in presentation of skill difficulty and reading ability. The textbooks assume a common developmental continuum that does not exist across all students (Cawley & Parmar, 1990). Further, these authors reflect the conflict presented to teachers who are faced with district expectations to achieve what is presented in the textbook as

well as pressures for students to show improved achievement on standardized testing instruments.

Cawley and Parmar (1990) suggested that the needs of students with mild disabilities could best be served with reduced emphasis on computation and increased emphasis on mathematics in contextual settings, emulating life experiences. Components included in this type of approach would include mathematics for problem-solving, communication, and reasoning. Calculators and microcomputers should become integral and standard equipment for programming. Calculators relieve the burden of computation and allow more time and effort to be spent on problem-solving. Microcomputers, as mentioned earlier, stimulate interest and student productivity.

Smith and Misra (1992) developed a comprehensive system designed to enhance the development of academic and social/behavioral goals for students with mild disabilities in regular classrooms. This management system benefits students without disabilities as well. Although these authors developed this system as a control basis for behaviors, many of the components can also foster curriculum adaptation and successful inclusive experiences. Certainly frustration with curriculum challenges often elicit behaviors in students who are mildly disabled. The components particularly conducive to curriculum modification involve rate of success, rules, materials, routine, and scheduling.

Foremost to the matter of successful modification is the rate of success. Teachers must provide the students ample opportunity to experience an appropriate rate of success. Tasks should not be so easy as to cause boredom, nor should they be so difficult as to cause frustration.

Rules are an important component to effective classroom management and relate well to modification. Rules communicate expectations in advance. Rules should be established early in the year collaboratively between teachers and classmates. This process of collaboration gives students ownership of the rules. Rules should be limited to

seven or less. More than seven in number becomes difficult for students to remember and difficult to monitor and enforce as well.

The selection of appropriate materials is central to effective adaptation. Materials should be age appropriate and functionally relevant to maintain interest and time on task. These authors also explained that simple routines eliminate confusion. Routines can include things such as how lessons begin and end, how teacher assistance is requested, and requesting permission for non-routine tasks. Students who understand routines will be able to function as a part of the classroom community with minimal disruption to others.

Scheduling, if at all possible, should be a joint effort as well, allowing some student input. Scheduling should be permanent, visibly posted and deviated from as little as possible. Elementary students can be expected to attend to a lesson between 20 and 30 minutes at the most. Teachers need also to remember that students are more likely to engage in a less preferred activity if they are aware a preferred activity will follow.

Scruggs and Mastropieri (1992) also offered recommendations toward achieving mainstream success. Students who are mildly disabled approach academic tasks in less sophisticated ways. Research indicates that the tendency is for a student's performance to increase considerably when instruction is subject to specific cognitive strategies. Self-questioning, self-monitoring, predicting, task analysis, and external memory systems are representative of cognitive strategies. Other strategies identified to enhance successful mainstream inclusion include the employment of parents and peers as tutors. Parents and peers as tutors, however, must be provided very specific guidance including what materials to use, how to use those materials, and how long the tutoring session should last. In fact, research indicates that students who are mildly disabled can effectively tutor other students who are mildly disabled (Cook, Scruggs, Mastropieri, & Casto, 1985).

These authors also identified the cooperative learning strategy as an enhancement to successful mainstreaming. This strategy relies heavily on the use of peers for instruction and support. Typically, a cooperative learning team is formed with a heterogeneous group of students comprised of students across all ranges of high, mid, and low ability. A problem is presented to the group and it is the task of the group to solve the problem. Each member of the group is assigned an integral role in the task. It should be noted, however, that students without a disability should be informed ahead of time of the effective instructional strategies to help their peers with disabilities.

Recently, mnemonic (memory enhancing) strategy instruction has emerged as a powerful instructional technique. This technique is designed specifically to promote the acquisition of academic content (Scruggs & Mastropieri, 1992). Mnemonic instruction improves memory recall by systematically integrating specific retrieval routes within the content to be learned. For example, a student expected to learn about the earthworm in science may be given a picture of a worm in the earth. This picture might also include specific information about the earthworm, such as the fact that the earthworm has many hearts. This might be depicted by drawing a number of hearts on the earthworm. When called upon for this information, the student is then able to retrieve it by accessing or visualizing this picture. Studies have indicated that mnemonic instruction can be used to learn abstract as well as concrete information.

Students with mild disabilities have frequently been characterized as deficient in the area of semantic memory (Swanson, 1987). The systematic approach to memory recall as presented in mnemonic instruction is perhaps a key to success for these students. Mnemonic instruction allows students to learn not only content, but also appropriate programming strategies.

Research (Scruggs, 1992; Swanson, 1987) has demonstrated that mnemonic instruction has greatly enhanced students' ability to recall and comprehend content

material. Furthermore, students, as a group, have been successful in developing their own mnemonic strategies and applying them to novel situations. However, researchers have also learned of a possible detriment to mnemonic instruction. It appears that the pace at which learners acquire new information may be greatly reduced. This is to suggest that the amount of content to be learned may be sacrificed for the method. Another drawback is that mnemonic instruction requires increased effort on the part of the teacher, making the student more dependent on teacher directed instruction. These authors urge further studies, recommending that mnemonic instruction be utilized and considered an effective method, but cautioned that it may not be an appropriate method for all content.

Despite all the strategies available for effective curriculum modification, two elements in the instructional design continue to impede progress. Clear definition of teacher roles is one. A need for an acceptable, meaningful means of assessment is another (Nolet & Tindal, 1993).

The current climate created by the pressures and desires to facilitate inclusion has given cause to reevaluate and expand teachers' roles and responsibilities (Warger & Rutherford, 1993). Nolet and Tindal (1993) stated that serving students with special needs in content area classes is difficult and the fact that teachers' roles are not clearly defined makes the task more difficult. Increasingly, general education and special education are being called upon to form professional partnerships.

Without question, general education will be asked to assume greater responsibility for teaching students with disabilities. Special education will be called upon to assume a collaborative role in the regular classroom. Unfortunately, research suggests neither group has received sufficient preparation to assume those new roles (Gable, McLaughlin, Sindilar, & Kilgor, 1993).

Co-teaching is an instructional delivery option in which classroom teachers and special education teachers or other special service personnel share responsibility for planning, delivering, and evaluating instruction for a group of students. The co-teaching model is conducted in an atmosphere where both teachers are equal partners. Neither takes a back seat to the other and both are responsible for implementing the students' educational program. A major goal of co-teaching is to establish a classroom climate in which all students are valued members of the community and are recipients of a variety of teaching strategies (Friend, Reising, & Cook, 1993). Co-teaching is most apt to be the option of choice when a group of students with special needs exists in a cluster.

Many regular educators have long complained of an inability to accommodate students with special needs stemming from a lack of suitable preparation (Gable & Hendrickson, 1993). In fact, there is substantial literature available concerning the impact teacher attitudes have on the effectiveness of collaboration (Allen-Meares & Pugach, 1982; Johnson, 1988; Pugach & Johnson, 1988). The negative attitudes held by some regular and special educators hinder the collaborative teaching effort. Pugach (1988) suggested that this negative sentiment is due in part to the underlying division of special and regular education teachers which assumes that each possess a unique set of skills suitable only for the students charged to them. Gable, Hendrickson, Evans, Frye, and Bryant (1993) cautioned that it is unreasonable to expect teachers to universally display enthusiasm and acceptance of teacher collaboration and integration itself. It is also essential to remember that not all educators are suited to collaboration and remediation toward that end should not be attempted. Rather, collaboration is an appropriate arrangement with strong, willing teachers (Gable, Arilen, & Cook, 1993).

Nolet and Tindal (1993) explained that an effective collaborative relationship between the classroom teacher and the special educator is necessary to establish what is being taught and how. Their suggestion was a model in which the classroom (content)

teacher is responsible for and provides expertise associated with the content knowledge of the specific subject area. The special education teacher is then responsible for bringing expertise into the classroom relative to the method of instruction, motivational techniques, and classroom management skills.

Choate (1993) suggested that as the general educator is charged with greater diversity of student clientele, the role of special educators providing direct instruction may diminish. This change would likely cause a shift in responsibility to a more indirect and consulting model. Thus, special education teachers as consultants is another option. In this model, students with disabilities are placed in age appropriate classes. Consultant services are provided for needs not traditionally met in the regular classroom environment. Consultation can be provided for all students in the classroom (Alper, 1992; Ryndak, 1992).

With respect to curriculum modification itself, Comfort (1990) charged teachers to recognize curriculum modification as a critical extension of the teacher's role. To accomplish this goal, Comfort suggested teachers be provided the opportunity to enhance their knowledge and skills of curriculum decision-making. In addition, teachers should be held less accountable for standardized test scores and more for curriculum and instructional decisions.

Parents and other non-education professionals are quickly assuming roles in curriculum delivery as well. Typically the school has been held responsible for the time frame equating the school day. The trend today is for teachers, parents, human service personnel, and sometimes even the students themselves to have an integral part in program decision-making (Reynolds, 1993). This tendency toward coordination of services stems from the realization that the basic interest of all parties overlaps. The major concern for all is the individual with the disability and how to improve not only school, but life in general for that individual.

Students with special needs in the regular classroom present a challenge to teachers. One of the most critical is finding a means of assessment to ensure instruction is monitored constantly and is operating at an optimum level (Shapiro & Ager, 1992). Nolet and Tindal (1993) suggested that assessment is of vital concern in considering alternative models of special education in content areas. These authors contend that it is unfair to assume that key information is not being learned simply because a student with a mild disability is unskilled in communicating this knowledge.

One current trend in both special and regular education favors curriculum based assessment (CBA) or curriculum based measurement (CBM) (Fuchs, Fuchs, & Fernstrom, 1992; Schloss, 1992). CBA, as defined by these authors, is "a set of simple standardized procedures for obtaining reliable and valid measures of student achievement which, in turn, facilitate teachers' ongoing or formative evaluations of their teaching effectiveness" (p. 263). Schloss (1992) referred to CBA simply as a method of testing what is being taught.

CBM differs slightly from CBA in that CBM focuses on long term instructional goals and is a blend of traditional and alternative assessment models. CBA relies heavily on teacher designed and observed procedures. CBM relies on standardized measurement methodology (Fuchs & Deno, 1992). That is, CBM prescribes methods for the creation of measurement samples as well as methods of administering and scoring tests.

CBA offers more frequent assessment obtained through a variety of methods which can be accomplished by the teacher, by the student independently, or with the assistance of a peer. A wide spectrum of curriculum based assessment tools are available. Some examples include sketches, oral responses, flash card drills, sample products, projects, and portfolios (Choate, 1993; Nolet & Tindal, 1993).

Schloss (1992) described six characteristics of CBA:

1. students must be assessed on instructional materials;

2. assessment is limited to direct observations or products of developed skills or concepts;
3. assessment occurs frequently;
4. assessment data is used to alter instructional programming if necessary;
5. results are reliable--the test is stable in the absence of intervention; and
6. CBA is sensitive to small changes in performance.

Choate (1993) called for co-assessment of special learners based on changing teacher roles as well as strides being made in the assessment field. Applying the earlier mentioned concepts of collaboration and consultation to the assessment process results in teachers sharing their knowledge with one another and causes these professionals to work cooperatively to solve problems. These changes in roles and assessment strategies require proactive participation to achieve success. It is essential that educators unite in order to provide meaningful assessment. Prerequisite to this, however, is unified teacher training and preparation for both special and regular education teachers (Choate, 1993).

As stated by Reynolds (1993), access to the public school is ensured for students with mild mental impairment and other disabilities. The focus must now turn to the outcomes guaranteed by that education. Reynolds cited a quote from a special panel of the National Association of the State Boards of Education (1992) ". . . emphasis should be placed on improved instruction rather than the processes of classifying and labeling students" (p. 4).

Chapter III

SUMMARY AND CONCLUSIONS

Empowered by parental drive and legal mandates, the historical trend toward increased inclusion does not seem likely to fade away. The focus is no longer on whether or not learners with disabilities will be a part of the mainstream classroom; rather, it is on how to improve the instructional setting for those learners while reducing the need for potentially harmful labeling.

Educators today must face the realization that their students are more dissimilar than similar. As educators come to terms with this increasingly diverse classroom population, they are challenged to seek alternative service delivery options. Current research provides numerous options related directly to teaching models. Among those options emerge terms such as co-teaching, cooperative teaching, team teaching, and collaboration. These terms, by definition alone, possess a fundamental implication of teachers who work together toward the same end, sharing knowledge and expertise. No longer should it be assumed or expected that educators are responsible only for those charged to them according to licensure.

Research also provides an abundance of specific strategies and techniques available to accommodate the modern classroom. In fact, the information available can be overwhelming. Certainly there are no clear cut answers as to which method is most effective or how and when to implement the various methods. Very likely there is not a single best method. It seems reasonable to assume that different strategies and techniques will be successful in different situations.

Educators looking for a starting point might give consideration to cooperative learning strategies. Cooperative learning as a teaching concept appears to muster the most compelling support. Many professionals and parents alike find this approach to learning innately appealing. A small heterogeneous team of mixed abilities and learning preferences seems a natural process to foster inclusion and reexamine attitudes toward students who are challenged.

Current literature with techniques and strategies in place seemingly pleads for universities to more closely align general and special education programs. Parallel training in curriculum instruction and adaptation as well as collaborative and cooperative teaching skills would lend itself to producing a strong, cohesive unit of professional educators. Without cross categorical training and preparation, co-teaching is vulnerable to resource room type situations within the mainstream setting.

Many educators have already experienced the union of regular and special education teachers in the classroom. These individuals would likely be able to offer astute insight into the dynamics of successful co-teaching. Additional research concerning cooperative teaching relationships as well as development and maintenance of effective parent, teacher, and ancillary personnel relationships would benefit all involved. In the meantime, established teachers faced with the challenges before them to educate all students should be provided additional skills and knowledge by means of additional district in-service training.

Negative attitudes toward individuals with disabilities will never completely disappear, but knowledge gives impetus to understanding and understanding gives impetus to acceptance. Likewise, educators will never completely agree on the single best approach to teaching. Teachers must be comfortable with doing their best and understanding that the issues before them are difficult. Knowledge and insight are

acquired slowly and carefully. The benefits derived from careful research are typically worth the wait.

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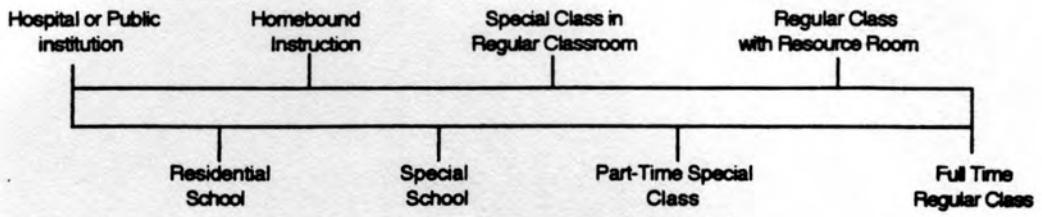
APPENDIX

Special Education Continuum



This continuum is presented from most restrictive to least restrictive end. Restrictiveness is judged by the difference in proximity and structure of the services provided to individuals with disabilities as compared to services provided to same age peers without disabilities (Schloss 1992).

Continuum obtained from Taylor (1988), Journal of the Association for Persons with Severe Handicaps.