ABSTRACT

Title of Dissertation:	**A SURVEY OF KNOWLEDGE AND IMPLEMENTATION OF BEST PRACTICES FOR INCLUSION BY PERSONNEL PREPARED TO TEACH STUDENTS WITH SEVERE DISABILITIES**
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The purpose of the research study was to: (a) determine if recent graduates receiving certification in severe disabilities were adequately prepared to teach students with severe disabilities in inclusive environments; (b) determine if recent graduates were teaching or previously taught in the field in which they were prepared (retention); (c) determine if graduates from May, 1996 to May, 2003 learned about and implemented best practices for inclusion (and believe they are critical to student success); and (d) determine if once teaching, certain variables were predictive (or more specifically account for the variability) of perceived adequacy of preparation and time spent supporting students in inclusive environments.

Former graduates of the department of special education (EDSP) from the University of Maryland specializing in severe disabilities were located and electronically

surveyed to collect follow-up and partial program evaluation data. A newly developed and validated instrument was developed to evaluate pre-service preparation in the field of inclusion. A nonhierarchical regression analysis was conducted to examine the contribution of certain variables on perceived adequacy of preparation to support students with severe disabilities in inclusive environments. Another nonhierarchical regression analysis was conducted to examine the contribution of certain variables on time spent supporting students with severe disabilities in inclusive settings once teaching. Independent t-tests were performed to compare the mean scores for adequacy of preparation for inclusion.

Respondents reported strong knowledge of inclusive best practices (e.g., collaborative practices, individual student supports, instructional strategies) as a result of their pre-service preparation at the Univeristy of Maryland. Many inclusive best practices (e.g., individual student supports, assessment practices, instructional strategies) were reported to be present in respondents current or most recent teaching situation and almost all indicators were found to be 'critical to the success of students with severe disabilities'. Completion of the "Inclusive Practices" course and participation in inclusive field placements during pre-service preparation were predictive of increased adequacy of preparation for inclusion. Strong agreement of adequacy of preparation for inclusion at the pre-service level indicated more time spent supporting students with severe disabilities in inclusive settings once teaching.

A SURVEY OF KNOWLEDGE AND IMPLEMENTATION OF BEST PRACTICES

FOR INCLUSION BY PERSONNEL PREPARED TO TEACH STUDENTS WITH

SEVERE DISABILITIES

by
Heather Christine Young

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DEDICATION

This work is dedicated to Tracy & Zoë.

Thanks for being so patient… I couldn't have done it without your unconditional love

and support, and the occasional needed distraction.

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Chapter I

Introduction

People with severe disabilities have become increasingly part of 'mainstream'

society since the deinstitutionalization movement began in the late 1960's. The incidence

of individuals, who have severe disabilities, is approximately one percent of the

population (Brown, Branston, Hamre-Nietupski, Johnson, Wilcox, &Gruenewald,

1979a). Typically, people with severe disabilities are a heterogeneous group with

moderate, severe, or profound mental retardation and often have concomitant vision or

hearing loss, orthopedic or health impairments, and may require intensive support.

"Support may be required for life activities such as mobility, communication, self-care,

and learning as necessary for community living, employment, and self-sufficiency"

(TASH, 2000).

Throughout much of the 20th century, children and adults with severe disabilities

were sent to state institutions. Not until the 1960's did advocates and parents start

providing quasi-educational services for children with severe disabilities in non-

traditional school settings, including churches and community centers. However with

litigation (PARC vs. Penn., 1972) and legislation (P.L. 94-142, The Education for all

Handicapped Children Act, 1975), children with severe disabilities began to receive a

free and appropriate *public education*.

Once students with severe disabilities could receive a public education, the

discussion began to focus on what and where to teach. In the 1970's, the majority of

students with severe disabilities were taught in segregated self-contained facilities which

housed students ages 5-21, all having severe disabilities. It was assumed that specialized

services would be more efficient if they were in a 'centralized location' (Brown et al., 1979a). It was also assumed that students with severe disabilities would more easily establish social and emotional relationships with other students with similar 'functioning' levels. Concerns were expressed about typically developing peers, including the possible detrimental effects on their social and emotional growth as well as the quality of their education, if students with severe disabilities were present (Brown et al., 1979a).

Brown et al. (1979a) countered all these arguments with a logical rationale for students with severe disabilities participating in and attending public, non-segregated schools. They stated that as more and more students and adults with severe disabilities moved out of institutions and into local neighborhoods, there would be a need for an increased level of understanding and empathy on behalf of those without disabilities. Ultimately, people with severe disabilities would be living, recreating, working, and accessing the communities in which all people live and work. They would need to learn the necessary skills to 'function' within these various future environments, and public school environments could offer multiple opportunities to learn those skills. Brown and his colleagues argued that typically developing peers would be future parents, teachers, therapist, colleagues, neighbors, merchants, employers, and community members coexisting with people with severe disabilities.

> The fundamental premise offered here is that if severely handicapped students are
> to function as independently and productively as possible in a variety of
> heterogeneous, public, post-school, community environments, then it is
> mandatory that educational environments provided for both the severely

handicapped and nonhandicapped students reflect and represent those goals

(Brown et al., 1979a, p.5).

In 1983, Brown et al. advocated for educators to move students with severe intellectual disabilities to their neighborhood schools as opposed to placement in segregated, out of area schools. The authors made several points about the move from segregated schools to neighborhood schools. Since students with severe intellectual disabilities account for only 1% of the population, Brown et al. (1983) also proposed that the natural proportion of individuals with and without disabilities should allow for a limited number of students in the regular schools. "Severely handicapped students develop most when in physical, social, emotional, and intellectual presence of nonhandicapped persons in reasonable approximations to the natural proportions" (Brown et al., 1983, p. 17). In addition the authors suggested additional factors that include accessibility, maximal participation, relative cost, and psychological and social effects of segregation on personnel. By attending local neighborhood schools, accessibility is much more feasible for both students and their friends and families. The inclusion of students with severe disabilities also has positive effects for those who interact with the students including increased acceptance and tolerance for diversity.

In 1989, Brown et al. advocated for students with severe disabilities to attend the schools of their family members, friends, and neighbors.   The authors gave several reasons why students with disabilities should attend home schools. First, Brown et al. (1989) stated that all of the nondisabled students are future professionals who may work with, live with, or be a parent to people with disabilities. Exposure to people with disabilities increases acceptance for diversity. In addition Brown et al. stated that direct

instruction in the environments in which the students with severe disabilities will be functioning is more beneficial than instruction in artificial segregated settings.

In 1991, Brown et al. addressed the issue of inclusion, in part, by outlining the pros and cons of exactly how much time students with severe disabilities should spend in general education versus special education classrooms. Brown et al. also stated that there were advocates who felt that students with severe disabilities can learn much from their nondisabled peers and should be placed in a general education class with needed support services available in the general education class. These authors took a third position that the placement of the student with severe disabilities should be varied based on the individual needs and chronological age of the student. Brown et al. (1991) stated that the level of services needed by a student may best be served part of the time in a general education class while spending part of the time out of the general education class.

Important Legislation for Students with Disabilities

While P.L. 94-142 (the Education for all Handicapped Children Act, 1975) and subsequent reauthorization P.L. 101-476 (the Individuals with Disabilities Education Act, 1990) had the provision of 'Least Restrictive Environment' for students with disabilities, the amendments in IDEA 1997 went even further and implied that children with disabilities should be educated in the same buildings they would attend if the child did not have a disability. Students were supposed to be educated in the general education class with their non-disabled peers to the maximum extent possible. The amendments to IDEA 1997 were also important in that it also had provisions for all students with disabilities were to be provided access to the general education curriculum.

However, there was a provision made for students to be moved to a more restrictive environment if the appropriate supplementary aids and services were provided and the IEP could not be successfully implemented in the general education setting (IDEA, 1997). "The IDEA further requires the provision of programmatic supports and modifications that will enable staff to meet the needs of students with disabilities in the general education classroom" (MDDC, 2003, p. 3). As a result there was a need for additional staff training on how to implement appropriate supplementary aids and services which included the use of modifications to curriculum, assignments, activities, and materials and provision of accommodations. Preservice preparation programs also needed to make adjustments so that new teachers could also develop and implement modifications and accommodations so that students with disabilities could access the general education curriculum.

Inclusion for Students with Severe Disabilities

Inclusion evolved out of the provision of Least Restrictive Environment (LRE) originally mandated in the Education for All Handicapped Children Act (P.L. 94-142, EHA) and later revised in the Individuals with Disabilities Education Act (P.L. 101-476, IDEA) and required as part of the amendments to IDEA 1997. Inclusive best practices are defined as those research based procedures that are deemed to be most effective when used within the context of an inclusive setting. Examples of 'best practices' include: "(a) collaboration between general educators, special educators, support staff, and related service providers; (b) family involvement; (c) choosing and planning what to teach; (d) scheduling, coordinating, and delivering inclusive services within the school; (e) assessing / reporting student progress on as ongoing basis; (f) instructional strategies; and

(g) supporting students with challenging behavior" (p. 133, Jackson et al., 2000).

Giangreco et al. (1990) discussed the advantages of local schooling. Specifically, the authors suggested that school personnel must cease confusing intensity of services with location of service delivery and schools must provide educational experiences that reflect the demands of an inclusive life in the community.

In the wake of legislation, litigation, and a call for civil rights for those with severe disabilities, speculation grew about the potential benefits of including students with severe disabilities in general education settings. As a result, several authors began to research the efficacy of mainstreaming, then integration and finally inclusion of students with severe disabilities (Brown et al., 1991; Hunt, Farron-Davis, Beckstead, Curtis, & Goetz, 1994; Stainback & Stainback, 1988; Wisniewski & Alper, 1994). Many authors outlined the benefits of inclusion which encompasses: (a) increased disability awareness on behalf of both teachers and general education students (York, Vandercook, Macdonald, Heise-Neff, & Caughy, 1992); (b) increased friendship development between students with disabilities and their nondisabled peers (Peck, Donaldson, & Pezzoli, 1990; Haring, Breen, Pitts-Conway, Lee, & Gaylord-Ross, 1987; Stainback, Stainback, & Hatcher, 1983; Stainback & Stainback, 1987); (c) increased social interactions between students with disabilities and their nondisabled peers (Grenot-Scheyer, 1994; Helmstetter, Peck, & Giangreco, 1994; Sasso & Rude 1988; Fritz, 1990; Staub & Hunt, 1993); and (d) an increase in appropriate behavior on behalf of students with severe disabilities (York et al., 1992).

There is overwhelming evidence to support the efficacy of inclusive schooling efforts based on the research. Specifically, benefits to students with severe disabilities

include: (a) higher quality IEP's; (b) an increase in skills taught; and (c) an increase in adaptive behaviors including social skills, friendship skills, and the ability to interact with peers (Hunt et al, 1994; Logan & Malone, 1998; and York et al., 1992). Furthermore, research indicated that there was no concomitant loss of skills traditionally taught within the context of self-contained settings (Salend & Garrick-Duhaney, 1999). For student without disabilities, evidence shows that inclusion does not interfere with instruction, achievement scores, or grades. In fact, inclusive schooling practices have shown to increase students without disabilities' understanding and tolerance of human differences and empathy (Helmstetter et al., 1998 and Janney & Snell, 1996). There are also many barriers to the successful implementation of inclusive schooling practices. Barriers include biases of general and special educators, rigid expectations, lack of collaborative planning time, lack of administrative support, limited explanation of roles within the classroom, and lack of adequate preparation to provide supports in inclusive environments (McDonnell, 1998; Wood, 1998; and York & Tunidor, 1995).

Reforms in Teacher Education

Teachers have had to respond to rapid changes during the past 30 years due to changes in legislation and philosophy of where and how students with severe disabilities could and should be educated. These changes demanded that teachers both understand and explore their constantly evolving roles while trying to adapt their daily teaching to reflect new research and innovation (Baumgart & Ferguson, 1990). Currently, we need teachers who can create maximal effective educational environments and experiences for a very heterogeneous and programmatically complex group of students. At this time, it is unclear if this is occurring regularly as there is limited research.

Overall reform efforts needed in special education and general education teacher preparation include development of various skills by all teacher candidates preparing to teach in today's increasingly diverse classrooms. These skills include: (a) professionalism; (b) collaboration, (c) assessment and lesson planning; (d) management of a diverse classroom of learners, and (e) reflection, self-assessment, problem solving, and decision-making. Some suggest the need for additional field experiences in various settings and content areas (Ryndak et al., 2001). Specifically, general education teacher preparation may need to include experiences with students with disabilities and infuse special education methodology and pedagogy within their pre-service programs (Pugach, 1996).

However, barriers exist within and between various stakeholders. Specifically, different organizational structures have differing priorities and expectations including the federal government which provides funding, state departments of education which determine eligibility for licensure and certification, institutes of higher education which prepares future (or current) special and general educators (often separately), and local school districts which employs the educators who are often inadequately prepared (or under prepared) to meet the needs of today's' diverse student population (Lindsey & Strawderman, 1995; McLaughlin et al., 1988; and Pugach, 1987).

Reform efforts at the school and district level, including meeting the challenging needs of students who experience cultural, linguistic, and learning differences, must dictate the reform efforts in teacher education (Bowen & Klass, 1993; Lindsey & Strawderman, 1995; McLaughlin et al., 1988; and Pugach, 1987). The question that continues to pervade those involved in teacher education reform is how to prepare special

educators once (or if) collaboration is achieved with general educators (Davis et al., 1996 and Pugach, 1996). The realities of today's classrooms may not reflect the content of today's teacher preparation programs, which may complicate the translation of theory and research-based best practice(s) into classroom practice (Lindsey & Strawderman, 1995 and McLaughlin et al., 1988).

Many teachers in general education and special education are being forced to work together without the specialized preparation needed to collaborate (Ferguson, Meyer, Jeanchild, Juniper, & Zingo, 1992). Teachers have different styles and bring a variety of skills, knowledge, and expertise to the classroom (Monahan, Marino, & Miller, 1996). General educators tend to focus on the entire class: managing behavior of the group as well as focusing on group outcomes for a curriculum unit. Special educators often focus on individual needs, or remediation of skills, needed for students with disabilities to participate in a particular class. Difficulties may exist in blending styles and collaborating on how to support students with a variety of needs when backgrounds and philosophies are inherently different (Pugach, 1996; Daane, Beirne-Smith, & Latham, 2001).

Personnel Preparation

According to Ferguson (2000), there are several challenges currently facing teacher education. Many teacher preparation programs are changing requirements and encouraging more activity or field-based performance assessment. Many assignments are directly related to course content, yet demonstrated within the field during practicum or student teaching experiences. Teaching the way we want our graduates to teach has challenged teacher education programs to redesign courses, program sequences, and

practices. Teacher candidates' experiences in real schools and classrooms become the content of many university-based classes. These classes are taking place on the university campus and increasingly within partner schools (Ferguson, 2000).

Many teacher preparation programs are changing requirements and encouraging more activity or field-based performance assessment. General education and special education teachers need to be prepared to meet the needs of students with disabilities in general education settings. Teacher education programs must prepare teachers to be successful in inclusive educational environments in which students with or without disabilities have a mutually valued presence (Mattson & McGregor, 1997; Ryndak & Kennedy, 2000; and Villa et al., 1996). Teachers for all ages (elementary through secondary) need additional information on how to adapt curriculum and instruction to meet the educational needs of these students (CEC, 1999 and Ferguson, 2000). Some teacher education programs are preparing teachers with dual licenses in general and special education by blending content from general and special education (Keefe et al., 2000; Mattson & McGregor, 1997; and Villa et al., 1996).

Personnel preparation for severe disabilities. With growing numbers of students with severe disabilities participating in general education settings, it is necessary to prepare pre-service teacher candidates to facilitate the process of inclusion (Mattson & McGregor, 1997). Teacher preparation programs traditionally teach and promote the use of theory and research based best practices (Ryndak, Clark, Conroy, & Holthaus-Stuart, 2001). Ryndak et al. evaluated Master's level teacher preparation programs in severe disabilities and determined areas of expertise included the following: (a) collaboration and technical assistance, (b) inclusion, (c) advocacy and self-advocacy, (d) curriculum

content identification process, (e) effective instruction, (f) functional assessment and behavior intervention, (g) transition, (h) physical and sensory disabilities, and (i) research.

In 2001, the national organization, The Association for Persons with Severe Disabilities (TASH) released a *Resolution on Teacher Education.* This statement is reflective of the TASH resolution on the education of students with disabilities. The TASH organization agrees that there is a "moral imperative" that students with disabilities should be educated with peers in general education settings with the necessary supports. Consequently, teacher preparation "must be inclusive and collaborative". The organization also supports the idea of multi-level preparation consisting of initial certification with basic expertise and advanced preparation with more specialized knowledge pertaining to the intricacies of teaching students with severe disabilities.

According to TASH (2001), initial certification should provide a basic understanding of general education curriculum, instructional methods and assessment, along with a basic expertise in severe disabilities. These expertise areas include: (a) teaching diverse learners in heterogeneous groups, (b) collaboration with families, (c) collaboration with school and non-school personnel, (d) ability to gather relevant and authentic assessment information, (e) collaborative planning, (f) learner centered curriculum (based on student needs), (g) individually appropriate education within general education using modifications, assistive technology, use of augmentative /alternative communication and non-intrusive supports, (h) ability to direct support staff, and (i) appreciation of school community. Advanced preparation should consist of: (a) research to practice in general education, (b) specialized knowledge in feeding and

positioning, (c) use of effective practices across students (severity) and across ages, (d) reflection, (e) leadership roles, and (f) ability to teach self-advocacy.

Currently there are several options for preparing teachers who specialize in teaching students with severe disabilities. Options include dual-licensure for general and special educators (Ryndak & Kennedy, 2000; Keefe, Rossi, de Valenzuela, & Hawarth, 2000), general education with special education endorsement (Ferguson, 2000), alternative certification or alternative route certification for teachers with temporary provisional or emergency certification, also known as Resident Teacher Programs (Rosenberg & Rock, 1994; Maryland State Department of Education, 2004; U.S Department of Education, Office of the Under Secretary, 2003); multi-categorical licensure within special education (Council for Exceptional Children, 1999; Eichenger & Downing, 2000), or traditional special education certification in severe disabilities (Baumgart & Ferguson, 1990; Snell, Martin, & Orelove, 1997).

While the legal trend (IDEA, 1997; NCLB, 2002) has been toward increased participation in general education or access to the general education curriculum, current placements for the majority of students with severe disabilities continue to be in restrictive environments (Rainforth, 2000). As a result, the goal for teachers preparing to teach in the field of severe disabilities is twofold. First, they need to have the ability to support students in general education and provide access to the general education curriculum (NCLB, 2002). Second, they need to facilitate this process for those students in which inclusion in general education is not yet a regular part of their school day (Rainforth, 2000).

Personnel preparation for inclusion. Inclusive schooling efforts can be effectively implemented with the proper supports. These supports include appropriate resources, proper preparation at the pre-service or in-service level, high expectations for students with disabilities, ability to work with / direct support staff, a positive attitude towards inclusion, and time for collaborative teaming (Daane et al., 2001; Salisbury & McGregor, 2002; Werts et al., 1996; and Wolery et al., 1995). Unfortunately, many of those working with students with severe disabilities in inclusive environments may not have received the proper preparation at the pre-service level.

Regrettably, many special educators and most general educators report not being prepared to implement inclusive practices (Agran & Alper, 2000; Rainforth, 2000; McCormic et al., 2001; Reed & Monda-Amaya, 1995; Buell, et al., 1999; and Henning & Mitchell, 2002). Most pre-service personnel preparation programs for general educators include little to no special education course work or practicum experience with students with disabilities. Many pre-service personnel preparation programs for special educators include little course work on content instruction or include very few experiences where teacher candidates are required to collaborate with general educators. Based on an examination of the research, is unclear if those who work with students with severe disabilities in inclusive settings are (or were) properly prepared at the pre-service level.

Statement of the Problem

With more and more young children, students, and adults with severe disabilities constituting the fabric of human society, it has become increasingly necessary to understand their needs and provide preparation for those who will work to increase their quality of life. As a result, there is a need for 'highly qualified personnel' (NCLB, 2002)

with preparation "for which a small number of personnel with highly specialized skills and knowledge are needed" (IDEA, section 673(b)(3)).

A goal of teacher preparation programs is to prepare graduates to teach successfully within the field in which they were prepared and to implement best practices (Billingsley, 2003). Another goal of teacher preparation programs is to prepare individuals to teach in their certification area and to remain locally due to the well-documented teacher shortages, especially the area of severe disabilities (Ryndak & Kennedy, 2000, McLeskey, Tyler, and Flippin, 2003). Also it would seem a natural conclusion to determine whether the graduates of teacher preparation programs are aware of and able to implement best practices.

While there are many well-documented best instructional practices for students with severe disabilities (Baumgart & Ferguson, 1990; Jackson, Ryndak, & Billingsley, 2000; Mattson & McGregor, 1997; Rainforth, 2000; and Ryndak et al., 2001), there is little empirical evidence to support whether new teachers are implementing these best practices (Blanton et al., 2003). There is also no specific knowledge base about what teachers of students with severe disabilities must know, with the exception of the Ryndak et al. (2001) study which only evaluated masters level personnel preparation programs in severe disabilities. Recommendations have been made about the content within severe disabilities personnel preparation programs based in literature about best instructional practice (Baumgart & Ferguson, 1991; Fox & Williams, 1992) and program descriptions (Keefe et al., 2000; Rainforth, 2000; Snell et al., 1997). Blanton et al. state, "Teachers of students with severe disabilities must not only be prepared to meet the unique educational

needs of these students but must do so in the context of the typical schools and classrooms (p.25)."

Subsequent research is critical given the importance of: (a) increasing legislative demands to include all students in the general education curriculum; (b) the need for pre-service preparation programs to prepare new teachers to facilitate access to the general education curriculum; and (c) the need to evaluate those aforementioned programs. However at this time, there is no empirical research regarding: (a) the imparting of inclusive best practices within pre-service preparation for severe disabilities; (b) the use of inclusive best practices by recent graduates in severe disabilities; or (c) whether recent graduates (new teachers) believe those inclusive best practices to be important. Research also has not yet shown what or if certain best practices engaged in at the pre-service level lead to greater 'preparedness' to facilitate inclusion when teaching. Perhaps most importantly, researchers have not definitively established if certain aspects of pre-service personnel preparation programs in severe disabilities are related to, or predictive of, feelings of 'preparedness' or if the level of 'preparedness' can predict time spent facilitating those inclusive practices shown to be effective in the literature. Consequently it is not known if the University of Maryland, as an institution, effectively prepares future special educators specializing in severe disabilities to work in inclusive settings.

Purpose of Study

The purpose of the research study was to: (a) determine if recent graduates receiving certification in severe disabilities were adequately prepared to teach students with severe disabilities in inclusive environments; (b) determine if recent graduates were teaching or previously taught in the field in which they were prepared (i.e., retention in

the field of special education); (c) determine if recent graduates learned about and implemented best practices for inclusion (and believe they are critical to student success); and (d) determine certain variables were predictive (or more specifically account for the variability) of perceived adequacy of preparation and time spent supporting students in inclusive environments.

Former graduates of the department of special education (EDSP) from the University of Maryland (N=63) specializing in severe disabilities were located and electronically surveyed to collect follow-up and partial program evaluation data. Respondents met the following criteria: (a) they graduated from UM with a degree from the Department of Special Education from May, 1996 until May, 2003 and (b) were eligible for initial certification in special education and severe disabilities. Because of the amendments of IDEA 1997 regarding the provision of service delivery in the least restrictive environments and the mandate that all students have access to the general education curriculum, graduates of the Univeristy of Maryland, Department of Special Education before the year 1996 might not have received adequate preparation in the area of inclusive practices, a main component of the study. Teacher candidates graduating with eligibility for initial certification in special education and severe disabilities were specifically chosen because information garnered from the study has implications for future program changes in the preparation of severe disabilities personnel, a critical teacher shortage area (Ryndak & Kennedy, 2000).

Graduates were asked to rate their *knowledge* and *degree of presence* (in their current or most recent teaching position) of *Inclusive Best Practices* and if these practices were *critical to student success*. A content and concurrently valid instrument was

developed through extensive review of literature and examination of expert identified

instruments, as there was no instrument previously developed to evaluate preparation of

pre-service teacher candidates' knowledge and implementation of inclusive practices.

The first part of the survey was based on a previously established instrument (Maryland

State Department of Education, 2001) developed to measure Local School System (LSS)

and individual school preparation for and use of 'Inclusive Best Practices' in Maryland.

The latter part of the survey was developed by the author and contained follow-up

questions regarding preparation received while attending UM. Many responses were

analyzed using measures of central tendency (mean and median) and measures of

dispersion (standard deviation and range) as well as qualitative methods including

constant comparison and content analysis for the open-ended responses. Independent t-

tests were performed to compare means of the 'Adequacy of Preparation for Inclusion'

and 'Percentage of Time Spent in Inclusive Settings (Once Teaching)' and non-

hierarchical regression analyses were performed to determine if variables were predictive

of 'Adequacy of Preparation for Inclusion' and 'Percentage of Time Spent in Inclusive

Settings (Once Teaching)'.

Research Questions

> *(1)* Are teacher candidates (undergraduate and graduate) with initial certification in
>
> Severe Disabilities (SD) from the Department of Special Education at the
>
> University of Maryland (May, 1996 to May, 2003) working (or previously
>
> worked) in the field in which they were prepared?

(2) Do teacher candidates (undergraduate and graduate) with initial certification in Severe Disabilities (SD) from the Department of Special Education at the University of Maryland (from May, 1996 to May, 2003) report being adequately prepared to support students with disabilities in an inclusive environment, and if so are certain variables (i.e., completion of the Inclusive Practices course, number of inclusive field experiences, percentage of inclusive field experiences) predictive of that perceived adequacy of preparation to support students in inclusive environments?

(3) What is the level of knowledge of inclusive best practices for students with severe disabilities by teacher candidates (undergraduate and graduate) with initial certification in Severe Disabilities (SD) from the Department of Special Education at the University of Maryland (from May, 1996 to May, 2003)?

(4) What is the degree of presence of inclusive best practices for students with severe disabilities by teacher candidates (undergraduate and graduate) with initial certification in Severe Disabilities (SD) from the Department of Special Education at the University of Maryland (from May, 1996 to May, 2003) in their current or most recent teaching situation?

(5) What inclusive best practices for students with severe disabilities are most critical to student success as reported by teacher candidates (undergraduate and graduate) with initial certification in Severe Disabilities (SD) from the Department of Special Education at the University of Maryland (from May, 1996 to May, 2003) in their current or most recent teaching situation?

(6) Are variables (i.e., completion of the Inclusive Practices Course, participation in

an inclusive practicum or student teaching placement, perception of adequate

preparation to meet the needs of students with severe disabilities in inclusive

environments) predictive of time spent supporting students in inclusive

environments in their current or most recent teaching situation?

Definition of Terms

Content is defined as "the subject matter or discipline that teachers are being

prepared to teach at the elementary, middle level, and/or secondary levels.

Content also refers to the professional field of study (e.g., special education, early

childhood, school psychology, reading, or school administration)" (NCATE,

retrieved 6/10/04, http://www.ncate.org/search/glossary.htm)

Critical to Student Success is defined as the belief the respondent holds about

whether the presence of a particular indicator is essential for a student with severe

disabilities to be successful.

Degree of Presence is defined as the level to which an indicator is present or

being implemented at the respondents' current or most recent teaching situation.

Double Count Program (DC) is defined as course work in which up to 12 credits

can be taken as part of an undergraduate degree within the initial special

education teacher certification program, is applicable to a future graduate degree

in special education at the University of Maryland.

Field Experiences are defined as "a variety of early and ongoing field-based

opportunities in which candidates may observe, assist, tutor, instruct, and/or

conduct research. Field experiences may occur in off-campus settings such as

schools, community centers, or homeless shelters (NCATE, retrieved 6/10/04,

http://www.ncate.org/search/glossary.htm)

Graduate Initial Teacher Certification in Severe Disabilities (GSD) is defined as

graduate level teacher candidates who chose to specialize to teach school aged

students (ages 5-21) with severe disabilities in school, community, vocational, or

post-secondary settings (Typically these students completed a baccalaureate

course of study unrelated to special education).

Highly Qualified Teacher is defined by the No Child Left Behind Act of 2002 as a

person who holds a bachelor's degree, is fully certified by the state in which they

teach, and demonstrates subject matter competency in the core academic subject

in which the teacher teaches, including special educators who teach core academic

subjects.

> However, special educators who do not directly instruct students in a core
>
> academic subject or who provide only consultation to highly qualified
>
> teachers of core academic subjects in adapting curricula, using behavioral
>
> supports and interventions, or selecting appropriate accommodations do
>
> not need to meet the highly qualified requirements (U.S Department of
>
> Education, Office of the Under Secretary, 2003, p.21).

Inclusion is defined as the educational practice of providing assistance and/or

instruction to students with disabilities to increase participation in chronologically

age-appropriate general education settings (e.g., regular pre-schools, the home

school, or post-secondary institution) as delineated by their Individual Family

Support Plan (IFSP) or Individual Education Program (IEP) within the context of

the core curriculum and general class activities (Halvorsen & Neary, 2001).

Inclusive Best Practices are defined as those research based procedures that are

deemed to be most effective when used within the context of an inclusive setting.

> Examples of 'best practices' include: "(a) collaboration between general
>
> educators, special educators, support staff, and related service providers;
>
> (b) family involvement; (c) choosing and planning what to teach;
>
> (d) scheduling, coordinating, and delivering inclusive services within the
>
> school; (e) assessing / reporting student progress on as ongoing basis;
>
> (f) instructional strategies; and (g) supporting students with challenging
>
> behavior" (Jackson et al., 2000, p. 133).

Inclusive Environments are defined as pre-school classrooms, general education

classes, lunch, recess, extra-curricular activities, or post-secondary settings in

which students with disabilities are participating as members in natural

proportions.

Individuals with Severe Disabilities are defined as those who have primary

disabilities that significantly impair cognitive abilities, adaptive behaviors, and

performance of life skills. Specifically they may have associated behavior

problems, a strong possibility of additional physical and/or sensory disabilities,

and require additional educational resources and ongoing pervasive levels of

support (TASH, 2000).

Initial Teacher Certification is defined as a program of collegiate level study in which teacher candidates gain the appropriate credentials needed to teach through specific course work, projects, activities, practica, and student teaching.

Level of Knowledge is defined as whether teacher candidates learned or acquired information about a particular indicator as a result of their program while in attendance at the Univeristy of Maryland.

Low-Incidence Disability is defined as:

(A) "a visual or hearing impairment, or simultaneous visual and hearing impairments;

(B) a significant cognitive impairment; or

(C) any impairment for which a small number of personnel with highly specialized skills and knowledge are needed in order for children with that impairment to receive early intervention services or a free appropriate public education" {IDEA, section 673(b)(3)}.

Pedagogical Knowledge is defined as "the general concepts, theories, and research about effective teaching, regardless of content areas" (NCATE, retrieved 6/10/04, http://www.ncate.org/search/glossary.htm)

Teacher Candidates (TC) are defined as "individuals admitted to, or enrolled in, programs for the initial or advanced preparation of teachers, teachers continuing their professional development, or other professional school personnel. Candidates are distinguished from "students" in P–12 schools" (NCATE, retrieved 6/10/04 from http://www.ncate.org/search/glossary.htm)

Transition is defined as "a coordinated set of activities for a student with a disability that -

(A) is designed within an outcome-oriented process, which promotes movement from school to post-school activities, including post-secondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation;

(B) is based upon the individual student's needs, taking into account the student's preferences and interests; and

(C) includes instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and, when appropriate, acquisition of daily living skills and functional vocational evaluation." {IDEA section 602 (30)}

Undergraduate Initial Teacher Certification in Early Childhood Special Education with Certification in Severe Disabilities (UGEC w/ SD) is defined as those teacher candidates who chose to specialize in learning to teach infants, toddlers, pre-school aged, or kindergarten aged students (birth to age 5) with severe disabilities in homes, hospitals, centers or facilities, pre-schools, or kindergarten classes.

Undergraduate Initial Teacher Certification in Severe Disabilities (UGSD) is defined as those teacher candidates who chose to specialize in learning to teach school aged students (ages 5-21) with severe disabilities in school, community, vocational, or post-secondary settings.

Undergraduate Initial Teacher Certification in Special Education with Graduate Certification in Severe Disabilities (UGSE w/ GSD) is defined as those teacher candidates who chose to specialize in the Educational Handicaps (EH) or Secondary Transition (ST) program and received initial teacher certification in special education during their undergraduate program. However, as graduate students they took additional courses to receive certification in severe disabilities.

CHAPTER II

Review of the Literature

The purpose of this chapter is to summarize the relevant literature regarding relevant aspects of the study. The first section, Reforms in Teacher Education, examines arguments for change in the current structure of personnel preparation including the need to incorporate special education within overall reform efforts. The next section, Pre-Service Personnel Preparation, delineates current options for teacher licensure in special education, including dual licensure of special education and general education, and possible changes needed in teacher licensure. The third section, Inclusive Practices, reviews seminal pieces of literature regarding the support of students with severe disabilities in inclusive environments. Specifically, research studies that have empirically validated aspects of inclusive education, barriers recognized by various stakeholders, and supports needed to successfully implement inclusion are discussed. The final section, Pre-Service Personnel Preparation for Severe Disabilities, outlines specific components needed to prepare individuals to work with students with severe disabilities, including preparation of special educators for implementation of inclusive practices and the current state of preparation of general educators to implement inclusive practices.

Reforms in Teacher Education

Overall reform efforts needed in special education and general education teacher preparation include development of various skills by all teacher candidates preparing to teach in today's increasingly diverse classrooms. These skills include:

(a) professionalism; (b) collaboration, (c) assessment and lesson planning; (d)

management of a diverse classroom of learners, and (e) reflection, self-assessment, problem solving, and decision-making. Some suggest the need for additional field experiences in various settings and content areas. Specifically, general education teacher preparation may need to include experiences with students with disabilities and infuse special education methodology and pedagogy within their pre-service programs. Special education teacher preparation is debating the infusion of content knowledge and methodology so that those teaching in a specific subject area are considered 'highly qualified', according to the NCLB Act of 2001.

However, barriers exist within and between various stakeholders. Specifically, different organizational structures have differing priorities and expectations including the federal government which provides funding, state departments of education which determine eligibility for licensure and certification, institutes of higher education which prepares future (or current) special and general educators (often separately), and local school districts which employs the educators who are often inadequately prepared (or under prepared) to meet the needs of today's' diverse student population.

Pugach (1987) discussed what constitutes improved teacher preparation needed to reform the content and structure of current practices in special education teacher education. Experts agreed that poor classroom teaching is characterized by: "didactic, unimaginative large group or traditional within classes grouping practices with few provisions for meeting the individual needs of students (p. 310)". Pugach discussed how teachers failed to: (a) provide systematic corrective feedback; (b) establish positive classroom ambiance (negative teachers spent substantially more time dealing with behavior problems); (c) use efficient time management strategies; (d) clearly articulate

instructional goals to students; (e) establish positive supportive relationships with families; (f) routinely monitor their own teaching behavior or 'self-assess'; and (g) consider it their responsibility to re-teach those who didn't get it the first time. Conceptually good teaching techniques are effective with all children, not just those students in special education (Pugach, 1987).

The content of special education teacher preparation should include direct instruction, behavior management, peer tutoring, cooperative learning, and cognitive and metacognitive strategies (Pugach, 1987). Unfortunately special education teacher preparation is not uniform. There is a need for extensive coaching of teachers in preparation. Specifically, Pugach (1987) stated that experience is the best teacher. Special education teachers have limited background in general education curriculum and it is important to remove independent educational identities.

Assurances must be made that clinical sites are models of highest quality of instruction and that systematic opportunities for reflection on the part of pre-service students are integrated into those experiences. Formal university study would include preparation in both general and content specific pedagogy and preparation in the professional skills of self-assessment and collaboration. Special education will continue to serve students who are the indirect casualties of a general education system that has developed a narrow conceptualization of its responsibilities—partly due, no doubt, to its long-standing dependence on special education. P. 311

McLaughlin, Valdiviseo, Spence, and Fuller (1988) conducted four research studies which included a mail survey of pre-service special education majors, two

surveys of individual states' manpower needs, and interviews with faculty in selected states concerning teacher preparation and teacher preparation programs. As a result of the synthesis of findings, the article presents the major policy issues that emerged for teacher preparation programs.

McLauglin et al. (1988) found conflicting perceptions of teaching competencies. Specifically, state department representatives were concerned with lack of competence of new personnel in special education. Faculty from teacher institutions were less concerned or perceived no change in student quality and felt that priority in preparation programs should center on assessment skills and developing lesson plans and instructional programs. State Education Agencies (SEA's) generally perceived a lack of competence related to procedures involved in implementing aspects of P.L.94-142 on the local level. State education agencies noted a mismatch between teacher preparation and job realities. Student surveys indicated that preparation programs might not be responding to the job market. Over half of the graduate students were attending school to upgrade skills. Faculty acknowledged that preparation models generally emphasized traditional research and writing skills. As a result, the following question arose, "who controls the preparation of special education teachers (p. 218)?"

McLaughlin and her colleagues found that there were external influences on special education. First, the federal government was identified as the major influence on higher education as a supportive benefactor in grants and funding. However, federal priorities were not perceived as influencing content or philosophy of preparation programs. The state department of education was the second major influence on

preparation programs, but by far the most important factor in influencing preparation

programs because of their control of the licensing of new personnel.

McLaughlin et al. (1988) concluded changes in policy and programs in teacher

preparation need to be investigated. Disagreement between producers and consumers

needs to be confronted, and as a result, higher education and school bureaucracy must

work together. Competency statements and professional standards must influence the

program standards or certification requirements. National quality indicators need to be

set to add consistency to pre-service and inservice preparation. Consideration must be

given to what to do when teachers find jobs that do not match their preparation. There

also needs to be ongoing teacher support and inservice programs and alternatives for the

structure and content of the preparation programs to meet the needs of the students,

especially graduate students. Collaboration between producers and consumers of teacher

preparation programs must be developed.

Bowen and Klass (1993) conducted a pilot study to obtain information on six

areas relating to supply of new teaching personnel. The study found that attention needed

to be given to the areas of institutional and state certification relationships, program

preparation capacity and projection of graduates, and student recruitment. Conditions

most identified as causing a decrease of trainees were: (a) increased costs associated with

decrease in financial aid (39.5%); (b) decreases in funding (34.1%); and (c) reduction in

faculty (26.9%). Federal grant support (financial aid) was used by 37.8% of students and

26.1% received state grant support. According to Bowen and Klass, only 37% of low-

incidence program coordinators followed up on the employment of their program

graduates. Finally, it was determined that 67% of the preparation programs were not

producing enough graduates to meet the demands of their states (Bowen & Klass, 1993).

According to Lindsey and Strawderman (1995), special education is in the midst

of controversial reform and is moving towards a more fully inclusive model of service

delivery as mandated by law. School reform often includes references to needed reforms

in teacher education and the effectiveness of traditional teacher education programs to

develop professional educators competent to deal with the current demands of public

school teaching. Therefore Lindsey and Strawderman reviewed teacher education

literature that promoted change from traditional education practices. The authors

conducted both electronic and hand searches in the field of teacher preparation over the

past ten years. They formed conceptual matrix categories, restructuring organizational

systems or polices and barriers to success. A new matrix was formed as recurrent

themes, trends, and concepts emerged.

Commitment to change and collaboration between disciplines, personnel, and

institutions characterized the climate that facilitated innovative teacher education reform.

Recurring themes included: (a) changes in organizational structures on policies that

served to reinvent teacher education; (b) barriers to successful reform; (c)

professionalism as a universal goal or outcome of reform efforts; and (d) provision of

effective instructional opportunities applicable to all student populations. In addition to

the previous themes, Lindsey and Strawderman argued that general education programs

should infuse special education methodology and pedagogy. Specifically, teaching

requirements should include direct involvement students with special needs as a

prerequisite for teacher certification. Barriers to successful reform included cultural

differences between public schools and universities, including attitudes, perceptions, mission, vision, organizational structures, and lack of incentives for faculty to change.

There are critical issues that face the field of education, including the adequate preparation of special education teachers. Pugach (1996) argued that we must make sure that programs are soundly field-based and that practicing teachers are intimately and equitably involved in the preparation of new special education teachers. She also strongly suggests the need to take a stand about the philosophical framework and make certain teacher candidates have the methodological expertise to make these frameworks meaningful at the level of practice.

Pugach posed questions about how to properly define the relationship among preparing teachers to provide an equitable education to all students, view culture, language, race, ethnicity, and gender as assets rather that deficits, and work with students who have disabilities. She also suggested the need to determine what it is that we wish to prepare special education teachers to do once we have been successful in achieving a sound level of collaboration with our general education colleagues.

Rosenberg (1996a) discussed the idea that many teachers know about best practices for the classroom, but are not always putting those strategies into practice. Many of the committed professionals serving students with disabilities have not received adequate preparation for the job. Too many have had little or no formal preparation in how to teach children and youths with or without special learning needs. Veteran special educators may be unable to implement novel practices, as there is not enough time in the day. Rosenberg suggested that we need to find ways to adapt the environment so a student with a disability can have success meeting the expectations or demands of the

school setting. Ultimately, Rosenberg argued that a series of behavioral supports should be developed for teachers including mentoring, ongoing professional development possibilities, and opportunities for communication and collaboration with other professionals.

In another article, Rosenberg (1996b) argued that effective special educators must appreciate the multi-disciplinary nature of their job. As a result, they must be prepared through a multi-disciplinary education. As special educators strive to be professionals with leadership roles, they must also be able to focus on the day-to-day instruction of students with disabilities. Ultimately, the classroom is where educators have the most influence.

Davis, Monda-Amaya, and Hammitte (1996) sought to determine what former Teacher Education Division (TED) presidents believe were past, present, and future issues in special education and teacher education. Forty-three names of past presidents were obtained from CEC and Teacher Education Division (TED) archives. Of the 43 names, six were deceased and ten former presidents current addresses were unavailable. Nineteen of twenty-seven former presidents responded. Each past president was sent a survey requesting demographic information and answers to four open ended questions. Issues that respondents determined will or will not be important to the field in the coming years were broken into categories. The following items were listed as being important in the future: (a) teacher preparation (84%), (b) collaboration (68%), (c) changes in special education (68%), (d) cost/funding (32%), (e) professional standards (26%), and (f) assessment (26%).

One issue that many past presidents were concerned about was preparing teachers for inclusion (Davis et al., 1996). Concerns stated by respondents were that many teacher education programs were: (a) the merging of special and general education faculty; (b) the content of teaching curricula; and (c) the combination of elementary and special education programs. Collaboration with other professionals in education, especially with general educators has been in a positive effort and will continue to be necessary effort in the future. Special and general educators will require preparation in collaboration during teacher education. As more students with severe disabilities are included, elementary or secondary teachers will need expertise in working with a special educator and educational aide. Continued separate preparation in teacher education between elementary, secondary, and special education will inhibit future collaboration (Davis et. al., 1996). It is important to prepare teachers both through in-service and pre-service, to work in a multi-cultural, multi-ethnic, multi-needs, diverse society. It is critical to reorient the thinking of general and special educators to include all children in the discussion of diversity.

Spooner and Johnson (1996) conducted a study as part of the anniversary issue of *Teacher Education and Special Education* to comment on the field of special education and the preparation of personnel to work in it. Persons involved in the study were past TED publication awards recipients. Results indicated that many individuals firmly believe that division of special education and general education is becoming less distinct and that many of the same challenges that teacher educators face in special education are also faced by colleagues in general education teacher preparation. Although significant progress has been made over the past 25 years, fulfilling the goal to provide effective

educational services to all persons with disabilities continues and should not be overlooked. Additionally, those who participated in the study feel that there is no justification for the separation of special education departments.

Blanton (1992) found that the main method of developing and validating competencies or essential knowledge in special education is from expert opinion, external validation, or professional consensus followed by student achievement gains. Conception of teaching and learning is dominated by the technological orientation, which greatly influences the content of teacher preparation programs including organization and delivery of instruction. Alternative models for developing teacher preparation programs include: meaningfulness of knowledge, sources of teachers' knowledge, and acquisition of knowledge (Blanton, 1992). To develop further knowledge, teacher educators should decide how acquisition of knowledge relates to what pre-service educators already know. Also, pre-service education should rely on the tasks, critical problems, decisions, and problems found typically in a classroom. Special educators need to engage in more dialogs about teaching and learning and as well as address the pre-service teachers' knowledge and how knowledge can be transformed.

According to Buck, Morsink, Griffin, Hines, and Lenk (1992), the old model for special education field-based preparation focused on the attainment, transfer, and the observation and measurement of teacher competencies during field activities. Recently, however, the following preparation practices have been additionally observed: on-the-job supervised internship assessment, planning and remediation of teaching competencies, increased mentoring and coaching, and additional field-based experiences.

Buck et al. (1992) discussed four unresolved issues dealing with the implementation of field-based experiences to include: the role of early field experiences, length of internship, amount of supervision, and selection of field site teachers. Coaching and more opportunities for the development of decision-making skills are two practices that show great improvements in teaching preparation. Current and past evaluation processes including the competency or performance based teacher education (C/PBTE) are discussed as well as suggestions for more effective evaluations are given. The authors proposed two recommendations including observation of interns in a variety of settings and content areas and reflection through a daily journal. Buck et al. (1992) also suggest that cooperating teachers become more responsible for day-to-day monitoring and feedback for intern performance and being given an orientation program on supervision of pre-service students.

With increasing pressure from regional governing bodies of educational reform, state boards of education, and the federal government demanding highly qualified teachers, accountability for institutes of higher education is on the rise (NCLB, 2003). Specifically, the National Council for Accreditation of Teacher Education (NCATE) is responsible for evaluating undergraduate and graduate teacher preparation programs including special education (NCATE, 2004; http://www.ncate.org/ncate/m_ncate.htm). The Council for Exceptional Children (CEC) has developed specific standards for special education programs including knowledge and skills for common core, early childhood, and general and independence curricula for students with high incidence and severe disabilities, respectively (CEC, 2001; http://www.cec.sped.org/ps/perf_based_stds/knowledge_standards.html.)

Since the 1990's, there has been a trend for students with and without disabilities to be evaluated using performance based tasks. Following that trend, more and more colleges and universities are also evaluating student performance through alternative means of assessment (e.g., capstone projects, field based projects, portfolios) Conderman, Katsiyannis, and Franks (2001) determined if special education teacher preparation programs were using alterative forms of assessments to evaluate teacher candidate performance as well as to evaluate their own programs. The authors surveyed 58 special education teacher preparation programs. Participants were asked to submit program evaluation plans and answered questions about the frequency and objectives of external reviews and self-study, their alignment with CEC standards and outcomes, and department specific review and subsequent revisions to curriculum (syllabi, field supervisor performance, teaching performance, advising, etc.).

Results indicated that most programs regularly 'self-evaluate' their programs and make subsequent changes to curriculum if warranted. Most programs (80%) continuously assess their alignment and performance with CEC standards and competencies. Methods used to evaluate these competencies included portfolios, class assignments and projects, exit interviews, course evaluations, team decisions, and follow-up surveys. A range of institutions (65%-84%) regularly reviewed syllabi, faculty teaching, and supervision performance for field placements. Most evaluations of supervision of field performance (student teaching and practicum) were done via survey offered to cooperating teachers and some exit interviews with teacher candidates. However, a majority indicated that feedback was rarely given to supervisors regarding their performance and none indicated any specific procedures for evaluation of field

supervisors (observation by faculty, reliability of observations between supervisors, etc.).

Overall, results indicated that most programs conducted several reviews of their practices

and procedures using a variety of methods. However, assessment of student learning was

conducted using predominantly paper-pencil tasks. Conderman et al. (2001) suggest that

programs formalize their self-evaluation procedures and rely on more performance based

assessments of teacher candidate learning.

Summary. Reform efforts at the school and district level, including meeting the

challenging needs of students who experience cultural, linguistic, and learning

differences, must dictate the reform efforts in teacher education (Bowen & Klass, 1993;

Lindsey & Strawderman, 1995; McLaughlin et al., 1988; and Pugach, 1987). The

question that continues to pervade those involved in teacher education reform is how to

prepare special educators once (or if) collaboration is achieved with general educators

(Davis et al., 1996 and Pugach, 1996). The realities of today's classrooms may not

reflect the content of today's teacher preparation programs, which may complicate the

translation of theory and research-based best practice(s) into classroom practice (Lindsey

& Strawderman, 1995 and McLaughlin et al., 1988). The current study shows the

relationship between the content of one pre-service preparation program and the use of

those strategies learned in some of today's complex classrooms.

Pre-Service Personnel Preparation

In this next section, Pre-Service Personnel Preparation, current options for teacher

licensure in special education including dual licensure of special education and general

education, and possible changes needed in teacher licensure are delineated. Specific

areas of focus include: (a) the pro's and con's of traditional licensure (multicategorical

verses disability specific); (b) non-traditional certification developed to meet today's

increasing teacher shortages; and (c) the implementation of dual certification between

general education (often elementary education or early childhood education) and special

education. Each will be discussed below relative to the literature.

Traditional pre-service personnel preparation has taken place within the context of

institutes of higher education, which are governed by the National Council for

Accreditation for Teacher Education or NCATE. NCATE oversees the process by which

teacher candidates are prepared to teach once they complete and graduate from an

accredited program. Specifically, "In accredited schools, the new professional teacher

gains: (a) a broad liberal arts education; (b) an in-depth study of the content to be taught;

(c) a foundation of professional knowledge on which to base decisions; (d) diverse, well-

planned clinical experiences in P–12 schools; (e) an evaluation of readiness to practice

through many measures of performance; and (f) the ability to use knowledge in practice"

(NCATE, 2004; http://www.ncate.org/future/benefits.htm).

With the recent enactment of the NCLB Act of 2001, an effort is being made by

the federal government to increase the quantity and quality of those who are teaching

children in a variety of settings, especially those in which children are performing below

standardized achievement levels. According to NCLB, achievement gaps are greatest

with students who are economically disadvantaged, from racial and ethnic minority

groups, have disabilities, or are not English language proficient. Specifically, there is a

push to 'qualify' those who traditionally may have not met teacher licensure standards

due to lack of coursework or experience in pedagogy. It is an underlying assumption of

the NCLB Act that highly qualified teachers lead to students who learn and achieve more,

most often measured through standardized achievement tests. To meet the 'highly qualified' standards as determined by NCLB, one must: (a) hold a minimum of a bachelors degree, (b) obtained full state certification or licensure, and (c) demonstrate subject area competence in each of the academic subjects in which the teacher teaches (NCLB, 2004; http://www.ed.gov/admins/tchrqual/learn/hqt/edlite-slide008.html.

However, for *new* elementary and secondary teachers to be considered 'highly qualified' there are requirements of passing specific subject area tests as delineated by individual State Education Agencies (SEA's) and an academic major, undergraduate or graduate degree, or equivalent in a core academic subject (e.g., English, Reading/Language Arts, Mathematics, Science, Foreign Languages, Civics and government, Economics, Arts, History, and Geography) for secondary teachers. This researcher believes this may allow those who are highly trained in specific subject areas (e.g., those with a bachelor's degree in mathematics, for example) to be 'highly qualified' to teach with no requirement of coursework or experience in pedagogy.

For special educators, the requirements around the 'highly qualified' standard are less clear. Essentially, if a special educator is teaching an academic subject, they must 'demonstrate subject area competence' possibly determined by a score on a 'rigorous State academic subject test'. However " special educators who do not directly instruct students in a core academic subject or who provide only consultation to highly qualified teachers of core academic subjects in adapting curricula, using behavioral supports and interventions, or selecting appropriate accommodations do not need to meet the highly qualified requirements" (U.S Department of Education, Office of the Under Secretary, 2003, p.21). Current guidelines are being established by SEA's on what it means to be

'highly qualified' as well as determination of reforms needed in current licensure structure to meet the accountability standards set forth by NCLB.

Options for special education teacher licensure. The Council for Exceptional Children (CEC, 1999) posed several questions regarding the debate over multicategorical or multi-disability licensure verses categorical or disability specific licensure in special education. Questions included: (a) Does one type of licensure better meet the needs of students with disabilities? (b) How should categories be broken down? (c) Which license will best prepare special education teachers to teach in today's classrooms? The article delineates several pros and cons to multicategorical licensure.

The Council for Exceptional Children discussed several advantages to states offering a multicategorical license. Most special educators currently work in settings with students with a variety of disabilities. Looking at students through a multicategorical license allows teachers to focus on what instructional strategies each child needs rather than on his or her disabilities. There is the added benefit of doing away with labels (CEC, 1999). Teachers may use same/similar methods or techniques when teaching students with mild to moderate disabilities. Moreover, teachers with multi-licensure are an asset to schools and increase personal employability.

The Council for Exceptional Children also presented some disadvantages to multicategorical licensure. Specifically, it may prevent students with disabilities from receiving appropriate educational instruction. Teachers may have breadth of knowledge about disabilities but often do not have the depth needed. The trend in the field of special education is moving to graduates of teacher preparation programs becoming generalists verses specialists (CEC, 1999). Multicategorical courses provide only a foundation of

knowledge about particular disabilities, which possibly creates a void in special education knowledge and instruction and may promote placing inexperienced teachers in difficult teaching situations. Multicategorical licensure may overlook certain categories of disabilities as several very different disabilities may be grouped (e.g., mild disabilities or severe disabilities). Opponents claim that it also avoids looking for the cause of a student's disability, information that is often critical to providing appropriate educational instruction (CEC, 1999).

The Council for Exceptional Children has added a multicategorical framework to its knowledge and skill standards. This has lead to more states revising their licensing standards. CEC's framework assures that special education teachers have been taught the skills they need to work with students regardless of the type of special education program they graduate.

The two most common certification practices followed by most states are the categorical (by specific disability) or across the age span (K-12 certification). Eichenger and Downing (2000) address the need for special educators to have a broader knowledge base of students with various disabilities as well as knowledge of the core curriculum within a designated age range. Additionally, some teachers need specialized knowledge and skills to teach students with complex needs (e.g., severe disabilities, serious emotional disturbance). The areas of change needed in special education certification is to align special education certification with general education certification, provide collaborative teacher preparation for general and special educators with initial certification, and provide advanced preparation for specialization within special education. The major changes over the past 25 years to the field of special education

need to be applied to the current special education certification practices (Eichenger &

Downing, 2000).

Multi-categorical or multi-disability licensure enables teacher candidates the

ability to have knowledge of all disabilities, albeit limited, which may reflect real life

case loads once teaching as more and more special educators have to work with a variety

of students with exceptional learning needs (CEC, 1999). Often multi-categorical

licensure is based on a specific age group, which enables teacher candidates to

understand pedagogy relative to the level of schooling (e.g., early childhood, elementary,

or secondary). Disability specific (e.g., learning disabilities, emotional behavior

disorders, severe disabilities) licensure ensures teacher candidates are specialists

regarding aspects of programming across the life span. Some argue that teacher

candidates should be generalists and be prepared collaboratively with options for

specialization when pursuing advanced preparation (Eichenger & Downing, 2000).

Nontraditional certification. With an increasing shortage of personnel to teach

students with disabilities, teacher educators have explored alternative means of preparing

certified and qualified special education teachers (Rosenberg & Rock, 1994). Problems

with nontraditional certification programs include the preparation of educational

personnel in unconventional ways, which allow admission into the education profession

of qualified people without traditional undergraduate teacher preparation. Often these

alternatively prepared teachers do not have enough background in education. Yet, they

assume full classroom responsibilities prior to the completion of the preparation program

(Rosenberg & Rock, 1994).

In the early 1990's John Hopkins University, the Maryland State Department of Education (MSDE), and two urban local school agencies developed a field-based, 2-year experimental program leading to certification and a Master's degree in Special Education called ALTCERT. The ALTCERT program possessed several unique features and selected individuals had to have the greatest commitment to remaining in the profession. Candidates must have previously demonstrated academic success, with a 3.0 undergraduate GPA of better and had to be familiar with Maryland youths with mild to moderate disabilities. Finally candidates had to have good written and expressive skills.

During the program, there was intensive on-the-job university based supervision from a university supervisor, a building mentor, and Local School System (LSS) administers and supervisors. Information about performance was gathered through direct observation. Building mentors provided practical information about management of workload and suggestions for accessing the schools community (Rosenberg & Rock, 1994).

The ALTCERT program was an intensive two-year 36-hour graduate program. Personnel specialists matched the needs of the individuals and the program with the appropriate school and its administration. A university supervisor met with each teacher at least once per week at the start of the program. Teachers were involved in a three-step observation process, the 'Supervision Throughout Model'. Results of study were very positive. ALTCERT teachers were performing at or exceeding satisfactory levels in their first year of teaching and demonstrated specific instructional and management competencies at better than satisfactory levels. Finally, there were no significant

differences between ratings of teachers prepared in the ALTCERT programs and teachers from the control group who were prepared in traditional teacher preparation programs.

In Maryland, another alternative route to certification is called the Resident Teacher Certificate (RTC), adopted by the Maryland State Board of Education (MSDE) in 1990, and became effective in 1991. This certificate creates an alternative route into the teaching profession for applicants without a teaching background. Local school systems are charged with the implementation of an RTC program. The RTC program is intended to appeal to and recruit liberal arts graduates and those who are changing careers who already hold degrees in an academic content in the arts and sciences. Once a RTC program is established by a local school system, one needs to meet the following requirements: (a) an earned bachelor degree or higher from a regionally accredited institution of higher education in a discipline appropriate to an assignment in the elementary or secondary school curriculum; (b) have a "B" average of or better in courses related the area of assignment; (c) submission of qualifying scores on teacher certification tests- Praxis I and II (Basic skills and content tests only); and (d) complete 135 clock hours of study prior to employment as a resident teacher.

Once requirements listed above are satisfied, an individual is employed by the local school system as a resident teacher. During employment, a resident teacher must fulfill additional certification requirements including: (a) completion of an additional 45 clock hours of study for secondary resident teachers or an additional 135 clock hours of study for elementary teachers during employment as a resident teacher; (b) receive mentoring for each year employed as a resident teacher; (c) present verification of satisfactory teaching performance for each year employed as a resident teacher; and

(d) submit qualifying scores on remaining teacher certification test-Praxis II (Principles

of Teaching and Learning or specific pedagogy tests as required by the certification area)

(MSDE, 2004; http://certification.msde.state.md.us/Certification/ResidentTeacher.html).

With increases in teacher shortages, some argue there is a need to certify and

recruit educators who have nontraditional backgrounds to fill those vacancies. While

some programs provide for ample feedback and supervision of newly prepared educators,

others simply offer certification with specialized knowledge of content in lieu of

knowledge of pedagogy. At this time, there is not enough evidence to evaluate the

efficacy of these programs.

Dual-licensure. Mattson and McGregor (1997) argue that diverse students do not

only mean those that have difficulty learning. Diversity refers to different linguistic,

cultural, and ethnic groups as well as those who learn differently. They advocate for a

reform in teacher preparation that encompasses knowledge of curriculum, conflict

resolution, problem solving as well as individual learning needs. The authors refer to

several national reports calling for reform in teacher education that values diversity in

student populations, including students that learn differently. A shift in the attitude

towards teaching may be necessary to 'reach all learners'. Specifically, the authors called

for a change in the way that all teachers teach. Teachers must be able to meet the needs

of a range of learning styles, intelligences, and talents of a variety of students. Teacher

preparation programs must prepare future teachers to have a repertoire of various

teaching strategies and the 'mindset' that all members of the classroom are valued.

Unfortunately, Mattson and McGregor have found that while discussions around

teacher education reform have been occurring regularly for the past several years, special

education is often overlooked. According to the authors, it has been argued by several researchers that if reform efforts do not include general education *and* special education, the extent of restructuring will be inadequate. The authors list and cite several examples of how general educators and special educators are not adequately prepared to meet the needs of all students within the context of today's ever-increasing inclusive schools.

Most pre-service personnel preparation programs prepare both general educators and special educators in isolation (Mattson & McGregor, 1997). This, in turn, creates a separate knowledge base and subsequent 'expertise' areas. Specifically, general educators learn to meet the needs of the entire class and to teach curriculum. However, special educators learn to meet the needs of students who have not traditionally been able to learn curriculum in the same way as the norm. As a result, general educators have learned that if a student is unable to meet the demands of the daily curriculum, that student is removed and theoretically 'remediated' until they can return and be successful. Consequently, general educators are not prepared to meet the needs of students with disabilities in the context of the general education class. Typically, general education teacher candidates take little, if any, coursework on special education methods during their preparation to become teachers. Lastly, special educators and general educators have not been prepared adequately to collaborate, even though they are being asked to do so once teaching. As a result, special educators are often unclear of their roles within the general education class and general educators are unaware of the best way to meet the needs of a diverse learner.

Mattson and McGregor (1997) suggested several ways to restructure teacher education to meet the needs of all students. One approach is a unified teacher preparation

program where all educators learn together at the pre-service level. While some

universities are unifying teacher education (e.g., Syracuse, Univeristy of Washington,

Univeristy of Illinois, Univeristy of South Florida), most are not due to the tremendous

commitment from higher education faculty and "alignment with state certification

practices" (p. 5). Other suggestions include the infusion of collaboration of various

disciplines and activities into current programs. Difficulty may result from various

teaching loads and responsibilities within departments and the lack of time to generate

'additional' responsibilities. Another option would be to increase special education

content and practicum experiences within general education preparation programs.

However, there would need to be additional faculty from multiple content areas. Their

final suggestion included a restructuring of basic coursework for *all* education majors to

reflect a 'common core' of skills that all educators must have. Unfortunately this would

involve a consensus on those 'common core' skills and a "substantial commitment of

faculty to work through a planning process and a willingness to change" (p.6).

Villa, Thousand, and Chapple (1996) reviewed many shortcomings of pre-service

teacher education programs. Specifically, the authors outlined the necessary skills

needed to promote successful inclusion of students with even the most severe disabilities.

Unfortunately, most pre-service programs prepare general educators and special

educators separately. Consequently, graduates leave with specialized skills either based

on remediation of individual student needs (for special educators) or teaching the

required general curriculum (general educators).

Villa et al. (1996) argued, "public schools simply mirror today's colleges and

universities" (p. 42). Essentially no one is graduating with the necessary skills to teach a

heterogeneous group of learners. Most teacher preparation programs do not model

collaboration as many faculty members have competing agendas across departments.

Between specialized research, advisees, committee membership, and course instruction,

most faculty members don't have the time or the inclination to approach members of

other departments to develop collaborative opportunities for teacher candidates. Villa et

al. (1996) delineated steps that higher education can take to facilitate a more collaborative

approach to preparing all educators. Essentially the authors argue for combining some

coursework and eliminating those courses that may have similar content in different

departments. They suggest all pre-service teacher candidates learn about the historical

foundations of teaching and subsequently specialize in an area to develop and extend

their competence.

Villa et al. (1996) summarized four dual certification programs where teacher

candidates are both certified in general education and special education. The programs

summarized in this article are at Trinity College, Syracuse Univeristy, Univeristy of

California at San Marco, and Arizona State Univeristy-West. These programs prepare

educators to teach heterogeneous groups of students in a variety of settings. Faculty

often model collaboration by co-teaching and providing instruction in school settings.

In addition to reviewing dual certification programs, the authors outlined a

community oriented in-service preparation program for all stakeholders who value

diverse learners. Preparation first consists of exemplary practices for heterogeneous

groups for any member of the community. Next it may focus on procedural safeguards

for parents. The third tier of preparation is specifically for those working directly with

children. Concepts introduced include: (a) outcome-based instructional methods,

(b) alternative assessment, (c) adaptation to curriculum, (d) facilitating peer supports,

(e) technology use, (f) school-wide behavior supports and discipline approaches, and

(g) instruction of social skills. The final tier focused on providing actual supervision and

coaching to practitioners so that may develop the reflective thinking skills needed to be

successful teachers. A statewide summer leadership institute and regional summer and

school year preparation are also discussed.

Villa et al. (1996) concluded that the "creation of inclusive schools and

classrooms is dependent on the development of a new collaborative relationship between

local education agencies, school districts, and preparation institutions" (p.48). This will

necessitate coordinated actions of many stakeholders at the local and state levels, ongoing

preparation, and model demonstration sites.

Keefe, Rossi, deValenzuela, and Hawarth (2000) provided an overview of the

Dual License Program at the University of New Mexico together with its unique aspects

that prepare apprentice teachers to work effectively in inclusive settings with all students.

Included in the student population are students with disabilities, including severe

disabilities, as well as students who are linguistically, culturally, academically, and

economically diverse. Upon graduation, apprentice teachers of the Dual License Program

are eligible to be licensed in general education (K-8) and special education (K-12). A

program overview is given that highlights admission into the program, competencies that

must be met by the apprentice teachers, how the program is structured with pre-residency

and residency components, the course sequence, field placements, and staffing.

Emphasis on the collaborative efforts among the department of general education,

department of special education, school districts, individual staff members, and apprentice teachers is made.

The adoption of democratic ideals in education is an underlying foundation that facilitated the redesigning of supervision necessary to provide a mentoring opportunity for the apprentice teachers (Keefe et al., 2000). The program itself is a work in progress as it uses outcome assessments to monitor, assess, and modify the program. The outcome assessments are based on a variety of evaluations including surveys given to apprentice and mentor teachers, interviews, the apprentice teacher competency matrix, residency component rubrics, instructor and field supervisor evaluations, and graduate placement data. This reform demonstrates the philosophy of the program that there is much to gain in a unified approach in educating teachers to teach all children (Keefe et al., 2000).

At this time, there are a limited number of programs that offer dual certification between general education and special education. The existing programs offer teacher candidates the opportunity to engage in collaborative practices at the pre-service level, which may lead to better collaborative efforts once teaching. However, until collaboration is a priority within higher education and there are incentives for faculty to change, there will continue to be separate preparation of teacher candidates.

Changes needed in special education teacher licensure. According to Ferguson (2000), there are several challenges currently facing teacher education. Many teacher preparation programs are changing requirements and encouraging more activity or field-based performance assessment. Many assignments are directly related to course content, yet demonstrated within the field during practicum or student teaching experiences. Teaching the way we want our graduates to teach has challenged teacher education

programs to redesign courses, program sequences, and practices. Teacher candidates'
experiences in real schools and classrooms become the content of many university-based
classes. These classes are taking place on the university campus and increasingly within
partner schools.

More so, there has been a shift to a standards-based system in education. As
teacher educators in special education, Ferguson argues that we must be part of the larger
reform 'conversation' about professional development, accountability, and overall
teacher preparation. She argues that inclusive teacher preparation may never come to
fruition for special educators and general educators, unless we can be part of overall
teacher education reform. It is not enough that either prospective teachers or children and
youth know things; they must also be able to do things. Ferguson discussed the
feasibility of a tiered licensure system. She suggests in the future, we may see either no
separate special education licensure (because general and special education initial
preparation have successfully merged) or special education only available as
endorsements added to a general education license.

Ryndak and Kennedy (2000) discussed possible reasoning behind decreasing
scores by students on standardized achievement tests. The authors argued that it is
believed this is evidence that schools are failing to properly prepare students and may be
a consequence of teachers who are not adequately prepared. "This has led to calls for
Institutions of Higher Education (IHE's) to prepare teachers for increasingly specialized
roles, rather than in broader issues of pedagogy" (Ryndak & Kennedy, 2000, p.69).

Teacher education programs face a complex existence. There has been a trend
toward even greater teacher shortages (U.S. Department of Education, 2002). Due to

shortages, agencies are hiring individuals without certification or certification out of the area they are hired to teach (U.S. Department of Education, 2002). Another problematic trend is that many teachers leave positions within five years. With accelerating diversity of America's students, teachers are challenged by the broadening spectrum of linguistic, cultural, and ethnic differences (Ryndak & Kennedy, 2000).

Teacher education programs must prepare teachers to be successful in inclusive educational environment in which students with or without disabilities have a mutually valued presence (Ryndak & Kennedy, 2000). General education and special education teachers need to be prepared to meet the needs of students with disabilities in general education settings. Teachers for all ages (elementary through secondary) need additional information on how to adapt curriculum and instruction to meet the educational needs of these students. Some teacher education programs are preparing teachers with dual licenses in general and special education by blending content from general and special education.

Ryndak and Kennedy offered three options for higher education to prepare educators who work with students with special needs, particularly those with severe disabilities. First, they can prepare teachers to have a range of specialized expertise required to effectively provide educational services for students with disabilities, including those with severe disabilities and to have some knowledge of the general education and content instruction (generalists). Second they could prepare teachers to specialize in the area of severe disabilities and consequently, collaboration and communication skills so that they may share information with those who specialize in general education content (specialists). Or lastly they can prepare teachers to be both

generalists and specialists, familiar with all aspects of the specialized knowledge needed to teach students with severe disabilities as well as general education content.

Smith (2000) provides a commentary on the topics addressed in the special JASH issue on teacher preparation for inclusion of students with severe disabilities. According to the National Center on Educational Statistics, 78% of general educators serving students with disabilities in their classroom felt unprepared to address these particular students' educational needs. Additional challenges faced by teachers include the following: increase diverse student population not reflected by teacher workforce, talented individuals seeking employment in higher paying sectors, greater emphasis on technology in the provision of educational services, and higher demands and accountability on teachers (Smith 2000).

Initial Report of the Secretary on the Quality of Teacher Preparation (2000) indicates that states vary widely in requirements for teacher certification and licensure. The following are needs based on their findings: (a) more difficult entry requirements for teacher preparation programs including mandatory admissions tests, higher student grade point averages and "cut scores" on state licensing programs, (b) interviews to screen candidates, and (c) longer student teaching internships (Smith, 2000). Furthermore, additions to curriculum and more attention to student outcomes through the use of performance assessments are needed.

Summary. Many teacher preparation programs are changing requirements and encouraging more activity or field-based performance assessment. General education and special education teachers need to be prepared to meet the needs of students with disabilities in general education settings. Teacher education programs must prepare

teachers to be successful in inclusive educational environments in which students with or without disabilities have a mutually valued presence (Mattson & McGregor, 1997; Ryndak & Kennedy, 2000; and Villa et al., 1996). Teachers for all ages (elementary through secondary) need additional information on how to adapt curriculum and instruction to meet the educational needs of these students (CEC, 1999 and Ferguson, 2000). Some teacher education programs are preparing teachers with dual licenses in general and special education by blending content from general and special education (Keefe et al., 2000; Mattson & McGregor, 1997; and Villa et al., 1996). The current study establishes the use of and beliefs about the importance of best practices for inclusion by special educators prepared at the University of Maryland. The current study also establishes what specific content of pre-service programs including a course on *Inclusive Practices*, field experiences, and activities engaged during inclusive field placements that lead to greater preparedness to support students with disabilities in inclusive settings.

Inclusive Practices

The following section on inclusive practices is broken down into four different sections. First, the background and information on inclusion in general is discussed with a definition of best practices for inclusion, a major component of the study. Second, research in inclusive schooling practices for students with severe disabilities is delineated. Specifically, evidence regarding the efficacy of inclusive schooling practices for both students with severe disabilities and students without disabilities is presented. In addition, a section on program quality indicators outlines how some researchers evaluated the quality of services students with severe disabilities were receiving. Third, barriers to

the successful implementation of inclusive practices are outlined based on several pieces of literature. Lastly, supports needed to implement inclusive schooling practices are also discussed.

Giangreco and Putnam (1990) reviewed existing literature, prior to 1990, on students with severe disabilities regarding the provision of appropriate special education services in general education environments. Court cases influencing practice and research studies are included. Giangreco et al. (1990) discussed the advantages of local schooling. Specifically, the authors suggested that school personnel must cease confusing intensity of services with location of service delivery and schools must provide educational experiences that reflect the demands of an inclusive life in the community. Giangreco and his colleagues also advocate for individualized educational goals that reflect longitudinal planning and meaningful outcomes. Educational inclusion, student dignity, and the extent of services that are encompassed are major issues.

Curricular and instructional practices that are conducive to structured social contact are important to students with severe disabilities. Giangreco and his colleagues also advocate for specialized instruction needs to be provided to meet individual student needs while also providing opportunities for meaningful peer relationships and participation. Overall, the authors recommend the following as a suggestion for future research: (a) effects of inclusion on academic achievement, social-behavioral skills, social attitudes, and interpersonal relationships, (b) balance between intensive skill, community based, general education classroom, and social interaction, (c) validation of adaptation models that result in positive educational outcomes, (d) effects of various

instructional practices and teacher behaviors, and (e) reevaluation of educational

objectives for both students with and without disabilities.

In 1994, Wisniewski and Alper outlined some guidelines for including students

with severe disabilities in the general education classroom. The article discussed the five

systematic phases intended for leaders to aid in the successful inclusion of students with

severe disabilities. The phases are as follows: develop networks, access resources,

review options, install inclusion strategies, and provide a system of feedback and self-

renewal. Phase one (Developing Networks) begins by establishing collaborative

relationships between teachers and parents whom share a common vision. Additionally,

they will share in the efforts as well responsibilities, and decision making towards

promoting inclusion (Wisniewski & Alper).

Wisniewski and Alper (1994) suggested the use of several system-change

strategies or strategies towards inclusion which include providing direct services and

intervention, offering technical assistance, providing demonstration models and

developing support networks. Overcoming negative attitudes towards inclusion is critical

and strategies for facilitating positive attitudes include commitment among

administrators, advance preparation and inservice preparation sessions (Grenot-Scheyer,

Coots & Falvey, 1989). Studies have shown mixed support among school professionals

for inclusion and indicate that the more severe the disability the more negative the

attitude. The authors also addressed the need for leaders as well as teachers to evaluate

the degree of inclusion in school environments using such instruments as Program

Quality Indicators (Meyer, 1987).

The authors suggested that leaders needed to establish task forces, encourage parental involvement and establish strong policy statements advocating inclusion to aid in adequate delivery of services. Schools commonly experience difficulty in identifying and implementing the structural changes that lead to inclusion. The debate over whether inclusion is cost effective continues with many schools experiencing personnel shortages. In phase three, leaders should review techniques shown to be effective in inclusive educational environments such as team teaching, flexible grouping, cooperative learning, peer and cross-tutoring, special friends and buddy systems and assistive-device technologies and computer assisted instruction.

Wisniewski and Alper (1994) concluded that installing strategies that lead to inclusion involves leaders firstly seeking increased awareness of specific instruction through parents and teachers. Secondly, provision of information for teachers and clarifying teachers' roles is needed. Thirdly, leaders give technical assistance and promote collaboration when concerns over the activity's effect on parent, teacher or students expectations or performance are evident. The last phase involves developing a system of feedback and renewal between parents, teachers, and the community. Inclusion should be evaluated on the following: extent to which students with severe disabilities gain independence in performing functional skills in their home, school, and community environments, participate in the community, and extent to which these students make choices in their daily lives.

In many school districts the question is not whether inclusion should be a practice, but how to best employ inclusive practices. A true model of inclusion would serve all students with disabilities, regardless of the level of severity, only in general education

classes or classrooms with in-class educational support from the special education

teachers or other specialists (Bruneau-Balderrama, 1997). Reports from individual

schools and school districts where inclusion has been successfully instituted generally

support benefits from both general and special education students and staff. Yet, many

educators remain reluctant to embrace inclusion for a number of reasons. Many feel

'forced' into inclusion. Reports also indicate an inadequacy of teacher preparation for

inclusion at the pre-service and in-service level as well as an inability to give equal

attention to all students. Lastly, commitment of administration was consistently

questioned (Bruneau-Balderrama).

Personality factors and communication style reflect important aspects of

successful inclusion. Communication that is open and easy is more likely to lead to

successful interactions between general educators, special educators, related service

providers, administration and support staff. Bruneau-Balderrama suggested that teachers

needed to engage in constant communication, remain flexible, and retain a sense of

humor. Communication with service providers should also be honest and frequent.

Bruneau-Balderrama (1997) suggested that teaching style and philosophy are also

important when facilitating inclusive practices. Both teachers must support the principles

of inclusion and general educators should have some background in disabilities,

particularly with regard to intervention techniques. Both members of the team must

examine their teaching strategies and behavior management approaches and make

changes when the situation warrants. Both teachers should have a similar approach to

learning and must support one another to strive to work things out. Finally teachers must

be willing to accept input from parents and support their continued involvement in the

inclusion process. With regard to management issues, teachers must meet daily and plan for the following day. Both must always be engaged with students in order to meet so many diverse needs. Bruneau-Balderrama concludes that team teaching is one of the hardest ventures one can undertake because teachers must work so closely together.

Jackson, Ryndak and Billingsley (2000) examined opinions of several national severe disabilities experts on useful practices in inclusive education. The authors argued that continued research "that delineates best inclusive practices and potential benefits may help to dismantle some barriers to inclusion within schools (p. 129)." While single subject research is at times labor intensive, it may be necessary for future research on strategies appropriate for use within inclusive settings. It was also suggested that surveys and interviews might also be extremely beneficial in evaluating the efficacy of various strategies used in inclusive settings.

Jackson et al. (2000) sent a questionnaire to experts in severe disabilities who were asked to provide some personal information, define inclusive education, and to provide their opinion on useful practices in inclusive education. Experts were defined as those who have authored articles related to inclusive education in select journals. Categories in which inclusive practices could be framed were developed by the authors and were based on professional literature.   Experts were asked to comment on useful practices and to provide the source of their information (e.g., personal experience, empirical research conducted, professional literature).

Jackson et al. (2000) developed nine categories, all of which had several themes that emerged from expert responses. The first category was 'Promoting inclusive values'. Corresponding themes included: (a) creating community in the classroom, (b) providing

positive examples, (c) use of appropriate practices, and (d) 'living inclusion day-to-day'. Ultimately, 'Promoting inclusive values' implied that all students were valued members of the class and that practices that were successful were talked about openly among staff and parents and promoted to those who were not yet advocates for inclusion.

The second category was 'Collaboration between general and special educators'. Themes included: (a) unified school culture, (b) equalize roles and responsibilities, (c) meet staff preparation needs, and (d) the development of relationships between all educators. 'Collaboration between educators implied that roles and responsibilities needed to be redefined and provide an opportunity for colleagues to communicate effectively and share expertise as well as work together to meet the needs of students.

The third category was 'Collaboration between educators and related service providers'. The themes that emerged included: (a) establishment of a common set of 'inclusive' values, (b) reconfigure service provision, (c) redefine the service providers' contribution, and (d) creation of a shared focus on education outcomes. Experts consistently conveyed the notion that there needed to be dissolution of the 'rigid boundaries' held by many therapists and that service provision needed to be integrated within the context of the general education classroom versus traditional pull out models.

The fourth category was 'Family involvement' which included the following strategies: (a) broad roles for parent participation, (b) utilize parents as an information source, (c) ensure open communication, (d) assist families in making informed choices about their child's placement, (e) make the 'inclusion option' happen, and (f) broaden our understanding of families. It was felt by many experts that families are valuable and sometimes 'underused' source of information.

The fifth category was 'Choosing and planning what to teach as evidenced by: (a) gathering relevant information across environments and tasks, (b) selection of useful data-gathering and decision making protocols, and (c) ensuring knowledge sharing and service coordination. 'Choosing and planning what to teach' focused on selection and prioritizing of goals that will increase independence and focus on future environments that are based on the general education curriculum and can be embedded within daily instruction.

The sixth category was 'Scheduling, coordinating, and delivering inclusive services within the school' as indicated by reconfiguring service structures and the use of a variety of non-intrusive adaptations. Experts reported the need to integrate individual instructional activities within the general educators lesson plans, use a matrix to assist in recognition of opportunities to provide instruction on IEP objectives, and use strategies conducive to all students engaging in active learning (e.g., block scheduling, cooperative learning groups).

The seventh category was 'Assessing/Reporting student progress on an ongoing basis' through the use of performance-based, authentic, in-context assessments. Experts reported that assessment should illustrate the "functional direct relationship between environmental demands, student needs, and student abilities, so that the information is meaningful to team members" (p.136).

The eighth category was 'Instructional strategies' as evidenced through the use if systematic instruction methods, instruction provided in context and methods that enhance social relationships and membership are used. Respondents emphasized that instruction should focus on antecedents; prompting and general case programming that is activity

based, uses natural opportunities, and uses existing routines. Social skills instruction,
peer-mediated instruction, and cooperative learning provide opportunities to enhance
social relationships of students.

The last category was 'Supporting students with challenging behavior' by (a)
using contextual modifications or manipulating antecedents by anticipating behavior, (b)
involving peers through instruction and modeling of appropriate behavior, and (c) using
methods that focus on the function rather than the form of behavior. Specifically,
respondents wanted to emphasize the need for teachers working in inclusive settings to
understand the communicative function of the behavior and to teach students with
challenging behaviors to make choices.

Most of the respondents (83%) reported that personal experience was the major
source of information from which they drew their expertise. Personal research activity
and empirical research accounted for a little over 50% as the source of their information.
Jackson and his colleagues concluded that special educators must align themselves with
general educators. Reforms are necessary that may be resisted by unprepared teachers,
parents, and/or district policy mandating a full continuum of services. Finally, the
authors recommended that special education instructional methods must be evaluated
within the context of the general education setting (Jackson et al., 2000).

In the previously reviewed articles, several strategies for developing inclusive
education are presented. Inclusion evolved out of the provision of Least Restrictive
Environment (LRE) originally mandated in the Education for All Handicapped Children
Act (P.L. 94-142, EHA) and later revised in the Individuals with Disabilities Education
Act (P.L. 101-476, IDEA) and required as part of the amendments to IDEA 1997.

Inclusive best practices are defined as those research based procedures that are deemed to be most effective when used within the context of an inclusive setting. Examples of 'best practices' include: "(a) collaboration between general educators, special educators, support staff, and related service providers; (b) family involvement; (c) choosing and planning what to teach; (d) scheduling, coordinating, and delivering inclusive services within the school; (e) assessing / reporting student progress on as ongoing basis; (f) instructional strategies; and (g) supporting students with challenging behavior" (p. 133, Jackson et al., 2000).

Research on inclusive practices. A bulk of research focused on the need for development of social relationships and friendships formed between students with severe disabilities and their nondisabled peers as a result of mainstreaming, integration, and ultimately inclusion. The importance of facilitating friendships and nondisabled peer involvement in the education of students with severe disabilities was discussed by Stainback et al. (1983) and again by Stainback and Stainback (1987) which included guidelines for achieving and maintaining friendship skills between students with severe disabilities and their peers. Specific benefits that nondisabled adolescents perceived for themselves from their social relationships with peers with severe disabilities included: (a) improvements in self-concept; (b) growth in social cognition; (c) increased tolerance of other people; (d) reduced fear of human differences; (e) development of personal principles; and (f) interpersonal acceptance and friendship (Peck et al., 1990). Haring et al. (1987) conducted a comparison study evaluating the difference between peer tutoring and special friend experiences and found that there were significantly higher levels of social interaction in the special friend experiences verses tutoring experiences. All of the

previously cited articles stressed the need for development of friendships and social interactions among students with disabilities and their nondisabled peers.

A majority of position papers and research also focused on development and measurement of social interactions among students with severe disabilities and their nondisabled peers as a result of mainstreaming, integration, and ultimately inclusion. Stainback et al. (1981) in a position paper outlined methods for encouraging interactions among students with severe disabilities and their nondisabled peers including: (a) classroom organization, structure, and materials; (b) teaching the students with severe disabilities specific interaction skills; and (c) teaching the nondisabled peers to interact with the students with severe disabilities. Fritz (1990) compared social interactions among students with mental retardation and nondisabled peers using an ability awareness activity. Results indicated that a one-time ability awareness activity was not enough to increase social interactions among students with and without disabilities. Suggestions included both structured (e.g., teacher developed, purposeful interaction) and unstructured (naturally occurring such as recess, lunch, or during recreation and leisure time) opportunities for social interactions should be made available.

Fenrick and Petersen (1984) successfully measured an increase in positive attitudes towards students with moderate to severe disabilities by their nondisabled peers after participation in a peer-tutoring program. Sasso and Rude (1988) measured increases in social status by students involved in a peer initiation program. Staub and Hunt (1993) evaluated the effects of social interaction training on high school peer tutors of schoolmates with severe disabilities. The social interaction training was successful in that those receiving the training increased their social interactions with the students with

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severe disabilities more than those who had not received the training. Grenot-Scheyer (1994) found differences between the interactions among students with severe disabilities and either their friends or their acquaintances. Specifically there were instances where the friend would initiate interactions more than the acquaintance. Helmstetter et al. (1994) surveyed high school students about the outcomes of interactions with peers with moderate to severe disabilities. Results indicated that the interactions with the students were perceived as mostly positive including: (a) increased responsiveness to the needs of other people; (b) valuing relationships with people with disabilities; (c) personal development; (d) increased tolerance of other people; (e) development of personal values; (f) increases in appreciation of human diversity; and (g) positive changes in personal status with peers. All of the previously mentioned studies have shown interactions between students with moderate and severe disabilities and their nondisabled peers were often achieved through inclusionary practices.

Hamre-Nietupski et al. (1993) surveyed parents of students with moderate, severe, and profound disabilities in the state of Iowa. The author developed an instrument to survey parents in regards to their preferences of how much time should be spent on skill instruction and friendship development while in school. Specifically the survey was administered to determine the percentage of time that should be spent on functional life skills development, academic skill development, friendship development, or other skill development.

The preferences of parents were assessed using several variables including the level of disability of the student and the age of the student. Results of the study were as follows. The parents of students with moderate disabilities preferred that there children

learn functional life skills 42% of the time, academics 36% of the time, and develop

friendships 22% of the time while in school. Parents of students with severe and

profound disabilities preferred that their children learn functional life skills 50% of the

time, develop friendships 26% of the time, learn academics 14% of the time, and engage

in other activities 11% of the time (other activities included physical therapy, speech

therapy, occupational therapy, etc.).

When the variable of age was examined, results indicated that as a student got

older the parent preferred that the student learn more functional life skills and when the

child was younger, parents preferred for their child to develop friendships. Implications

of this study include the need to continue to teach functional life skills but also to include

academic instruction and friendship development as important goals for all students with

disabilities.

Another study, which tried to empirically validate the inclusive school movement,

was by York, Vandercook, Macdonald, Heise-Neff, and Caughey in 1992. York et al.

(1992) surveyed general education teachers, special education teachers, and middle

school students at the end of the first school year where students with severe disabilities

were being included into general education classes. Eleven general educators, seven

special educators and 181 students without disabilities were surveyed. Questions on the

survey varied for general and special educators and students. The students with severe

disabilities were included daily in general education classes including science, reading,

social studies, health, P.E., and industrial technology. None of the students attended

general education classes for an entire day.

York et al. reported feedback from general educators was generally positive. The general educators indicated that inclusive education seemed to benefit both children with and without disabilities. The general educators saw improvements in skill retention of students with disabilities as well as an increase in appropriate behavior. Another benefit noted was the acceptance of the students with disabilities by the students without disabilities and genuine friendship development occurring. The general educators noted difficulty in knowing how and when to include the students with disabilities into class activities.

York et al. (1992) reported feedback from special educators revealed that they were also generally pleased with the outcome of the school year. The special education teachers were often present when the students were included in the general class and aided the general education class teacher in adapting materials and development of curricula. The special educators were also enthusiastic about the social development of the students with disabilities as well as the acceptance by the students without disabilities.

Student feedback indicated mostly positive feedback about their classmates with severe disabilities (York et al., 1992). Students without disabilities enjoyed having new students with disabilities in their classes and felt they found more similarities between themselves than differences. The students mostly felt that the students with severe disabilities could learn and should be included in their classes at least some of the time if not all of the time. Implications of this study include acceptance by students and teachers of people with disabilities in the classroom and the feasibility of inclusion as a successful educational option.

Hunt, Farron-Davis, Beckstead, Curtis, and Goetz (1994) examined the effects of placement of students with severe disabilities in general education versus special education classes. The authors compared eight full inclusion programs to eight special class programs with each program containing two participants having either more or less disability. There were several criteria used to determine whether or not the programs were full inclusion models or strictly special class models including: chronological age appropriate placement, attending the same class if the student was not disabled, a natural proportion of students with severe disabilities at the school and placed in general education classes, support services were implemented by both special education and general education teachers in the context of the general education class including IEP development and implementation.

Hunt et al. (1994) used several measures to determine student outcomes and program quality. Measures included IEP quality and curricular content, engaged time, integrated activities, affective demeanor, and social interactions. The authors analyzed the programs and concluded that the full inclusion programs were more effective. Consistently, the students in the full inclusion classes spent more time engaged and interacting socially with their nondisabled peers. Also, the types of activities and curriculum the students in the full inclusion classes were engaged often were more academic in nature. Hunt et al. (1994) concluded that more empirical research is needed in the area of full inclusion versus special education placement.

Logan and Malone (1998) compared the instructional contexts of 15 students with severe disabilities and 15 of their general education peers in the same general education elementary classrooms. Use of a part-time support model was employed. Elements

examined during the course of the study included: (a) activities, (b) instructional group size, (c) amount of instruction each group received from various general and special education staff and peers, (d) nonverbal prompting provided by teachers, (e) teacher focus of instruction, and (f) student engagement.

The educational environment consisted of three schools, 15 different classrooms and 15 different general education teachers, and one student with severe disabilities per classroom. There was a special educator or paraprofessional team teaching two to three hours per day and the general education teacher was responsible for instruction of the student with severe disabilities the rest of the day (highly disruptive students were excluded). Teachers all volunteered to teach in inclusive settings, 12 general educators were in their first year of inclusion, and three were in their 2nd year of inclusion (Logan & Malone, 1998).

Results suggest different instructional contexts existed for students with severe disabilities. More individualized instructional supports were provided for the students with severe disabilities, including one-to-one instruction, small group instruction provided by special education staff, physical and gestural prompting, and teacher focus on the student with severe disabilities. Special education staff provided most of the individualized supports.

Additional research and limitations of the study were discussed. Logan and Malone (1998) suggested there is a need to study other full time and part time special education support models that provide individualized instructional contexts. There is also a need to study how much individualized instructional contexts more restructured general ed. models provide and the type and level of teacher support needed (mentions that the

activity data may not reflect how IEP objectives, especially functional skills, when integrated into the general education activities), investigate the difference of time shared in instruction by general and special educators, and to learn what teachers, parents, school boards, and proponents or opponents of inclusive schooling think of the results.

Implications of Logan and Malone's (1998) study include the following; (a) support staff should play a variety of roles in the general education classroom, (b) additional personnel is needed, (c) the part-time cooperative teaching model may provide adequate instructional support for students with moderate, severe, or profound disabilities who don't have challenging behaviors, (d) special education staff focus their instructional support on the initial acquisition of skills by the student with severe disabilities where systematic instruction is more critical.

Helmstetter, Curry, Brennan, and Sampson-Saul (1998) sought to gain a better understanding of the instructional contexts of students with severe disabilities by comparing their general and special education classes in terms of instructional format and content, instructional partners, and student engagement in instruction. Nine elementary students with severe disabilities were observed in the general special education classrooms using a two-minute time sampling procedure. Each participant was observed for one and one-half schools days. Only time spent in the classroom was used. The amount of non-instruction and instruction was recorded, along with the instructional format, content, partner, and student response.

Helmstetter et al. (1998) found in comparison to special education classrooms, general education classrooms provided more instruction, utilized more whole class instruction, provided a comparable amount of one-to-one instruction, addressed academic

content more, and utilized nondisabled peers more and special education adults less. Also, in comparison to special education classrooms, participants in general education were less actively engaged and more passively engaged with teachers and paraprofessionals.

Salend and Garrick-Duhaney (1999) reviewed literature concerning impact of inclusion on: (a) students with disabilities concerning academic outcomes, (b) students with disabilities concerning social outcomes, (c) students with disabilities attitudes toward placement, (d) students without disabilities concerning academic outcomes, (e) students without disabilities concerning social outcomes, (f) attitudes of educators, (g) implementation concerns of educators, and (h) collaborative teaching experiences among special and general educators. Salend and Garrick-Duhaney argued that inclusion is a movement to establish schools and other social institutions that meet the needs of all learners. Respecting and learning from each other's differences is viewed as part of meeting needs. Inclusion affects both children with special needs and children without special needs as it attempts to establish a community of learners. The movement is to alter the current philosophy for educating all children even though it has focused on individuals with disabilities.

Salend and Garrick-Duhaney (1999) reported that results indicated that the impact of inclusion on students with disabilities in the areas of academics, social outcomes, and attitudes towards placement shows gains, no significant differences, and even failure. Various models of delivery, type of disability, and age as well as how these interrelate, may explain discrepancies. The impact of inclusion on students without disabilities indicated that inclusion does not interfere with the academic performance with respect to

the amount of allocated and engaged instructional time, the rate of interruptions to planned activities, and achievement test scores and grades. Literature reviewed indicated that students possess positive views of inclusion, increased acceptance, understanding, and tolerance of individual differences.

Salend and Garrick-Duhaney (1999) also reported that teachers' responses to inclusion are shaped by a variety of variables and change over time. Teacher perceptions are related to success, student characteristics, financial resources, support services, training, administrative support, and time to collaborate and communicate. General educators experience positive outcomes of increased skill in meeting needs, increased awareness as positive role model, increased confidence as teacher, and feeling good. Special educators experience positive outcomes including increased feeling of being an integral part of school community, enhanced perspective of education system, working with students without disabilities, and observing students with disabilities participate with peers. Concerns for general educators include negative attitudes of others, fear of educating general education students may suffer, inability to address severe health and medical needs and behavioral challenges, lack of funds for supports, rigid requirements of curriculum, limited amount of time for collaboration and communication. Concerns for special educators include loss of control, subordinate role in the general education classroom, and fear of loss of specialized services. The varied findings of the impact of inclusion have several contributing factors. The quality of the inclusion program, the extent of accommodations, and the level of support are influential.

Janney and Snell (1996) conducted a study including five students (focus students) having moderate and severe disabilities and the strategies five teachers used to

facilitate and shape peer interactions. One focus student was in a partial integration classroom, two were in full integration classrooms, and two were in full inclusion classrooms. The authors found that these teachers made modifications that have been organized into four categories. The first category was "New Rules About Helping". Rules changed so that peers were encouraged to "help" or "work with" the students with disabilities. Rules included who to help, when to help, and how to help. The next category was "Just Another Student". Teachers expected the focus students to follow classroom rules and participate in classroom activities and routines. It was noted that rules did have to be modified sometimes, not all instructional activities were modified for focus student participation, and sometimes classmates seemed to adapt a teacher or parent role when helping a focus student. Teachers attempted to "normalize" the appearance of focus students through "Age-Appropriate Interactions". This was noted with clothing, voice inflection, word choice, and instructional materials. Adults used the "Backing Off" strategy to allow for time and opportunity of peers to interact without interference. Often the adult would initiate an activity with a focus student and a peer, and then gradually fade from the activity so that the peers were interacting without adult interference (naturally).

Janney and Snell's (1996) findings lend support to the value of inclusion and the mutually satisfying and cooperative means to achieve it. Modifications and accommodations to class instructional activities, rules, and routines did not inhibit peers from viewing focus students as class members. The encouragement of developing teaching relationships between typically developing peers and focus students "may have trespassed on …social reciprocity that occurs in friendships (pg. 79)." It is suggested that

classrooms should foster an environment of cooperation for all students as opposed to an environment of independence and competition. Inclusive classrooms should reflect the range of student characteristics in the class recognizing diversity and promoting balance.

Fisher and Meyer (2002) investigated development and social competence of students with severe disabilities after two years in a self-contained or inclusive program. Those students who were participating in an inclusive program spent most of their day in a general education class with individual support provided by a paraprofessional and some time 'pulled out' for related services. Students who were participating in a self-contained program received all services and instruction in a special education classroom. Some of these classes were in separate facilities or in a separate wing in a regular school, not necessarily the neighborhood school. The authors reported that placement of individual students reflected 'geographical circumstances' verses differences in individual children.

Two measures were used to evaluate developmental functioning and social competence. The 'Scales of Independent Behavior' (SIB) was used and has been shown to show even the smallest individual differences of students with severe and profound cognitive developments in developmental functioning. The SIB measures: (a) motor skills; (b) social interactions and communication skills; (c) personal living skills; and (d) community living skills. The 'Assessment of Social Competence' (ASC) was designed to assess functional aspects of social competence. Specifically the ASC measures the extent to which students with severe disabilities: (a) initiates contact; (b) self-regulates; (c) follows rules; (d) provides positive feedback; (e) provides negative feedback; (f) obtains cues; (g) offers assistance; (h) accepts assistance; (i) indicates preference; (j)

copes with negatives; and (k) terminates contact. Participants were assessed on both measures, matched into pairs based on chronological age and SIB scores at the first testing, and reassessed on both measures after two years of placement in an inclusive program or a self-contained program (Fisher & Meyer, 2002).

The authors reported that statistically significant gains were made on the measure for development, the SIB, for students in the inclusive program group. The inclusive program group also realized higher social competence scores (ASC). When the measures were examined, not based on group affiliation, results indicated that participants made moderate gains on personal living and community living domains (SIB) and made significant gains with respect to initiating contacts and coping with negative situations (ASC). While gains were not drastic as there was not much difference on the developmental measures, the inclusive schooling group scored somewhat higher on adaptive behavior and traditional development gains. The results lead to the argument that students with severe disabilities may not learn more skills as dictated by their IEP's as a result of direct instruction within a self-contained setting. The results are also supportive of previous research indicating that students with severe disabilities can make significant social gains as a result of inclusion (Fisher & Meyer, 2002).

There is overwhelming evidence to support the efficacy of inclusive schooling efforts based on the research. Specifically, benefits to students with severe disabilities include: (a) higher quality IEP's; (b) an increase in skills taught; and (c) an increase in adaptive behaviors including social skills, friendship skills, and the ability to interact with peers (Hunt et al, 1994; Logan & Malone, 1998; and York et al., 1992). Furthermore, research indicated that there was no concomitant loss of skills traditionally taught within

the context of self-contained settings (Salend & Garrick-Duhaney, 1999). For student

without disabilities, evidence shows that inclusion does not interfere with instruction,

achievement scores, or grades. In fact, inclusive schooling practices have shown to

increase students without disabilities' understanding and tolerance of human differences

and empathy (Helmstetter et al., 1998 and Janney & Snell, 1996). The current study

establishes the knowledge, use, and beliefs about inclusive schooling practices by special

educators recently prepared at the University of Maryland.

Research has shown that students with severe disabilities were receiving services

in their home or neighborhood schools with increased regularity. Researchers began

demonstrating that students with severe disabilities and their nondisabled peers were

experiencing positive outcomes from their increased interactions. As a result, there was a

need to evaluate the quality of the services those students with severe disabilities were

receiving.

Program quality indicators. In 1987, Meyer published the first checklist of

Program Quality Indicators or PQI as a way to evaluate whether school programs serving

students with severe disabilities were using research based and documented best

practices. The items were originally generated from an extensive search of the literature

on effective practices for students with severe disabilities.

In 1987, Meyer, Eichenger and Park-Lee conducted a study to validate these

promising practices in educational services for students with severe disabilities. The

authors sought to gain the expert opinion from multiple stakeholders about which

indicators would best measure program quality for students with severe disabilities. Six

groups (total N=254) representing such interests as behavior therapy, deaf-blindness,

mental retardation, state directors of special education, and parents differentially rated items on the PQI. They rated 123 indicators about their importance when providing educational services to students with severe disabilities. Indicator statements were divided into several categories: (a) program philosophy; (b) program design and opportunities for student learning; (c) systematic instruction and performance evaluation; (d) Individual Education Program (IEP) development and parent participation; (e) staff development and team collaboration; and (f) facilities and resources.

In 1992, Eichenger and Downing replicated the original study conducted by Meyer et al. (1987). This study investigated the perceptions of 28 teachers and 41 program administrators regarding the importance of 123 items representing program quality for learners with severe disabilities. Eichenger and Downing's study provided an update of the process to see if the original value-based statements were still considered important. The authors were also interested in determining if discrepancies would exist between the teachers and program administrators in their ratings of these program indicators and whether their ratings would differ from those of the original six respondent groups. The participants were from university programs that followed the basic philosophy underlying the PQI and represented different geographical regions of the country. The criteria for the teachers included: (a) two years of teaching experience with learners with severe disabilities; (b) teaching in an integrated setting; and (c) and recognition as a master teacher. Furthermore, their current program needed to include functional and age appropriate activities, individualized community-based instruction, and integrated activities with nondisabled peers.

Respondents were asked to rate the relative importance of 123 indicators of the program quality according to a 20-point scale. Three types of ratings were included in the study. First, the mean score ratings and standard deviations were computed across the total sample and separately for the teachers and the administrators on each of the items. These ratings reflected the extent to which each item was perceived as important. Second, t-test comparisons were made on each item to determine whether significant differences existed between the teachers and administrators relative to the importance of the items. Third, the data from both groups were analyzed in comparison to responses made by the six original respondent groups. Both groups consistently rated the majority of the 123 items between the "important" and "very important". The results support the importance of the items listed on the original PQI checklist, and this support provides further credence to the use of this instrument for ongoing program evaluation. The results of these group comparisons indicated that there is good congruence between the perceptions and priorities of the teachers and administrators.

Another replication to further extend the findings of the Meyer et al. (1987) study was conducted by Ayres, Meyer, Erevelles, and Seunghee (1994). The authors chose to investigate whether teachers of students with severe disabilities were implementing PQI. Ayers et al. investigated whether teachers who are "known for their efforts to develop quality programs for students with severe disabilities" (Ayers et al., p. 84) were knowledgeable of PQI, used these indicators in their classrooms, and had difficulty when trying to implement PQI's. Specifically, teachers from five states were asked to complete a survey in which they rated each PQI on a Likert scale in three areas: (a) level of your knowledge and skills for this indicator; (b) degree of presence of this indicator in your

program; and (c) the difficulties of implementation of this indicator. Indicators were divided into group factor scores. Groups included the 'Best Practices' of integration, home school professional practices, staff development, data based instruction, and criterion of ultimate functioning. Mean factor scores were calculated for each group in the areas of knowledge or skill, degree of presence, and difficulty.

Researchers determined that most of the respondents were highly knowledgeable about 'Best Practices' as a whole and there was a relatively high degree of presence of 'Best Practices' in their programs. However, they also reported considerable difficulty when implementing the aforementioned 'Best Practices'. Respondents were also asked to report anecdotal information to support their difficulty in implementing the 'Best Practices' listed on the PQI. Analysis of the open-ended responses indicated a lack of time to implement the best practices and the lack of vision or support by their administration at both the system and school level.

Researchers have documented the benefits for both students with severe disabilities and students without disabilities as a result of mainstreaming, integration, and inclusion. Instruments were developed to determine if quality programs existed and if students with severe disabilities were receiving the best instructional practices. In some cases, it was determined that teachers were implementing these practices identified through research. However, inclusion of students with severe disabilities is not occurring with the regularity one might expect given the benefits attributed to this type of service provision.

Barriers to inclusion. The purpose of York and Tundidor's 1995 study was to develop a district wide profile of the issues raised when considering systems change to

more inclusive educational practices for students with special education labels. First, they gained the perspectives of educators, parents, and students regarding inclusive education. As stakeholders, it was felt that their opinions were valuable in the planning process. Second, York and Tundidor documented issues raised when considering system-wide change toward inclusive education. The authors used a qualitative methodology via 45 interactive and participatory focus groups discussions. Participants included seven secondary schools and six elementary schools' professionals, support staff, parents, and students

As a result of in depth qualitative analysis, four themes emerged including history, perceived facilitators, perceived barriers, and priorities for change (York & Tunidor, 1995). There has been an increase in the percentage of students with disabilities attending regular schools, but special education services remain largely separate from general education within those schools. Perceived facilitators centered on the attitudes and skills of service providers and the allocation of collaboration time. Perceived barriers included rigid general education curricular expectations, insufficient resources for staffing and materials, lack of collaboration time, and negative attitudes. Many respondents questioned the appropriateness of inclusion for students with more severe disabilities. Student groups expressed many differences in opinion from adult groups, particularly regarding the appropriateness of the inclusion of students with more severe disabilities (York & Tunidor, 1995).

Professionals were better informed, but expressed more skepticism, distrust, and frustration than other groups. They focused on curricular issues and felt that only students who could achieve the same curricular outcomes should be included in the

general education classes. Support staff focused on individual students in relation to their respective job responsibilities. They consistently identified the need for more resources. Parents centered on issues specific to their respective children. Unfortunately, there seemed to be an overall inability from the adult groups to envision a different way of structuring for inclusion.

Student groups first talked among themselves concerning peers with special needs. They had received very little information about students with disabilities (no ability awareness). They tended to focus on social and interactive aspects of inclusion and participation of peers with disabilities in general education classes. Cognitive and academic abilities were not mentioned as barriers to inclusion.   Student groups engaged in conversation of how they could facilitate greater inclusion of their peers with disabilities and did not express concerns about certain types of disabilities and behavioral challenges. Finally, they expressed a sense of loyalty to the students with special needs.

York and Tunidor (1995) concluded that the study was successful in developing a profile of issues from diverse constituents in a district proposing a systems change to inclusive education. The findings are also largely representative of opinions of constituents with little knowledge or experience with inclusion.

McDonnell (1998) addressed the biases of general educators and special educators, which can impede implementation of strategies that are conducive to a student-centered approach for all students (inclusively). McDonnell discussed empirically validated strategies that: (a) support the development of an effective instructional foundation within general education classes, (b) accommodate the unique

needs of students with severe disabilities, and (c) were implemented within typical structure of elementary and secondary classrooms.

McDonnell found that teachers should: (a) actively engage students, (b) ensure high levels of success, (c) present materials systematically and consistently, (d) provide immediate feedback, (e) group students heterogeneously, (f) use cooperative learning and peer tutoring, and (g) create student-specific, parallel, naturalistic and embedded instruction. McDonnell concluded that improving school achievement for students with severe disabilities can only be done by improving instruction for all students. He also stated that research suggests a number of positive outcomes of inclusion and improvement is necessary in the instructional foundation of class. Teachers need to broaden instructional format and success of inclusion "hinges" on the ability of researchers and practitioners to improve instruction to all students.

Wood (1998) investigated through qualitative methodology the roles that develop as a result of inclusive education. Traditionally, special education and general education have been separated at the school level as well as at the university level. To effectively include students with severe disabilities, general educators and special educators must seek more interactive roles and relationships, coordinated teaching arrangements, new skills and role definitions, and flexibility. Collaboration offers an opportunity to take advantage of the diverse and specialized knowledge of both special and general educators.

Initially special educators and general educators maintained their role boundaries (Wood, 1998). However with time, inclusive practices including collaboration evolved. General educators tended to feel 'appreciated' because they 'opened the door' to students

with severe disabilities to participate in general education. General educators expressed concerns around the presence of special education support staff, felt that support was fragmented, and there was more knowledge needed regarding content instruction on behalf of special educators. Problems included: (a) lack of professional preparation in consultation / collaboration skills; (b) time for planning; (c) role uncertainty; (d) funding issues; (e) large caseloads for special education; (f) differing backgrounds and perceptions of the educational process; (g) an assumption of 'expertise'; and (h) classroom interventions that could be intrusive in nature (Wood, 1998).

Suggestions for successful future inclusion include: (a) clarification of roles and responsibilities; (b) preparation on various fields' assumptions, practices, and terminology, and (c) sharing of previously developed solutions. Commitment to inclusion or inclusive education will involve new and / or renewed relationships between schools and universities as well as innovative associations between special and general teacher education programs. There will also need to be reinvented organizational structures within teacher education programs, a commitment to teacher preparation through modeling of good teaching by university faculty, and new partnerships between schools and universities to develop course work reflective of the reality of public schools. However, for all of these things to take place, there will need to be a reallocation of university faculty time and a commitment to inclusive education (Wood, 1998).

Pivik, McComas, and LaFlamme (2002) investigated the barriers and possible facilitators to inclusive education in Ontario, Canada. Much like the United States, the province of Ontario has 'laws of protection' similar in scope and content to IDEA. Children with disabilities are provided with appropriate special education services based

on level of need. The Canadian Teachers Federation has a long standing policy that students with disabilities should be educated in the "the least restrictive environment in which the child's needs can be satisfactorily addressed" (Pivik et al., 2002, p.98). Pivik and her colleagues used focus groups of students with limitations in mobility (physical disabilities) and their parents to identify current barriers to full participation in school settings.

After qualitatively analyzing the transcripts of the focus group sessions with students and parents, the authors reported four categories of barriers. First, participants identified environmental barriers (e.g., ramps, narrow doorways, locker placement, inaccessible bathrooms and water fountains, lack of accessibility for physical education, etc.) as the most intrusive hindrance to participation in schools. Next, participants reported difficulty dealing with intentional attitudinal barriers such as isolation and bullying. Participants also reported unintentional attitudinal barriers (e.g., lack of ability awareness on behalf of educators and students without disabilities) as a major impediment to participation in general education settings. Lastly, respondents reported that physical barriers (e.g., difficulty with dressing for P.E. or recess, maneuvering in the halls, extra time to ambulate to various settings, and extra time to complete assignments) also hindered their participation in schools. Respondents suggested that the environment should be modified including changes to bathrooms, water fountains, lockers, hallways, and ramps. Respondents also suggested that faculty, staff and students should engage in periodic ability awareness activities (Pivik et al., 2002).

As reported in the previously reviewed articles, there are many barriers to the successful implementation of inclusive schooling practices. Barriers include biases of

general and special educators, rigid expectations, lack of collaborative planning time, lack of administrative support, limited explanation of roles within the classroom, and lack of adequate preparation to provide supports in inclusive environments (McDonnell, 1998; Wood, 1998; and York & Tunidor, 1995). However, the next section presents the supports needed to successfully implement inclusion.

Supports needed to implement inclusion. Wolery et al. (1995) sent a mail survey to experienced elementary school teachers in Pennsylvania (N=158) about their perceptions of the supports available to them needed for successful inclusion of students with severe disabilities. Wolery et al. also investigated the differences in the perceptions based on general/special educators, grade level and self-ratings of the success of their inclusion experiences.

Special and general educators reported similar levels of need. However, special educators reported having greater resources. Grades two and three reported greater discrepancy between their needs and resources that other grades. A high percentage of both special and general educators reported the need for further preparation to successfully implement inclusive practices. Consequently, a low percentage of teachers reported having the appropriate preparation to implement inclusive practices (Wolery et al., 1995).

All teachers reported the need for more preparation and materials as well as support personnel. Due to the stressors often associated with including a student with severe disabilities, both general and special educators reported the need for personal support and meeting time for collaboration.

Interviews with general and special education teachers and administrators from 10 schools having students with moderate and severe disabilities integrated into general education schools and classes were conducted by Janney, Snell, Beers, and Raynes (1995). The schools were part of a statewide technical assistance project. The purpose was to examine the 53 individual participants' judgments about the success of integration efforts, and to examine the participants' beliefs and attitudes about the success of their own integration efforts, what reduced their initial resistance to change, and what factors facilitated or hindered success. Reoccurring themes pertaining to success and advice followed.

Criteria for success included the theme of "benefits outweigh costs". The costs for the teachers were based on having the necessary and sufficient supports so that integration had not resulted in extraordinary workloads. Benefits reflected increased independence, alertness, and awareness, improved functional skills, age appropriate behaviors, self-esteem, and belonging to the community environment for students with disabilities. For general education students, benefits included self-esteem, acceptance of individual differences, generalized benefits to the school and community, and becoming less self-centered. Teachers agreed that the supports had been provided, and that the benefits for the students and school community outweighed the costs.

Janney et al. (1995) also elicited advice for district administrators from the interviews. They determined it was important to provide the supports and resources, give the go ahead, and show appreciation. However, participants were adamant in not wanting specific implementation guidelines. Enough direction and decision making needs to be offered while maintaining flexibility. The principal sets the tone and needs to keep it

positive. First, the administration must start with teacher volunteers and involve everyone in preparation and planning as a team.

The administration must also provide information, orientation, and preparation as well as remove logistical and environmental barriers. It is important that the administration plans and pace the changes slowly to build the integrated environment. They also must give teachers respect in initiating and implementing ideas, and recognize their efforts. It is imperative that administration keeps the general education teachers' workloads from increasing by having special education counterparts to provide supports. The special educators need to be enthusiastic, positive, flexible, low key, and non-threatening. Information about the integrated student should be shared as well as mutual planning and cooperation (Janney et al., 1995).

Janney et al. (1995) provided advice for general education teachers regarding integration of students with disabilities. First they suggest that general educators not form preconceptions, problem solve as a team, and help the student to belong. The findings are generally consistent with the literature on implementing educational change. A collaborative effort of participation, planning, and decision-making reduces resistance.

Werts et al. (1996) surveyed general and special educators for their consensus on the conditions and supports needed to successfully include students with severe disabilities in general education classrooms. Werts et al. were also interested in determining the problems faced when implementing inclusion practices. There were several items listed by the majority of teachers as barriers to mainstreaming or inclusion. First, teachers perceived a need for preparation specific to the child they were serving. Next, they reported the need for help outside of the classroom from the entire team.

Lastly, the teachers reported the need for help within the classroom from paraprofessional. Teachers with students who had more severe problems were more concerned with appropriate supports. Teachers with students with more mild disabilities wanted more time to adapt the curriculum.

Six hundred and eighty licensed general and special education teachers and administrators in 32 schools that had experience in providing inclusive educational opportunities for all children were surveyed regarding their perceptions related to full inclusion of students with disabilities (Villa, Thousand, Meyers, & Nevin, 1996). The professionals surveyed generally believed that educating students with disabilities in general education classrooms results in positive changes in educators' attitudes and job responsibilities. For both general and special educators, administrative support and collaboration were powerful predictors of positive attitudes towards full inclusion. Coequal importance of general and special education teachers in a co-teaching or collaborative team was stressed.

Barnett and Monda-Amaya (1998) conducted a survey to examine principals' attitudes toward and knowledge of inclusion. Participants were 65 of the 115 randomly selected principals in the state of Illinois that performed the survey. Principals held positions in elementary schools 65% of the time, in middle schools 59% of the time, and in high schools 55% of the time. Administrators reported the service delivery models most often used were resource consultation programs for students with learning disabilities or behavior disorders. Only 23% of all schools reported having self-contained programs for students with moderate disabilities and 9% of all schools had programs for students with severe disabilities.

The authors found that principals defined inclusion by selecting 22 descriptive items from a list. The three items that were chosen most often were: 1) supportive environment (55%), 2) shared responsibility (48%), and 3) cooperation (41%). Principals indicated their definition of inclusion applied to the following groups: (a) students with learning disabilities (97%); (b) those at risk for failure (83%); (c) students labeled trainable mentally handicapped (36%); and (d) severely or profoundly handicapped (20%) were selected the least. The highest mean ratings for educational practices used most and perceived to be most effective were heterogeneous and/or multi-age groupings, collaboration, and cooperative learning.

The practices with the lowest ratings were parent education support groups, interaction analysis, and in-service on inclusion. Principals were encouraged to list additional practices that were not included in the survey These practices included parent workshops on inclusion, special services teams, all teachers being responsible for students, enrichment through the arts, use of integrated curriculum and expanded functioning of the resource room for student with and without disabilities. According to the authors only 30% of the principals selected the leadership statement that mostly resembles what inclusion advocates propose (Barnett & Monda-Amaya, 1998).

Barnett and Monda-Amaya (1998) found the results of the study suggested that principles across the state appear to have differing ideas and attitudes about inclusion; therefore, further investigation is needed to look at the definitions, organizational structures and skills and practices needed by principals in creating inclusive schools. Additional knowledge in correlation between leadership style and restructuring for inclusion would aid in making recommendations for the following: necessary role

changes for principals in inclusive schools, critical competencies needed by principals to fulfill new roles and ways to provide the needed knowledge and training for both practicing and pre-service administrators.

Salisbury and McGregor (2002) investigated the administrative climate of five elementary schools engaged in 'inclusive approaches'. The authors used surveys, direct observation, and interviews were used to evaluate the extent to which administrative attitudes towards inclusive education and leadership traits can be attributed to successful school wide improvement initiatives. Each of the five school principals involved in the study: (a) was engaged in general education school-wide reform effort; (b) was willing to be involved in the research project; (c) had students with significant disabilities enrolled in their school; and (d) lead a school nationally recognized as a 'Blue Ribbon School'. Each of the schools had participated in some kind of externally funded project to support reform efforts.

A general pattern reflecting an 'open' climate existed at all five schools. Principals were found to be more supportive than directive or restrictive. Teachers reported that patterns of disengagement were low, but collegiality and intimacy scores were higher. Salisbury and McGregor (2002) also found that principals were generally: (a) self-directed; (b) invested in personal relationships with staff; (c) accessible; (d) reflective in decision making; (e) collaborative with other leadership staff and provided time for teaming; and (f) were intentional in their development of programs (e.g., strong sense of direction and a 'stick-to-it' approach to reform efforts). Principals were found to use several strategies to promote inclusion of students with disabilities in general education settings including: (a) assignments (e.g., heterogeneous classrooms, age-

appropriate grade-level classroom, and involvement of all students in extracurricular activities); (b) supports (e.g., instructional support team, use of adult mentors, special education staff as part of grade level teams, and blended staff development); (c) instruction (e.g., team teaching, flexible grouping, and looping); and (d) 'Big Picture' as evidenced by building initiatives which reflect district policy, initiatives connected to school improvements, an inclusive school-based vision, early reading initiatives, modeling of inclusive attitude, and reflective discussions.

Praisner (2003) surveyed over 400 elementary school principals about their attitudes towards inclusion, training and experience variables, and perception regarding appropriate placement of students with disabilities. Most principals reported being 'uncertain' about inclusion (76.6%), while 21.1% reported being clearly positive about inclusion and 2.7% reported being negative about inclusion. The more inservice hours, special education credits taken, and experience with inclusion were correlated with increases in positive attitudes towards inclusion. Appropriate placements selected by principals were evenly distributed across the continuum; with full time regular education with support was chosen most often. However, the selection of 'appropriate placements' varied based on disability category. Specifically, the more severe the disability the more restrictive the placement the principal perceived was appropriate. Overall, the more experience the principals had with successful inclusion the more positive attitude they had towards inclusion.

Daane, Beirne-Smith, and Latham (2001) conducted a survey designed to investigate the perceptions of elementary teachers, both general education and special education and their building administrators toward inclusive education in a school

system, which had been implementing inclusion for two years. Inservice instruction on inclusion and collaborative teaching had not yet been provided. Items on the survey included: (a) teacher collaboration efforts; (b) instruction of students with disabilities; (c) teacher preparedness for meeting the needs of students with disabilities; and (d) perceived achievement outcomes of students with disabilities.

There was agreement from respondents that IEPs were being cooperatively planned and team teaching was taking place (Daane et al., 2001). Respondents also indicated that more communication was needed. Although collaboration was taking place, the educators indicated they were not comfortable with it due to multiple reasons including personality conflicts, lack of planning time and limited time in the classroom by the special educator due to scheduling. Both general educators and special educators agreed that the inclusive classroom was not the most effective learning environment. However, administrators felt the inclusive classroom was the most effective learning environment. General educators and administrators felt that the child included was the responsibility of the general education teacher. Teachers indicated that there were more management problems, while administrators did not perceive more management problems. All three groups disagreed with the idea that students with disabilities achieved more academic success in the general education classroom. However all three groups agreed that students grew socially with inclusion (Daane et al., 2001).

Daane et al., (2001) concluded there was agreement among administrators, special education teachers, and general education teachers regarding the importance of collaborative efforts and cooperatively planning IEPs with the understanding that collaboration is not comfortable. General and special education teachers agreed on the

effectiveness of inclusive education where social gains were noted, but academic achievement was lacking and management was difficult. The authors suggest substantial blocks of time for collaborating and planning, opportunities for on-going professional development, means and ways for adapting and modifying curriculum and instruction, and that administrators, special educators, and general educators must collaborate and plan effectively together.

Hunt, Soto, Maier, and Doering (2003) investigated the effectiveness of a collaborative teaming process between special and general educators on the social participation and academic achievement of three elementary students with severe disabilities in general education classrooms. A collaborative team consisting of a special educator, a general educator, a related service provider (if applicable), a paraprofessional, and parents supported each student with a severe disability. The team met and identified areas of need for the students to successfully participate in general education. The team developed and implemented an individualized 'Unified Plan of Support' consisting of: (a) academic adaptations for reading, writing, and math; (b) communication supports; and (c) social supports so that each student could increase participation in general education activities. The team met regularly to review and modify plans if needed, as well as discussed the progress of individual students in the areas of academic achievement, social participation, and overall participation in general classroom activities.

Hunt et al. (2003) evaluated the effectiveness of the 'Unified Plans of Support' through behavioral observations and interviews with team members. Specifically, the authors used the 'Interaction and Engagement Scale' to determine levels of engagement and interaction patterns. The authors used interval recording and during each interval

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recorded: (a) the first communicative interaction; (b) the identity of the communicative partner; (c) the function of the interaction (e.g., request, protest, comment, or assistance); (d) the quality of the interaction; (e) the level of engagement; and (f) the grouping pattern. A multiple baseline design was used to evaluate the effectiveness of the 'Unified Plans of Support' intervention.

A decrease in nonengagement levels of students with severe disabilities between baseline and intervention of the 'Unified Plans of Support' was noted. It was also reported that students initiated more interactions with classmates and engaged in more reciprocal interactions with peers. Analysis of the interviews conducted with team members indicated that students with severe disabilities experienced: (a) increased assertiveness in classroom interactions; (b) increases in academic progress; (c) increased interactions and collaborative activity with classmates; and (d) increased initiation in requests for assistance. Team members also reported the benefits of having an opportunity to engage in regular and planned discussions of student progress as well as an opportunity to discuss how progress was also generalizing to the home environment. Overall, the collaborative teaming process and use of the 'Unified Plans of Support were beneficial to individual student progress and to team members providing supports in an inclusive environment (Hunt et al., 2003).

Summary. Inclusive schooling efforts can be effectively implemented with the proper supports. These supports include appropriate resources, proper preparation at the pre-service or in-service level, high expectations for students with disabilities, ability to work with / direct support staff, a positive attitude towards inclusion, and time for collaborative teaming (Daane et al., 2001; Salisbury & McGregor, 2002; Werts et al.,

1996; and Wolery et al., 1995). Unfortunately, many of those working with students with severe disabilities in inclusive environments may not have received the proper preparation at the pre-service level. It is unclear if those who work with students with severe disabilities in inclusive settings are (or were) properly prepared at the pre-service level. The current study adds to the limited literature regarding the preparation of those who may teach students with severe disabilities in inclusive settings and the components of pre-service preparation that lead to greater feelings of preparedness.

Pre-Service Personnel Preparation for Severe Disabilities

There are numerous approaches to preparing teachers to work with students with severe disabilities. In this section, general teacher preparation to teach students with severe disabilities, preparation of special educators for implementation of inclusive practices, and the current state of preparation of general educators to implement inclusive practices are reviewed.

Baumgart and Ferguson (1990) investigated the relationship between emerging best educational practices for students with severe disabilities and the capacity of pre-service preparation programs to prepare teachers to implement these practices. Teachers have had to respond to rapid changes during the 1980's due to changes in legislation and philosophy of where and how students with severe disabilities could and should be educated. These changes demanded that teachers both understand and explore their constantly evolving roles while trying to adapt their daily teaching to reflect new research and innovation. Currently, we need teachers who can create maximal effective educational environments and experiences for a very heterogeneous and

programmatically complex group of students. At this time, it is unclear if this is occurring regularly as there is limited research.

Once applied behavioral analysis succeeded in demonstrating that students with severe cognitive impairments could indeed learn, best educational practices shifted towards skill selection based on active involvement in current and future environments. These skills included teaching skill clusters that cross traditional content domains, teaching chronologically age-appropriate skills, and use of natural and community environments as instructional contexts.

Baumgart and Ferguson (1990) presented the key elements of the 'Best-Practice Approach.' Team collaboration, family involvement, negotiation, and instructional effectiveness are described as the 'Best Practice Approach'.   Team collaboration by educators, experts, parents, and university personnel is necessary. However it is not being explicitly taught at the pre-service level. Family involvement includes support of the family or caregivers to ensure a student has opportunities to practice or perform activities in non-school hours that are taught or learned during school hours. Also activities incorporated into school instruction should be based upon family input or requests. Negotiation refers the ability to problem solve, rectify discrepancies between optimal and realistic practices, and maintaining a sense of professional worth. Instructional effectiveness includes direct and frequent data collection for formative evaluation of pupil learning, and the incorporation of generalization strategies.

The intended outcomes of the 'Best Practice Approach' are students who have jobs and a place to live in the community, a network of friends and acquaintances, options for recreation/leisure, and access to community services as needed. Current state-

of-the-art practices are capable of producing the outcomes of community participation, supportive social networks, ordinariness, and invisibility. However these outcomes are not widespread and the practices required necessitate teachers' assuming new roles and responsibilities (Baumgart & Ferguson, 1990). There is a need to restructure and even dissolve the separation between regular and special education along with new "job descriptions" before these state-of-the-art practices can be implemented. Also special educators need access to general education for best practices to be implemented. Baumgart and Ferguson conclude that reform efforts must include *all* teachers and must result in professionals who are team members and see their roles as that of teaching all students.

Fox and Williams (1992) stated a need for qualified personnel with a large knowledge base to provide the most current and effective "Best Practices" in the least restrictive environment (LRE). Technology in instructional practices has rapidly evolved over the past 30 years. The philosophy of teaching students with severe disabilities evolved out of feelings of entitlement to those who were once institutionalized. Once students with severe disabilities were in fact entitled to a 'free and appropriate public education', programming evolved out of sense of 'fairness'.

Fox and Williams (1992) debated what skills and practices are most appropriate for students with severe disabilities and found that age of the student generally dictates changes in 'Best Practice' according to Fox and Williams. Many experts and researchers agree that students with severe disabilities need to learn self-care, self-determination, communication and social skills. Teachers of students with severe disabilities need to have knowledge of a variety of areas. They need to know how to provide direct

instruction, individualized instruction, task analysis, prompting, time delay, etc. They

must also have a vast amount of knowledge about instruction of self-care, self-

determination, communication, social and friendship skills, and functional academics.

Fox and Williams (1992) discussed the importance of providing future educators with

value-based preparation that will aid in the implementation of teaching strategies and

design of education program. They outlined nine competencies for preservice preparation

programs including: (a) typical child development, (b) legal issues, (c) characteristics and

service needs, (d) behavioral technology, (e) health and medical issues, (f) physical

management, (g) family support, (h) trans-disciplinary team collaboration and resource

coordination, and (i) current best practices in curriculum and instruction.

Fox and Williams (1992) argued that separate class instruction is contrary to the

implementation of 'Best Practices'. As a result, implementation of best practices is not

widespread. Disparity exists between research based best practices and actual field based

practices. This problem does not solely exist within special education. The knowledge

base has changed quickly but systems are slow to follow. Practices that special educators

may know to be the most beneficial may not be encouraged or supported in their schools

and classrooms. As a result, the attrition rates for teachers of students with severe

disabilities are very high. Bad models including outdated tactics for behavior

management and instructional methods may further preclude pre-service teachers from

learning best practices, while participating in practicum rotations or student teaching.

Fox and Williams (1992) recommended for example, that students learn the

process of developing an Individualized Education Program (IEP) based on litigated

cases rather than based on statues and regulations. Broader field experiences are also

recommended including a variety of age groups, students with severe behavioral issues, students with severe multiple disabilities, and an experience of providing family support. Finally, Fox and Williams reported that 60% of State Education Agencies at the time indicated a need in improving the preparation of teachers in providing the most current and effective practices in the least restrictive environment to students with severe disabilities.

Snell, Martin, and Orelove (1997) described a personnel preparation program for unendorsed teachers of students with severe disabilities in Virginia. The five-year, federally funded program involved three universities (University of Virginia, George Mason University, and Virginia Commonwealth University) and the 61 teachers who completed the program and preparation cycles. The preparation cycles were designed to make high quality graduate preparation easily accessible to these unendorsed teachers. On-site consultation to teachers during their practicum experience was provided from three of the state's Technical Assistance Centers (TAC). The two main focal points of the preparation program were as follows: (a) teachers need both research-based skills and an understanding of the social values consistent with the current best practices and (b) in-service teacher preparation requires certain program characteristics (Snell et al., 1997).

A survey was conducted after the trainees finished the program. Participants were surveyed on their 'thinking' or perceptions of certain best practices as well as their 'activity' or practice of best practices. Most respondents reported that their participation in the preparation program increased their thinking about some best practices (e.g., inclusion, transition, communication, teaming, functional and age-appropriate skills, and

use of non-aversive techniques). Many respondents also reported that the program influenced their potential practice of best practices. T-test comparisons were also made between those participants that taught students with severe disabilities and those who taught other students. Results indicated that those participants teaching students with severe disabilities in non-residential schools were more influenced and more likely to employ best practices in their teaching situation (Snell et al., 1997).

Snell et al., (1997) also conducted focus group interviews to discuss problems with and barriers to preparation teachers as well as recommendations for preparing teachers. The problems and barriers discussed were: (a) limited to access to preparation because programs are offered where faculty are verses where teachers are in need of preparation, (b) difficulty in obtaining funding to support endorsements programs in low-incidence areas, (c) inflicting stringent rules or criteria for preparation in an area of great need, (d) trends towards reductions in the number of endorsements, and (e) limited supervision and evaluation of teachers of students with severe disabilities. The problems specific to the program and to personnel preparation programs in general for students with severe disabilities involved recruitment, collaboration and communication, discrepancy and practice and coordination of course content and practicum.

Based on these findings, the authors recommend that future programs do the following: (a) survey teachers more thoroughly after each preparation cycle so improvements reflect their perspective, (b) include employers in evaluation process, both to supplement teacher's evaluation and to inform employers about best practices, and (c) to track graduates' employment as an index of burnout and the health of profession. The

authors also briefly addressed issues related to personnel preparation in severe disabilities areas such as incidence, supply and demand, shrinking funds, and advisory partnership.

Ryndak et al. (2001) conducted two important descriptive studies pertaining to program configuration and expertise needed for masters level trainees in the area of severe disabilities. Experts in the area of severe disabilities were identified and contacted for their participation. Experts were identified as those who had received and were directing a masters level personnel preparation grant to prepare teachers to work with students with severe disabilities. Additional experts were located via authorship within the McGregor and Voegelsberg (1998) compilation of research on inclusive practices.

Experts were asked to describe the master's level programs that they were directing or affiliated with and to nominate programs which were exemplary. Ryndak et al. (2001) established areas of expertise and skills necessary to demonstrate expertise in working with students with severe disabilities through a compiled list consisting of competencies used by Council for Exceptional Children and previously established competencies found within the literature. The list was sent to teachers, nationally recognized experts in severe disabilities, and the co-authors. Feedback was given and a final list compiled. Areas of expertise included: (a) collaboration and technical assistance, (b) inclusion, (c) advocacy and self-advocacy, (d) curriculum content identification process, (e) effective instruction, (f) functional assessment and behavior intervention, (g) transition, (h) physical and sensory disabilities, and (i) research.

Most respondents reported that their masters' programs resulted in some form of professional certification which ranged in number of credit hours needed for completion (30-61) and number of field experiences, depending of the level of previous experience.

Most required more than one field experience and were tied directly to course work. The respondents also indicated whether the areas of expertise compiled by the authors are addressed in their respective programs and whether they should be addressed in Masters' programs. Interestingly, most participants did not self-report that their programs were exemplary.

While there were several limitations to the studies (e.g., limited sample size, lack of inter-observer agreement during interviews, perceptions reported were not validated, the possibility in differences in state certification procedures and their effect on program configuration), it is one of the only studies to date that identifies "expertise related to preparation in severe disabilities". Ryndak et al. (2001) suggested that inclusive field experiences might be an ideal forum for demonstrating expertise in severe disabilities, due to the complexity of serving students within general education settings and activities. Suggestions for future research "should focus on how well teachers and education teams are prepared to meet these students; needs through various teacher education programs" (p. 104).

There has been an evolution of the structure and content of preparation of teachers of student with severe disabilities. Within the last 30 years students with severe disabilities have been entitled to a free and appropriate public school education. As a result, there developed a need for teachers with very specialized training. Initially the focus of instruction for students with severe disabilities focused on individualized instruction to increase self-care communication, daily living community access, and social skills. Recently, there has been more of a focus on teaching functional academics, communication, social skills, friendship development, and self-determination skills,

possibly due to an increase in time spent in general education environments. Legislation

such as the amendments to IDEA 1997 and the NCLB Act of 2001 have changed the

focus to inclusion of students with disabilities within the general education curriculum.

The current study attempts to determine if teacher candidates from the University of

Maryland learned the appropriate skills to facilitate access to the general curriculum for

students with severe disabilities.

   Preparation for inclusion. Smith and Hilton (1997) articulated the position held

by the MRDD (Mental Retardation and other Developmental Disabilities) Division of the

Council of Exceptional Children on the preparation of the educational community for

inclusion of students with developmental disabilities.   Smith and Hilton determined that

critical to preparation should include knowledge of disabilities, encouragement of

appropriate attitudes, legal and ethical issues, collaboration, and methods of friendship

development. Additional preparation is needed for teachers and administrators in

assessment, advanced collaboration skills, effective practices for direct instruction and

service delivery, transition, and evaluation of educational outcomes. They argued that

individual schools should provide preparation themselves and the professionals within

them as well as the state and local educational agencies.

   Past terms such as mainstreaming and the Regular Education Initiative (REI) are

discussed as well as inclusion and its current definition(s). The article reviews 10

essential categories of an inclusive learning environment (Schultz, 1994) that are as

follows: attitudes, relationships, support for students, support for teachers, administrative

leadership, curriculum, assessment, program and staff evaluation, involvement of parents,

and community involvement. The authors contended that the responsibilities of special

educators have changed and there is need in retraining to provide support to general

educators in making adaptations to instruction and curriculum. Additionally, preparation

in consulting and conferencing skills, structuring classrooms for friendship building, and

the ability to evaluate social and academic gains of students prior to and during inclusive

placements may need to be provided.

Maheady (1997) discussed many instructional implications associated with

teaching diverse groups of learners. Some brief descriptions of educational practices that

can be used to teach diverse learners are included, as well as an exploration of how future

teachers can be better prepared for accommodating such learning differences.

Additionally, issues that are discussed include: how teacher preparation departments,

schools and colleges of education might better prepare future teachers. The author

suggests that teachers move away form the traditional "stand and deliver" approach in

which teaching is centralized with the teachers as the expert. Instead, teachers should use

methods that facilitate learning among all students as a classroom or community where

they can function as effective instructors for themselves and one another. Cooperative

learning and peer tutoring are both popular and effective approaches used as well as Class

Wide Peer Tutoring (CWPT), Numbered Heads Together (NHT) and Peer Assisted

Learning Strategies (PALS). Both general and special educators should use these

strategies in inclusive settings (Maheady, 1997).

Lesar, Benner, Habel, and Coleman (1997) discussed and evaluated the

redevelopment of the pre-service teacher education program at the University of

Tennessee in inclusive elementary education over a two-year period. The Inclusive Early-

Childhood Education Unit (IECE) of the university developed a three-phase preparation

model (Discovery, Discipline, and Divergence) based on the constructivist approach to preparation. The preparation model symbolizes that learning opportunities are arranged into recursive levels of development with specific understanding at each level.

During the discovery phase, students explored important concepts through case-based techniques. Emphasis on the development of knowledge, skills, techniques, and dispositions that create effective teachers is placed during the discipline phase. The divergence phase consists of students using all that their knowledge to create effective adaptations to the needs of individual students. Upon completion of undergraduate studies, the students would then take part in a full-time yearlong internship. Evaluation based on input from students, school administrators and mentoring teachers involved in the IECE program found both success and also issues of concerns (Lesar et al., 1997).

Issues of concern were how to balance the emphasis of whole language, collaborative learning, and alternative approaches to assessment. Challenges faced by the university in the implementation of an inclusive teacher education program are as follows: (a) reorganization of program offering and content, (b) use of alternative forms of student assessment and grading and teacher education innovation embedded in a bureaucratic university system, (c) placement of interns with mentoring teachers who demonstrate best practices in classroom instruction, and (d) state licensure requirements restricting the unification of teacher education programs.

Kerns (1997) argued as greater emphasis is placed on inclusionary programs and more principals are seeking dually certified teachers for general education classrooms, it became necessary to specifically survey the graduates to ascertain whether their preparation had been adequate to meet the changing roles of an educator. Participants

included graduates from University of New Hampshire who graduated with dual certification in general and special education by May 1993. An 11-page survey including open-ended responses, forced choices, and ranked order responses was given to graduates and took approximately 45 minutes to complete. A total of 42 of the 65 graduates completed and returned the survey. Results indicated five areas were scored as 80-94.7%, which was interpreted to mean graduates felt they had strengths of very good or adequate. Six areas 63-68.4%, three areas 52.6-57.9%, three areas 42.1-47.4%, and one area 26% where graduates reported they were able to conduct workshops (Kerns, 1997).

This survey was an initial attempt to ascertain the graduate's perceptions of their preparation to teach in today's changing schools. Limitations include a small sample, which represents a unique population. Overall graduates felt very pleased and made statements such as "The program started me in a direction what would see 'life long learning' about 'how we learn' and 'thinking about thinking' as a teachers responsibility – not a special teacher, not a regular teacher, but a teacher!" (Kerns, 1997, p. 314).

Agran and Alper (2000) argued there is much evidence to support positive outcomes for students with severe disabilities as well as peers as a result of inclusion. General educators were surveyed to evaluate what strategies or 'best practices' they used within the classroom. These best practices were defined as those in Applied Behavior Analysis or ABA. General educators were using best practices, specifically a "broad repertoire of strategies" (p.170). It was determined that general educators may need more courses and practicum experiences that "emphasize individual instruction and classroom accommodations for diverse learners" (p. 170). General educators need a comprehensive

array of skills in curriculum and accommodations, however most institutions of higher education don't require this. Usually, pre-service teacher educator programs in general education, are only required to take a 'survey course' or an introductory course reflecting only cursory information about disabilities. Typically these courses don't offer strategies but characteristics often not as useful for general educators. It is difficult to expect general educators to know how to teach students with severe disabilities when they are not receiving any preparation at the pre-service level.

Agran and Alper (2000) surveyed special educators about skills they most valued as curricular priorities for their students with severe disabilities. Those skills ranked as most important for successful inclusion were: social interactions, friendships, self-determination and self-management as opposed to functional community and daily living skills. Most teachers ranked academic skills as a low priority. Findings are consistent with other literature that states what special educators value is what they typically teach students with severe disabilities (social skills, friendship skills, self-care, self determination, communication, etc.). At the pre-service level we should then be responsible for preparing teacher candidates the 'vision' of prioritizing skills for participating in general education (Agran & Alper, 2000).

Since passage of the Education for All Handicapped Children Act (EHA) in 1975, schools have been required to educate students in the least restrictive environment (LRE). Some people interpret this as mandating a continuum of placements that automatically become more restrictive for students with more severe disabilities. Rainforth (2000) describes one course on inclusive education for students with severe disabilities.

Most teachers who are certified to teach elementary or secondary education have a minimal preparation in special education and have far less preparation or experience related to teaching students with severe disabilities. Faculty of the special education program recognized the need for all teachers with special education certification to have some preparation to teach students with severe disabilities in inclusive settings (Rainforth, 2000).

This course was designed to use principles of adult learning with emphasis on active participation. Key components of the course are a series of field-based assignments that lead course participants through the process of designing an inclusive educational program for a student with severe disabilities. Assignments and activities include; (a) an essay on dreams and nightmares for inclusive education, (b) identification of student with severe disabilities, (c) participating in a MAPS meeting, (d) assessment of regular education environment, (e) lesson planning and assessment, (f) development of a peer support plan, and finally (g) a reflective essay. Preparing teachers to educate students with severe disabilities in inclusive settings is a challenging effort, made more challenging when the practices described in a university classroom are not evident in the schools where teachers practice.

McCormic, Noonan, Ogata, and Heck (2001) conducted a pilot study, which considered how the co-teachers relate to one another. Specifically the study explores associations between co-teachers' perceptions of similarity in philosophical beliefs, personal characteristics and traits, and the professional style with one another, and two quality outcomes. The outcomes are quality of the preschool environment and child engagement.

Several personal characteristics and traits were identified to be important for collaboration and co-teaching including: (a) ways of dealing with colleagues, supervisors, parents, and other professionals, (b) approach to planning and dedication, (c) ability to be supportive to colleagues, and (d) dedication to an enjoyment of teaching (McCormic et al., 2001). Present research suggests that the extent to which co-teacher perceive themselves to be similar to one another in characteristics and traits, professional style, and philosophical beliefs and biases may affect their ability to provide a quality environment. Co-teachers should be provided with experiences that will help them learn how to notice, examine, and perhaps rethink their practices with peers. Co-teachers also need to learn how to talk to, listen to, and respect one another while finding areas of agreement. Suggestions for improvements included: (a) how to discuss and evaluate options without taking a value position, (b) how to follow through on responsibilities in a timely fashion, and finally (c) how to engender trust. We may be able to further increase the likelihood of successful inclusive programs by doing two things: making prospective teachers aware of the importance of relationships and teaching them ways to create positive working relationships with other adults (McCormic et al., 2001).

Regrettably, many special educators and most general educators report not being prepared to implement inclusive practices (Agran & Alper, 2000; Rainforth, 2000; McCormic et al., 2001; Reed & Monda-Amaya, 1995; Buell, et al., 1999; and Henning & Mitchell, 2002). Most pre-service personnel preparation programs for general educators include little to no special education course work or practicum experience with students with disabilities. Many pre-service personnel preparation programs for special educators include little course work on content instruction or include very few experiences where

teacher candidates are required to collaborate with general educators. Implications of the current study offer suggestions about the preparation of both special education and general education teacher candidates to support students with disabilities in inclusive settings.

General educators preparation for inclusion. Kearney and Durand (1992) conducted a study to examine teachers' preparation in working with students with exceptionalities in integrated class settings. Recent trends show a critical need to educate regular educators in areas of special education. The survey study involved 35 chairpersons of postsecondary schools of education in the state of New York. The questionnaires sent asked participants to reflect on their own school's educational programs for general educators regarding aspects of inclusive practices such as accreditation, coursework, and field placement requirements. Results indicate that postsecondary schools do not provide sufficient coursework and field experiences to prepare general educators for inclusive classrooms. Less than one-third of the programs involved in the study were accredited by the National Council for Accreditation of Teacher Education (NCATE) and offered dual certifications in regular education and special education, required preparation in collaborative teaching and education and/or offers preparation as a consultant teacher with certification in integrated environments.

Reed and Monda-Amaya (1995) evaluated the extent in which undergraduate general educators received instruction in inclusion and collaboration. In 1979, Illinois mandated that all persons obtaining teaching certification in its state must complete three semester hours in the psychology and identification of exceptional students. The study proposed the following questions: (a) What characteristics describe the required courses

and the instructors who teach them, (b) How do the instructors define inclusion and collaboration and what are their attitudes towards these terms, and (c) To what extent are the skills and competencies that facilitate these practices perceived to be important, and to what extent do instructors emphasize these practices in class? Overall, 37 instructors representing 35 institutions across the state responded to surveys. General results indicated a gap that exists between what instructors perceive as important practices for preservice teachers to know and to what extent the instructors actually emphasized in their courses as being important.

Gemmell-Crosby and Hanzlik (1994) conducted a study with seventy-one private-sector preschool teachers from cities ranging size from 30,000 to 90,000. These pre-school teachers responded to a questionnaire regarding their attitudes toward inclusion. The questionnaire included demographic information, the definition of children with disabilities, and statements attempting to obtain information depicting the teachers' attitudes toward including children with disabilities in their classroom, as well as perceptions of the adequacy of support services and their competency to teach such children. The questionnaire addressed the teachers' satisfaction with support services and the education and preparation they had received or were currently receiving regarding including children with disabilities. The questionnaire also contained two open-ended questions to provide a forum for teachers' comments regarding inclusion, education and preparation, and support services. Gemmell-Crosby and Hanzlik were able to provide insight into the linkages among factors that affect preschool teachers' attitudes toward inclusion and their feelings of competency in teaching children with disabilities.

Gemmell-Crosby and Hanzlik (1994) reported that the more satisfied teachers were with the level of support and preparation they received regarding inclusion of children with disabilities in their classroom, the more positive attitudes they had toward the concept of inclusion. Specifically, the more competent or successful preschool teachers feel in meeting the special educational needs of a child in their classroom, the more favorable attitudes they will have toward inclusion. Second, the more adequate support preschool teachers feel they are receiving from related service providers, the more favorable attitudes they will have toward inclusion. Third, the more adequate education and preparation preschool teachers feel they are receiving while teaching children with special needs, the more favorable attitudes they will have toward inclusion. Fourth, the more education, special education courses, experiences, support from related services and continuing education preschool teachers receive, the more competent they will feel about having children with disabilities in their classrooms. Finally, the more education, special education courses, experiences, support, continuing education, and the more competent preschool teachers feel about teaching children with disabilities, the more favorable attitudes they will have toward inclusion.

There has been much national debate about the value of including students with disabilities in general education settings. However, it has had limited impact on the national standards movement (Wigle & Wilcox, 1996). Many state and national professional standards boards regulate standards for professional practice in the field of education. These standards are intended to be reflective of essential skills and knowledge necessary for the successful education of students. Currently, many of these standards are not addressing the issues of educating students with disabilities in the least restrictive

environment or how to best prepare teachers for inclusive classrooms. Wigle and Wilcox (1996) propose criteria to developing a favorable learning environment harmonious with LRE. The five criteria include: (a) substantive student-teacher interaction, (b) opportunity to respond, (c) academic engaged time, (d) relevant curriculum, and (e) maximization of student success. The authors suggested potential changes to pre-service teacher education programs that will address these specific criteria. Teachers tend to provide more interactions and 'teaching time' to students they perceive to be more successful. However, it is those students who are not as successful that may benefit the most from additional teacher interactions and additional opportunities to respond. The author's suggested pre-service teachers participate in a variety of field experiences with a range of students. The authors also suggested that focusing on such skills as question framing, wait time, cuing, and coaching within the context of a heterogeneous classroom may increase student-teaching interactions and increase the opportunity for students to respond. The authors also emphasize the need for pre-service teachers to be placed with knowledgeable mentor teachers who can model best practices.

Curriculum in general education often focuses on general academic skills that prepare students who may continue their educational careers at the postsecondary level. However, for many students, not just those students with disabilities, the curriculum is not relevant. As a result, many students do not focus on the curriculum and are not as engaged as learners for who the curriculum is relevant. Wiggle and Wilcox (1996) suggested that pre-service teachers needed to learn how to design activities that facilitate engagement in the leaning process. They also need to learn to select appropriate materials, use differing materials, and adapt objectives and curriculum to accommodate

diverse learners. Teacher preparation programs also need to instill the vision that all learners are valued.

There continues to be growing demands to educate students with disabilities in the LRE. As a result there continues to be a need for highly qualified personnel to educate those students within inclusive settings (Buell, Hallam, Gamel-McCormick, & Scheer, 1999). As a result of the IDEA Amendments of 1997, many states are requiring a comprehensive system to develop personnel prepared to work with students with disabilities. The lack of qualified personnel continues to be a barrier to providing services to students with disabilities in inclusive settings. Historically, most general educators and special educators have been prepared separately. As a result, they have different perspectives and philosophies about the education of children. Most general educators report supporting the idea of inclusion for students with disabilities, but lack the appropriate or adequate preparation.

Buell et al. (1999) conducted a needs assessment around inclusive education for both special and general educators. This study was also designed to assess teachers' efficacy in teaching students with disabilities in inclusive settings. Lastly, the authors evaluated the perception of supports and resources needed to promote inclusive education. Both general education and special education teachers in one state were randomly selected to complete a survey. Questions included Likert scale, yes-no, and open-ended items. In all areas of the study, the authors found that special educators rated themselves higher in their ability, efficacy, understanding of inclusion and resources available. Many general educators rated themselves as not having a high ability to manage problem behavior, individualize instruction, or adapt curriculum or materials.

While these skills are clearly necessary for successful inclusion, they are essential for the

effective teaching of students in general. General education teachers reported a lack of

resources as a contributor to their inability to effectively promote inclusion. General

educators indicated a need for additional preparation in program modification,

assessment of academic progress, adaptations to curriculum, managing student behavior,

developing IEP's and the use of assistive technology. Buell et al. suggest that these skills

be taught in the context of pre-service programs for general educators. However, until

they are taught within the context of pre-service general education programs, special

educators will need to be able to provide those areas of expertise.

Finley-Snyder (1999) conducted a qualitative study with general education

inservice teachers regarding their attitudes and concerns about special education. A

majority of those surveyed stated special education in their school consisted of resource

room teachers and aides with some inclusion and students with severe disabilities being

serviced in self-contained classrooms. Total inclusion was not found in any of the

schools of the study participants.   A majority of general education teachers did not

believe their administrator was supportive of their needs nor adequately provided in-

service preparation. Additionally, many of the teachers felt that they did not receive

adequate preparation necessary for inclusion in college.

Teacher educators need to change course requirements for future educators in

order for them to be better prepared to work in an inclusive classroom (Finley-Snyder;

1999). In order for inclusion to be successful, special educators, teacher educators, and

administrators need to take a more aggressive approach to preparing general educators.

Administrators and special educators need to be more attentive and supportive of the

needs of general educators. Administrators need to take an active role in continuously providing inservice preparation for general educators as well as encourage more collaboration between general and special educators.

Henning and Mitchell (2002) reported a large percentage of general educators convey that they were not prepared during their pre-service programs to teach or 'manage' students with disabilities included in their classes. Some evidence suggests that in addition to lack of adequate preparation, perceptions of students with disabilities held by general educators may also be a contributing factor to their inability to promote successful inclusion. This study sought to both improve the attitudes of pre-service elementary education majors as well as provide an opportunity to learn some collaborative planning strategies during one of their courses. Initially, the researchers gathered information about perceptions held by elementary education majors through reflections written. They qualitatively analyzed the responses and determined that class discussions around inclusive practices might be beneficial. A collaborative planning session was to take place between the elementary education majors and some graduate special education majors. However due to several complications, this session did not take place. This was reflective of the systemic issues within higher education. The instructors were in different departments, buildings, had different schedules, and ultimately had different agendas. Upon follow up during the subsequent semester, a more formal survey was given to assess attitudes about inclusion of students with disabilities in general education. Two class sessions were planned collaboratively between the instructors at the higher education level. During the first session, elementary education majors participated in different academic tasks while simulating various

disabilities. During the second class, both elementary education majors and special education majors worked together in collaborative groups to design a successful lesson for students with disabilities in general education. The researchers used an 'Appraise-Adapt-Ally' model to teach pre-service teachers to facilitate successful inclusion. Students were also given a post 'inclusion module' survey and t-tests were conducted to evaluate any significant changes.

The ability to 'appraise' a student and potential teaching situation was found to be beneficial. More importantly, the ability to 'adapt' instruction and materials to meet the needs of students with disabilities was even more beneficial. The most potentially tenuous element of the model was the 'ally' portion of the preparation. Collaboration or 'allying' one's self with other educators, whose preparation and background is not similar, can be difficult. Collaboration often is successful and relies upon the personalities of the parties involved. Positive experiences in collaborative planning groups may potentially be more beneficial than actually learning how to adapt materials or curriculum. However, effective collaboration must begin with models in higher education (Henning & Mitchell, 2002).

Summary. There are a few examples where pre-service personnel are prepared together and graduate with dual certification in general education and special education. However, this is not the norm or even a trend as most personnel preparation programs prepare teacher candidates based on separate state certification / licensure requirements for special education and general education. It is also evident that most general educators have not been prepared to teach students with severe disabilities and may not have the strategies to work successfully with special educators facilitate the process of inclusion.

Summary

There is overwhelming evidence to support the efficacy of inclusive education for students with severe disabilities. Specifically, it has been shown through research that students with severe disabilities can learn new academic skills (York et al., 1992; Hunt et al., 1994) and social skills (Logan & Malone, 1998) including initiating interactions with peers and developing social competence (Meyer & Fischer, 2002). As a result of increased participation in general education settings, there have been many opportunities for students with severe disabilities to interact socially and develop friendships with peers with whom they live and recreate.

The research has also shown that students without disabilities don't 'lose' skills or even instructional time in general education because a student with a severe disability is in their class (Helmstetter et al., 1998; Salend & Garrick-Duhaney, 1999). In fact, many students without disabilities benefit from the additional staffing often associated with the inclusion of students with severe disabilities (Logan & Malone, 1998). Research has also demonstrated that students without disabilities experience improvements in self-concept, growth in social cognition, and develop increased tolerance of differences as a result of interactions with students with severe disabilities (Peck et al., 1990; Helmstetter et al., 1994; York et al., 1992; Janney et al., 1995).

However, inclusion and the implementation of inclusive practices have often been met with skepticism, fear, and negative attitudes about its purpose and the possible deleterious effects on students without disabilities. Overwhelmingly, special educators reported having difficulties with role boundaries, struggling with collaboration and communication with their general education counterparts, differing backgrounds and

perceptions of the educational process (e.g. remediation of skills previously taught and not mastered verses teaching of content to a whole group), and often have had limited resources (York & Tunidor, 1995; McDonnel, 1998; and Wood, 1998; McCormic et al., 2001). General educators reported a lack of professional preparation in teaching students with severe disabilities, a lack of preparation in collaboration skills, lack of administrative support, and time to collaborate and communicate with their special education counterparts (Finley-Snyder, 1999; Buell et al., 1999; Kearney & Durand, 1993, Agran & Alper, 2000; Wood, 1998). For inclusion to be successful stakeholders needed to feel their presence and input was valued.

In contrast, special educators, general educators, and administrators reported positive attitudes towards inclusion and the implementation of inclusive practices once they had experienced the process successfully (York et al., 1992; Salend & Garrick-Duhaney, 1999; York & Tunidor, 1995; Janney et al., 1995; Barnett & Monda-Amaya, 1998; Salisbury & McGregor, 2002; and Praisner, 2003). Given the appropriate resources and support, stakeholders agreed that students with severe disabilities could be successfully included. The most often mentioned predictors of successful inclusion were time allocation for collaboration and collaborative teaming, ability to communicate, administrative support, experience with inclusion, and adequate preparation either at the pre-service or in-service level (Wood, 1998; Wolery et al., 1995; Janney et al., 1995; Werts et al., 1996; Danne et al., 2001; and Hunt et al., 2003).

Regrettably, many special educators and most general educators report not being prepared to implement inclusive practices (Agran & Alper, 2000; Rainforth, 2000; McCormic et al., 2001; Reed & Monda-Amaya, 1995; Buell, et al., 1999; and Henning &

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Mitchell, 2002). Most pre-service personnel preparation programs for general educators include little to no special education course work or practicum experience with students with disabilities. Many pre-service personnel preparation programs for special educators include little course work on content instruction or include very few experiences where teacher candidates are required to collaborate with general educators. There are a few examples where pre-service personnel are prepared together and graduate with dual certification in general education and special education (Mattson & McGregor, 1997; Villa et al, 1996). However, this is not the norm or even a trend as most personnel preparation programs prepare teacher candidates based on separate state certification / licensure requirements for special education and general education.

In addition to philosophical and research supported arguments for inclusion of students with disabilities, it is now a major focus of legislative reforms. Specifically with the amendments of IDEA 1997, there is a requirement that students with disabilities have access to the general education curriculum with the necessary supplementary supports and services. The amendments of IDEA 1997 also imply that students with disabilities are to attend the same school they would if they did not have a disability. With the enactment of the NCLB Act of 2001, a provision was made that all students should access the general education curriculum as standards for measurement of adequate yearly progress would be based on the general education curriculum. Inclusion of students with disabilities was no longer a moral imperative but a legal one as well.

As a result, it is evident that many teachers who work with students with severe disabilities may not have received adequate preparation to implement inclusive practices. It is also evident that most general educators have not been prepared to teach students

with severe disabilities and mat not have the strategies to work successfully with special educators who facilitate the process of inclusion. While there is ample research on inclusive practices and some research on the importance of personnel preparation for severe disabilities, there is almost no research on whether those at the pre-service level preparing to work with students with severe disabilities, learn about and use inclusive best practices or believe them to be important. Thus, the purpose of this study to investigate the extent to which special educators prepared at the Univeristy of Maryland, who specialized in severe disabilities, were prepared to meet the needs of students within inclusive environments (e.g., collaborative practices, provision of student supports, assessment, and instructional strategies).

CHAPTER III

Methodology

The purpose of the study was to survey former graduates of the University of

Maryland, Department of Special Education, who specialized and received initial

certification in Severe Disabilities. Specifically, graduates were questioned about the

adequacy of preparation received at the University of Maryland regarding their ability to

support students with severe disabilities within inclusive environments. Descriptions of

the severe disabilities program at the University of Maryland, eligibility requirements for

participants, coursework taken, location of graduates, instrumentation development,

reliability and validity procedures, data collection, and data analysis are stated below.

Participants

Severe disabilities program, University of Maryland. The Univeristy of Maryland

(UM) is located in College Park, Maryland and is the flagship Research I institution in

the state. During the 2003-2004 year, there were 34,160 students, both graduate and

undergraduate attending. In the College of Education, there were 1,190 undergraduate

students and 1,091 graduate students enrolled in 2003-2004. The College of Education

contains six separate departments: (a) Counseling and Personnel Services (EDCP); (b)

Curriculum and Instruction (EDCI); (c) Education Policy and Leadership (EDPL); (d)

Human Development and Institute for Child Study (EDHD); (e) Measurement, Statistics

and Evaluation (EDMS); and (f) Special Education (EDSP).

The Department of Special Education (EDSP) has 15 full time faculty members,

two faculty research assistants who coordinate the peer advising office and the

Department of Defense Education Agency (DODEA) Master's Preparation Programs in

Germany. In addition, numerous support staff lecture, supervise teacher candidates in practica and internships, and coordinate institutes and federal outreach, model demonstration, and personnel preparation grants.

The Department of Special Education prepares undergraduate teacher candidates in: (a) Early Childhood Special Education Birth to Grade Three; (b) Elementary Special Education Grades One to Eight; or (c) Secondary/Middle Special Education Grades Six to Twelve. Graduate students in need of initial certification can choose from: (a) Early Childhood Special Education: Birth to Grade 3; (b) Elementary Special Education: Grades 1-8; (c) Secondary/Middle Special Education: Grades 6-12; (d) Dual Certification: Early Childhood and Severe Disabilities: Birth-Grade 3; (e) Elementary and Severe Disabilities: Grades 1-8; (f) Secondary/Transition and Severe Disabilities: Grades 6-12; and (g) Severe Disabilities only, if already certified in Early Childhood, Elementary or Secondary/Middle Special Education.

The undergraduate and graduate teacher preparation program has undergone substantive changes over the past three years. Prior to 2001, teacher candidates could specialize in a disability 'specialty' area. Specifically, teacher candidates could choose to specialize in Educational Handicaps, Early Childhood, Severe Disabilities, or Secondary and Transition Special Education. Those who specialized in severe disabilities took coursework specific to instruction of students with severe disabilities, but across the life span. Both undergraduate students and graduate students pursuing initial certification in severe disabilities engaged in similar coursework and field experiences. At that time, all teacher candidates pursuing the severe disabilities certification were required to take a course on *Inclusive Practices*. In addition, field experiences were based on engagement

in strategies learned each semester within the severe disabilities coursework (e.g., teaching of functional life skills, infusion of IEP goals within general education, development of positive behavior supports, community based instruction, support for students at community work sites, transition practices).

Since 2001, teacher candidates may choose to specialize in an age-based area with coursework and experiences across disability categories. Specifically, all teacher candidates gain knowledge and experience with students having severe disabilities as well as high incidence disabilities. In addition, all undergraduate teacher candidates graduate with dual certification in severe disabilities. Prior to 2001, only those teacher candidates specializing in severe disabilities or early childhood special education could obtain an additional certification in severe disabilities. At this time, only one field experience is required with students with severe disabilities and the *Inclusive Practices* course is no longer a requirement. With specific coursework sequences for each specialty area, there is little room in the undergraduate program schedule to take the *Inclusive Practices* course as an elective.

Unlike many undergraduate teacher preparation programs, UM has a five-year program. It was determined that teacher candidates would benefit from additional practical experience while completing coursework related to their degree. During their 4th year, teacher candidates participate in specialized courses along with two successive practicum placements. Teacher candidates are expected to refine their lesson planning skills, develop specialized instructional programs, and participate in more hands on teaching under the leadership of a mentor teacher. During the 5th, year teacher candidates are expected to master lesson planning, instructional delivery, classroom management,

planning and implementing positive behavior supports, assessment, collaboration, professionalism, individual learning differences, and characteristics of learners. To accomplish this, teacher candidates participate in a practicum experience and additional coursework during the fall semester and then transition to a full time internship for 14 weeks in the spring. During the full time internship, teacher candidates take over all planning and mentor teacher responsibilities. A unique feature of UM's 5-year undergraduate program is that teacher candidates have an option of participating in the 'Double-Count' program. The double-count option allows students to complete course towards their Master's degrees in specific disability areas during the 5th year and within 30 credit hours.

Eligibility requirements. An attempt was made to locate all graduates receiving initial certification from the undergraduate or graduate program in the area of severe disabilities at the University of Maryland, Department of Special Education since May 1996. This included teacher candidates who specialized in: (a) undergraduate initial teacher certification in Severe Disabilities (UGSD); (b) undergraduate initial teacher certification in Early Childhood Special Education and Severe Disabilities (UGEC w/SD); (c) graduate initial teacher certification in Severe Disabilities (GSD); and (d) undergraduate initial certification in special education (at University of Maryland) with graduate coursework in severe disabilities resulting in Severe Disabilities certification (UGSE w/ GSD).

Graduates from the year 1996 to present were chosen for several reasons. The Individuals with Disabilities Education Act or IDEA P.L. 101-476 was passed in 1990. In response to IDEA's focus on the Least Restrictive Environment (LRE), programmatic

changes in pre-service teacher preparation for students with disabilities became

increasingly necessary. There was a shift in the focus of traditional models of pre-service

teacher preparation for students with severe disabilities to an inclusive model of service

delivery. Pre-service teacher candidates were now being taught inclusion-focused tasks.

In addition to learning the elements of effective instructional delivery (e.g., classroom

management, disability specific health procedures, community-based instruction,

vocational instruction and transition, functional assessment, behavioral intervention, and

augmentative communication devices), teacher candidates were also being taught about

inclusion and inclusive practices (Smith & Helton, 1997).

       With added responsibility, faculty had to instruct teacher candidates on the skills

and competencies needed to teach students with severe disabilities as well as the

philosophy behind inclusion and practical strategies to implement inclusion, which was

now mandated by federal law P.L 101-476 (IDEA, 1991). Due to the recent development

of inclusive practices, there were no empirical data to support inclusive strategies teacher

candidates were now being asked to embrace. There were some data to support the

positive effects of integration and mainstreaming, and experts were extrapolating these

results to project the expected benefits inclusion would have on students with severe

disabilities (Eichenger & Woltman, 1993; Giangreco & Putnam, 1990; Janney, Snell,

Beers, & Raynes, 1995). As a result there were no standards for inclusive practices, an

empirically validated database, or 'experts' in the field of inclusion.

       Graduates before 1996 may not have had sufficient exposure to inclusive

practices or had the opportunity to participate in the 'Inclusive Practices' course.

Completion of EDSP 450: Inclusive Practices in the Schools, offered from 1997 on, by

all teacher candidates enrolled in the severe disabilities program was also considered as a deciding factor. The course surveys components of effective inclusive education. The course was required for undergraduates in the final year of their program. The course was offered as an elective for graduate teacher candidates. Course components included co-teaching strategies, collaboration between general and special educators, modifications and accommodations to curriculum, use of positive behavior supports, and assessment and grading practices in general education.

Finally, graduates of 1996 and after were chosen because of the increased practice of including students with severe disabilities into general education classrooms in the state of Maryland. Many graduates of UM's program in severe disabilities were teaching in the state. Initial systems change initiatives were introduced in the early 1990's through the Maryland State Department of Education (MSDE) and the Maryland Coalition for Inclusive Education's (MCIE) Neighborhood Inclusion Project (NIP). These organizations worked with specific local school systems (LSS) on promoting the inclusion of students with severe disabilities into their home schools.

Prior to 1992, many LSS's were serving students with severe disabilities in segregated settings (more than 60% of their school day in self-contained classrooms and/or facilities). Several LSS's received instruction and technical assistance on strategies to include students with severe disabilities in general education environments from MSDE and MCIE. This instruction and technical assistance served as an impetus for students with severe disabilities to be increasingly included into general education environments for many LSS's. Graduates prior to 1996 working in Maryland may not

have had any experience implementing inclusive best practices due to the lack of schools or districts implementing inclusive best practices.

Inclusion in Maryland. Maryland was one of the first states to pass legislation that required the education of children with disabilities, including young children (from birth to age five) prior to the Education of All Handicapped Children Act (P.L. 94-142) in 1975. As a result, Maryland built special schools and developed programs to provide segregated special education services (Maryland Developmental Disabilities Council, 2003). Consequently, placements in self-contained facilities and in segregated classrooms within general education schools remain a frequently used option for students with severe disabilities. Maryland "is one of the most segregated states in the nation for its education of students with disabilities" (MDDC, 2003, p.6).

As a result, students with severe disabilities in Maryland are often in self-contained classrooms (out of general education classroom for more than 60% of their school day). In fact, 59% of school-aged students with mental retardation, 46% of students with autism, and 44% of students with multiple disabilities are educated outside of the general education classroom for greater than 60 % of their school day (MDDC, 2003). In relation to other states, Maryland had the 10th highest percentages of students with disabilities receiving services in self-contained classrooms and has the 11th highest percentage of students with disabilities receiving services in public separate schools (MDDC, 2003).

Required coursework. All required coursework for Severe Disabilities Certification is summarized in Table 1. Coursework required for initial certification in UGSD and GSD included: EDSP 400: *Functional Assessment and Instruction in Special*

Education (formerly *Assessment, Curriculum, and Instruction for Students with Severe Disabilities)*; EDSP 403: *Instructions of Students with Physical Disabilities*; EDSP 404: *Education of Students with Autism;* EDSP 410: *Community-Based Assessment and Curriculum in Special Education;* EDSP 412: *Transition and Vocational Instruction for Students with Disabilities;* EDSP450: *Inclusive Practices in the Schools;* and EDSP 487: *Family Partnerships in Special Education.*

   Coursework required for initial certification in UGEC w/SD included: EDSP 400: *Functional Assessment and Instruction in Special Education:* EDSP 403: *Instruction of Students with Physical Disabilities*; and EDSP 404: *Education of Students with Autism,* EDSP450: *Inclusive Practices in the Schools;* and EDSP 487: *Family Partnerships in Special Education.* Coursework required for certification in Severe Disabilities at the graduate level, once initial certification in special education was acquired in the undergraduate level, included EDSP 410: *Community-Based Assessment and Curriculum in Special Education;* EDSP 412: *Transition and Vocational Instruction for Students with Disabilities* EDSP450: *Inclusive Practices in the Schools;* and EDSP 487: *Family Partnerships in Special Education.*

Table 1

Coursework Required for Severe Disabilities Certification

Courses	UGSD	UGEC w/ SD	GSD	UGSE &GSD
EDSP 400: Functional Assessment and Instruction In Special Education	*X*	*X*	*X*	*X*
EDSP 403: Instruction of Students with Physical Disabilities	*X*	*X*	*X*	
EDSP 404: Education of Students with Autism	*X*	*X*	*X*	
EDSP 410: Community-Based Assessment and Curriculum in Special Education	*X*		*X*	*X*
EDSP 412: Transition and Vocational Instruction for Students with Disabilities	*X*		*X*	*X*
EDSP 450: Inclusive Practices In the Schools	*X*	*X*	*X*	*X*
EDSP 487: Family Partnerships In Special Education	*X*	*X*	*X*	*X*

Location of graduates. The Undergraduate Advising Office in the Department of

Special Education had records of all recent graduates including the date teaching

certification was recommended, course work completed, and type of initial special

education certification recommended (i.e., Elementary Special Education, Early

Childhood Special Education, Early Childhood Special Education with Severe

Disabilities, Severe Disabilities, and Secondary Special Education and Transition). The

Department of Special Education Graduate Program Director had records of all graduates

recommended for initial certification in severe disabilities. After consulting with both the

undergraduate advising office and the graduate director, a list of 101 prospective

respondents was generated. A specific breakdown of the total number of possible

respondents by year graduated, undergraduate status, graduate status, and initial

certification received is listed in Table 2.

Table 2

Possible Survey Respondents from UM

Year	UGSD	UGEC w/ SD	GSD	UGSE w/ GSD
Spring 1996	5	N/A	1	N/A
Summer 1996	N/A	N/A	0	N/A
Fall 1996	N/A	N/A	1	N/A
Spring 1997	6	N/A	0	2
Summer 1997	1	N/A	0	N/A
Fall 1997	N/A	N/A	2	N/A
Spring 1998	5	8	0	2

Table 2 (cont.)

Possible Survey Respondents from UM

Year	UGSD	UGEC w/ SD	GSD	UGSE w/ GSD
Summer 1998	N/A	N/A	2	N/A
Fall 1998	N/A	N/A	0	N/A
Spring 1999	5	6	3	1
Summer 1999	N/A	N/A	2	N/A
Fall 1999	N/A	N/A	0	N/A
Spring 2000	6	9	1	3
Summer 2000	N/A	N/A	1	N/A
Fall 2000	N/A	N/A	0	N/A
Spring 2001	5	2	2	2
Summer 2001	N/A	N/A	1	N/A
Fall 2001	N/A	N/A	0	N/A
Spring 2002	4	7	1	2
Summer 2002	N/A	N/A	0	N/A
Fall 2002	N/A	N/A	1	N/A
Spring 2003	N/A	N/A	2	N/A
TOTAL N=101	N=37	N=32	N=20	N=12

Once this list of prospective respondents was generated, personal information on each graduate was recorded into a database. This included name, year graduated, program status, e-mail address, any known secondary e-mail address, mailing address, and phone number. This researcher regularly keeps in contact with several recent graduates from both the undergraduate and graduate programs and many of these teacher candidates now serve as mentor teachers for current teacher candidates. Also, as the former project coordinator for a three-year federally funded severe disabilities personnel preparation grant, the author kept follow-up information for grant reporting purposes. Specifically, a recent brief phone and/or e-mail follow-up survey was conducted for all teacher candidates receiving personnel preparation grant assistance while completing their graduate work in either low-incidence disabilities and were asked about basic demographic information, employment status (including job responsibilities), and current e-mail address.

Following the recording of the known information, the author then conducted an extensive Internet search to locate additional respondents. The potential respondents' names were entered into a search engine (e.g., *Ask Jeeves, Google, Overture, Yahoo*). This process elicited several web pages containing information about specific graduates. In addition, the author conducted searches for prospective respondents on local school system websites. Specifically, names were entered into the web site search engines for the following county school systems in Maryland: Anne Arundel (http://www.aacps.org), Baltimore (http://www.bcps.org), Carroll (http://ccpl.carr.org/ccps), Charles (http://www.ccboe.com), Frederick (http://www.fcps.org), Harford (http://www.hcps.org/), Howard (http://www.howard.k12.md.us), Montgomery

(http://mcps.k12.md.us), Prince Georges (http://www.pgcps.pg.k12.md.us), and St.

Mary's (http://www.smcps.k12.md.us) counties. This search also elicited several e-mail

addresses. Many of the local school systems have district-wide e-mail access for

employees including teaching staff. The author also contacted faculty members closely

involved in the undergraduate early childhood special education program as the author

has had minimal contact or interaction with this group of prospective respondents. An

early childhood faculty member contacted graduates with whom she still kept in contact

and asked them if they would be willing to be contacted for the purposes of this study.

That faculty member then forwarded messages sent and e-mail addresses of those former

teacher candidates to the author. Finally, the author contacted several known graduates

with whom a personal relationship exists, for any additional information known about

fellow classmates with whom they graduated. A total of 85 of the 101 potential

respondents were located with an e-mail address, mailing address, or phone number.

Instrument Development

   Solicitation of expert opinion. To develop or select an appropriate instrument for

use in this study, this researcher felt it was appropriate to contact several experts in the

field of severe disabilities including those familiar with personnel preparation and

inclusive practices (S. Alper, M. Agran, L. Jackson, C. Jorgensen, G. McGregor, D.

Ryndak, M. Snell, personal communication, December 13, 2002). After an ancestral

search of the literature was conducted, experts were chosen based on several factors

including: (a) authors of seminal pieces of research on inclusion and / or personnel

preparation for severe disabilities; (b) authors of various instruments used to measure best

practices for inclusion; and (c) members of important committees and / or editorial

boards of the focal disability rights and advocacy group for persons with severe

disabilities. Experts were identified as those who had published articles in refereed

journals or had developed instructional materials around inclusion or inclusive practices.

In addition, many of the experts were identified as being associate editors or members of

the editorial board of *Research and Practice for Persons with Severe Disabilities*. In

addition to the selection of experts known to conduct research on inclusive practices or

personnel preparation in severe disabilities, members of the personnel preparation

committee of *The Association of Persons with Severe Handicaps* (TASH) were contacted

while in attendance at the Annual TASH Conference, held December $10^{th} – 14^{th}$, 2002 in

Boston, MA.

As it was the purpose of the study to identify whether graduates receiving initial

certification in severe disabilities were knowledgeable of and were implementing

inclusive best practices, the researcher detailed the proposed research to be conducted

and asked said experts to identify any known instruments that measure 'Quality

Indicators' or 'Best Practices' for inclusive education. Several experts identified

Program Quality Indicators (Meyers et al., 1992) as a reasonable instrument for the

purpose of the proposed study. In addition, several experts identified the work being

done at the University of New Hampshire's Institute on Disability and the *Essential Best

Practices in Inclusive Schools'* instrument developed by Jorgensen, McSheehan, and

Sonnenmeier (2002). Others suggested the author contact them after the TASH 2002

Conference for a list of instruments currently used in their states as planning tools for

developing inclusive practices. After the conference, the researcher contacted via e-mail,

those experts with whom she spoke at the TASH conference as well as other experts

elicited from the ancestral search conducted previously. A list of experts contacted,

method of contact, status of expertise, professional affiliation and responses generated are

summarized in Table 3.

Maryland's Quality Indicators for Inclusive Schools. The Maryland State

Department of Education (MSDE) and the Maryland Coalition for Inclusive Education

(MCIE) also developed an instrument to evaluate inclusive practices in the state of

Maryland. Specifically a task force:

… described the current state of inclusive practices, formulated a shared vision

for inclusive education environments in Maryland Schools, defined the quality indicators

of inclusive schools, identified obstacles and issues that impede moving toward the

vision, and finally explored directions and resources needed for schools to build inclusive

education services (MSDE & MCIE, 2002, p.1).

As a result of the collaboration between MSDE and MCIE's Inclusion Task

Force, the instrument *Quality Indicators for Inclusive Schools* was developed.

Specifically, LSS's and particular schools needing evaluation of the presence of inclusive

practices, use the instrument as a planning tool. The instrument measures whether each

indicator was already in place, in progress, or emerging and whether a particular indicator

was a priority. Ultimately, the instrument was being used to identify areas of need for

professional development activities in the area of inclusive practices.

Table 3

Summary of Contacted Experts

Expert	Contact Method	Expertise Status	Affiliation	Responses
Dr. Sandra Alper	TASH Conference	Research articles recently published; Personnel Prep. Committee	Univ. of Northern Iowa	PQI, Essential Best Practices
Dr. Martin Agran	TASH Conference	Research articles recently published; Associate editor of JASH; Personnel Prep. Committee	Univ. of Northern Iowa	PQI, Essential Best Practices
Dr. Diane Browder	E-mail	Research articles Recently published; Editorial Board of JASH; Personnel Prep. Committee	Univ. of North Carolina-Charlotte	PQI, Essential Best Practices
Dr. June Downing	E-mail	Research articles Recently published; Associate Editor of JASH; Personnel Prep. Committee	California State University-Northridge	PQI, Essential Best Practices
Dr. Doug Fisher	E-mail	Research articles recently published	San Diego State Univ.	PQI

Table 3 (cont.)

Summary of Contacted Experts

Expert	Contact method status	Expertise	Affiliation	Responses
Dr. Michael Giangreco	E-mail	Research articles Recently published; Editorial Board of JASH	Univ. of Vermont-UAP	Best Practice Guidelines; Essential Best Practices
Dr. Lewis Jackson	TASH Conference E-Mail	Research articles Recently published; Personnel Prep. Committee Chair	University of Northern Colorado	PQI, Colorado Effective Education Model
Dr. Cheryl Jorgensen	TASH Conference E-mail	Research articles recently published	University of New Hampshire UAP	Best Practice Guidelines, PQI, Essential Best Practices
Dr. Gail McGregor	TASH Conference E-mail	Research articles recently published	University of Montana Rural Institute on Disability	Inclusion Practices Priority Instrument, Inclusion Practices Survey, The Complete School, Effective Practice Checklist, Best Practice Guidelines

Table 3 (cont.)

Summary of Contacted Experts

Expert	Contact method	Expertise status	Affiliation	Responses
Dr. Diane Ryndak	TASH Conference E-Mail	Research articles Recently published; Associate Editor of JASH; Personnel Prep. Committee	University of Florida	PQI, Essential Best Practices, District / Site Level Needs Assessments, Building Level Indicators of Successful Schools
Dr. Marti Snell	TASH Conference	Research articles Recently published; Editorial Board of JASH	Univ. of Virginia	Best Practice Guidelines, Essential Best Practices, PQI

For further follow-up, the researcher contacted the Director of Professional

Development Services for the Maryland Coalition for Inclusive Education (MCIE), Dr.

Carol Quirk. The author felt that an instrument developed and used primarily in the state

of Maryland would be most appropriate due to the proposed respondents' affiliation with

the state of Maryland (e.g., attendance at the University of Maryland, many still residing

in Maryland, many potentially teaching in Maryland). Dr. Quirk was contacted

regarding the development and use of the *Quality Indicators for Inclusive Schools*

developed by the MSDE and MCIE's Inclusion Task Force (2002). The Inclusion Task

Force was comprised of members affiliated with the Maryland State Department of

Education (MSDE) and MCIE. The author was already familiar with this tool and was

proposing its use as the basis for the current study. Through personal communication

(C. Quirk, January 21st, 2003), Dr. Quirk outlined the process for the development of the

instrument as well as identified several additional 'Best Practice' or 'Quality Indicator'

instruments reviewed by the task force to "identify what was already out there in terms

of surveys/checklists".   Indicators and formats were synthesized and presented to the

task force, who in turn "did some group editing" (C. Quirk, personal communication,

January 21st, 2003). The task force developed the instrument based on the premise that

the indicators were based on 'best practices' literature and other available instruments.

Description of the Instrument

There were four major portions on the 'Inclusive Best Practices Survey'. The

first portion of the survey was based on the previously developed instrument 'Quality

Indicators for Inclusive Schools' used and developed in the state of Maryland.

Specifically, respondents were asked to rate: (a) effective practices learned, (b) effective

practices used, and (c) effective practices, which are most critical to student success.

The second part of the survey asked respondents to provide information about their

undergraduate or graduate preparation for initial certification in severe disabilities. The

third portion of the survey asked questions related to the preparation received for

supporting students with severe disabilities in inclusive environments. The last portion

of the survey asked respondents to provide information about their current or most recent

teaching experiences, if no longer teaching. The survey contained questions in various

formats including Likert scale ratings, multiple choice, multiple select, fill in the blank, short answer, and open-ended responses.

Based on the research questions, a survey with specific questions related to former graduates' course of study and current or most recent teaching situation was warranted. Also because the author wanted to partially replicate the Ayers et al. (1994) study, a survey allows collection of a large amount of data about former graduates' knowledge of and use of best practices for inclusion. A description of the extensions to the Ayers et al. (1994) study is contained in Table 4 and Table 5.

On page one of the 'Inclusive Best Practices Survey', respondents were provided with the purpose of the study and given specific information about confidentiality. Respondents were told that they may voluntarily participate and may choose not to answer specific questions. Respondents were also given information to contact the investigator and were asked to 'click' on a 'YES' or 'NO' radio button that indicated their consent to participate. Respondents were then directed to the second page of the survey.

Part I. After comparing similar instruments, it was determined by the author that the MSDE / MCIE *Quality Indicators for Inclusive Schools* (2002) was an appropriate instrument on which to base the first portion of the study. Specifically, the *Quality Indicators for Inclusive Schools* instrument was found to be similar in content, scope and quality of other instruments examined. It was determined that several items from the instrument were adapted so those respondents could apply each quality indicator to their current or most recent teaching experience. For example, items that began with 'Teachers…' were changed to "I"…" In addition only items that pertained to teachers or

an item that a teacher would have direct control of were included. Items that were

excluded were based on school administrators, scheduling issues (in which the teacher

had no control), and school improvement teams.

Table 4

Extensions of Ayers et al. (1994) Study

_____

Procedures / Instrumentation

_____

1. Instrument / Procedural use of the *Quality Indicators for Inclusive Schools* as
   developed by MSDE and MCIE Inclusion Task Force (2002) as a basis for
   survey questions; only indicators that teachers could have a direct impact [no
   scheduling, systems based, or administrative questions].

2. Original study included several components of Program Quality Indicators (PQI),
   which encompassed all aspects of best practices for students with severe
   disabilities, current study would focus solely on Quality Indicators for *Inclusive*
   Schools.

3. Survey designed to elicit information regarding graduates of a specific program
   (i.e., UM) verses teachers who received preparation from a variety of institutions.

4. Additional responses were requested for each quality indicator to include *Most*
   critical to student success.

5. Respondents were contacted via e-mail.

6. Increased response rate as well as quicker turn-around time resulted with the use
   of an internet survey

Table 5

Extensions of Ayers et al. (1994) Study

Participants

1. Former undergraduate teacher candidates from the University of Maryland, College Park receiving initial certification in severe disabilities, since 1996.

2. Former graduate teacher candidates from the University of Maryland, College Park receiving initial certification in severe disabilities, since 1996

3. Former graduate teacher candidates from the University of Maryland, College Park receiving initial undergraduate certification in special education (either Educational Handicaps-EH or Secondary and Transition-ST) who took additional coursework in severe disabilities, since 1996

4. Descriptive follow up data was collected to establish whether graduates were actually teaching in the area in which they were prepared, and if graduates were teaching in an inclusive setting.

5. Through e-mail, respondents were sent a link directly to an electronic survey as designed by the author and maintained through the University of Maryland web site: http://cgi.umd.edu/survey/display?qualityindicators/hcyoung518

Items included were based on specific areas identified by the task force as indicators of practices that support inclusive education. These areas included: (a) Collaborative Planning and Teaching; (b) Individual Student Supports; (c) Student Assessment and Grading; and (d) Instructional Practices. *Collaborative Planning and Teaching* refers to cooperation and preparation with general educators, related service professionals, parents and support staff in the development of Individual Education Plans (IEP's), lesson and units for instruction, and instructional modifications. *Individual Student Supports* refers to the development of strategies that facilitate access to multiple environments (e.g. pre-school, general education classes, lunch, recess, extracurricular activities, post-secondary settings) and increase student independence. *Student Assessment and Grading* refers to participation in statewide assessments with modifications and measures of student performance. *Instructional Practices* refers to the selection and use of appropriate instructional strategies and technology as well as differentiated instruction. Several specific quality indicator statements under each of the aforementioned categories were included for a total of 22. Specifically there were eight statements that constitute *Collaborative Planning and Teaching*, five statements that constitute *Individual Student Supports*, three statements that constitute *Student Assessment and Grading* and six statements that constitute *Instructional Practices*.

Each respondent was asked to rate on a Likert Scale whether they: strongly agree, agree, were neutral, disagree, or strongly disagree with each 'quality indicator for inclusive schools' statement. Respondents were asked first about their *Level of Knowledge* on each of the 22 indicators based on their program at UM (Questions 2-23). *Level of Knowledge* was defined as whether they learned about a particular indicator as a

result of their program while in attendance at the University of Maryland. Second,

respondents were asked about the *Degree of Presence* of each indicator in their current or

most recent teaching situation (Questions 24-45). *Degree of Presence* was defined as the

level to which an indicator was present or being implemented at the respondents' current

or most recent teaching situation. Finally, respondents were asked again to rate whether

each of the 22 indicators was *Critical to the Success of Students with Severe Disabilities*

(Questions 46-68). *Critical to the Success of Students with Severe Disabilities* was

defined as the belief the respondent holds about whether the presence of a particular

indicator was required for a student with severe disabilities to be successful. A final

open-ended question was included for respondents to list any additional 'Inclusive Best

Practices' they felt were most critical to students with severe disabilities' success, but not

included in the survey. Respondents were asked to rate all 22 indicators on their *Level of*

Knowledge, Degree of Presence, and *Critical to the Success of Students with Severe*

Disabilities for a total of 66 questions (Questions 2-68).

   Part II. The next part of the survey contained questions that assessed specific

demographic and follow up information about each of the respondents. Questions 69-73

were based on respondents' program of study, specifically those that participated in the

undergraduate initial certification special education program with certification in severe

disabilities, concentration chosen (SD, EC, EH, or ST), year graduated, participation in

the double count program (program in which up to 12 hours of course work taken as an

undergraduate degree is applicable to a future graduate degree at the University of

Maryland), and concentration chosen during the graduate portion of the double count

program (LD, BD, EC, SD, ST). Questions 74-75 were based on respondents' program

of study, specifically those that participated in the *graduate* initial certification special education and severe disabilities program, concentration chosen (LD, BD, EC, SD, or ST) and year graduated.

Part III. The next part of the survey contained questions that pertained to the preparation they received while at University of Maryland regarding supporting students with severe disabilities in inclusive environments. Support of students with severe disabilities in inclusive environments was defined as the educational practice of providing assistance and/or instruction to increase participation in chronologically age-appropriate general education settings (e.g., regular pre-schools, the home school, post-secondary institution) as delineated by their Individual Family Support Plan (IFSP) or Individual Education Program (IEP) within the context of the core curriculum and general class activities. Question 76 was specific to whether respondents took EDSP 450 or 499 (during the summer) "Inclusive Practices in the Schools" while at UM. Questions 77-79 pertained to the total number of field placements in which they participated, the number of field placements during their preparation where they supported students in inclusive environments and the placement's description. Questions 80-82 pertained to whether respondents felt they were adequately prepared to support students in inclusive environments and specific examples (e.g., course work, assignments, activities) in which they engaged during preparation at University of Maryland. Question 83-84 were open-ended questions about any additional preparation (workshops, lectures, or courses) that might have better prepared respondents to meet the needs to students in inclusive environments or additional preparation respondents may have received after their attendance at UM.

Part IV. The last part of the survey contained questions for those respondents who were *currently teaching or previously taught*. Specifically, questions 85-92 asked about respondents' years teaching, age level, disability categories of students with whom they were working, teaching position, percentage of time spent teaching students with severe disabilities, percentage of time spent supporting students in inclusive environments, state, and demographic category (i.e., urban, suburban, rural). Questions 93-102 asked those respondents who were *no longer teaching* to provide information on their current employment situation, years taught before leaving, age level, disability categories of students with whom they used to work, teaching position, percentage of time spent teaching students with severe disabilities, percentage of time spent supporting students in inclusive environments, state, demographic category (i.e., urban, suburban, rural), and their reason for leaving the profession in an open-ended question. A copy of the survey is included in Appendix A.

Validity of Instrument

   Concurrent validity. To verify that the *Quality Indicators for Inclusive Schools* was a valid instrument and similar in content, scope, and quality to other instruments, the author carefully compared all 'Inclusive Best Practices' instruments. These instruments used for comparison were suggested by and obtained from experts in the field of personnel preparation and inclusion of students with severe disabilities. The comparisons were made to establish a 'gold standard' and to conduct *concurrent validity* (Litwin, 1995). The author compared statements or items included on the instruments by grouped indicators. Specifically, all instruments had headings of indicators that were considered best practice within the inclusion literature. Headings contained in the " Quality

Indicators for Inclusive School", which were based on best practices in the area of inclusion, were used as the main comparison. All other instruments were evaluated for their likeness to this instrument. Headings included: (a) Assignment and Scheduling; (b) Collaborative Planning and Teaching; (c) Instructional Practices; (d) Assessment and Grading; (e) Individual Student Supports; and (f) School Leadership. A comparison of all 'Inclusive Best Practice' instruments suggested by experts (in Table 3) is summarized in Table 6.

Additional *concurrent validity* was conducted with an instrument developed by the College of Education at the University of Maryland. "Teaching as a Career: Follow-up Survey of College Of Education Graduates" was reviewed for content, scope, and quality as compared to the 'Inclusive Best Practices Survey'. The College of Education instrument was also online. However, it could only be accessed through the use of a password. This instrument was both reliable and valid, as determined by its use in an ongoing study regarding teacher retention.

All questions unrelated to the special education degree received were excluded in the comparison. Much of the content, language, and structure of the questions were equivalent regarding demographic information, current teaching status, and the status of those not currently teaching. One of the major differences in instruments was in format and wording for Likert scale responses regarding on-campus teacher preparation courses. Respondents were asked about the quality of their preparation (i.e., excellent, good, adequate, poor, no preparation) verses agreement on statements about their preparation (i.e., strongly agree, agree, neutral, disagree, strongly disagree). Overall, the instruments

were very similar in content, scope, and structure regarding demographic and follow-up information.

Table 6

Comparison of Inclusive Best Practices Instruments

Instruments	Fox, T. & Williams, W. (1998). *Best Practice Guidelines*	Halvorsen, A. & Neary, T. (1996a). *District Level Needs Assessment*	Halvorsen, A. & Neary, T. (1996b). *Site Level Needs Assessment*
Quality Indicators			
Assignment & Scheduling	X	X	X
Collaborative Planning & Teaching	X	X	X
Instructional Practices	X		
Assessment & Grading	X		
Individual Student Supports	X		X
School Leadership	X	X	X

Table 6 (cont.)

Comparison of Inclusive Best Practices Instruments

Instruments	ICI (1995) Inclusive Practices Survey	Jorgensen et al. (2002). Essential Best Practices	Kleinert et al. (1990). Quality Program Indicators
Quality Indicators			
Assignment & Scheduling	X	X	
Collaborative Planning & Teaching	X	X	X
Instructional Practices	X	X	X
Assessment & Grading	X	X	X
Individual Student Supports	X	X	X
School Leadership	X	X	

Table 6 (cont.)

Comparison of Inclusive Best Practices Instruments

Instruments	MSDE & MCIE (2002). Quality Indicators For Inclusive Schools	Meyer et al. (1992) Program Quality Indicators	Montie et al. (1992). Inclusion Practice Priorities Instrument
Quality Indicators			
Assignment & Scheduling	*X*	*X*	*X*
Collaborative Planning & Teaching	*X*	*X*	*X*
Instructional Practices	*X*	*X*	*X*
Assessment & Grading	*X*	*X*	
Individual Student Supports	*X*	*X*	*X*
School Leadership	*X*	*X*	*X*

Table 6 (cont.)

Comparison of Inclusive Best Practices Instruments

Instruments	Simon et al. Effective Practice Checklist	Swize et al. (1990). Colorado Effective Education Model	Wilcox, B. & Nicholson, N. (1990). Building Inclusive Schools
Quality Indicators			
Assignment & Scheduling	*X*	*X*	*X*
Collaborative Planning & Teaching	*X*	*X*	*X*
Instructional Practices	*X*	*X*	*X*
Assessment & Grading	*X*	*X*	*X*
Individual Student Supports	*X*	*X*	*X*
School Leadership	*X*	*X*	*X*

Face validity. After the instrument was initially developed by the author, four people with limited knowledge of the survey's purpose or content (i.e., a special educator not prepared at UM or working with students with severe disabilities in an inclusive setting; a general educator not prepared at UM or working with students with severe disabilities in an inclusive setting; an attorney unfamiliar with best practices in special education; a management professional working for a major manufacturer) were asked to review it for several factors including organization, flow, ease of use, and clearness of the wording of questions (Litwin, 1995). Those conducting face validity were not asked specifically about content.

Several suggestions were made about the order of questions, confusion of directions (e.g., skipping certain questions depending on graduate or undergraduate status, "if yes then answer X or if no then answer Y"), and redundancy of question openings (e.g., "While attending the University of Maryland, I… was changed to "I learned to…"). All recommendations were taken into consideration and numerous changes were made including an adjustment in order of some questions, clarification of directions and wording on some questions, and minor grammatical revisions.

Content validity. Several experts (N=10) from the state of Maryland were asked to review the content of the survey regarding appropriateness and thoroughness of questions (Litwin, 1995). Experts were chosen within the state of Maryland due to the population of the respondents (i.e., those who received initial certification in severe disabilities at the University of Maryland). They were also chosen because they were familiar with inclusion of student with severe disabilities and familiar with personnel preparation either at the pre-service or in-service level. Experts included: (a) the director

and project manager of professional development services at the statewide systems change and advocacy organization for inclusion; (b) two faculty members at the major state university for personnel preparation specializing in severe disabilities; (c) one director of special education for a local school system in Maryland; (d) two high school, one middle school, and two elementary special educators familiar with inclusion of students with severe disabilities and University of Maryland's special education program as well as serving as mentor teachers for practicum and student teaching experiences. The author felt it was important to include experts familiar with research and clinicians familiar with the day-to-day nuances consistent with inclusion of students with severe disabilities.

Feedback from Maryland experts was consistently positive. It was felt by most experts that the survey was very thorough and clearly written. Some suggestions were made to further clarify certain statements regarding 'students with disabilities' and from the 'Quality Indicators for Inclusive Schools' instrument as it applied to future respondents course of study while at UM and use of best practices in their current or most recent teaching situation. Items using the term 'students with disabilities' were changed to 'students with severe disabilities' as it was determined that the focus of the study pertained to preparation received to teach students with severe disabilities. Feedback was also given about the use of the term 'Inclusion' or 'Inclusive Environments' as some experts familiar with inclusive education in Maryland felt that the word 'inclusion' was used to describe a continuum of service delivery models in Maryland. Some experts felt 'inclusion' or 'inclusive environments' needed to be redefined or at least clarified further so that all respondents were working with a 'consistent definition'.

Pilot testing of instrument. As previously stated, the number of potential

respondents was 101 graduates. It was determined by the author that 10% of the potential

respondents would be asked to pilot test the survey (N=10). To determine the breakdown

of the respondents to pilot the survey, 10% of each category was randomly selected (i.e.,

four UGSD, three UGEC, two GSD, one UGSE w/ GSD) by alternating years graduated

to control for cohort effect, as many of the respondents may have attended classes

together. Respondents were contacted via e-mail and asked if: (a) Are instructions

clearly written? (b) Are questions easy to understand? (c) Will respondents know how to

indicate or change responses online (clicking and pointing the mouse on the specified

answers)? (d) Are the responses choices mutually exclusive? (e) Are the response choices

'exhaustive'? (f) Is privacy of the respondents respected and protected? and (g) Do you

have any suggestions regarding the addition or deletion of questions, the clarification of

instructions, or improvements in format? (Fink, 1995).

Several respondents (N=7) replied with suggestions regarding clarification of

content. Specifically, suggestions were made about the appropriateness of the inclusion

of questions on co-teaching (does not typically happen at the pre-school level) and

statewide assessment for early childhood teachers since students do not participate in

statewide assessment until third grade. It was also suggested that a 'not-applicable'

choice be included for some questions regarding the early childhood teachers.

Suggestions were also made regarding one of the 'Yes or No' forced choice answers

where respondents felt a continuum might be more appropriate as one respondent stated

"I can't imagine anyone being all the way yes or all the way no". It was also suggested

that respondents be given a list of ways in which the University of Maryland prepared

graduates to support students with severe disabilities in inclusive environments. Most

suggestions were included in the revisions. However, due to the technology associated

with the development and implementation of the survey (online and developed and

maintained by the Office of Information Technology-OIT), the format and choices for the

Likert scale responses were pre-determined and could not be adjusted (e.g., inclusion of a

'not-applicable' choice). In addition, many respondents identified the inability to

'unselect' an answer to be potentially problematic. Again, due to the technology of the

web survey program, it was not possible to make this adjustment. All of the validation

procedures are summarized in Table 7.

Data Collection

Data collection consisted of a relatively new form of survey methodology. The

survey was on a World Wide Web site as maintained by the University of Maryland and

the author. Respondents were initially located via e-mail and asked for their participation

in the completion of the survey. Within this e-mail, there was a link to the web site

containing the proposed survey. The web site address was:

http://cgi.umd.edu/survey/display?qualityindicators/hcyoung518

Respondents were asked to complete a series of questions about demographics

and UM program information as well as current employment status. Once respondents

reached the end of each specific page, they then proceeded to the next page of the survey.

Questions on the survey had several formats including 'Yes or No', 'Fill in the Blank',

'Multiple Choice' (only one answer possible), 'Short Answer', 'Multiple Select' (where

multiple answers could be selected, if appropriate), 'Essay', and Likert scale 'forced

choice' responses.

Table 7

Summary of Instrument Validation Procedures

Validity Procedure	Concurrent Validity	Face Validity	Content Validity
Participants:	Persons identified as experts in the field of inclusion (nationally) were contacted and asked to recommend instruments that measured 'Inclusive best practices' (Gold Standard).	Persons not familiar with purpose or content were asked to review the instrument.	'Experts' from the state (MD) who were familiar with program at UM and worked in field of inclusion (N=10); 10% of proposed sample: N=10).
Method:	Researcher located and analyzed instruments based on headings for similarity (brief content analysis) to ensure scope and content were similar; compared to previously validated and reliable UM College of Education Instrument.	Review of organization, flow, ease of use, and clarity in wording.	Pilot testing for feedback regarding clarity of questions, ease of use of technology, responses exhaustive and / or exclusive, privacy, and suggestions for deletions /additions.

All answers required the use of a mouse where respondents pointed and clicked on selected answers. For open-ended questions (fill in the blank, short answer and essay) respondents were required to place the cursor into the answer box via the mouse. Once the cursor was placed in the response box, respondents needed to type their responses.

The creation of the survey on the website was done by the author who, as a student and faculty member of the University of Maryland, had an already specified user name and access to development of multiple surveys. The Office of Information Technology at the University of Maryland manages the site. However the author was able to manipulate the creation of questions, question type, number of pages, and order of questions. Due to the structure of the survey, questions were coded in the design for ease of analysis. Specifically, codes were given for each question so that the author could pull out responses from specific questions or groups of questions when conducting the analysis of the data.

There were several features of web surveys that made it a viable and innovative medium to collect data. Features included ease of use by the respondents, increased response rate, and rapid turn around time (Dillman, 2000). The survey took approximately 20-30 minutes to complete and could have been done as soon as the respondents received the e-mail. Once the respondent completed the survey, they clicked the 'Done' button with their mouse and the results were automatically sent to the author's e-mail address. In addition, the technology kept track of responses by individual respondents as well as cumulative responses.

Response rate. To increase response rate, respondents were notified in a 'pre-notice e-mail' (Dillman, 2000). Specifically, respondents were told that another e-mail

with a link to the web address for the survey would be sent out in a few days (See Appendix B). E-mails were all sent out individually as opposed to a 'mass mailing' (Dillman, 2000). This helped to ensure that respondents e-mail programs didn't interpret the e-mail as bulk or 'junk' e-mail. The e-mail with the link to the survey was in the format of a 'cover letter' stating the purpose of the study. It also included a statement regarding their eligibility to enter their names and address in a drawing, as an incentive. Respondents were instructed to reply to the original e-mail sent (with the link to the web site address for the survey) to the author's e-mail address. Specifically they were instructed to reply to the original e-mail once they had completed the survey. A copy of the e-mail sent is included in Appendix C.

To increase the rapidity of their response to the survey, a 'graduated' incentive for earlier responses was created. Specifically, those respondents who answered the survey within the first two days (48 hours) of the e-mail notifying them of the survey were entered to win $50.00, provided by the researcher. After two days, a reminder e-mail was sent out to those who had not responded and replied to the author to be entered into the drawing (Dillman, 2000). Those respondents who answered the survey within the next five days (days three-seven, or the first week) of the e-mail notifying them of the survey were entered to win $30, provided by the researcher (See Appendix D). After the first week, another reminder e-mail was sent out to those who had not responded and replied to the author to be entered into the drawing. Those respondents who answered the survey within the last two-week period (weeks two and three) of the e-mail notifying them of the survey were entered to win $20.00, provided by the researcher (See Appendix E). When data collection was completed, one person's name was drawn at random to receive $50, if

they answered the survey and e-mailed the author within the first 48 hours. One person's name was drawn at random to receive $30, if they answered the survey and e-mailed the author within the first week, days three to seven. One person's name was drawn at random to receive $20, if they answered the survey and e-mailed the author during the final two weeks, weeks two and three. Total data collection was no longer than three weeks from the time the initial e-mail was sent to potential respondents.

Of the total 85 respondents located and contacted via e-mail, 63 responded and completed the online survey for a response rate of 74%. The overall response rate for this specific population of graduates was 62.3% or 63 of 101 graduates.

Reliability. To evaluate the reliability or 'repeatability' of the study and use of the instrument for it's intended purpose; two different reliability measures were conducted. Measures for the quantitative portion of the data are discussed below followed by reliability procedures for the qualitative analysis.

It was determined that due to the nature of the data being collected (electronically), it was not necessary to conduct reliability on data collection or data entry as it was an intrinsic part of the electronic survey technology. All raw data were retrieved via e-mail and 'cut and pasted' using the mouse and cursor on the computer into SPSS for analysis. All missing data were reported when analysis was conducted.

However, to determine the internal reliability or consistency of the instrument and the grouping variables, coefficient alpha was calculated (Litwin, 1995). Specifically, *Level of Knowledge,* coefficient alpha was conducted for: (a) collaborative practices (coefficient alpha = .74); (b) student supports (coefficient alpha = .66); (c) assessment strategies (coefficient alpha = .74); and (d) instructional strategies (coefficient alpha =

.77). *Degree of Presence* coefficient alpha was conducted for: (a) collaborative practices (coefficient alpha = .83); (b) student supports (coefficient alpha = .77); (c) assessment strategies (coefficient alpha = .67); and (d) instructional strategies (coefficient alpha = .74). *Critical to the Success of Students with Severe Disabilities* coefficient alpha was conducted for: (a) collaborative practices (coefficient alpha = .80); (b) student supports (coefficient alpha = .76); (c) assessment strategies (coefficient alpha = .51); and (d) instructional strategies (coefficient alpha = .80). Internal reliability was sufficient to maintain the variable groupings.

To measure reliability for the qualitative data, another researcher familiar with the topic areas (i.e., inclusive practices, severe disabilities, personnel preparation) and qualitative research methodology was consulted to conduct reliability for those open-ended responses. All responses were reviewed for appropriateness for inclusion in the heading or sub-heading elicited from the coding and categorization primarily conducted by this researcher. Reliability was conducted for each separate open-ended survey question and their subsequent responses (N = 7 survey questions). Each question had responses ranging from nine statements given by respondents to 45 statements provided by respondents. The researcher who conducted reliability had two suggestions regarding placement of statements in specified categories. Specifically, she suggested that some statements be included in more than one category if it had possible multiple meanings. For example, respondents were asked about additional preparation that would have better prepared them to support students in inclusive environments. One respondent indicated they wanted "general education classes". The author interpreted this to mean more classes at the pre-service level with general education teacher candidates while the other

researcher (who conducted the reliability) suggested it might mean that the respondents wanted more exposure to general education classes in the context of a field experience. As a result, some statements were coded for more than one category, if appropriate. The other researcher suggested the removal of some 'sub-headings' in some larger categories. However this researcher (the author) determined that there was enough of a distinct category to keep the sub-headings.

One open-ended question was analyzed using content analysis where statements were broken down specifically by activities reported by respondents and age of student with whom they participated in these activities during an inclusive field placement. Reliability was measured by calculated agreements of number of statements representing the activity and age level reported and dividing by number of agreements plus disagreements. Inter-rater reliability was 96.7%.

Data Analysis

Upon receiving the results via e-mail at the author's address, the author copied and pasted the answers into the Statistical Package for the Social Sciences (SPSS). Group scores were analyzed for means and standard deviations. Overall summarization of all data was done through the use of the web survey and a statistical package with limited 'administrative' work from the author (e.g., no hard copies of surveys to code and enter data).

Much of the data analysis was descriptive in nature. Additional analysis involved the use of inferential statistics, including Independent t-tests to compare means and non-hierarchical regression analysis. Finally, some data analysis employed qualitative methodology to organize, categorize, and analyze any emerging themes within the open-

ended questions (Strauss & Corbin, 1990). The qualitative analysis was intended to add additional meaning or richness to the quantitative data collected.

Analysis procedures of individual research questions. Specifically, to answer Research Question 1 regarding retention, questions about current or previous teaching status, location, type of students served, age level, setting, percentage of time spent reported to be spent working with students with severe disabilities and time spent supporting students with severe disabilities in inclusive settings (Inclusive Best Practices Survey Questions # 69-75) were analyzed using frequency counts (i.e., number of respondents reporting) and percentages, if applicable. Inclusive Best Practices Survey Questions # 85-88, 91-92, 93-97, 100-101 were also analyzed with frequency counts and percentages. Inclusive Best Practices Survey Question # 89-90, 98-99 were analyzed with measures of central tendency (i.e., mean, median) and measures of dispersion (i.e., standard deviation, range). Inclusive Best Practices Survey Question # 102 was analyzed using qualitative methodology, specifically coding and categorization of responses.

Upon initial review of the responses from this open-ended question (i.e., Reason for leaving the teaching profession, even if only temporarily), organization of statements into meaningful categories was easily ascertained. Once categories were developed, individual statements were placed into each of the three categories. Because the statements for this open-ended question were very straightforward, additional 'constant comparison' was not needed (Strauss & Corbin, 1990).

To answer Research Question 2 regarding pre-service preparation, questions about coursework, perception of adequate preparation, and practica / student teaching within inclusive environments (Inclusive Best Practices Survey Question # 76-78, 80-81)

were analyzed using frequency counts (percentages), measures of central tendency (e.g. mean and median number of inclusive field placements or mean level of agreement regarding adequacy of preparation), and measures of dispersion (e.g. range and standard deviation). Independent t-tests were run to determine if a significant difference existed between those mean scores for perceived adequacy of preparation for inclusion between (a) those that took the inclusive practices course and those that did not, (b) those who had greater than or equal to 50% inclusive field placements and those who had less than 50% inclusive field placements, and (c) those who had greater than or equal to two inclusive field placements and those who had less than two inclusive field placements. A non-hierarchical regression analysis was conducted to examine the contribution of: (a) completion of the "Inclusive Practices" course; (b) number of inclusive field placements; and (c) percentage of inclusive field placements, on the criterion variable, perceived adequacy of preparation to support students with severe disabilities in inclusive environments.

Inclusive Best Practices Survey Question #'s 79 was analyzed using content analysis to develop specific activities engaged in while participating in an inclusive field placement and the age level at which those activities occurred. Specifically, this researcher took all statements and color-coded age levels stated within the text of each response (i.e., green for Early Childhood or Pre-school, yellow for Elementary and Middle, pink for High School and Post secondary) if any were indicated. Once that was completed, this researcher looked for similar words or phrases and indicated with a code (e.g., a check mark, an 'X', a circle, a letter) each time a similar word or phrase appeared. For example, many respondents may have indicated they "provided modifications to

curriculum". This was marked with a check mark each time it was mentioned and was cross referenced with the age level which was also indicated in the statement (e.g., 4th grade was determined to fall under 'Elementary School'; George Washington University Transition Program was determined to fall under 'Post-Secondary). Each statement, which indicated an age-range and an activity, was coded. Frequency counts of each activity, consistent with a specified age range, were reported in a table.

Questions 82-84 (i.e., Other preparation received while at UM which prepared respondents to support students with severe disabilities in inclusive environments; Additional preparation that might have *better* prepared respondents to support students with severe disabilities in inclusive environments; Additional preparation received *after* completing the program at UM that prepared respondents to support students with severe disabilities in inclusive environments) were also analyzed using qualitative methodology, specifically coding and categorizing responses using the constant comparison method, which elicited emerging themes (Strauss & Corbin, 1990). When using the 'constant comparison' method, it was important to ensure that all of the categories and themes that emerged were separate and mutually exclusive so that individual statements could not be placed in multiple categories. Certain categories emerged as the statements were coded. The first statement was coded and put into a category. The second statement was then compared to the first statement; if it was similar then it was coded as part of the first category. If it was not similar then it was coded separately. This was done for all of the subsequent statements for each of these three questions. These coded statements became units of analysis. Each unit was compared to the next unit. From these unit comparisons, themes or categories emerged.

To answer Research Question 3, Likert scale questions about preparation and level of knowledge about inclusive best practices (Inclusive Best Practices Survey Question #'s 2-23) were analyzed with frequency counts, percentages, measures of central tendency (e.g. mean and median), and measures of dispersion (e.g. range and standard deviation). Grouped items (i.e., collaborative practices questions 2-9, individual student supports questions 10-14, assessment practices questions 15-17, instructional practices questions 18-23) were also analyzed with measures of central tendency (e.g. grand mean).

To answer Research Question 4, Likert scale questions regarding the use of inclusive best practices in their current or most recent teaching situation (Inclusive Best Practices Survey Question #'s 24-45) were analyzed with frequency counts, percentages, measures of central tendency (e.g. mean and median), and measures of dispersion (e.g. range and standard deviation). Grouped items (i.e., collaborative practices questions 24-31, individual student supports questions 32-36, assessment and grading questions 37-39, instructional practices questions 40-45) were analyzed with measures of central tendency (e.g. grand mean).

For Research Question 5, Likert scale questions regarding opinions about which inclusive best practices were most critical to the success of students with severe disabilities (Inclusive Best Practices Survey Question #'s 46-67) were analyzed with frequency counts, percentages, measures of central tendency (e.g. mean and median), and measures of dispersion (e.g. range and standard deviation). Grouped items (i.e., collaborative practices questions 46-53, individual student supports questions 54-58, assessment and grading questions 59-61, instructional practices questions 62-67) were

also analyzed with measures of central tendency (i.e., grand mean). Inclusive Best

Practices Survey Question #68 (i.e., Additional *inclusive Best Practices* which are critical

to the success of students with severe disabilities) was analyzed using qualitative

methodology, specifically coding and categorizing responses using the constant

comparison method, which elicited emerging themes (Strauss & Corbin, 1990).

Finally, for Research Question 6, Independent t-tests were conducted to determine

if a significant difference existed between mean percentage of time spent supporting

students with severe disabilities in inclusive environments, once teaching, for: (a) those

that took the inclusive practices course and those that did not; (b) those who had greater

than or equal to 50% inclusive field placements and those who had less than 50%

inclusive field placements; and (c) those who had greater than or equal to two inclusive

field placements and those who had less than two inclusive field placements. Another

Independent t-test was conducted to determine if their was a significant difference

between mean percentage of time spent supporting students with severe disabilities in

inclusive environments, once teaching, for those that reported they 'strongly agreed'

(Likert Scale =1) that their preparation for inclusion was adequate and those that reported

less than 'strongly agree' (Likert Scale >= 2) that their preparation for inclusion was

adequate. To determine if certain variables may predict behavior, specifically if graduates

may work in inclusive environments based on preparation they receive at the pre-service

level, the researcher examined the contribution of three predictor variables including; (a)

completion of the Inclusive Practices course; (b) percentage of inclusive field

experiences; and (c) the mean score of adequacy of preparation to meet the needs of

students with severe disabilities in inclusive environments (Inclusive Best Practices

Survey Question #'s 76, 77-78, and 80) on the criterion variable (percentage of time spent

supporting students with severe disabilities in inclusive environments, Question #'s 90

and 99) using non-hierarchical regression analysis.

CHAPTER IV

Results

The purpose of the research study was to: (a) determine if recent graduates were teaching or previously taught in the field in which they were prepared (i.e., retention in the field of special education); (b) determine if recent graduates learned about and implemented best practices for inclusion (and believe they are critical to student success); (c) determine if recent graduates receiving certification in severe disabilities were adequately prepared to teach students with severe disabilities in inclusive environments; and (d) determine certain variables were predictive (or more specifically account for the variability) of perceived adequacy of preparation and time spent supporting students in inclusive environments.

Follow-up information was categorically obtained regarding graduates and their current or most recent teaching status, as well as their use of best practices. Most respondents were currently teaching students with disabilities (not all of which may be considered 'severe disabilities') in self-contained classrooms in general education schools in Maryland. Program effectiveness was also evaluated through specific questions related to adequacy of preparation and their knowledge of best practices. Most respondents reported strong knowledge of inclusive best practices (e.g., collaborative practices, individual student supports, instructional strategies) and many of the inclusive best practices were present in their current or most recent teaching situation (e.g., individual student supports, assessment practices, and instructional strategies). An important finding was that almost all indicators were found to be 'critical to the success of students with severe disabilities'. Respondents indicated through multiple sources of

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information that they were in fact adequately prepared to support students with severe

disabilities in inclusive settings with the caveat that engaging in collaborative practices

with general educators was challenging and not always occurring with regularity at their

current or most recent teaching position.

Finally, certain program components of the Univeristy of Maryland were

examined to establish the extent to which they enhance graduates' ability to support

students with severe disabilities in inclusive environments. Completion of the *Inclusive*

Practices course and participation in inclusive field placements were predictive (or

accounted for variability) of the level of 'preparedness' to support students with severe

disabilities in inclusive settings. While completion of the *Inclusive Practices* course,

inclusive field placements, and level of preparedness for inclusion did not account for

variability (or predict) percentage of time spent including students with severe disabilities

in inclusive settings once teaching, those who reported strong agreement about level of

preparedness for inclusion spent a more statistically significant amount of time

supporting students in inclusive environments than those who reported less than strong

agreement of preparation for inclusion. The chapter is organized by results indicated for

each of the six separate research questions.

Research Question # 1

Were teacher candidates (undergraduate and graduate) with initial certification in

Severe Disabilities (SD) from the Department of Special Education at the University of

Maryland (from May, 1996 to May, 2003) working (or previously worked) in the field in

which they were prepared?

Years teaching. Frequency counts, percentages, measures of central tendency (mean and median) and measures of dispersion (standard deviation and range) were used to determine the number of respondents who were currently teaching and those who were no longer teaching as well as the number years of teaching or taught. Descriptive data for years teaching for the respondents who were currently teaching and those who previously taught are presented in Table 8. Fifty out of sixty-three respondents indicated that they were currently teaching while 12 respondents indicated that they were no longer teaching, with one respondent indicating neither. The mean number of years teaching for those currently teaching was four years, while those who were no longer teaching was 4.08 years. The range for those currently teaching was one to eight years. The range for those who previously taught was two to seven years.

Location of teaching. Most respondents reported they were currently teaching in the state of Maryland (N=41, 77.3%) and more specifically in a suburban setting (N=40, 75.4%); the remaining taught in surrounding states in the Mid-Atlantic region of the country (i.e., Virginia, Pennsylvania, New Jersey, New York), with two respondents reported teaching in foreign countries (i.e., Brazil, Germany). Very few reported currently teaching in urban settings (N= 9, 16.9%) or in rural settings (N=4, 7.6%). Those respondents who were no longer teaching reported similar results having taught in the state of Maryland (N=11, 91.6%) and in a suburban setting (N=10, 83.3%) verses having taught in urban settings (N=0, 0%) or rural settings (N=2, 18%). Results of demographic information for respondents are presented in Tables 9 and 10.

Table 8

Mean (Standard Deviation), Median, and Range of Years Teaching for Respondents who were Currently Teaching or those who had Previously Taught

Years	Currently Teaching N (%; Cum. %)	Previously Taught N (%; Cum. %)
Eight Years	2 (4%; 4%)	0 (0%; 0%)
Seven Years	2 (4%; 8%)	2 (16.7%; 16.7%)
Six Years	8 (16; 24%)	0 (0%; 16.7%)
Five Years	7 (14%; 38%)	2 (16.7%; 33.3%)
Four Years	10 (20%; 58%)	3 (25%; 58.3%)
Three Years	8 (16%; 74%)	1 (8.3%; 66.7%)
Two Years	10 (20%; 94%)	4 (33.3%; 100%)
One Year	3 (6%; 100%)	0 (0%; 100%)
Total Number (missing)	N=51 (12)	N=12 (51)
Mean (Standard Deviation)	M=4.0 (SD=1.82)	M=4.09 (SD=1.81)
Median	Mdn=4.0	Mdn=4.0
Range (Min.-Max.)	7.0 (1.0 – 8.0)	5.0 (2.0 – 7.0)

Table 9

Location Where Respondents Reported Teaching

State	Currently Teaching N (%)	Previously Taught N (%)
Maryland	41 (77.3%)	11 (91.6%)
Virginia	1 (1.8%)	1 (8.4%)
Pennsylvania	2 (3.7%)	0 (0%)
New Jersey	4 (7.6%)	0 (0%)
New York	2 (3.7%)	0 (0%)
Rio de Janeiro, Brazil	1 (1.8%)	0 (0%)
Heidelberg, Germany	1 (1.8%)	0 (0%)

Table 10

Demographic Setting Where Respondents Reported Teaching

Setting	Currently Teaching N (%)	Previously Taught N (%)
Urban	9 (16.9%)	0 (0%)
Suburban	40 (75.4%)	10 (83.3%)
Rural	4 (7.6%)	2 (17.6%)

Position held. Frequency counts and percentages were used to determine the demographic information on the positions held by respondents who were currently teaching or had previously taught and were no longer teaching. Frequency data for type of position held is presented in Table 11. When answering the survey, respondents could select multiple positions that described their current or most recent teaching position. Most respondents indicated that their current or most recent position consisted of multiple roles or teaching positions. Specifically, very few indicated that they were only a 'self-contained' special educator or only a 'co-taught' special educator (i.e., respondents may have reported they were a self-contained special educator, an inclusion facilitator, or a vocational coordinator). Reported percentages are not presented cumulatively because they represent the proportion of total number of teaching positions reported (e.g., some respondents may have indicated that they held up to four positions and total N for position reported exceeds the number of total respondents).

Most respondents described themselves as a Special Education Teacher in a self-contained classroom within a general education school (Currently Teaching-N=19, 24%; Previously Taught-N=5, 27.7%). Second, respondents described themselves as a Special Education Teacher-Community Based (Currently Teaching-N=10, 12.8%; Previously Taught-N=2, 11%). Next, respondents described themselves as Inclusion Facilitators (Currently Teaching-N=9, 11.5%; Previously Taught-N=3, 16.6%). All other positions were reported less than 10% of the time.

Table 11

Teaching Position Held by those Currently Teaching and those who Previously Taught

Teaching Position	Currently Teaching N (%)[a]	Previously Taught N (%)[a]
Special education teacher[b]	19 (24%)	5 (27.7%)
Special education teacher (Community- Based)	10 (12.8%)	2 (11%)
Inclusion facilitator	9 (11.5%)	3 (16.6%)
Special education teacher (Co-Taught)	7 (8.9%)	3 (16.6%)
Special education teacher[c]	6 (7.6%)	2 (11%)
Special education teacher (Resource)	6 (7.6%)	2 (11%)
Transition teacher	6 (7.6%)	2 (11%)
Early intervention teacher[b]	5 (6.4%)	0 (0%)
Vocational coordinator	4 (5%)	0 (0%)
Early intervention teacher (Home- based)	4 (5%)	0 (0%)
Early intervention teacher[c]	2 (2.5%)	0 (0%0
Other	0 (0.0%)	0 (0%)

Note: [a]Cumulative percentage not reported as respondents reported having multiple teaching positions (roles), [b]Self-Contained Classroom within a General Education School, [c]Self-Contained Facility or Special Education Center

Age level of students with whom respondents were working. Age level taught was evenly distributed across age ranges; results are presented in Table 12. For those currently teaching, 18.7% (N=12) were teaching children from birth to age 5 (Pre-K); 26.5% (N=17) were teaching children at the elementary level; and 37.4% (N=24) were teaching children at the secondary level (middle school through post-secondary). However, for those who were no longer teaching, most respondents taught at the secondary level (N=12, 66.6%), followed by elementary (N=4, 22.2%) and the early childhood level (N=2, 16.2%).

Table 12

Age Level Taught by Respondents

Age Level	Currently Teaching N (%)[a]	Previously Taught N (%)[a]
High School (Grades 9-12, ages 14 to 21)	18 (28.1%)	9 (53%)
Primary Elementary (Grades K, 1, 2 & 3)	10 (15.6%)	2 (11.7%)
Intermediate Elementary (Grades 4 & 5)	7 (10.9%)	2 (11.7%)
Early Childhood Intervention (Ages 3- 5)	7 (10.9%)	2 (11.7%)
Middle School (Grades 6, 7 & 8)	4 (6.2%)	3 (17.6%)
Early Childhood Intervention (Infant- Toddler)	3 (4.7%)	0 (0%)
Early Childhood (Pre-K)	2 (3.1%)	0 (0%)
Post-Secondary[b]	2 (3.1%)	0 (0%)

Note: [a]Cumulative percentage not reported as respondents reported teaching multiple age levels;

[b]Community based, Community College, or University (ages 18-21 receiving services via LSS)

Students with whom respondents were working. Frequency counts and percentages were used to determine the disability category of students with whom respondents were currently teaching or had previously taught and their data are presented in Table 13. When answering the survey, respondents could select multiple disability labels that described their current or former students. Most respondents indicated that they taught students with a variety of disabling conditions. Very few indicated that they only taught students with autism or students with mental retardation.

Reported percentages are not cumulative and represent the proportion of disability categories reported in total (e.g., some respondents may have indicated that they taught 10 different disability categories and total N for disability category reported exceeds the number of total respondents). For those currently teaching, respondents indicated they taught students with autism (N=37, 57.8%), followed by mental retardation (N=29, 45.3%), multiple disabilities (N=27, 42.2%), learning disabilities (N=27, 42.2%), students with emotional disabilities (N=23, 35.9%), students with speech language impairments (N=23, 35.9%), students with developmental delays (N=21, 32.8%), students with other health impairments (N=17, 26.6%), students with physical and health disabilities (N=15, 23.4%), and students with traumatic brain injury (N=9, 14.1%). All other disability categories were reported less than 10% of the time.

For those previously taught, respondents indicated they taught students with mental retardation (N=9, 16.7%), followed by autism (N=8, 14.8%), learning disabilities (N=7, 13%), students with emotional disabilities (N=7, 13%), students with speech

language impairments (N=7, 13%), and students with other health impairments (N=6, 11.1%). All other disability categories were reported less than 10% of the time.

Table 13

Disability Label of Students with whom Respondents Reported Teaching

Disability Label	Currently Teaching N (%)[a]	Previously Taught N (%)[a]
Students with Autism	37 (57.8%)	9 (16.7%)
Students with Mental Retardation (MR)	29 (45.3%)	9 (16.7%)
Students with Multiple Disabilities (MD)	27 (42.2%)	7 (13%)
Students with Learning Disabilities (LD)	27 (42.2%)	7 (13%)
Students with Emotional Disabilities (ED)	23 (35.9%)	7 (13%)
Students with Speech Language (SLI)	23 (35.9%)	7 (13%)
Students with Developmental Delays (DD)	21 (32.8%)	4 (7.9%)
Students with Other Health Impairments (OHI)	17 (26.6%)	6 (11.1%)
Students with Physical and Health Disabilities (PHD)	15 (23.4%)	5 (9.3%)
Students with Traumatic Brain Injury (TBI)	9 (14.1%)	2 (3.7%)
Students with Visual Impairments (VI)	6 (9.4%)	4 (7.4%)
Students with Hearing Impairments (HI)	5 (7.8%)	1 (1.9%)
Students with Concurrent Visual and Hearing Impairments (Deaf- Blindness)	1 (1.6%)	2 (3.7%)

Note: [a]Cumulative percentage not reported because respondents reported teaching students with various labels.

Portion of day spent teaching students with severe disabilities. Frequency counts and percentages were used to describe the portion of day spent teaching students with severe disabilities; results are presented in Table 14. The largest number of respondents indicated they spent 100% of their day teaching students with severe disabilities (N=19, 35.8%), followed by 0% of their day (N=14, 26.5%), 80% of their day (N=7, 13.2%), 40% of their day (N=6, 11.3%), 60% of their day (N=4, 7.6%), and 20% of their day (N=3, 5.6%). At least 49 % of the respondents reported they spent at least 80% of their day with students with severe disabilities.

Table 14

Portion of Day Respondents Report Teaching Students with Severe Disabilities

Percent Of Day	Currently Teaching N (%, Cum. %)	Previously Taught N (%, Cum. %)
100%	19 (35.8%, 35.8%)	3 (25%, 25%)
80%	7 (13.2%, 49%)	2 (16.7%, 41.7%)
60%	4 (7.6%, 56.6%)	2 (16.7%, 57.4%)
40%	6 (11.3%, 67.9%)	2 (16.7%, 74.1%)
20%	3 (5.6%, 73.5%)	1 (8.3%, 82.4%)
0%	14 (26.5, 100%)	2 (16.7%, 100%)

For those respondents who were no longer teaching, the largest number indicated they spend 100% of their day teaching students with severe disabilities (N=3, 27%),

followed by 0% (N=2, 16.7%), 40%, (N=2, 16.7%), 60% (N=2, 16.7%), 80% (N=2, 16.7%), and 20% (N=1, 8.3%). At least 41.7 % of the respondents reported that they spent at least 80% of their day with students with severe disabilities.

Portion of day in inclusive settings. Respondents were also asked to estimate what portion of their day they either currently or previously supported students with severe disabilities in inclusive environments. Frequency counts and percentages were used to describe portion of day supporting students with severe disabilities in inclusive environments; results are presented in Table 15.

Table 15

Portion of Day Respondents Reported Supporting Students with Severe Disabilities in Inclusive Environments

Percent Of Day	Currently Teaching N (%, Cum. %)	Previously Taught N (%, Cum. %)
100%	0 (0%; 0%)	0 (0%, 0%)
80%	4 (7.6%; 7.6%)	1 (8.3%, 8.3%)
60%	6 (11.3%, 18.9%)	2 (16.7%, 25%)
40%	6 (11.3%, 30.2%)	3 (25%, 50%)
20%	12 (22.6%, 52.8%)	4 (33.3%, 83.3%)
0%	25 (47%, 100%)	2 (16.7%, 100%)

The largest number of respondents indicated that they spend 0% of their day supporting students with severe disabilities in inclusive environments (N=25, 47%), followed by 20% of their day (N=12, 22.6%), 40% of their day (N=6, 11.3%), 60% of their day (N=6, 11.3%), 80% of their day (N=4, 7.6%), and last 100% of their day (N=0, 0%). At least 30.2 % of the respondents reported that they spent at least 40 % of their day supporting students with severe disabilities in inclusive environments.

The largest number of respondents who were no longer teaching indicated that they spend 20% of their day supporting students with severe disabilities in inclusive settings (N=4, 33.3%), followed by 40% of their day (N=3, 25%), 60% and 0% of their day (N=2, 16.7%), and 80% of their day (N=1, 8.3%), and 100% of their day (N=0, 0%). At least 50% of the respondents reported that they spent at least 40 % of their day supporting students with severe disabilities in inclusive environments.

Reasons for leaving teaching profession. For those who were no longer teaching, respondents were asked what best described their current employment status and to provide a reason for leaving the teaching profession, even if only temporarily. Frequency counts and percentages as well as categorization of open-ended responses were used to describe reasons for leaving the teaching profession; results are presented in Table 16. Seven (58.4%) of the respondents reported that they were employed in the field of education but outside of the classroom (e.g., administration, advocate, consultant), four (33%) reported they were on family or maternity leave, and two (8.3%) respondents indicated that they were either on a leave of absence or unemployed. No one indicated she or he was a full time student or employed outside of the field of education. The open-ended statements corroborate these responses and respondents indicated that they

left the teaching profession to care for a child (Family Leave or Maternity Leave) or they were working in administration or consulting. Those who indicated they were doing administrative work indicated it was still within the field of special education. Two respondents were working for their respective Boards of Education within their Local School Systems, one was the director of instruction at a private school for students with autism, and one respondent indicated that she was an educational consultant specializing in transition.

Table 16

Current Employment Information for Those Respondents No Longer Teaching.

Employment Information	Previously Taught N (%)
Employed, but outside of the field of education	0 (0%)
Leave of absence	1 (8.3%)
Full time student	0 (0.0%)
Family or Medical Leave or Maternity Leave	4 (33%)
Employed in the field of education but outside of the classroom (i.e., supervisor, administrator, principal, advocate, consultant, technical assistance, aide)	7 (58.4%)
Unemployed	1 (8.3%)

Research Question 2

Do teacher candidates (undergraduate and graduate) with initial certification in Severe Disabilities (SD) from the Department of Special Education at the University of Maryland (from May, 1996 to May, 2003) report being adequately prepared to support students with disabilities in an inclusive environment, and if so are certain variables (i.e., completion of the *Inclusive Practices* course, number of inclusive field experiences, percentage of inclusive field experiences) predictive of that perceived adequacy of preparation to support students in inclusive environments?

Adequacy of preparation for inclusion. Frequency counts (percentages), measures of central tendency (i.e., mean level of agreement regarding adequacy of preparation), and measures of dispersion (i.e., range and standard deviation) were used to analyze questions about the completion of the 'Inclusive Practices' course and perception of adequate preparation for inclusion. Results are presented in Table 17. Respondents were asked about the completion of the Inclusive Practices Course during their pre-service program. Forty-one respondents (65%) indicated they did take the class, twenty respondents (32%) indicated they did not take the class, while two respondents (3%) did not respond. Respondents were also asked whether they received adequate preparation to support students with severe disabilities in inclusive settings. Twenty-nine respondents (46%) said they 'Strongly agreed' their preparation was adequate; while twenty-three (35%) indicated they 'Agreed' their preparation was adequate. As a result, 81% of the respondents either 'agreed' or 'strongly agree' that their preparation to support students in inclusive environments was adequate. The mean level of agreement was 1.82 (SD=.

957), meaning scores on average fell between 'Strongly Agree'=1 and 'Agree'=2. The

range of responses was from one to five.

Table 17

Frequency of Responses for Adequacy of Preparation to Support Students with Severe

Disabilities in Inclusive Settings

Number	Adequate Preparation
	N (%; Cum. %)
1 (Strongly Agree)	29 (46%; 46%)
2 (Agree)	22 (35%; 81%)
3 (Neutral)	8 (13.1%; 94.1%)
4 (Disagree)	3 (4.7%; 98.8%)
5 (Strongly Disagree)	1 (1.2%; 100%)
Total Number (Missing)	N=63(0)
Mean (Standard Deviation)	M=1.82 (SD=. 957)
Median	Mdn=2.0
Range (Min. – Max.)	4.0 (1.0 – 5.0)

Field placements. The total number of field placements reported (refer to Table

18) ranged from two to ten with most respondents reporting they had at least six (N=22,

35.5%) different field placements, followed closely by participation in five different field

placements (N=21, 33.3%). Eight respondents reported that they had four different field

placements (12.9%) with all other number of field placements with less than 10%. At least 43.5% of all respondents indicated that they had at least six placements, while 98.4% of respondents had at least three different field placements. The mean number of placements was 5.22 (SD= 1.35).

Table 18

Mean (Standard Deviation), Median, and Range of Number of Field Placements and Inclusive Field Placements During Pre-Service Preparation

Number	Field Placements N (%; Cum. %)	Inclusive Field Placements N (%; Cum. %)
10	1 (1.6%; 1.6%)	
8	2 (3.2%; 4.8%)	
7	2 (3.2%; 8%)	
6	22 (35.5%; 43.5%)	
5	21 (33.3%; 76.8%)	5 (8.1%; 8.1%)
4	8 (12.9%; 89.7%)	9 (14.5%; 22.6%)
3	6 (9.7%; 98.4%)	17 (26.9%; 49.5%)
2	1 (1.6%; 100%)	14 (22.6%; 72.1%)
1	0 (0%; 100%)	9 (14.5%; 86.6%)
0	0 (0%, 100%)	9 (13.4%, 100%)
Total Number (Missing)	N=63(0)	N=63(0)
Mean (Standard Deviation)	M=5.22 (SD=1.35)	M=2.35 (SD=1.48)
Median	Mdn=5.0	Mdn=2.0
Range (Min. – Max.)	8.0 (2.0 – 10.0)	5.0 (0.0-5.0)

The number of inclusive field placements ranged from zero to five with most respondents reporting they had three inclusive field placements (N=17, 26.9%), closely followed by two inclusive field placements (N=14, 22.6%). Only nine respondents indicated that they had only one or no inclusive field placements. As a result, almost half of the respondents (49.5%) had at least three inclusive field placements and 72.1% had at least two inclusive field placements. The mean number of inclusive field placements was 2.35 (SD=1.48).

Because not all respondents experienced the same number of placements, the percentage of inclusive field placements was calculated by dividing the number of inclusive field placements by the total number of field placements. The range of inclusive field placements was 0% to 100% with a median of 50%. The mean percentage of inclusive field placements was 48.5% (SD= 31.1%).

Activities to prepare for inclusion. Respondents were asked to select activities in which they engaged during their pre-service preparation at the University of Maryland that prepared them to support students with severe disabilities in inclusive settings. Frequency counts (percentages) were used to report the findings. Because the respondents could select multiple activities, the results are not reported in cumulative percentages; results are presented in Table 19. Respondents reported learning and implementing the following activities leading to the ability to support students with severe disabilities in inclusive settings while at the University of Maryland: (a) data collection procedures (N=58, 90.6%); (b) planning instructional programs and / or instructional lesson plans (N=55, 85.9%); (c) adapting instruction for diverse learners (N=52, 81.3%);

Table 19

Activities Respondents Selected which Prepared them for Inclusion During Pre-Service Preparation

Activity	N (%)[a]
Data Collection Procedures	58 (90.6%)
Planning Instructional Programs and Instructional Lesson Plans	55 (85.9%)
Adapting Instruction for Diverse Learners	52 (81.3%)
Communication with Parents or Caregivers	52 (81.3%)
Reflective Journals and Self- Critique of Instruction	50 (78.1%)
Providing Appropriate Instruction	49 (76.6%)
Assessment of Student Strengths and Needs	49 (76.6%)
Development of an IFSP[b] or an IEP[c]	48 (75.0%)
Planning for Positive Behavior Supports (PBS)	47 (73.4%)
Creation of Curricular Modifications	42 (65.6%)
Collaboration with General Educators, Related Service Providers, or Support Staff[d]	41 (64.1%)
Communication with General Educators, Related Service Providers, or Support Staff[d]	41 (64.1%)
Designing and Implementing Instructional Units	40 (62.5%)
Providing Appropriate Accommodations in General Education	39 (60.9%)
Use of Technology[e]	33 (51.6%)

Note: [a]Not cumulative as respondents could choose as many responses as appropriate, [b]Individual Family Support Plan, [c]Individual Education Plan , [d]Paraprofessionals, Volunteers, Peer Tutors, and [e]Assistive Technology, Computer Technology, Alternative or Augmentative Communication Devices

(d) communication with parents or caregivers (N=52, 81.3%); (e) reflective journals and /
or self-critique of instruction (N=50, 78.1%); (f) providing appropriate instruction (N=49,
76.6%); (g) assessment of student strengths and needs (N=49, 76.6%); (h) development
of an IFSP or an IEP (N=48; 75%); (i) planning for positive behavior supports (N=47,
73.4%); (j) creation of curricular modification (N= 42, 65.6%); (k) collaboration with
general educators, related service providers, or support staff (N=41, 64.1%);
(l) communication with general educators, related service providers, or support staff
(N=41, 64.1%); (m) designing and implementing instructional units (N=40, 62.5%);
(n) providing appropriate accommodations in general education (N=39, 60.9%); and
(o) use of technology (N=33, 51.6%). The respondents who indicated 'other' were asked
to provide examples in an open-ended format. These statements were coded and
categorized to elicit any emerging themes, using the constant comparison method
(Strauss & Corbin, 1990).

Group comparisons for preparation for inclusion. Independent t-tests were run to
determine if a significant difference existed between those mean scores for perceived
adequacy of preparation for inclusion between: (a) those that took the inclusive practices
course and those who did not; (b) those who had greater than or equal to 50% inclusive
field placements and those who had less than 50% inclusive field placements; and
(c) those who had greater than or equal to two inclusive field placements and those who
had less than two inclusive field placements. To determine which significance level to
use, equal variances assumed or equal variances not assumed, the Levene Test for
Equality of Variances was used. If Levene's test was significant (<= .05), then equal

variances were not assumed. If Levene's test was not significant (> .05), equal variances
were assumed.

The mean score on adequacy of preparation for inclusion for those respondents
who took the inclusive practices class was 1.69 and for those who did not take the class,
it was 2.15 (t=-1.524, p=. 139). The mean level of agreement for preparation for inclusion
was 1.51 for those respondents who had greater than or equal to 50% of their field
placements in inclusive settings and was 2.29, for those who had less than 50% of their
field placements in inclusive settings (t=-3.355, p=. 001). The mean level for agreement
for preparation for inclusion for those respondents who had greater than or equal to two
inclusive field placements was 1.56, for those who has less than two inclusive field
placements, it was 2.47 (t=-3.617, p=. 001). Independent t-tests for those who had
greater than 50% inclusive field placements and those who had greater than or equal to
two inclusive field placements were statistically significant and are presented in Tables
20-22.

Table 20

Adequacy of Preparation for Inclusion

	Mean Rating on 5-Point Scale[a]		Significance	
Preparation for Inclusion	Yes	No	t	P
Completion of Inclusive Practices Course	1.69	2.15	-1.524	.139

Note. [a] 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

Table 21

Adequacy of Preparation for Inclusion

	Mean Rating on 5-Point Scale[a]		Significance	
Preparation for Inclusion	>= 50%	< 50%	t	P
Percentage of Inclusive Field Placements	1.51	2.29	-3.355	.001

Note. [a] 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

Table 22

Adequacy of Preparation for Inclusion

	Mean Rating on 5-Point Scale[a]		Significance	
Preparation for Inclusion	>= 2.0	< 2.0	t	P
Number of Inclusive Field Placements	1.56	2.47	-3.617	.001

Note. [a] 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

Prediction of adequacy of preparation for inclusion. A non-hierarchical

regression analysis was conducted to examine the contribution of: (a) completion of the

"Inclusive Practices" course; (b) number of inclusive field placements; (c) percentage of

field inclusive field placements, on the criterion variable, perceived adequacy of

preparation to support students with severe disabilities in inclusive environments. . The

regression analysis for adequacy of preparation for inclusion is presented in Table 23.

Table 23

Non-Hierarchical Regression Analysis for Adequacy of Preparation for Inclusion

Variables	Initial Entry of the Construct			Construct Entered in Last Position	
	Simple R	R Squared	p-value	R Squared Increment	p-value
Completion of Inclusive Practices Course	.227	.052	.083	.086	.014
Number Inclusive Field Placements	.334	.112	.010	.013	.329
Percentage of Inclusive Field Placements	.422	.178	.001	.104	.007

% of Total Contribution: 26.8% (.268)

When entering the variables into the analysis, each variable was entered into the

construct in the first position and in the last position (i.e., variables were entered as 1st,

2nd, 3rd, then 2nd, 3rd, 1st, then 3rd, 1st, 2nd). The predictor variables accounted for 26.8% of

the variance. The t-test for beta weights was statistically significant for both number of

inclusive field placements and percentage of inclusive field placements when entered into

the first position. However, the t-test for beta weights was statistically significant when

completion of the inclusive practices course was entered into the last position and

contributed 8.6% of the variance above and beyond the other variables. The t-test for beta weights was also statistically significant when the percentage of inclusive field placements was entered into the last position and contributed 10.4% of the variance when controlling for the other variables.

Descriptive statements about inclusive field placements. All comments entered under the question 'Please describe any field placements in which you provided support for students with severe disabilities in inclusive settings' were color-coded by age levels. Specifically, a content analysis was utilized to develop specific activities engaged in while participating in an inclusive field placement and the age level at which those activities occurred. This researcher took all statements and color-coded age levels stated within the text of each response (i.e., green for Early Childhood or Pre-school, yellow for Elementary and Middle, pink for High School and Post secondary) if any were indicated. Once that was completed, this researcher looked for similar words or phrases and indicated with a code (e.g., a check mark, an 'X', a circle, a letter) each time a similar word or phrase appeared. For example, many respondents may have indicated they "provided modifications to curriculum". This was marked with a check mark each time it was mentioned and was cross referenced with the age level which was also indicated in the statement (e.g., 4th grade was determined to fall under 'Elementary School'; George Washington University Transition Program was determined to fall under 'Post-Secondary). Each statement, which indicated an age-range and an activity, was coded. Frequency counts of each activity, consistent with a specified age range, were reported in Table 24.

Table 24

Qualitative Content and Age Level Analysis of Descriptive Statements About Inclusive Field Placements

Activities	Early Childhood (N=8)	Elementary School (N=53)	Middle School (N=6)	High School (N=66)	Post-Secondary (N=7)
Modifications[a] (N=31)	3	13	2	12	1
In-Class Support[b] (N=19)	1	5	2	11	
Behavior Supports (N=19)	4	9	1	5	
Accommodations (N=15)		8	1	4	2
Peer Supports[c] (N=13)		4		9	
Job Training[d] (N=13)				9	4
Community Based Instruction (N=8)				8	
Assistive Technology[e] (N=7)		7			
Data Collection[f] (N=6)		1		5	
Adaptations (N=6)		3		3	
Co-Teaching (N=3)		3			

Note: [a]Curriculum, assignments, activities, or materials, [b]Includes statements about 'inclusive teaching', [c]Includes natural supports, [d]Situational Job Sampling in community settings, [e]Including Computer Technology and Alternative or Augmentative Communication Devices, [f]Includes Assessment

Only five respondents indicated that none of their field placements was inclusive or encompassed some aspect of supporting students with severe disabilities in inclusive environments. Those respondents either indicated 'none', 'N/A', or specifically described a field experience that was self-contained (e.g., "Student teaching at _____ school's preschool class for children with autism, I worked with students with severe disabilities, but only in self-contained classrooms or schools during UM; most of my experience with inclusion of students with severe disabilities has been while teaching"). The most reported activity in which respondents reported having engaged in an inclusive field placement was providing "Modifications to curriculum, assignments, activities, or materials". Three respondents indicated they provided modifications at the early childhood (pre-school) level, 13 respondents provided modifications at the elementary level, two at the middle school level, 12 at the high school level and one respondent indicated that she provided modifications at the post-secondary level (i.e., community college program where students with severe disabilities participated in classes, 'campus life', community-based instruction, and job training through funding from the local school system).

Next was "In-class Support" which also included statements made about 'inclusive teaching'. Specifically, statements that fell into this category included, "… at a middle school, I provided in class supports in math classes (materials, teacher support, etc.)" or "in 9th – 12th grades, supports were provided in electives like health class or P.E.". One respondent indicated she provided in class support at the early childhood level, five indicated supports were provided at the elementary level, two in middle school, and eleven in high school.

The provision of "Behavior Supports" was mentioned several times at the early childhood level (N=4), at the elementary level (N=9), in a middle school (N=1), and at the high school level (N=5). Statements that were coded as 'behavior supports' included "I provided behavior supports" or "helped develop behavior plans". Provision of "Accommodations" were also mentioned with some frequency, early childhood (N=0), elementary (N=8), middle school (N=1), high school (N=4), and post-secondary (N=2). Several respondents also mentioned developing "Peer Supports (or peer tutoring) at the elementary (N=4) and high school (N=9) levels. Peer supports also encompassed statements about 'natural supports' as well.

Several respondents also mentioned participation in "Job Training" (or vocational training) in their inclusive field placements. Specifically, statements made regarding job training specified situational job sampling in community settings (e.g., "job training in a community workplace"). Nine respondents mentioned facilitating participation in community job sites at the high school level and four respondents at the post-secondary level. Eight respondents indicated they provided "Community Based Instruction" at the high school level during inclusive field placements. Seven respondents indicated that they used "Assistive Technology" to support students with severe disabilities in inclusive settings, all at the elementary level. Most respondents provided specific examples of assistive technology in their statements (e.g., "PCS writing with symbols", "sensory tool for oral stimulation, communication boards, augmentative devices"). "Data Collection" was also mentioned as an activity in which they engaged to support students with severe disabilities in inclusive environments during a field placement. Specifically, one elementary example was mentioned while five examples were mentioned at the high

school level (e.g., "monitored student participation in general education classes", "assisted in informal assessments and collected data", "kept IEP progress on social and academic objectives in class"). "Adaptations" were mentioned three times at the elementary and high school levels, and "Co-Teaching" was mentioned three times but only at the elementary level.

Additional preparation needed. Respondents were asked to identify any additional preparation that might have *better* prepared respondents to support students with severe disabilities in inclusive environments. These statements were also analyzed using qualitative methodology, specifically coding and categorizing responses using the constant comparison method, which elicited emerging themes (Strauss & Corbin, 1990). Results are presented in Table 25. Eight separate categorical themes emerged after comparing 42 statements made by respondents in the open-ended question regarding additional preparation needed including: (a) Collaboration and communication with general education teachers and general education teacher candidates; (b) Knowledge of general education curriculum content instruction including reading and math; (c) Assessment including the administration of alternate assessment; (d) IEP process; (e) Parental interactions; (f) Supervision of support staff; (g) Access to successful inclusion; and (h) No additional preparation needed. The largest grouping of statements (N=14) fell under the category, 'Collaboration / Communication with General Education Teachers and General Education Teacher Candidates'.

Specifically, one respondent felt she did not receive enough preparation in planning with general educators and general education teacher candidates. One respondent said she would have liked "Cooperative group work with general education

teacher candidates at Maryland planning and preparing (designing) lessons - I don't

experience much interest from the general education teachers at work for collaboration.

Perhaps if teacher candidates were put together while taking classes, it would happen

more on the job."

Table 25

Qualitative Analysis of Respondents' Statements About Additional Preparation Needed

Preparation Needed	N (%)
Collaboration and communication with general education teachers	8 (19%)
Knowledge of general education curriculum content instruction including reading and math	8 (19%)
Collaboration and communication with general education teacher candidates	6 (14%)
No additional preparation needed	6 (14%)
Assessment including the administration of alternate assessment	3 (7%)
IEP process	3 (7%)
Parental interactions	3 (7%)
Access to successful inclusion	3 (7%)
Supervision of support staff	2 (5%)

Another respondent indicated, "I think that emphasis was put on the idea of

inclusion, but we were not adequately prepared to teach academic lessons, collaborate

with general educators [we rarely interacted with non-special education students in any

classes]. I was prepared to identify strengths and needs, collect data, develop IEP's, etc. looking back, I would have liked to have more preparation with designing lesson plans and delivering instruction appropriate for an academic/inclusive setting. I would have liked more preparation with co-teaching and collaborative teaching models. It was talked about, but never practiced". Others simply indicated they would have liked "More discussion with general educators with students with disabilities in their class", "More hands on training with general education teachers", and "Opportunities to collaborate with gen. ed. majors."

Six respondents felt negative attitudes of general educators as a result of including students with severe disabilities in their classes. Those respondents felt they would have benefited from additional communication or 'negotiation skills' when dealing with general educators. Specifically respondents indicated they would have liked to know "How to interact with general education teachers who do not plan ahead/area not able to collaborate to modify instruction, and encourage independence," or "Open dialogue on the sensitive and extremely political opinions and difficulties with having students in a school building let alone trying to include them in general education classrooms." Lastly, one respondent, who teaches high school indicated she wanted to know

"…The reality. This is often a hard sell, especially in high school where my students are only included for non-academic classes. A lot of teachers do not understand the purpose or philosophy of inclusion. Negotiation and communication skills with regular educators who are slow to pick up would really have been helpful. I have had to learn how to communicate gracefully and with tact things that, inside, are very frustrating to me. At Maryland, we were taught

the ideal, not the reality. All teachers are pressed for time, and often overburdened. Figuring out how to get what I need done for my students is challenging."

Eight statements were categorized under the theme 'Knowledge of the General Education Curriculum Content Instruction including Reading and Math'. Specifically, respondents felt they needed more instruction at the pre-service level on how to teach content area courses and basic skills including reading and math. One respondent indicated, "…More exposure to general education curriculum. It sometimes feels as if I am speaking another language than the general ed. teachers I work with. If I had more exposure to the scope and sequence of various grades/classes/topics, I might be more prepared to anticipate and infuse life skill topics into the curriculum." A respondent who teaches at the elementary level indicated,

"…I feel that the program gave me a broad and very useful foundation in the field of education. Although I was given opportunities to plan lessons and thematic units, I feel that we could've used more preparation within the general curriculum. I spent one of my five years since graduating teaching in a self-contained class for student's k-2 with learning disabilities. I was not fully prepared to teach that curriculum. It is hard to make modifications to instruction when the material isn't defined. Perhaps a placement in a regular classroom in which students are given the opportunity to work and plan with general educators would be helpful."

Three respondents indicated they would have like more preparation with 'Assessment including the administration of alternative assessments'. Specifically, "…Participation in the preparation, administration and completion of alternate state

assessments (imap, alt msa); more experience/exposure to data collection procedures and methods in the classrooms with real students (as opposed to just learning about it in college classrooms)." Three respondents felt they needed additional preparation with the 'IEP Process' (e.g., "Having more preparation with the IEP process, being a part of more team meetings", "More access to and being able to help develop IEP's") and 'Parental Interactions' (N=3) (i.e., "More of working with parents and participating in IEP team meetings"). Four respondents also indicated the need for additional preparation in the 'Supervision of Support Staff'. Specifically, respondents indicated, "More preparation for supervision of assistant teachers," and "How to utilize and coach assistants who come in without any special ed. background and do not take any initiative." Three indicated they would have liked 'Access to Successful Inclusion'. Specifically, respondents wanted, "More exposure to successful inclusion, wider range of supports and accommodations for all levels of disabilities (not just severe)," but felt "Not many of the early childhood programs are inclusive as it is not government mandated. I am not sure the university can do anything about that." Finally, six respondents indicated that they needed 'No Additional Preparation' and felt "very prepared". Specifically respondents stated, "I do believe that the core, hands-on training I received while at UM provided me with the best preparation for classroom teaching. I have been teaching special education in New York City for two years now and feel that UM did an excellent job of preparing me for the realities of the classroom environment. I have been able to apply everything I have learned at UM," "I feel the program at UM provided me with diverse experiences," and "No additional information needed, I felt very prepared. In some cases, I knew more

about best practices in special education than the seasoned teachers whom I began to work with."

Preparation received after UM. Additional preparation received *after* completing the program at UM that prepared respondents to support students with severe disabilities in inclusive environments was also analyzed using qualitative methodology, specifically coding and categorizing responses using the constant comparison method, which elicited emerging themes (Strauss & Corbin, 1990). Two separate categorical themes emerged after comparing 32 statements made by respondents in this open-ended question. Only four respondents indicated that they had received no additional preparation after attending UM.

The first theme was 'Additional Graduate Level Preparation and Participation of Professional Conferences and In-services'. Seven of the statements about additional graduate level preparation, conference attendance, or in-services included the use of technology, including augmentative communication devices and assistive technology. One respondent indicated, "After graduating from University of Maryland, I went on to receive a master's in educational technology from… This degree in conjunction with my UM degree helped me to understand how to better incorporate assistive technology into the early childhood classroom." Three indicated they had "…training in using technology devices (intelli keys, board maker, writing w/ symbols) for special educators, "…intellitools and Boardmaker training through the assistive tech. department in the county," and " Augmentative communication training." One respondent stated it would be useful to provide additional preparation to paraprofessionals (e.g., …" vocational

training inservice for ia's; computer training for ia's; anything to help ia's learn how to support students rather than do for the student").

Six respondents also indicated they had received additional preparation in the area of 'Reading and Phonics' training mostly through in-services. Respondents indicated they had, "…Reading instruction for students with disabilities, preparing students with disabilities for High School Assessments (a state mandated assessment)," "An educational class in science and reading instruction through county classes," and "…Reading strategy seminars, curriculum/content area trainings." Five respondents indicated they had participated in various in-services or conferences (e.g., TASH Conference, TEACCH training for students with autism, "… a conference in New Hampshire on inclusion", and "Trainings offered by MANSEF (Maryland Association for Non-Public Special Education Facilities)."

Eleven respondents indicated the best training they received after attending the University of Maryland was 'On the Job Training and Real Life Experiences'. Three respondents indicated they had either taught ESY (extended school year) or had been a long-term substitute before teaching. Five respondents specifically stated "On the job training" and "learning from mistakes". One respondent indicated, "…Working with the students and staff/ the experience is where the real learning about teaching students with severe disabilities and teaching children in general has taken place. Student teaching is helpful and the book knowledge is helpful, but in my experience I have to teach to learn how to teach!" Another stated, "…The school community based program was extremely strong and had great teachers and instructional assistants working with each other and they were able to teach me how to interact with the general education teachers so that we

could increase student participation in inclusive environments." Finally, one respondent summed up her experience after UM, "I think the best preparation after UM was the experience I got in the classroom and in team meetings. It was amazing when leaving I felt I knew it all...but there is still so much to learn! I have also attended some countywide seminars that helped give me some ideas to better encourage and include students with severe disabilities in the classroom."

Research Question 3

What is the *level of knowledge* of inclusive best practices for students with severe disabilities by teacher candidates (undergraduate and graduate) with initial certification in Severe Disabilities (SD) from the Department of Special Education at the University of Maryland (from May, 1996 to May, 2003)?

Collaborative practices. Frequency counts, percentages, measures of central tendency (mean and median), and measures of dispersion (standard deviation and range) were used to analyze the level of knowledge respondents had about collaborative practices learned while in attendance at the University of Maryland; results are presented in Table 26. The highest percentages of agreement (reporting Strongly Agree or Agree on the Likert scale) were on items related to: (a) parents being welcomed as part of instructional planning teams (95.2%) M=1.27 (SD= .61); (b) use of planning and problem solving strategies (90.3%) M=1.66 (SD=. 65); (c) instruction is a shared responsibility between general educators and special educators (85.5%) M=1.71 (SD=. 79); (d) design of curriculum units and lessons with general educators (80.6%) with M=2.42 (SD=1.06);

Table 26

Level of Knowledge of Collaborative Practices Selected by Respondents

Collaborative[b,c] Practices	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Parents are welcomed as part of instructional planning teams	95.2%	1.27 (.61)	1.0	3.0 (1.0 – 4.0)
Use planning / problem solving strategies	90.3%	1.66 (.65)	2.0	2.0 (1.0 – 3.0)
Instruction is shared by General Educators / Special Educators	85.5%	1.71 (.79)	2.0	3.0 (1.0 – 4.0)
Design curriculum units / lessons with General Educators	80.6%	2.42 (1.06)	2.0	4.0 (1.0 – 5.0)
Co-teaching methods are chosen based on student needs	80.6%	1.94 (.88)	2.0	3.0 (1.0 – 4.0)
Design curriculum units / lessons using multi-level, multiple intelligences, and learning styles	78.7%	1.85 (1.09)	2.0	4.0 (1.0 – 5.0)
Roles and responsibilities are clearly defined for adults	72.6%	1.95 (.97)	2.0	3.0 (1.0 – 4.0)
Paraprofessionals are prepared to provide appropriate supports	71%	2.02 (1.19)	2.0	4.0 (1.0 – 5.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .741;

[c] Grand Mean= 1.844; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

and (e) co-teaching methods are chosen based on student need (80.6%) M=1.94 (SD=.
88); followed by (f) design of curriculum units and lessons using multi-level, multiple
intelligences, and learning styles (78.7%) M= 1.85 (SD= 1.09), (g) roles and
responsibilities are clearly defined for all adults in the classroom (72.6%) M= 1,95 (SD=
.97), and (h) paraprofessionals are prepared to provide appropriate supports (71%) M=
2.02 (SD= 1.19). Internal reliability measures for this group of variables had a
coefficient alpha of .741 and a Grand Mean of 1.844.

   Student supports. Frequency counts, percentages, measures of central tendency
(mean and median), and measures of dispersion (standard deviation and range) were used
to analyze the level of knowledge respondents had about student supports learned while
in attendance at the University of Maryland; results are presented in Table 27. The
highest percentages of agreement (reporting Strongly Agree or Agree on the Likert scale)
were for indicators related to: (a) strategies to promote student independence (96.8%) M=
1.45 (SD= .618); (b) structure peer support strategies (91.9%) M=1.66 (SD= .723); (c)
conducting functional behavioral assessments (88.7%) M= 1.59 (SD=. 82), and (d)
developing positive behavior support plans for students with challenging behavior
(88.7%) M=1.50 (SD= .78); followed by (e) identify opportunities to develop strategies
to support students in extra-curricular activities (80.6%) M= 1.90 (SD= .95). Internal
reliability measures for this group of variables had a coefficient alpha of .656 and a
Grand Mean of 1.623.

Table 27

Level Knowledge of Student Supports Selected by Respondents

Student Supports[b,c]	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Strategies to promote	96.8%	1.45	1.0	3.0
student independence		(.618)		(1.0 – 4.0)
Structure peer support	91.9%	1.66	2.0	3.0
strategies		(.723)		(1.0 – 4.0)
Conduct functional	88.7%	1.59	1.0	3.0
behavioral assessment (FBA's)		(.819)		(1.0 – 4.0)
with students with challenging behaviors				
Develop positive behavior	88.7%	1.50	1.0	3.0
support plans (PBSP's) for students		(.784)		(1.0 – 4.0)
with challenging behaviors				
Identify opportunities to	80.6%	1.90	2.0	4.0
develop strategies to support		(.953)		(1.0 – 5.0)
students in extra-curricular activities				

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .656;

[c] Grand Mean= 1.623; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

Assessment practices. Frequency counts, percentages, measures of central tendency (mean and median), and measures of dispersion (standard deviation and range) were used to analyze the level of knowledge respondents had about assessment strategies

learned while in attendance at the University of Maryland; results are presented in Table

28. The highest percentage of agreement (reporting Strongly Agree or Agree on the

Likert scale) was on the indicator related to use of realistic measures of performance to

report progress (83.9%) M= 1.95 (SD= .98), followed by incorporation of

accommodations to assessments during instruction (67.7%) M=2.05 (SD= 1.12), and last

was facilitating participation in statewide assessments (including alternate assessments)

(49.2%) M= 2.59 (SD= 1.14). Internal reliability measures for this group of variables had

a coefficient alpha of .743 and a Grand Mean of 2.202.

Table 28

Level of Knowledge of Assessment Practices Selected by Respondents

Assessment Practices[b,c]	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Use realistic measures of performance to report progress	83.9%	1.95 (.982)	2.0	4.0 (1.0 – 5.0)
Incorporate accommodations to assessments during instruction	67.7%	2.05 (1.12)	2.0	4.0 (1.0 – 5.0)
Facilitate participation in statewide assessments (including alternative assessment)	49.2%	2.59 (1.14)	3.0	4.0 (1.0 – 5.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .743;

[c] Grand Mean= 2.202; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

Instructional strategies. Frequency counts, percentages, measures of central tendency (mean and median), and measures of dispersion (standard deviation and range) were used to analyze the level of knowledge respondents had about instructional strategies learned while in attendance at the University of Maryland; results are presented in Table 29. The highest percentages of agreement (reporting Strongly Agree or Agree on the Likert scale) were on the indicators related to: (a) differentiated instruction (95.2%) M= 1.39 (SD= .85); (b) strategies to promote active student learning (91.9%) M=1.44 (SD= .74); (c) providing instruction of IEP goals across subjects within general education (88.7%) M= 1.65 (SD= .79); and followed by (d) planning accommodations to curriculum and classroom instruction (83.9%) M= 1.89 (SD= .85); (e) use of assistive technology (75.8%) M= 2.06 (SD= 1.04); and (f) use of computer technology as a tool for learning (61.3%) M= 2.27 (SD= 1.03). Internal reliability measures for this group of variables had a coefficient alpha of .767 and a Grand Mean of 1.782.

Research Question 4

What is the *degree of presence* of inclusive best practices for students with severe disabilities by teacher candidates (undergraduate and graduate) with initial certification in Severe Disabilities (SD) from the Department of Special Education at the University of Maryland (from May, 1996 to May, 2003) in their current or most recent teaching situation?

Table 29

Level of Knowledge of Instructional Strategies Selected by Respondents

Instructional Strategies[b,c]	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Differentiate instruction	95.2%	1.39 (.85)	1.0	4.0 (1.0 – 5.0)
Strategies to promote active student learning (e.g, individual, small / large group, direct instruction, cooperative learning)	91.9%	1.44 (.74)	1.0	3.0 (1.0 – 4.0)
Provide instruction of IEP goals across subjects within General Education	88.7%	1.65 (.79)	1.5	4.0 (1.0 – 5.0)
Plan accommodations to curriculum / classroom instruction	83.9%	1.89 (.85)	2.0	4.0 (1.0 – 5.0)
Use assistive technology	75.8%	2.06 (1.04)	2.0	4.0 (1.0 – 5.0)
Use computer technology as a tool for learning	61.3%	2.27 (1.03)	2.0	4.0 (1.0 – 5.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .767;

[c] Grand Mean= 1.782; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

Collaborative practices. Frequency counts, percentages, measures of central tendency (mean and median), and measures of dispersion (standard deviation and range) were used to analyze the degree of presence of collaborative practices in respondents current or most recent teaching position, if no longer teaching: results are presented in Table 30. The highest percentages of agreement (reporting Strongly Agree or Agree on the Likert scale) were on items related to: (a) paraprofessionals are prepared to provide appropriate supports (96.2%) M= 1.42 (SD= .57); (b) parents being welcomed as part of instructional planning teams (94.3%) M= 1.39 (SD=.60); (c) use of planning and problem solving strategies (88.7%) M=1.72 (SD=.93); (d) roles and responsibilities are clearly defined for all adults in the classroom (88.7%) M= 1.70 (SD= .77); (e) design of curriculum units and lessons using multi-level, multiple intelligences, and learning styles (88.5%) M=1.71 (SD=1.01); followed by (e) design of curriculum units and lessons with general educators (59.6%) M=2.59 (SD= 1.34); (f) co-teaching methods are chosen based on student need (52.9%) M=2.63 (SD= 1.13); and (g) instruction is a shared responsibility between general educators and special educators (38.5%) M=3.06 (SD= 1.33). Internal reliability measures for this group of variables had a coefficient alpha of .826 and a Grand Mean of 2.025.

Student supports. Frequency counts, percentages, measures of central tendency (mean and median), and measures of dispersion (standard deviation and range) were used to analyze the degree of presence of student supports respondents had in their current or most recent teaching position; results are presented in Table 31.

Table 30

Degree of Presence of Collaborative Practices in Most Recent Teaching Position
Selected by Respondents

Collaborative Practices[b,c]	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Paraprofessionals are prepared to	96.2%	1.42	1.0	2.0
provide appropriate supports		(.569)		(1.0 – 3.0)
Parents are welcomed as part of	94.3%	1.39	1.0	2.0
instructional planning teams		(.60)		(1.0 – 3.0)
Roles and responsibilities	88.7%	1.70	1.0	3.0
are clearly defined for adults		(.77)		(1.0 – 4.0)
Use planning / problem	88.7%	1.72	2.0	4.0
solving strategies		(.927)		(1.0 – 5.0)
Design curriculum units /	88.5%	1.71	2.0	4.0
lessons using multi-level, multiple		(1.01)		(1.0 – 5.0)
intelligences, and learning styles				
Design curriculum units /	59.6%	2.59	2.0	4.0
lessons with General Educators		(1.34)		(1.0 – 5.0)
Co-teaching methods are	52.9%	2.63	2.0	4.0
chosen based on S's needs		(1.13)		(1.0 – 5.0)
Instruction is shared between	38.5%	3.06	3.0	4.0
General Educators / Special Educators		(1.33)		(1.0 – 5.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .826;

[c] Grand Mean= 2.025; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

Table 31

Degree of Presence of Student Supports in Most Recent Teaching Position Selected by
Respondents

Student Supports[b,c]	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Strategies to promote student independence	94.3%	1.45 (.72)	1.0	3.0 (1.0 – 4.0)
Structure peer support strategies	86.5%	1.76 (.941)	2.0	4.0 (1.0 – 5.0)
Conduct functional behavioral assessments (FBA's) w / students with challenging behaviors	82.4%	1.67 (.99)	1.0	3.0 (1.0 – 4.0)
Develop positive behavior support plans (PBSP's) for students with challenging behaviors	81.1%	1.66 (.96)	1.0	3.0 (1.0 – 4.0)
Identify opportunities to develop strategies to support students in extra-curricular activities	76%	1.98 (.89)	2.0	4.0 (1.0 – 5.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .772;

[c] Grand Mean= 1.708; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

The highest percentages of agreement (reporting Strongly Agree or Agree on the Likert

scale) were on indicators related to: (a) strategies to promote student independence

(94.3%) M= 1.45 (SD= .72); (b) structure peer support strategies (86.5%) M=1.76 (SD= .94); (c) conducting functional behavioral assessments (82.4%) M= 1.67 (SD= .99); and (d) developing positive behavior support plans for students with challenging behavior (81.1%) M= 1.66 (SD= .96); followed by (e) identify opportunities to develop strategies to support students in extra-curricular activities (76%) M= 1.98 (SD= .89). Internal reliability measures for this group of variables had a coefficient alpha of .772 and a Grand Mean of 1.708.

Assessment practices. Frequency counts, percentages, measures of central tendency (mean and median), and measures of dispersion (standard deviation and range) were used to analyze the degree of presence of assessment practices respondents' had in their current or most recent teaching position; results are reported in Table 32. The highest percentage of agreement (reporting Strongly Agree or Agree on the Likert scale) was on the indicator related to use of realistic measures of performance to report progress (94.2%) M= 1.62 (SD= .66), followed by facilitation of participation in statewide assessments (including alternate assessments) (79.2%) M= 1.69 (SD= .89) and incorporation of accommodations to assessments during instruction (66.7%) M=2.05 (SD= 1.12). Internal reliability measures for this group of variables had a coefficient alpha of .671 and a Grand Mean of 1.80.

Instructional strategies. Frequency counts, percentages, measures of central tendency (mean and median), and measures of dispersion (standard deviation and range) were used to analyze the degree of presence of instructional strategies in respondents' current or most recent teaching position; results are presented in Table 33.

Table 32

Degree of Presence of Assessment Practices in Most Recent Teaching Position Selected

by Respondents

Assessment Practices[b,c]	Likert Agree[a] (Cum.%)	Mean (SD)	Median	Range (Min. – Max.)
Use realistic measures of	94.2%	1.62	2.0	3.0
performance to report progress		(.66)		(1.0 – 4.0)
Facilitate participation in	79.2%	1.69	1.0	3.0
statewide assessments (including		(.89)		(1.0 – 4.0)
alternate assessment)				
Incorporate accommodations	66.7%	2.06	2.0	4.0
into assessments during instruction		(1.12)		(1.0 – 5.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .671;

[c] Grand Mean= 1.80; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

The highest percentages of agreement (reporting Strongly Agree or Agree on the Likert scale) were on indicators related to: (a) differentiated instruction (98.1%) M= 1.29 (SD= .49); (b) strategies to promote active student learning (94.2%) M=1.42 (SD= .61); (c) use of computer technology as a tool for learning (86.5%) M= 1.71 (SD= .87);

Table 33

Degree of Presence of Instructional Strategies in Most Recent Teaching Position Selected by Respondents

Instructional Strategies[b,c]	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Differentiate instruction	98.1%	1.29 (.49)	1.0	3.0 (1.0 – 4.0)
Strategies to promote active student learning (e.g, individual, small / large group, direct instruction, cooperative learning)	94.2%	1.42 (.61)	1.0	2.0 (1.0 – 3.0)
Use computer technology as a tool for learning	86.5%	1.71 (.87)	2.0	4.0 (1.0 – 5.0)
Provide instruction of IEP goals across subjects w/in G.E.	82.4%	1.80 (1.13)	1.0	4.0 (1.0 – 5.0)
Plan accommodations to curriculum / classroom instruction	82%	1.74 (.94)	1.0	3.0 (1.0 – 4.0)
Use assistive technology	75%	2.00 (1.05)	2.0	4.0 (1.0 – 5.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .737;

[c] Grand Mean= 1.670; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

followed by (d) providing instruction of IEP goals across subjects within general education (82.4%) M= 1.80 (SD= 1.13); (e) planning accommodations to curriculum and classroom instruction (82%) M= 1.74 (SD= .94); and (f) use of assistive technology (75%) M= 1.71 (SD= .87). Internal reliability measures for this group of variables had a coefficient alpha of .737 and a Grand Mean of 1.670.

Research Question 5

What inclusive best practices for students with severe disabilities were most *critical to student success* as reported by teacher candidates (undergraduate and graduate) with initial certification in Severe Disabilities (SD) from the Department of Special Education at the University of Maryland (from May, 1996 to May, 2003) in their current or most recent teaching situation?

Collaborative practices. Frequency counts, percentages, measures of central tendency (mean and median), and measures of dispersion (standard deviation and range) were used to analyze the collaborative practices which were most critical to the success of students with severe disabilities; results presented in Table 34. The highest percentages of agreement (reporting Strongly Agree or Agree on the Likert scale) were the items related to: (a) use of planning and problem solving strategies (100%) M= 1.24 (SD= .43); (b) parents being welcomed as part of instructional planning teams (98.4%) M= 1.25 (SD=. 47); (c) paraprofessionals are prepared to provide appropriate supports (98.4%) M=1.15 (SD=. 40); (d) design of curriculum units and lessons using multi-level, multiple intelligences, and learning styles (98.4%) M=1.27 (SD=. 48); (e) roles and responsibilities are clearly defined for all adults in the classroom (98.3%) M=1.10 (SD=.35); (f) co-teaching methods are chosen based on student need (96.7%) M= 1.44

Table 34

Collaborative Practices Most Critical to the Success of Students with Severe Disabilities Selected by Respondents

Collaborative Practices[b.c]	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Use planning / problem	100%	1.24	1.0	1.0
solving strategies		(.43)		(1.0 – 2.0)
Design curriculum units /	98.4%	1.27	1.0	2.0
lessons using multi-level, multiple		(.48)		(1.0 – 3.0)
intelligences, and learning styles				
Parents are welcomed as part of	98.4%	1.25	1.0	2.0
instructional planning teams		(.47)		(1.0 – 3.0)
Paraprofessionals are prepared	98.4%	1.15	1.0	2.0
to provide appropriate supports		(.40)		(1.0 – 3.0)
Roles and responsibilities	98.3%	1.10	1.0	2.0
are clearly defined for adults		(.35)		(1.0 – 3.0)
Co-teaching methods are	96.7%	1.44	1.0	3.0
chosen based on S's needs		(.62)		(1.0 – 4.0)
Design curriculum units /	91.9%	1.45	1.0	2.0
lessons with General Educators		(.64)		(1.0 – 3.0)
Instruction is shared between	82%	1.72	2.0	3.0
General Education / Special Education		(.80)		(1.0 – 4.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .797;

[c] Grand Mean= 1.334; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

(SD= .62), (g) design of curriculum units and lessons with general educators (91.9%)

M=1.45 (SD=. 64); and followed by (h) instruction is a shared responsibility between

general educators and special educators (82%) M=1.72 (SD= .80). Internal reliability

measures for this group of variables had a coefficient alpha of .797 and a Grand Mean of

1.334.

Student supports. Frequency counts, percentages, measures of central tendency

(mean and median), and measures of dispersion (standard deviation and range) were used

to analyze the student supports most critical to the success of students with severe

disabilities; results are presented in Table 35. The highest percentages of agreement

(reporting Strongly Agree or Agree on the Likert scale) were the indicators related to: (a)

strategies to promote student independence (100%) M= 1.13 (SD= .34; (b) developing

positive behavior support plans for students with challenging behavior (100%) M=1.19

(SD=.40); closely followed by (c) structure peer support strategies (98.4%) %) M=1.33

(SD=.51); (d) conducting functional behavioral assessments (98.4%) M=1.19 (SD=. 44);

and (e) identify opportunities to develop strategies to support students in extra-curricular

activities (98.4) M=1.33 (SD=. 57). Internal reliability measures for this group of

variables had a coefficient alpha of .759 and a Grand Mean of 1.237.

Assessment practices. Frequency counts, percentages, measures of central

tendency (mean and median), and measures of dispersion (standard deviation and range)

were used to analyze the assessment practices considered most critical to the success of

students with severe disabilities; results are presented in Table 36.

Table 35

Student Supports Critical to the Success of Students with Severe Disabilities Selected by

Respondents

Student Supports[b,c]	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Develop positive behavior support plans (PBSP's) for students with challenging behaviors	100%	1.19 (.40)	1.0	1.0 (1.0 – 2.0)
Strategies to promote student independence	100%	1.13 (.34)	1.0	1.0 (1.0 – 2.0)
Structure peer support strategies	98.4%	1.33 (.51)	1.0	2.0 (1.0 – 3.0)
Identify opportunities to develop strategies to support students in extra-curricular activities	98.4%	1.33 (.57)	1.0	3.0 (1.0 – 4.0)
Conduct functional behavioral assessments (FBA's) w / students with challenging behaviors	98.4%	1.19 (.44)	1.0	2.0 (1.0 – 3.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .759;

[c] Grand Mean= 1.237; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

The highest percentage of agreement (reporting Strongly Agree or Agree on the Likert

scale) was on the indicator related to use of realistic measures of performance to report

progress (96.7%) M= 1.27 (SD= .52), followed by incorporation of accommodations to

assessments during instruction (91.5%) statewide assessments (including alternate

assessments) (61.7%) M= 2.21 (SD= 1.12). Internal reliability measures for this group of

variables had a coefficient alpha of .510 and a Grand Mean of 1.638.

Table 36

Assessment Practices Critical to the Success of Students with Severe Disabilities Selected

by Respondents

Assessment Practices[b.c]	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Use realistic measures of performance to report progress	96.7%	1.27 (.52)	1.0	2.0 (1.0 – 3.0)
Incorporate accommodations into assessments during instruction	91.5%	1.49 (.82)	1.0	4.0 (1.0 – 5.0)
Facilitate participation in in statewide assessments (including alternate assessment)	61.7%	2.21 (1.12)	2.0	4.0 (1.0 – 5.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .510;

[c] Grand Mean= 1.638; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

Instructional strategies. Frequency counts, percentages, measures of central

tendency (mean and median), and measures of dispersion (standard deviation and range)

were used to analyze the instructional strategies considered most critical to the success of

students with severe disabilities; results are presented in Table 37. The highest

percentages of agreement (reporting Strongly Agree or Agree on the Likert scale) were

on indicators related to: (a) providing instruction of IEP goals across subjects within

general education (100%) M= 1.28 (SD= .45); (b) followed by strategies to promote

active student learning (98.4%) M=1.23 (SD= .46); (c) use of computer technology as a

tool for learning (96.7%) M= 1.28 (SD= .52); (d) use of assistive technology (96.7%)

M= 1.26 (SD= .52); and (e) differentiated instruction (96.6%) M= 1.32 (SD= .54);

followed by (e) planning accommodations to curriculum and classroom instruction

(84.7%) M= 1.66 (SD= .96). Internal reliability measures for this group of variables had

a coefficient alpha of .804 and a Grand Mean of 1.351.

Additional inclusive best practices. The open-ended question regarding

"additional *Inclusive Best Practices"* which are critical to the success of students with

severe disabilities was analyzed using qualitative methodology, specifically coding and

categorization of responses using the constant comparison method, which elicited

emerging themes (Strauss & Corbin, 1990). Several categories listed as 'additional best

practices' were already stated within the context of the survey. These categories

included: (a) Collaborative Planning, (b) Positive Behavior Supports, and (c) Instruction

of IEP goals within the General Education Curriculum.

Table 37

Instructional Strategies Critical to the Success of Students with Severe Disabilities

Selected by Respondents

Instructional Strategies[b,c]	Likert Agree[a] (Cum. %)	Mean (SD)	Median	Range (Min. – Max.)
Provide instruction of IEP goals across subjects w/in G.E.	100%	1.28 (.45)	1.0	1.0 (1.0 – 2.0)
Strategies to promote active student learning (e.g, individual, small / large group, direct instruction, cooperative learning)	98.4%	1.23 (.46)	1.0	2.0 (1.0 – 3.0)
Use assistive technology	96.7%	1.26 (.52)	1.0	2.0 (1.0 – 3.0)
Use computer technology as a tool for learning	96.7%	1.28 (.52)	1.0	2.0 (1.0 – 3.0)
Differentiate instruction	96.6%	1.32 (.54)	1.0	2.0 (1.0 – 3.0)
Plan accommodations to curriculum / classroom instruction	84.7%	1.66 (.96)	1.0	4.0 (1.0 – 5.0)

Note. [a] Cumulative percentage of Agreement (Strongly Agree or Agree); [b] Coefficient Alpha= .804;

[c] Grand Mean= 1.351; 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

One respondent indicated, "Special educators and general educators should plan lessons, which demonstrate the real-life usefulness of skills required for teaching. Group discussion of modifications should occur and schools should provide regularly scheduled time for co-teachers to collaborate within the school day schedule." Five others who provided statements about Collaborative Planning felt there should be a focus on communication between all staff and parents should be involved in the IEP process. One respondent indicated, "Always hold high expectations and work toward the goals and objectives as a team, knowing that it is fine to modify and change your plans as you find what does and does not work, or what might be a better, more effective plan/program." Within the Positive Behavior Supports category one respondent indicated that on should use "behavioral plans which incorporate teacher behavior." Under the 'Instruction of IEP Goals within the General Education Curriculum' category a respondent indicated that it was important to "Include students in heterogeneous instructional groups to learn" and another indicated, "Numerous IEP goals can and should be met within the general ed. curriculum."

Other categories that emerged after using the constant comparison method which were not already part of the quality indicator statements on the survey included: (a) Knowledge of Content Area and Curriculum, (b) Natural Supports, (c) Administrative Support, (d) Person Centered Planning, and (e) Self-Determination Skills. Under the heading, Knowledge of Content Area and Curriculum, three respondents indicated "Special educators need to be trained in content area curriculum in order to be able to co-teach effectively." Under the heading Person Centered Planning three respondents

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indicated "Students should always be involved in their own educational planning; students should be active members of IEP teams to whatever extent possible based on the students' cognitive ability (especially, secondary/transition aged students!!!)" under person centered planning. Lastly, one respondent felt that "Self-determination skills should be learned as part of whole curriculum for all students."

Research Question 6

Are variables (i.e., completion of the Inclusive Practices Course, participation in an inclusive practicum or student teaching placement, perception of adequate preparation to meet the needs of students with disabilities in inclusive environments) predictive of time spent supporting students in inclusive environments in their current or most recent teaching situation?

Group comparisons for time spent supporting students in inclusive settings. Independent t-tests were conducted to determine if a significant difference existed between mean percentage of time spent supporting students with severe disabilities in inclusive environments, once teaching, for: (a) those who took the inclusive practices course and those who did not; (b) those who had greater than or equal to 50% inclusive field placements and those who had less than 50% inclusive field placements; and (c) those who had greater than or equal to two inclusive field placements and those who had less than two inclusive field placements. To determine which significance level to use, equal variances assumed or equal variances not assumed, the Levene Test for Equality of Variances was used. If Levene's test was significant ($\leq$ .05), then equal variances were not assumed. If Levene's test was not significant (> .05), equal variances were assumed.

The mean percentage of time spent supporting students with severe disabilities in inclusive settings for those respondents who took the inclusive practices class was 22% and for those who did not take the class, it was 19% (t=.433, p=.659). The mean percentage of time spent supporting students with severe disabilities in inclusive settings for those respondents who had greater than or equal to 50% of their field placements in inclusive settings was 25%, for those who had less than 50% of their field placements in inclusive settings, it was 17% (t=1.285, p=.204). The mean percentage of time spent supporting students with severe disabilities in inclusive settings for those respondents who had greater than or equal to two inclusive field placements was 23%, for those who has less than 2 inclusive field placements, it was 18% (t=.790, p=.422). None of the Independent t-tests was statistically significant and results are presented in Tables 38 – 40.

Table 38

Percentage of Time Spent Supporting Students with Severe Disabilities in Inclusive Settings (Once Teaching)

	Mean Percentage		Significance	
Time Spent in Inclusive Settings	Yes	No	t	P
Completion of Inclusive Practices Course	22%	19%	.443	.659

Table 39

Percentage of Time Spent Supporting Students with Severe Disabilities in Inclusive

Settings (Once Teaching)

	Mean Percentage		Significance	
Time Spent in Inclusive Settings	>= 50%	< 50%	t	P
Percent of Inclusive Field Placements	25%	17%	1.285	.204

Table 40

Percentage of Time Spent Supporting Students with Severe Disabilities in Inclusive

Settings (Once Teaching)

	Mean Percentage		Significance	
Time Spent in Inclusive Settings	>= 2.0	< 2.0	t	P
Number of Inclusive Field Placements	23%	18%	.790	.422

Another independent t-test was conducted to determine if there was a significant difference between mean percentage of time spent supporting students with severe disabilities in inclusive environments, once teaching, for those who reported they 'strongly agreed' (Likert Scale =1) that their preparation for inclusion was adequate (29%) and those who reported less than 'strongly agree' (Likert Scale >= 2) that their preparation for inclusion was adequate (16%) (t=-2.227, p=.030). This independent t-test was statistically significant and indicated a significant difference between those who strongly agree that their preparation for inclusion was adequate and those who either agreed, were neutral, disagreed, or strongly disagreed about the adequacy of their preparation for inclusion. A summary is presented in Table 41.

Table 41

Percentage of Time Spent Supporting Students with Severe Disabilities in Inclusive Settings (Once Teaching)

	Mean Percentage		Significance	
Time Spent in Inclusive Settings	=1 [a]	> = 2 [a]	t	P
Adequacy of Preparation for Inclusion	29%	16%	-2.227	.030

Note. [a] 5 = Strongly Disagree; 4 = Disagree; 3 = Neutral; 2 = Agree; 1 = Strongly Agree

Prediction of time spent supporting students in inclusive settings. A non-hierarchical regression analysis was also conducted to examine the contribution of predictor variables including: (a) completion of the Inclusive Practices course, (b) percentage of inclusive field experiences, and (c) the mean score of adequacy of preparation to meet the needs of students with severe disabilities in inclusive environments on the criterion variable, percentage of time spent supporting students with severe disabilities in inclusive environments. When entering the variables into the analysis, each variable was entered into the construct in the first position and in the last position (i.e., variables were entered as 1st, 2nd, 3rd, then 2nd, 3rd, 1st, then 3rd, 1st, 2nd). The predictor variables accounted for only 3.3% of the variance in the criterion variable. The t-test for beta weights was not statistically significant for any of the individual variables when entered into the first position. The t-test for beta weights was not statistically significant for any of the individual variables when entered into the last position. The non-hierarchical regression analysis for percentage of time spent supporting students with severe disabilities in inclusive settings is presented in Table 42.

Summary

A non-hierarchical regression analysis was conducted to examine the contribution of: (a) completion of the "Inclusive Practices" course, (b) number of inclusive field placements, (c) percentage of field inclusive field placements, on the criterion variable, perceived adequacy of preparation to support students with severe disabilities in inclusive environments (see Table 23).

Table 42

Non-Hierarchical Regression Analysis for Percentage of Time Supporting Students with

Severe Disabilities in Inclusive Settings

Variables	Initial Entry of the Construct			Construct Entered in Last Position	
	Simple R	R Squared	p-value	R Squared Increment	p-value
Adequacy of Preparation for Inclusion	.181	.033	.171	.023	.258
Percentage of Inclusive Field Placements	.068	.005	.611	.000	.983
Completion of Inclusive Practices Course	.069	.005	.603	.001	.837

% of Total Contribution: 3.3% (.033)

A non-hierarchical regression analysis was also conducted to examine the

contribution of: (a) completion of the "Inclusive Practices" course, (b) percentage of field

inclusive field placements, (c) perceived adequacy of preparation to support students with

severe disabilities in inclusive environments, on the criterion variable, time spent

supporting students with severe disabilities in inclusive settings, once teaching (See Table

42). Independent t-tests were performed to compare the means scores for adequacy of preparation between (a) those who took the inclusive practices course and who did not, (b) those who had $>=50\%$ inclusive field placements and those who had $<50\%$ inclusive field placements, and (c) those who had $>=2$ inclusive field placements and those who had <2 inclusive field placements.

Respondents reported strong knowledge of inclusive best practices (e.g., collaborative practices, individual student supports, and instructional strategies) as a result of their pre-service preparation at Univeristy of Maryland. Most inclusive best practices were present in respondents' current or most recent teaching situation and were reported to be 'critical to students with severe disabilities' success'. Completion of the "Inclusive Practices" course and participation in inclusive field placements during pre-service preparation are predictive of reported adequacy of preparation for inclusion. Strong agreement of adequacy of preparation indicated more percentage of time spent supporting students with severe disabilities in inclusive settings, once teaching.

CHAPTER V

Discussion

The purpose of the research study was to determine: (a) if recent graduates were teaching or previously taught in the field in which they were prepared (i.e., retention in the field of special education); (b) if recent graduates receiving certification in severe disabilities were adequately prepared to teach students with severe disabilities in inclusive environments; (c) if recent graduates learned about and implemented best practices for inclusion and believe those practices were critical to student success; and (d) if certain variables were predictive (or more specifically account for the variability) of perceived adequacy of preparation and time spent supporting students in inclusive environments once teaching. Results of each of these areas are summarized and discussed, limitations are addressed, and suggestions for future research, program implications for the University of Maryland, and implications for practice are presented.

Retention in the Field of Special Education

It was the intention of this study to determine if recent graduates receiving initial certification in severe disabilities were actually teaching students with severe disabilities, or at least taught students with severe disabilities. With documented critical teaching shortages in special education, and severe disabilities in particular, it is imperative that teacher educators who prepare teacher candidates, follow-up with their graduates to ensure their efforts were efficacious (Snell et al., 1997; McLesky, Tyler, & Flippin, 2003). It was found that, most of the respondents in this study were currently teaching and remained locally in Maryland. For those who were no longer teaching, most were still working in the field of education as administrators or consultants, with only a few

who reported leaving teaching to take care of children. Both groups reported four years as their mean and median years of experience. This may not be reflective of all teachers, as those surveyed may have graduated very recently (the survey included graduates from May, 1996 to May, 2003) and would not have had the opportunity to teach longer.

Respondents were asked to provide information about the position (or positions) either currently or previously held and the disability category they taught. Most respondents described themselves as special education teachers, specifically self-contained classrooms in general education schools or providing community based instruction. Most respondents reported their teaching position as multiple roles during the school day including combinations of the following: self-contained special educator, inclusion facilitator, vocational coordinator, co-teacher, and resource teacher. This may be reflective of the current staffing ratios and dispersion of students with severe disabilities in different school districts as well as the continuum of services provided (MDDC, 2003).   Only nine (11.5%) respondents described themselves as 'Inclusion Facilitators', which also may be indicative of the continuum of service provision within their individual school or district.

When asked to describe the students with whom they taught, most respondents indicated that they worked with students having a range of disabling conditions. Many respondents indicated they worked with students with autism, mental retardation, and multiple disabilities all of whom might be considered low-incidence disabilities. However, several respondents also indicated they worked with students with learning disabilities, emotional disabilities, speech and language impairments, and other health impairments, all of which may be considered high-incidence disabilities. About one-third

respondents also indicated they worked with children with developmental delays. Very few respondents indicated they worked solely with one 'type' of student (e.g., students with autism, students with learning disabilities). This outcome may be reflective of the growing diversity of caseloads where teachers may no longer be teaching only students with severe disabilities or only students with mild disabilities. It is unclear if this is occurring because students with disabilities are being placed in the least restrictive environment or because a continuum of services to students with severe disabilities is not being provided. That is, students with severe disabilities are only placed in schools where there is a provision of intensive service delivery required by students with severe disabilities (Kluth et al., 2002).

As a result, changes may be needed in the way teacher candidates are prepared. Multi-categorical or multi-disability licensure may enable teacher candidates the ability to have knowledge of all disabilities, albeit limited, which may reflect real life case loads once teaching as more and more special educators have to work with a variety of students with exceptional learning needs (CEC, 1999). Often multi-categorical licensure is based on a specific age group, which enables teacher candidates to understand pedagogy relative to the level of schooling (e.g., early childhood, elementary, or secondary). Disability specific (e.g., learning disabilities, emotional behavior disorders, severe disabilities) licensure ensures teacher candidates are specialists regarding aspects of programming across the life span. Some argue that teacher candidates should be generalists and be prepared collaboratively with options for specialization when pursuing advanced preparation (Eichenger & Downing, 2000).

Participants were asked about the portion of their day spent teaching students with severe disabilities (i.e., providing direct instruction) and a little more than one-third indicated they spent 100% of their day with students with severe disabilities. However, a little over one-fourth indicated they spent none of their day with students with severe disabilities, with all others indicating they spent at least part of their day working with students with severe disabilities. It is not clear if the variability in time spent teaching students with severe disabilities is a result of: (a) small numbers of students with disabilities at a particular school; (b) those with 'expertise' in severe disabilities' teaching other students; or (c) if the stressors of working full time with students with severe disabilities lead graduates to seek other positions where they can still use their special education techniques (e.g., individualizing instruction, use of positive behavior supports, assessment procedures) but with students with less intensive needs (Billingsley, 2003).

Respondents were also asked the portion of their day spent supporting students with severe disabilities in inclusive environments. Almost half of the respondents indicated they spent none of their day supporting students with severe disabilities in inclusive environments, with a little over half indicated they spend some portion of their day supporting students with severe disabilities in inclusive environments. Results were similar for those who were no longer teaching. Because the data were not aggregated by those who did not spent any of part their day teaching students with severe disabilities or by those who taught in self-contained special education centers or facilities, these results may not be indicative of those who do teach in general education schools and spend at least part of their day with students with severe disabilities.

However, most respondents reported being a special education teacher in a self-contained classroom in a general education school, which may be indicative of the realities of specific schools which do not provide a model of inclusive service delivery for students with severe disabilities. These results may also be reflective of student scheduling where students with severe disabilities may not spend all day segregated (e.g., self-contained class in general education school) but instead participate in inclusive environments for part of their day (e.g., included for special subjects, lunch, recess) (MDDC, 2003).

Adequacy of Preparation for Inclusion

Several sources of information were used to evaluate whether respondents were adequately prepared to support students with severe disabilities in inclusive settings. Almost two-thirds of the respondents completed the *Inclusive Practices* course and 81% reported they 'agreed' or 'strongly agree' that their preparation was adequate to support students with severe disabilities in inclusive settings. Almost all of the respondents reported having at least four field placements with most reporting having six placements. These numbers are reflective of the configuration of the graduate and undergraduate programs, where all undergraduate were required to have six different field placements and graduate students often had as many as four field placements during initial certification. More importantly, most respondents reported having at least one inclusive field placement.

When independent t-tests were conducted to compare means of perceived adequacy of preparation, both number of inclusive field placements and percentage of inclusive field placements showed statistically significant differences. Specifically, those

who had more inclusive field placements scored between 'agree' and 'strongly agree' about their preparation for inclusion verses those who had less inclusive placements who reported scores between 'agree' and 'neutral' about their preparation for inclusion. Ultimately, if respondents participated in inclusive field placements where they had an opportunity to support students with severe disabilities in inclusive settings, they reported being adequately prepared to do so. While there has been no research to date that specifies if inclusive field placements lead to better preparedness for inclusion, studies have indicated that satisfaction with preparation may lead to greater retention (Billingsley, 2003).

Respondents also reported they engaged in specific activities during their pre-service program, which prepared them to support students with severe disabilities in inclusive environments, and many of these activities were consistent with the literature on best practices for inclusion and personnel preparation for severe disabilities (Jackson et al., 2000; Ryndak et al., 2001; TASH, 2002). These activities included: (a) data collection and assessment procedures, (b) planning instructional programs and lessons, (c) collaborating and communicating with parents, general educators, related service providers, and support staff, (d) adapting instruction, creation of curricular modification, and providing appropriate accommodations in general education, (e) reflection and self-critique, and (f) planning for positive behavior supports. While a little over half of the respondents indicated they experienced activities in which they engaged in 'use of technology', almost half did not indicate they engaged in 'use of technology'. This is potentially, problematic given the need for use of educational technology for all students, not just those with severe disabilities. While technology is ever changing and being

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updated, it is possible that teacher candidates need more direct instruction on the use of technology at the pre-service level. More so, it may also indicate a need for the engagement of 'hands-on' use of technology activities during field experiences.

When asked to describe specific activities carried out in their inclusive placements, respondents noted several inclusive best practice activities. When respondents described their placements that were inclusive, many indicated which age group they worked (see Tables 19 and 24). Several respondents, who had field experiences at the secondary level, reported both community-based instruction and support provided at community job sites where students with severe disabilities were participating in situational job sampling and supported employment as inclusive placements. While some proponents of full inclusion may not consider community-based instruction or community job sites 'inclusive', this preparation is consistent with the TASH Resolution on Personnel Preparation. The resolution states, "… all teachers need to be prepared to provide individually appropriate education for all young adults who are in transition to adult life so that they can live and work in the community, including outcomes-oriented preparation for employment, community-based instruction, and supported living."

Upon examination of the open-ended responses, respondents consistently indicated they were very prepared to provide modifications and accommodations, make adaptations, develop peer and positive behavior supports, and plan for instruction of students with diverse learning needs. However, a recurring theme was that respondents did not feel adequately prepared to collaborate and communicate effectively with general educators, once they were out teaching. Several respondents attributed their inability to

collaborate with general educators to lack of pre-service preparation *with* general education teacher candidates. One respondent said, "Cooperative group work with general education teacher candidates at Maryland planning and preparing (designing) lessons - I don't experience much interest from the general education teachers at work for collaboration. Perhaps if teacher candidates were put together while taking classes, it would happen more on the job." Another respondent said they would have liked to have an, "Understanding the perspective of general education teachers."

Another issue respondents indicated was the need for additional communication skills or more specifically, 'negotiation' skills. Overall, many respondents felt while they were prepared for the day to day, hands-on strategies needed for successful inclusion, they were not prepared to 'sell' the idea of inclusion or educate school personnel about the potential benefits or rationale behind why students with severe disabilities should or could be included. One respondent said, "A lot of teachers do not understand the purpose or philosophy of inclusion. Negotiation and communication skills with regular educators who are slow to pick up would really have been helpful. I have had to learn how to communicate gracefully and with tact things that, inside, are very frustrating to me."

Research indicates that inclusive schooling efforts can be effectively implemented with the proper supports. These supports include appropriate resources, proper preparation at the pre-service or in-service level, high expectations for students with disabilities, ability to work with / direct support staff, a positive attitude towards inclusion, and time for collaborative teaming (Daane et al., 2001; Salisbury & McGregor, 2002; Werts et al., 1996; and Wolery et al., 1995). Unfortunately, many of those working

with students with severe disabilities in inclusive environments may not have received the proper preparation at the pre-service level.

Previous research and the results of this study indicate that general education and special education teachers need to be prepared to meet the needs of students with disabilities in general education settings. Teacher education programs must prepare teachers to be successful in inclusive educational environments in which students with or without disabilities have a mutually valued presence (Mattson & McGregor, 1997; Ryndak & Kennedy, 2000; and Villa et al., 1996). Teachers for all ages (elementary through secondary) need additional information on how to adapt curriculum and instruction to meet the educational needs of these students (CEC, 1999 and Ferguson, 2000). Teacher education programs may benefit from blending content from general and special education (Keefe et al., 2000; Mattson & McGregor, 1997; and Villa et al., 1996). As a result, all teachers may then understand "the purpose or philosophy of inclusion".

Another underlying theme that emerged was that respondents were not prepared for the gap that often exists between best practices taught at UM and the reality of what happens in schools once they are there as part of the school team. One respondent stated, "At Maryland, we were taught the ideal, not the reality. All teachers are pressed for time, and often overburdened. Figuring out how to get what I need done for my students is challenging." It is likely that during respondents' pre-service preparation, practicum, and internship experiences were at some schools using best practices for inclusion. However, given the status of inclusive practices for students with severe disabilities in Maryland, once graduates began teaching in local school districts, those aforementioned best practices may not be consistently implemented.

Respondents also indicated they needed additional preparation in the general education curriculum and content instruction, including reading and math. Respondents wanted more pre-service preparation on how to teach 'basic skills, academic skills, phonics, and the scope and sequence of the general education curriculum' so that they may be able to collaborate more effectively with the general educators. One respondent indicated, "More exposure to general education curriculum. It sometimes feels as if I am speaking another language than the general education teachers I work with. If I had more exposure to the scope and sequence of various grades/classes/topics, I might be more prepared to anticipate and infuse life skill topics into the curriculum." Perhaps the need for the additional preparation of teaching academic skills is also based on increased accountability standards, set forth by NCLB. All students, including those participating in the alternate assessment are being assessed on their 'adequate yearly progress' in reading and math skills. Therefore, it is imperative that IHE's consider the need to infuse more content instruction into special education teacher preparation. Consequently, IHE's need to consider the need to infuse a knowledge base of specific disabilities and more importantly how to modify curriculum and provide accommodations to students who learn differently for those engaged in general education teacher preparation.

While some respondents indicated they felt they needed no additional preparation, the other themes respondents mentioned were: (a) more practice with the administration of alternate assessment and 'user-friendly' data collection procedures, (b) more exposure to the IEP process, (c) more interactions with parents, (d) supervision of support staff, and (e) more exposure to successful models of inclusion. While the sample size was limited, these results support previous research in which special educators report having

little or no course work on content instruction during their pre-service preparation and very few experiences where teacher candidates are required to collaborate with general educators (Agran & Alper, 2000; Rainforth, 2000; McCormic et al., 2001; Reed & Monda-Amaya, 1995; Buell, et al., 1999; and Henning & Mitchell, 2002).

Of those who indicated a response in the open-ended question about 'Additional Training Received After Attendance at UM', over half of the respondents pursued additional training after their initial certification at UM. Many pursued training around the use of assistive technology and augmentative communication devices, understandable given the frequent updates and ever-changing technology. A few respondents also reported receiving various reading and phonics training, often during in-service activities, while others respondents reported various other conference and inservice attendance as training they received after their preparation at UM. Many respondents indicated that the best preparation they received after their attendance at UM was 'on the job training'. Respondents indicated that while they felt their preparation was outstanding, there was still much to learn. Practicum experiences and student teaching often provided a 'glimpse' of what teaching would be like. However, teaching on a daily basis was often full of experiences that cannot necessarily be anticipated or planned at the pre-service level. Specifically, one respondent said, "I think the best preparation after UM was the experience I got in the classroom and in team meetings. It was amazing when leaving I felt I knew it all...but there is still so much to learn!"

Knowledge, Use, and Beliefs About Inclusive Best Practices

Quality indicator statements for inclusive best practices were broken down into four different categories including *Collaborative Practices, Student Supports, Assessment*

Practices, and *Instructional Strategies* for 'Level of knowledge (or University knowledge)', 'Degree of presence', and 'Critical to the success of students with severe disabilities'. Respondents were asked if they learned about and use (or used) best practices for inclusion, and whether they believe best practices are critical to students with severe disabilities' success. Overall the results were positive, meaning that a majority of respondents selected 'strongly agree' or 'agree'. Under each area, 'Level of knowledge', 'Degree of presence', and 'Critical to student success' the four categories *collaborative practices, student support, assessment practices,* and *instructional strategies* are discussed.

  Level of knowledge regarding best practices for inclusion. Respondents reported they learned about most of the *collaborative practices* (e.g., use of problem solving strategies, instruction is a shared responsibility between general educators and special educators, parents are welcomed as part of an instructional planning team). Scores were somewhat lower, but were relatively positive overall, on the following indicators: (a) design of curriculum units and lessons with general educators; (b) design lessons using multiple intelligences and learning styles; (c) co-teaching methods are chosen based on student needs, (d) preparation of paraprofessionals; and (e) roles and responsibilities were clearly defined for adults in the classroom.

  Arguably one of the most difficult aspects of including students with severe disabilities is the ability to collaborate with other professionals (or paraprofessionals) (McCormic et al., 2001; McDonnell, 1998; Wood, 1998). Available research shows that special educators and general educators report having little or no preparation at the pre-service level in the area of collaboration, yet they are being asked to engage in it

regularly in the classroom (Agran & Alper, 2000; Buell et al., 1999; Finley-Snyder, 1999; Kearney & Durand, 1993). While many respondents report learning *collaborative practices* at the pre-service level at UM, when it's learned in isolation or only with other special educators, its value must be examined. Perhaps the best way to teach *collaborative practices* is in the context of collaborative coursework, activities, and in inclusive field experiences with pre-service general educators.

Most respondents indicated they 'strongly agreed' or 'agreed' they learned about *student supports*, especially strategies to promote student independence, structuring of peer supports, and functional behavioral assessment along with positive behavior support plans. Scores for *assessment practices* fell between 'agree' and 'neutral', specifically in the areas of facilitating participation in statewide assessments and incorporation of accommodations during instruction, understandable given new alternate assessment procedures in 2002. Respondents did, however, indicate they learned about the use of realistic measures of performance. Most respondents also reported they learned about *instructional strategies* to support students with severe disabilities in inclusive settings. Specifically, respondents indicated they learned: (a) strategies to promote active student learning; (b) to provide instruction of IEP goals across subjects in general education; (c) to differentiate instruction; and (d) to plan accommodations to curriculum and classroom instruction, with scores between 'strongly agree' and 'agree'. Scores were somewhat lower on knowledge of the use of assistive technology and use of computers as tools for technology as they fell between 'agree' and 'neutral'. While all teacher candidates are required to take a class on the use of educational technology, it is no longer offered in the special education department. As a result, teacher candidates take a course on the use of

general educational technology, which may not provide adequate information on the use of some specialized equipment, and technology used with students with severe disabilities.

Many of the strategies learned, for *student supports, assessment*, and *instructional strategies*, translate into good teaching in general, no matter the location of instruction or students with whom they are used. If, in fact, graduates do report learning these skills, one might assume it would enable them to teach all children. Student independence, behavior supports, use of realistic measures of performance, differentiated instruction, active learning, and the ability to accommodate instruction are all valuable skills no matter the student, regardless of ability, or location of service delivery. If instruction of students with severe disabilities in inclusive settings becomes customary, those who leave their pre-service preparation programs with the aforementioned skills could benefit the learning and achievement of *all* students.

Degree of presence regarding inclusive best practices. In the area of *collaborative practices*, there was variability in responses provided by graduates. Scores fell between 'strongly agree' and 'agree' for: (a) designed curriculum units and lessons using multiple intelligences and learning styles, (b) used planning and problem solving strategies, (c) welcomed parents as team members, (d) paraprofessionals were adequately prepared to provide appropriate supports, and (e) roles and responsibilities were clearly defined for adults in the classroom. However, respondents reported that design of curriculum units and lessons were not always occurring with general educators, co-teaching methods were not always chosen on the basis of students' needs, and instruction was not always a shared responsibility between general educators and special educators.

These results may be indicative of the respondents' ability to implement those practices (e.g., designing lessons, use of problem solving, welcoming parents as team members, training paraprofessionals, and defining roles) in settings that were not necessarily inclusive. Practices, which directly involved working or communicating with general educators, were not occurring as frequently. Perhaps this is indicative of the reported difficulties with collaboration with another professional whose background, knowledge of students, and expectations are inherently different (Pugach, 1996). Again, if the general educators or special educators had more exposure and experienced similar pre-service preparation that was collaborative, where instruction focused on broad issues of pedagogy and learning differences were valued, then design of lessons, co-teaching, and sharing of instruction may not be so problematic.

There are also many barriers to the successful implementation of inclusive schooling practices. Barriers include biases of general and special educators, rigid expectations, lack of collaborative planning time, lack of administrative support, limited explanation of roles within the classroom, and lack of adequate preparation to provide supports in inclusive environments (McDonnell, 1998; Wood, 1998; and York & Tunidor, 1995). Because one focus of the study was about the presence of inclusive best practices in respondents' current or most recent teaching position, respondents were not asked about barriers that might be present. Specifically, barriers identified in the research were not referenced or queried in the survey, which may be problematic. Future research might address not only which inclusive best practices are present but might also address alternative explanations to why some best practices are *not* present, including biases, rigid expectations, lack of collaborative planning time, lack of administrative support,

and limited role explanation vs. lack of adequate preparation. It is possible, that some general educators with whom some of the respondents work may have in fact received some preparation around inclusive practices, but do not engage in these practices based on some alternative explanation (e.g., personal bias, rigid expectations, lack of collaborative planning time, lack of administrative support, and limited role explanation).

For *student supports*, most respondents indicated that strategies to promote student independence, structured peer supports, functional behavioral assessments, and positive behavior supports were present (i.e., rated between strongly agree and agree) during their current or most recent teaching position with opportunities to develop supports for extra-curricular activities closely following.

A*ssessment practices* were also reported as being present. Specifically, use of realistic measures of performance was present followed by facilitation in statewide assessment and incorporation of accommodations into instruction. This was likely because of increases in accountability and the mandated testing required for all school-aged students under NCLB.

Almost all of the *instructional strategies* were reported to be present in respondents' current or most recent teaching position. Specifically, respondents indicated they regularly used differentiated instruction, strategies to promote active student learning, computer technology, provided instruction of IEP goals across subjects within general education, and planned accommodations to curriculum and classroom instruction, and used of assistive technology. Previously it was reported that collaboration with general educators was not always present in respondents' current or most recent teaching position. However, most respondents 'strongly agreed' that instruction of IEP goals was

being provided across subjects in general education. It is possible that the special

educator or a paraprofessional in the general education class, but possibly in isolation or

not in the context of the general education lesson being taught, is providing instruction of

these IEP goals.

Critical practices. Respondents selected almost all of the *collaborative practices,*

student supports, assessment practices, and *instructional strategies* to be 'critical to

student success'. For *collaborative practices*, respondents indicated they 'strongly

agreed' or 'agreed' that it was critical to the success of students with severe disabilities to

include: (a) use of planning and problem solving strategies, (b) use of multiple

intelligences and learning styles to design curriculum units and lesson, (c) parents must

be welcomed as team members, (d) paraprofessionals should be prepared to provide

appropriate supports, and (e) roles and responsibilities are clearly defined for all adults in

the classroom. However, as previously reported, not all of these *collaborative practices*

were present in their current or most recent teaching position. This may be indicative of

the limited role special educators have in the context of the general education class.

Respondents reported learning most of these skills and believed them to be important, yet

they weren't always being implemented. Perhaps since respondents reported having the

skills, the reason they are not being implemented is due to the lack of priority around

inclusive practices.

With accountability standards recently enacted for *all* students (NCLB, 2002), its

tenets will inevitably take precedent for state departments of education and consequently

local education agencies. The NCLB Act of 2001 stipulates that schools must be

accountable for the 'adequate yearly progress' for all students including students with

disabilities and that 'evidenced based practices' must be provided by highly qualified

personnel in core academic subjects (Final regulations, NCLB, 2002). Currently,

students are being assessed on reading and math, including those students who participate

in the alternate assessment. The law also stipulates that *all* students should have access to

the general education curriculum. With the priority on student achievement or adequate

yearly progress on reading and math standards, currently there are not incentives for

schools to become inclusive for students with severe disabilities because there aren't any

penalties for them *not* being inclusive.

Student supports were all seen as critical to student success. Use of peers,

behavior supports and functional behavioral assessment, and strategies to promote

student independence were almost always rated 'strongly agree' or 'agree'. Under

assessment practices, use of realistic measures of performance and the incorporation of

accommodations into assessment were also seen as critical practices. However,

facilitation in statewide assessments (including the alternate assessment) was not

necessarily seen as critical to student success. Perhaps this is due to a possible disconnect

between the implementation of best practices for inclusion and participation in an

alternate assessment, in which students are not assessed on the same general education

curriculum as their peers. The *alternate* assessment is based in the general education

curriculum, but not necessarily the *same* general education curriculum as other students

in their class or age group. While IDEA (1997) indicates that students with disabilities

should have access to the general education curriculum and be placed in the general

education class with supplementary aids and supports, it would reason that students with

disabilities (including severe disabilities) should be given the same assessment with

supplementary aids and supports. If this is not feasible, perhaps respondents feel the content of the alternate assessment is not meaningful or appropriate for students with severe disabilities. Further research may be needed to investigate why respondents felt that facilitation of participation in statewide assessments was not critical to student success.

Instructional *strategies* were unanimously seen as critical to student success as well, including the provision of instruction of IEP goals across academic subjects within general education. With knowledge of these practices and the belief that they are important to the success of students with severe disabilities, it remains unclear why inclusive practices are not being implemented with more regularity. Perhaps it is not a result of improperly prepared special educators, but systemic in nature. When asked about any additional best practices which are critical to student success, one respondent summed up, "Always hold high expectations and work toward the goals and objectives as a team, knowing that it is fine to modify and change your plans as you find what does and does not work, or what might be a better, more effective plan/program."

Predictors of Adequacy of Preparation and Time Spent in Inclusive Settings

Two different regression analyses were performed to determine if certain pre-service preparation variables were predictive of: (a) adequacy of preparation to support students with severe disabilities in inclusive settings, and (b) time spent supporting students with severe disabilities in inclusive environments, once teaching. All three variables (i.e., *Inclusive Practices* Course, Number of Inclusive Field Placements, Percentage of Inclusive Field Placements) entered into the regression model were predictive, accounting for 26.8% of the variability, of adequacy of preparation to support

students with severe disabilities in inclusive environments. Individually, all three

variables (i.e., *Inclusive Practices* Course, Number of Inclusive Field Placements, and

Percentage of Inclusive Field Placements) made a contribution above and beyond the

three of them together. As a result, respondents who completed the inclusive practices

course, had greater than or equal to two inclusive field placements, or had 50% or more

of their placements in inclusive settings, felt more prepared to support students with

severe disabilities in inclusive environments. In 2001, Ryndak et al.'s, supposition was

that the more practical field experiences in which pre-service teacher candidates got to

implement inclusive best practices, the more prepared they would be to implement those

same practices once teaching. This apparently is correct based on this study's findings.

However, when the same regression analysis was conducted with the following

variables: completion of the *Inclusive Practices* course, percentage of inclusive field

placements, and mean score on adequacy of preparation for inclusion, the results were

not significant. Specifically, those three variables did not account for a statistically

significant amount of variability in time spent supporting students with severe disabilities

in inclusive settings. While most respondents reported being adequately prepared to

support students with severe disabilities in inclusive settings, ultimately very few spent

much of their day supporting students in inclusive settings. One significant finding was

from an independent t-test which compared the means of those who 'strongly agreed' that

their preparation for inclusion was adequate and those who reported they either 'agreed',

were 'neutral', 'disagreed', or 'strongly disagreed' their preparation for inclusion was

adequate. Those who 'strongly agreed' that their preparation for inclusion was adequate,

spent more time supporting students in inclusive settings than those who did not.

Institutes of Higher Education continue to prepare both special educators and general educators for increasingly diverse classrooms and teaching experiences. In this study, graduates of a special education program specializing in severe disabilities reported they felt prepared to support these students in inclusive settings. Specifically, the majority reported completing the *Inclusive Practices* course, having inclusive field experiences, and engaged in several activities consistent with the literature regarding best practices for inclusion of students with severe disabilities (Jackson et al., 2000). While it is a relatively small sample, the results of this study were significant. Then why aren't they spending a larger portion of their day supporting students with severe disabilities in inclusive settings?' The most likely reason is that an inclusive model of service delivery is not occurring with regularity in the schools (or districts) the respondents are teaching, or have taught. With most respondents teaching in Maryland, it would seem a natural conclusion that respondents are not supporting students with severe disabilities in inclusive settings because Maryland "is one of the most segregated states in the nation for its education of students with disabilities" (MDDC, 2003; p.6).

Maryland was one of the first states to pass legislation that required the education of children with disabilities, including young children (from birth to age five) prior to the Education of All Handicapped Children Act (P.L. 94-142) in 1975. As a result, special schools programs were developed to provide segregated special education services (MDDC, 2003). Consequently, placements in self-contained facilities and in segregated classrooms within general education schools, remain a frequently used option for students with severe disabilities. The IDEA Amendments of 1997 stated that children with disabilities should be educated in the schools they would attend if the child did not have a

disability. Students were to be educated in the general education class with their

nondisabled peers to the maximum extent possible. However, there was a provision

made for students to be moved to a more restrictive environment only if the appropriate

supplementary aids and services were provided and the student was still not successful in

the general education setting (IDEA, 1997). Because the provision exists, there will

always be the option to do so (Kluth, et al., 2002).

According to the MDDC (2003) students with severe disabilities in Maryland are

often placed in self-contained classrooms and are out of general education classroom for

more than 60% of their school day. In fact, 59% of school-aged students with mental

retardation, 46% of students with autism, and 44% of students with multiple disabilities

are educated outside of the general education classroom for greater than 60 % of their

school day (MDDC, 2003). Compared to other states, Maryland had the 10th highest

percentage of students with disabilities receiving services in self-contained classrooms

and has the 11th highest percentage of students with disabilities receiving services in

public separate schools. As indicated earlier, most respondents reported that they were a

special education teacher in a self-contained classroom. While this study only represents

a small sample, the results support the Maryland Developmental Disabilities Council's

report on the presence of segregated classrooms in Maryland.

While many inclusive best practices for students with severe disabilities have

been documented in this study, they are not the same practices on which accountability

standards are measured. Specifically, schools are not being evaluated (or funded) based

on increases in social skills, friendship development, increases in social competence and

independent behavior, or increases in cognition, self-regulation, empathy, or the ability to

appreciate human differences. Until increases in social skills, friendship development, increases in social competence and independent behavior, or increases in cognition, self-regulation, empathy, and the ability to appreciate human differences are valued as necessary and critical outcomes, segregated practices may continue.

Students with severe disabilities comprise a small percentage of the overall student population (approximately 1%). Reading and math objectives from the alternate assessment (the standards by which NCLB is measuring student achievement), albeit based on the general curriculum, can be taught outside the regular class. Until research can show how inclusion of students with severe disabilities can demonstrate increases in students' 'adequate yearly progress' in reading and math, it won't be mandated by federal law that governs all students, and consequently won't be a priority.

Limitations of the Study

Several limitations exist within the current study, which may reduce the generalizability of the findings. First, the technology used to develop and manage the web survey could be manipulated for question content, location, and type; it was developed and maintained through the Office of Information Technology (OIT) and was designed for use by any University of Maryland faculty or staff member. However, its structure was uniform and certain aspects could not be manipulated. For example, alteration of fonts, colors, or formatting (e.g., bold, underline, or italics for emphasis) was not possible. In addition, once respondents 'selected' an answer or choice, it could not be 'deselected' for a 'no answer' response (e.g., if a respondent accidentally 'clicked' on a response and wanted to skip that particular question, only another choice could be selected).

Second, because the population of respondents was very specific, the sample size may not allow for generalization beyond the population, specifically teacher candidates graduating from the University of Maryland and specializing in severe disabilities. This study may not be indicative of all special educators who teach students with severe disabilities. In addition, this may not be reflective of all teachers, as those surveyed may have graduated very recently (the survey included graduates from May, 1996 to May, 2003) and would not have had the opportunity to teach longer. However, many of the results reported were similar to other studies in which the knowledge and use of best practices were examined (Ayers et al., 1994). In addition, several issues related to teaching and inclusion of students with severe disabilities that were revealed in this study are reflective of issues and findings with personnel preparation and inclusive practices in general (e.g., difficulty in collaboration with general educators, limited knowledge of general education curriculum and content, limited time spent supporting students with severe disabilities in inclusive settings, inclusive practices seen as critical to the success of students with severe disabilities).

Third, because preparation for supporting students with severe disabilities in inclusive settings was the main premise of the study, other aspects of personnel preparation for teaching students with severe disabilities were not addressed (e.g., issues about positioning and handling, special health care and sensory issues, transition, communication skills, instructional strategies used outside of inclusive settings, community-based instruction). With limited regularity of inclusive practices in Maryland, inquiry into the preparation to facilitate inclusion may not be as compelling as

how graduates' preparation met their needs in the model of service provision in which they currently (or previously) work.

Fourth, the inability to locate *all* graduates for the survey was problematic. Most of the respondents were: (a) those who remained in touch with personnel from the University and were teaching locally and were located via Internet search of local school systems' web sites or (b) those who may still be attending the University to complete their master's degree. Many of the respondents had a personal relationship with this researcher and may have felt obligated to answer the survey, especially since it was anonymous. This may help explain the large return rate and the rapidity with which most respondents answered the electronic survey. These individuals may not be reflective of their peers who could not be located. It is possible that the graduates, who could not be located, may no longer be teaching or perhaps work in an area outside of the field of education. Respondents who participated in the survey may have been highly motivated and pleased with their preparation and willing to assist this researcher in completing the study, which may have adversely affected the results.

Suggestions for Future Research

Through the course of the study, the *Inclusive Best Practices Survey* was found to be face, content, and concurrently valid to evaluate those who are either teaching or might teach in inclusive settings. The intent of the study was to evaluate one teacher preparation program's graduates who were prepared to teach students with severe disabilities. However, it appears that the instrument could be used with other groups including: (a) recent graduates of the newly redesigned program at UM who are all certified in severe disabilities; (b) recent graduates of the general education program at

UM; (c) graduates of other personnel preparation programs who prepare personnel to work with students with severe disabilities; and (d) any newly hired teachers (general educators or special educators) working with students who are being included in inclusive settings in Maryland or other states.

For graduates of the University of Maryland, the instrument could be used to evaluate recent graduates who all received certification in severe disabilities.   An evaluation of those in the newly designed program who are learning about and implementing best practices for inclusion, may be valuable in determining if there are aspects of the current pre-service program that also lead to feelings of 'preparedness' to support students with severe disabilities in inclusive settings.

The current program no longer requires the *Inclusive Practices* course, but infuses critical information into existing coursework. Perhaps if the more recent graduate (from the current program) when surveyed, report being adequately prepared to support students with severe disabilities in inclusive environments, other predictors may emerge. One suggestion might be to ask recent graduates from the new program if they engaged in the same inclusive best practice activities (e.g., adapting instruction for diverse learners; creation of curricular modifications; providing appropriate accommodations in general education; collaboration and communication with parents and caregivers, general educators, related service providers, or support staff; planning for positive behavior supports) during their pre-service preparation, but have them identify the origin of the completion of those activities including certain courses or field placements.

Second, this instrument could be used to evaluate other teacher preparation programs' ability to prepare special educators who may work with students with severe

disabilities in inclusive settings (e.g., Did they acquire knowledge of best practices? Are they implementing best practices when teaching?). This instrument could be tailored to meet the specific needs of other preparation programs to evaluate the qualifications of its graduates or personnel. According to U.S Department of Education, Office of the Under Secretary (2003), " special educators who do not directly instruct students in a core academic subject or who provide only consultation to highly qualified teachers of core academic subjects in adapting curricula, using behavioral supports and interventions, or selecting appropriate accommodations do not need to meet the highly qualified requirements" (p. 21). This newly developed validated instrument could be used to evaluate if special educators learned to 'adapt curricula, use positive behavior supports, and select appropriate accommodations' in their pre-service preparation and use those strategies once teaching.

Third, it might also be beneficial to evaluate whether teacher candidates in general education programs are learning about or able to implement best practices for inclusion. They may be responsible for implementing strategies and supports needed for students in their classes, if they end up teaching at a school that provides an inclusive model of service delivery. Many of the inclusive best practices were found to be good teaching strategies in general including, student independence, behavior supports, use of realistic measures of performance, differentiated instruction, active learning, and the ability to accommodate instruction, no matter the student, regardless of ability, or location of service delivery. It may be important to investigate if general educators were prepared to use collaborative practices or learned about strategies to work with students with disabilities. It is possible that some general educators were properly prepared (or at

least received some preparation around teaching students with disabilities) and inclusive practices are not occurring because of some other explanation (e.g., lack of collaborative planning time, lack of administrative support, lack of role definition).

Fourth, this instrument could be tailored to meet the specific needs of school districts to determine how to evaluate the current standards being set forth by SEA's under the auspices of NCLB. Specifically, the instrument developed for this study could be used to develop guidelines for developing a set of standards or skills needed by those who 'provide consultation, use behavioral supports or interventions, or select appropriate accommodations and do not need to meet the highly qualified standard' (NCLB, 2002). Newly prepared teacher candidates would have to demonstrate ways they mastered the four main tenets of the *Inclusive Best Practices Survey: collaborative practices, student supports, assessment,* and *instructional strategies*.

Future research might include how teacher candidates demonstrate standards in each of these areas, possibly through a portfolio including examples of: (a) modifications made to curriculum, activities, activities, or materials, (b) in class supports (e.g., use of individual student support plans); (c) behavior supports or positive behavior support plans, which include functional behavioral assessment; (d) provision of accommodations; (e) development and provision of peer supports; (f) use of assistive technology; (g) data collection; (h) adaptations; and (i) co-teaching. Permanent products could be developed over the course of a pre-service preparation program and possibly used to submit to state licensing boards instead of completion of an arbitrary standardized assessment.

Another area of future research might include the evaluation of currently existing dual certification programs in which teacher candidates are prepared jointly (e.g., early

childhood & special education, elementary education and special education, secondary education and special education). There are documented programs that offer dual certification with others emerging in the wake of IDEA 1997 amendments requiring the provision of special education service delivery within the context of general education classrooms with supplementary aids, supports, and related services to the maximum extent possible (Keefe et al., 2000, Mattson & McGregor, 1997; & Villa et al, 1996). While there has been documentation about the efficacy of these programs, they offer different models of joint preparation (e.g., elementary education with special education 'endorsement', special education coursework infused in the general education program, general and special education dual certification). Specifically, with a limited knowledge base about newly certified teachers serving students with severe disabilities, it would be beneficial to look at how the aforementioned dual certification programs addressed those issues specific to students with severe disabilities.

Moreover, teacher educators are in the precarious position of redefining the content of preparation programs to meet the requirements set forth by NCLB. Specifically, Colleges of Education will need to determine if: (a) special educators and general educators might be better prepared jointly; (b) if general educators will be required to have a double major or a minor in a specific content area (e.g., math, English, social studies, chemistry); (c) if there should be different levels of preparation for beginning special educators who meet either the 'teaching of content' standard or the 'provision of consultative services' (e.g., consulting, behavior supports, modifications and accommodations to curriculum) standard; and (d) if those who want severe disabilities certification should be prepared as an additional certification.

Program Implications for the University of Maryland

An important finding of the study was that participation in inclusive field experiences was predictive of the adequacy of preparation to support students with severe disabilities in inclusive settings. As a result, there is a need to cultivate, maintain, and evaluate field placement sites that are inclusive. Specifically, teacher candidates need to provide modifications and accommodations to students with severe disabilities in general education classes, offer in class supports, develop positive behavior supports including functional behavioral assessment, facilitate peer supports, and employ data collection procedures in their field experiences.

University supervisory personnel could evaluate current field placements using components of the instrument developed for this study. Mentor teachers, including those who are former graduates of the University of Maryland, could be surveyed about their use of strategies delineated in the survey including how much time they spend supporting students in general education environments, if they collaborate with general educators, are provided adequate collaborate planning time, use positive behavior supports, provide instruction with general educators, use differentiated instruction, use realistic measures of performance, facilitate peer supports, provides modifications to curriculum, etc. Frequently used field placements could be evaluated as well as new field placements that need to be cultivated, developed, and maintained. The *Inclusive Best Practices* instrument could be used to develop standards for selection and use of field placement sites that are modeling best practices for inclusion.

Another important finding of the study was that completion of the *Inclusive Practices* course was predictive of those who 'strongly agreed' or 'agreed' that their

preparation to support students with severe disabilities in inclusive settings was adequate. Both special education and general education personnel preparation programs at University of Maryland need to prepare educators to teach an increasingly diverse student population. The reintroduction of the *Inclusive Practices* course might improve future graduates' perception of the adequacy of their preparation to support students with disabilities in inclusive environments.

One suggestion is to require the *Inclusive Practices* course for undergraduate and graduate initial certification programs. Much of the information covered in the *Inclusive Practices* course is applicable to all undergraduate special education and general education majors. Course content includes strategies for collaborative teaming, development of modifications to curriculum, use of appropriate accommodations, development of positive behavior supports, models of co-teaching, and development of communication skills for clarity of role definition within the classroom. Joint preparation would offer an opportunity for both special education and general education teacher candidates to work collaboratively at the pre-service level, a need identified by many respondents in the survey and a need identified by the literature on general education teachers' preparation for inclusion counterparts (Finley-Snyder, 1999; Buell et al., 1999; Kearney & Durand, 1993, Agran & Alper, 2000; Wood, 1998).

However, for this to take place both the special education or the curriculum and instruction departments may have to eliminate a course from the current sequence to accommodate the additional *Inclusive Practices* course requirement. Further investigation into the feasibility of elimination of one course to allow for the reintroduction of the *Inclusive Practices* course as a requirement for undergraduate and

graduate initial certification programs would need to be conducted. It may be possible to combine content from current courses to allow for *Inclusive Practices* to be added.

As previously stated, only a little over 50% of the respondents indicated they engaged in activities in their pre-service program where they learned about 'use of technology'. Several other respondents also articulated in some of the open-ended responses that they received additional preparation after the University of Maryland around the use of assistive technology devices. One previous recommendation was that pre-service teacher candidates might need to engage in more 'hands-on' use of technology activities. First, when examining the use of inclusive best practices in field placements, university supervisory personnel could verify if there would be opportunities for teacher candidates to engage in the use of educational technology during practicum or internship experiences. A second suggestion might be to have someone with expertise in educational technology from the Special Education Department (EDSP) team teach the course that all undergraduate teacher candidates (general education and special education) take in the Curriculum and Instruction Department (EDCI). This may provide future special educators with additional information about specific assistive technology devices that students with more intensive needs may use. In addition, this may offer some additional information to future general educators who may have students who use specialized assistive technology in their classrooms. One last suggestion to improve use of technology information for pre-service teacher candidates would be to infuse additional information about assistive technology devices and other important educational technology into the proposed *Inclusive Practices* course. An important aspect of having students included in general education environments and providing

access to the general education curriculum is through the use of assistive technology. The *Inclusive Practices* course could provide an additional forum to explore this relevant and needed information.

Implications for Practice

An important and useful aspect of this study was the utilization of web technology to survey former graduates about their knowledge and use of best practices, as well as to gain specific information about their pre-service preparation to support students with severe disabilities in inclusive settings. With the use of the web technology, responses to the survey could be completed almost instantaneously as evidenced by most of the respondents completing the survey in less than 48 hours. Additionally, the web can be used to: (a) survey all recent graduates who received special education certification; (b) develop online performance assessments for field experiences so that mentor teachers, teacher candidates, and university supervisors can provide feedback interactively; (c) develop examinations that teacher candidates can complete off campus (e.g., take-home exams); and (d) develop end of semester course or supervisory evaluations. With the development of web-based technology, many paper and pencil tasks could potentially be eliminated, especially with the ability to store data and information electronically.

However, it is important to note that because of certain idiosyncrasies with the specific program, another web-based survey design program might be more beneficial. It might be possible with another survey generation device to use formatting that could make the instrument more 'user-friendly'. Specifically, changes made to the survey were time consuming based on its format and structure. With the use of another program, 'cutting and pasting' text to change question location might be simplified. Also with

another web-based program, one might be able to change wording for Likert scale responses (i.e., web program only had strongly agree, agree, neutral, disagree, and strongly disagree for a 5 point Likert scale question). One could include a 'Not Applicable' category or use other descriptors such as excellent, good, adequate, poor, or none, for example.

Another practical implication would be to change the type of question being asked to elicit more meaningful numerical information. Specifically, in the future one could use 'forced choices' verses a 'fill in the blank' response to elicit more precise data for analysis. For example, instead of asking respondents to fill in the number of field placements, they would be forced to choose one, two, three, four, five, six, etc.

Another practical implication for future use of this survey might include the 'collapsing' of certain response categories to elicit additional numbers of respondents in various categories for more meaningful comparisons. Specifically, if there were fewer choices for respondents to categorize themselves or select, there would be a greater number of respondents who could be placed in groups for comparison (e.g., age level, primary disability of students with whom they were working, position held). For example, respondents could indicate if they were primarily based in a self-contained setting or in a general education setting verses differentiating co-teaching vs. resource vs. inclusion facilitator, etc. One then might be able to look for patterns of pre-service experiences (e.g., number of field placements, inclusive field placements, completion of the *Inclusive Practices* course, adequacy of preparation for inclusion, specific activities engaged in during pre-service preparation) that have some relation to position held,

working with students with primarily high incidence disabilities or primarily low incidence disabilities, or setting where most service provision or teaching occurs.

Another practical implication for the future use of this survey might include limiting the use of open-ended responses. Many participants completed the open-ended responses, while others did not. The information from the open-ended responses was very useful. However, perhaps more respondents would be inclined to answer if there were only one or two open-ended questions instead of several. A possible solution to elicit some of the same information gained from the open-ended responses would be to use the responses from the current study as multiple-select choices on future revisions of the survey.

To broaden the potential use of the survey for larger audiences including those interested in inclusive best practices in general and those prepared to teach students with a range of disabling conditions, limited changes would need to be made to the instrument. Specifically, all wording around 'severe disabilities' could be removed and whatever terminology was most appropriate to the group that was being investigated could then be included. Almost all of the questions pertaining to inclusive best practices could be used around best teaching practices in general (e.g., differentiated instruction, provision of modifications to curriculum to accommodate diverse learners, use of positive behavior supports, use of realistic measures of performance, welcoming parents as team members). Additional questions could be added around the use of strategies learned during respondents' pre-service preparation, including general educators.

An additional finding of the study was that participation in inclusive field experiences was predictive of the adequacy of preparation to support students with severe

disabilities in inclusive settings. Those who 'strongly agreed' that their preparation to support students with severe disabilities in inclusive environments was adequate spent more time supporting students with severe disabilities in inclusive settings. As a result, there is a need to cultivate, maintain, and evaluate field placement sites that are inclusive. Specifically, teacher candidates need to provide modifications and accommodations to students with severe disabilities in general education classes, offer in class supports, develop positive behavior supports including functional behavioral assessment, facilitate peer supports, and employ data collection procedures in their field experiences.

University personnel could evaluate if field placements are an appropriate model of best practices for inclusion by using components of the instrument. Mentor teachers could be surveyed about their use of strategies delineated in the survey. Specifically, mentor teachers could be asked how much time they spend supporting students in general education environments, if they collaborate with general educators, are provided adequate collaborate planning time, use positive behavior supports, provide instruction with general educators, use differentiated instruction, use realistic measures of performance, facilitate peer supports, provides modifications to curriculum, etc. Frequently used field placements could be evaluated as well as new field placements that need to be cultivated, developed, and maintained.

Another implication for practice would be to encourage teacher candidates in general education to participate in additional special education coursework or vice versa. Many general education programs require a course in special education, which is an introductory course where students learn about different types of disabilities (MDDC, 2003). An important finding of the study was that completion of the *Inclusive Practices*

course was predictive of those who 'strongly agreed' or 'agreed' that their preparation to support students with severe disabilities in inclusive settings was adequate. One option might be to have general education teacher candidates take an *Inclusive Practices* course where they could learn strategies to support students with disabilities. The topics addressed in this course (e.g., collaborative practices, teaming, use of positive behavior supports, models of co-teaching, development of modifications and accommodations to curriculum) may be beneficial to both special education teacher candidates and general education teacher candidates. Personnel preparation programs that prepare educators to teach an increasingly diverse student population, might improve future graduates' perception of the adequacy of their preparation to support students with disabilities in inclusive environments from the introduction of an *Inclusive Practices* course. Joint preparation would offer an opportunity for both special education and general education teacher candidates to work collaboratively at the pre-service level, a need identified by many respondents in the survey and a need identified by the literature on general education teachers' preparation for inclusion counterparts (Finley-Snyder, 1999; Buell et al., 1999; Kearney & Durand, 1993, Agran & Alper, 2000; Wood, 1998).

Another possible solution would be to combine certain aspects of both the special education and general education pre-service preparation programs. Some have argued that much of pre-service preparation should be based on: a) broad issues of pedagogy and b) planning, instruction, and evaluation of a diverse group of learners (Mattson & McGregor, 1997, Pugach, 1996, and Ryndak and Kennedy, 2000). With general educators reporting difficulty with collaboration and not having the knowledge and skills necessary to teach students with disabilities in their classes (Finley-Snyder, 1999; Buell

et al., 1999; Kearney & Durand, 1993, Agran & Alper, 2000; Wood, 1998) *and* special educators reporting not having enough knowledge of content and general education curriculum as well and the limited ability to collaborate with general educators (York & Tunidor, 1995; McDonnel, 1998; and Wood, 1998; McCormic et al., 2001), perhaps teacher candidates in both general education and special education should be prepared together, especially in some early program courses that address general issues of pedagogy. An analysis would have to be conducted of the specific content of courses in both special education and general education departments, which address some of the same general outcomes. For example, each department may offer courses in classroom management, reading instruction, or assessment. All teacher candidates in their initial stages of their respective programs could attend classes together. This would allow, potentially, for more flexibility in scheduling, opportunities for collaboration between pre-service teacher candidates, and relieve some budgetary constraints currently facing many state university systems. This approach would not necessarily eliminate certification or specialization in either department, but perhaps provide an alternative, which may alleviate some of the problems presented in this study. Ultimately, because there is separate licensure there will continue to be separate preparation necessary.

Summary

Sixty-three former graduates of the department of special education (EDSP) from the University of Maryland specializing in severe disabilities were electronically surveyed to collect follow-up and partial program evaluation data. A newly developed and validated instrument was developed to evaluate pre-service preparation for personnel prepared to teach (and facilitate inclusion of) students with severe disabilities. With no

clear set of empirically validated standards for those who teach students with severe disabilities, especially in the context of inclusive environments (Blanton et al., 2003), this study adds to the limited research literature about the knowledge, use of, and beliefs regarding best practices by personnel prepared to teach students with severe disabilities in inclusive settings. This study also extends the findings of two studies, which attempted to determine if teachers were implementing best practices (Ayers et al., 1994) and pre-service components necessary to teach students with severe disabilities (Ryndak et al, 2001).

Respondents reported strong knowledge of inclusive best practices (e.g., collaborative practices, individual student supports, instructional strategies) as a result of their pre-service preparation at the Univeristy of Maryland. Many inclusive best practices (i.e., individual student supports, assessment practices, instructional strategies) were reported to be present in respondents current or most recent teaching situation and almost all indicators were found to be 'critical to the success of students with severe disabilities'. Moreover, this study produced data on the relationship between certain aspects of pre-service preparation (e.g., completion of an *Inclusive Practices* course, inclusive field experiences) and perceived adequacy of preparation to support students with severe disabilities in inclusive environments and time spent supporting students with severe disabilities in inclusive environments. Completion of the *Inclusive Practices* course and participation in inclusive field placements during pre-service preparation were predictive of increased adequacy of preparation for inclusion. Strong agreement of adequacy of preparation for inclusion at the pre-service level indicated more time spent supporting students with severe disabilities in inclusive settings once teaching.

Most respondents were not supporting the students with whom they were prepared to teach in inclusive settings with any amount of regularity (about 21% of their day). However, with the exception of some reported difficulty in collaboration with general educators, respondents provided multiple sources of information as evidence of their preparation to support students with severe disabilities in inclusive settings. This information is promising in that given certain aspects of pre-service personnel preparation (e.g., inclusive coursework, inclusive field placements), teacher candidates *can be* prepared to meet the needs of students with severe disabilities in inclusive environments. Adequate preparation for inclusion may be the first step in development of more inclusive models of service delivery for students with severe disabilities.

Inclusive Best Practices Survey

The following survey is part of a research investigation for a doctoral dissertation. The survey contains questions about the course of study you pursued while in attendance at the University of Maryland. The survey includes questions about the preparation you received, while attending the University of Maryland, to support students with severe disabilities in inclusive environments.

This research study aims to investigate the extent to which graduates were prepared to teach and implement 'Inclusive Best Practices' for young children, elementary, and/or secondary aged students with severe disabilities. Specifically there are questions: (1) regarding the level of knowledge learned about 'Inclusive Best Practices' while in attendance at the University of Maryland; (2) questions about the use of 'Inclusive Best Practices' in your current or most recent teaching situation; and (3) questions about which 'Inclusive Best Practices' are most critical to student success in your opinion.

This research study also aims to investigate whether graduates from University of Maryland are currently teaching young children, elementary, and/or secondary aged students with severe disabilities and the types of positions held or previously held, if no longer teaching. It is the interest of this researcher to investigate whether graduates are teaching or previously taught in the field in which they were prepared.

This survey is anonymous and contains no information that may personally identify you. The results are of no personal value to the researcher but may provide important information to the Department of Special Education in the preparation of future special educators. You may choose to refuse to participate without consequences or penalty or choose to answer specific questions. The survey will take approximately 20 minutes to complete. If you have any questions feel free to contact Heather Young at 301-405-7914 or via e-mail at hcyoung@wam.umd.edu.

1. By clicking on 'YES' below (or by answering 'YES' to this question), you are indicating that: (1) You understand the purpose of the research study; (2) You understand there are no risks involved; (3) you understand that your responses will be totally confidential and that results will only contain aggregated responses; and (4) you voluntarily consent to participate. Once you have 'clicked' on 'YES', scroll to the bottom of this web page and 'click' on the 'NEXT' button to begin the survey.

    YES / NO

Thank you in advance for your participation in this important research project!

Please direct all questions to hcyoung@wam.umd.edu

Part 1: EFFECTIVE PRACTICES LEARNED

For the following questions, you will state whether you: strongly agree, agree, are neutral, disagree, or strongly disagree with individual statements regarding the knowledge of 'Inclusive Best Practices' for students with severe disabilities learned *while in attendance at the University of Maryland*.

'Inclusive Best Practices' are defined as those research based procedures that are deemed to be most effective within the context of inclusive environments (e.g., pre-school classrooms, general education classes, lunch, recess, after-school activities, post-secondary settings).

2. I learned how to collaborate with general educators in the design of curriculum units and lessons.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

3. I learned how to design curriculum units and lessons using principles of multiple intelligence, multi-level instruction, learner styles, abilities, and interests to address the learning and communication needs of all students.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

4. I learned how to use collaborative planning and problem solving strategies to meet the needs of all students

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

5. I learned that instruction of students with severe disabilities is a shared responsibility between special and general educators.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

6. I learned to choose co-teaching methods based on student needs and curriculum content when two adults are instructors in the classroom.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

7. I learned that instructional planning teams should welcome parents as active team members and include students as appropriate.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

8. I learned to prepare instructional assistants to provide appropriate supports and modifications if needed and to include them as responsible contributors to the entire class.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

9. I learned to clearly define roles and responsibilities for all adults in the classroom (e.g., general educator, special educator, related service personnel, instructional assistants, or volunteers).

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

10. I learned to use structured peer support strategies to enhance social, behavioral, communication, and academic performance for students with severe disabilities.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

11. I learned to identify opportunities and develop strategies to support all students as active participants in extracurricular and school-wide activities based on students' interests and desires.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

12. For students with challenging behaviors, I learned to conduct functional behavioral assessments.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

13. For students with challenging behaviors, I learned to develop positive behavior support plans that are regularly reviewed and updated.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

14. I learned to develop strategies to promote student independence to the maximum extent possible and fade dependence on individual supports.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

15. I learned to facilitate participation in statewide assessments including alternative assessment, if applicable.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

16. I learned to incorporate accommodations during instructional activities, so that students may participate in assessments.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

17. I learned to use realistic measures of performance to report on student progress (e.g., progress reports, report cards).

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

18. I learned to use a variety of active student learning strategies designed to reach and engage all learners in instruction including individualized instruction, small and large groups, direct instruction, and cooperative learning.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

19. I learned to provide instruction on IEP goals across subject areas within the general education curriculum.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

20. I learned to differentiate instruction for students with severe disabilities.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

21. I learned to plan accommodations to curriculum goals and classroom instruction for students with severe disabilities, using the same or similar materials for assignments, homework, and tests.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

22. I learned to facilitate student use of assistive technology in classrooms as needed for meaningful participation in instructional activities.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

23. I learned to facilitate access to computer technology as a tool for learning for students.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

Part 2: EFFECTIVE PRACTICES USED

For the following questions, you will state whether you: strongly agree, agree, are neutral, disagree, or strongly disagree with individual statements regarding the use of 'Inclusive Best Practices' for students with severe disabilities DURING YOUR CURRENT OR MOST RECENT TEACHING SITUATION.

'Inclusive Best Practices' are defined as those research based procedures deemed to be most effective within the context of inclusive environments (e.g., pre-school classrooms, general education classes, lunch, recess, after-school activities, post-secondary settings).

During your current or most recent teaching situation, if you have NEVER taught a student with severe disabilities please scroll to the bottom of the page and click on the 'NEXT' button, which will bring you to the next page.

24. I have collaborated with general educators in the design of curriculum units and lessons.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

25. I have designed curriculum units and lessons using principles of multiple intelligence, multi-level instruction, learner styles, abilities and interests to address the learning and communication needs of all students.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

26. As part of an instructional planning team, I have used collaborative planning and problem solving strategies to meet the needs of all students.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

27. Instruction of students with severe disabilities was a shared responsibility between myself and general educators.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

28. Co-teaching methods were chosen on the basis of student need and curriculum content when two adults were instructors in the classroom.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

29. As part of an instructional planning team, I have welcomed parents as active team members and included students as appropriate.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

30. I have prepared instructional assistants to provide appropriate supports and modifications, if needed, and included them as responsible contributors to the entire class.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

31. Roles and responsibilities were clearly defined for all adults in the classroom (e.g., general educator, special educator, related service personnel, instructional assistants, volunteers).

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

32. I have used structured peer support strategies to enhance social, behavioral, communication, and academic performance of students with severe disabilities.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

33. I have identified opportunities and developed strategies to support all students as active participants in extracurricular and school-wide activities based on students' interests and desires.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

34. For students with challenging behaviors, I have conducted functional behavioral assessments.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

35. For students with challenging behaviors, I have developed positive behavior support plans that were regularly reviewed and updated.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

36. I have developed strategies to promote independence to the maximum extent possible and fade dependence on individual supports.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

37. I have facilitated participation in statewide assessments including alternative assessments, if applicable.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

38. I have incorporated accommodations for participation in assessments during instructional activities.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

39. I have reported realistic measures of actual performance on progress reports and report cards.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

40. I used a variety of active student learning strategies designed to reach and engage all learners in instruction including individualized instruction, small and large groups, direct instruction, and cooperative learning.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

41. I have provided instruction on IEP goals across subject areas within the general education curriculum, as opportunities became available.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

42. I have differentiated instruction for students with severe disabilities.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

43. I have planned accommodations to curriculum goals and classroom instruction for students with severe disabilities, using the same or similar methods for assignments, homework, and tests.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

44. My students used assistive technology in classrooms as needed for meaningful participation in instructional activities.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

45. My students accessed computer technology as a tool for learning.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

Part 3: EFFECTIVE PRACTICES THAT ARE MOST CRITICAL TO THE SUCCESS OF STUDENTS WITH SEVERE DISABILITIES

For the following questions, you will state whether you: strongly agree, agree, are neutral, disagree, or strongly disagree with individual statements regarding your beliefs about which 'Inclusive Best Practices' are MOST CRITICAL TO THE SUCCESS OF STUDENTS WITH SEVERE DISABILITIES.

Inclusive Best Practices are defined as those research based procedures deemed to be most effective in the context of inclusive environments (e.g., pre-school classrooms, general education classes, lunch, recess, after-school activities, post-secondary settings).

46. Special educators and general educators should collaborate in the design of curriculum units and lessons.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

47. Special educators and general educators should design curriculum units and lessons using principles of multiple intelligence, multi-level instruction, learner styles, abilities and interests to address the learning and communication needs of all students.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

48. Instructional teams should use collaborative planning and problem solving strategies to meet the needs of all students.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

49. Instruction of students with severe disabilities should be a shared responsibility between special and general educators.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

50. Co-teaching methods should be chosen on the basis of student need and curriculum content when two adults are instructors in the classroom.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

51. Instructional planning teams should welcome parents as active team members and include students as appropriate.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

52. Instructional assistants should be prepared to provide appropriate supports and modifications if needed and should be included as responsible contributors to the entire class.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

53. Roles and responsibilities should be clearly defined for all adults in the classroom (e.g., general educator, special educator, related service personnel, instructional assistants, volunteers).

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

54. Special educators and general educators should use structured peer support strategies to enhance social, behavioral, communication, and academic performance of students with severe disabilities.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

55. Special educators and general educators should identify opportunities and develop strategies to support all students as active participants in extracurricular and school-wide activities based on students' interests and desires.

Strongly Agree   *Agree*   *Neutral*   *Disagree*   *Strongly Disagree*

56. Functional behavioral assessments should be conducted for students who have challenging behaviors.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

57. Students with challenging behaviors should have positive behavior support plans that are regularly reviewed and updated.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

58. Strategies should be developed to promote student independence to the maximum extent possible and fade dependence on individual supports.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

59. Students should participate in statewide assessments including alternative assessments, if applicable.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

60. Accommodations for participation in assessments should be incorporated into instructional activities.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

61. Realistic measures of actual performance should be reported on progress reports and report cards.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

62. Special educators and general educators should use a variety of active learning strategies designed to reach and engage all learners in instruction including individualized instruction, small and large groups, direct instruction, and cooperative learning.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

63. Special educators and general educators should provide instruction on IEP goals across subject areas within the general education curriculum, as opportunities become available.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

64. Special educators and general educators should differentiate instruction for students with severe disabilities.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

65. Special educators and general educators should plan accommodations to curriculum goals and classroom instruction for students with severe disabilities, using the same or similar materials for assignments, homework, and tests.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

66. Students should use assistive technology in classrooms as needed for meaningful participation in instructional activities.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

67. Students should access computer technology as a tool for learning.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

68. Please list any additional 'Inclusive Best Practices' you feel are ***most critical to students with severe disabilities' success*** (short answer).

Part 4: UNDERGRADUATE PREPARATION AT THE UNIVERSITY OF MARYLAND

The following questions are related to the preparation you received while in attendance at the University of Maryland. If you attended the University of Maryland only as a *GRADUATE* student, please scroll to the bottom of the page and click on the 'NEXT' button, which will bring you to the next page.

69. Which month and year did you graduate from the Department of Special Education at the University of Maryland?

70. What was your area of concentration while you attended the special education initial certification program at the University of Maryland?

   A. Educational Handicap (EH)

   B. Early Childhood Education (EC)

   C. Severe Disabilities (SD)

   D. Secondary Transition (ST)

71. Did you participate in the 'Double Count' program, in which up to 12 credits of course work taken, as an undergraduate degree was applicable to a future graduate degree at the University of Maryland?

YES / NO

72. When did you complete the GRADUATE portion of the 'Double Count' program in special education at the University of Maryland?

   A. 1997

   B. 1998

C. 1999

D. 2000

E. 2001

F. 2002

G. 2003

H. Still completing course work or requirements.

I. Did not finish.

73. What was (or IS, if still completing course work or requirements) your area of concentration while in attendance at the University of Maryland, during the GRADUATE portion of the 'Double Count' program in special education?

      A. Learning Disabilities (LD)

      B. Behavior Disorders (BD)

      C. Early Childhood Special Education (EC)

      D. Severe Disabilities (SD)

      E. Secondary Transition (ST)

Part 5: GRADUATE PREPARATION AT THE UNIVERSITY OF MARYLAND

The following questions are related to the preparation you received while in attendance at the University of Maryland. If you attended the University of Maryland as an UNDERGRADUATE special education student, please scroll to the bottom of the page and click on the 'NEXT' button, which will bring you to the next page.

74. Which month and year did you graduate from the Department of Special Education at the University of Maryland (fill in the blank)?

75. What was your area of concentration while you attended the special education initial certification program at the University of Maryland?

   A. Learning Disabilities (LD)

   B. Behavior Disorders (BD)

   C. Early Childhood Education (EC)

   D. Severe Disabilities (SD)

   E. Secondary Transition (ST)

Part 6: PREPARATION FOR INCLUSIVE ENVIRONMENTS

The following questions are related to the preparation for SUPPORTING STUDENTS WITH SEVERE DISABILITIES in INCLUSIVE environments that you received while in attendance at the University of Maryland.

Support of students with severe disabilities in inclusive environments is defined as the educational practice of providing assistance and/or instruction to increase participation in chronologically age-appropriate general education settings (e.g., regular pre-schools, the home school, or post-secondary institution) as delineated by their Individual Family Support Plan (IFSP) or Individual Education Program (IEP) within the context of the core curriculum and general class activities.

76. Did you take the 'INCLUSIVE PRACTICES IN THE SCHOOLS' course EDSP 450 or EDSP 499 (offered during the summer) at any time during your preparation while attending the University of Maryland?

YES / NO

77. How many field experiences (practicum placements or student teaching) did you participate during your preparation at University of Maryland (fill in the blank)?

78. How many field experiences (practicum placements or student teaching) did you participate in which you SUPPORTED STUDENTS WITH SEVERE DISABILITIES in INCLUSIVE environments (e.g., pre-school classrooms, general education classes, lunch, recess, after-school activities, post-secondary settings) during your preparation at University of Maryland (fill in the blank)?

79. Please describe any field experiences (practicum placement or student teaching) in which you SUPPORTED STUDENTS WITH SEVERE DISABILITIES in INCLUSIVE environments. Please include age level, program, and type of supports provided (e.g., modification to curriculum / materials, accommodations, behavior supports, etc.). (Short answer)

80. During your preparation at the University of Maryland, do you feel you were adequately prepared to SUPPORT STUDENTS WITH SEVERE DISABILITIES in INCLUSIVE environments (e.g., pre-school classrooms, general education classes, lunch, recess, after-school activities, post-secondary settings)?

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

81. Please check examples of activities in which you engaged, while in attendance at the University of Maryland, which prepared you to SUPPORT STUDENTS WITH SEVERE DISABILITIES in INCLUSIVE environments (e.g., pre-school classrooms, general education classes, lunch, recess, after-school activities, post-secondary settings). Check all that apply.

1. Planning Instructional Programs / Instructional Lesson Plans

2. Providing Appropriate Instruction

3. Designing and Implementing Instructional Units

4. Adapting Instruction for Diverse Learners

5. Creation of Curricular Modifications

6. Providing Appropriate Accommodations in General Education

7. Collaboration with General Educators, Related Service Providers, or Support Staff (e.g., Paraprofessionals, Volunteers, Peer Tutors)

8. Planning for Positive Behavior Supports (PBS)

9. Communication with Parents or Caregivers

10. Communication with General Educators, Related Service Providers, or Support

    Staff (e.g., Paraprofessionals, Volunteers, Peer Tutors)

11. Assessment of Student Strengths and Needs

12. Data Collection Procedures

13. Development of an Individual Family Support Plan (IFSP) or an Individual

    Education Program (IEP)

14. Reflective Journals and / or Self-Critique of Instruction

15. Use of Technology (e.g., Assistive Technology, Computer Technology, Alternative

    or Augmentative Communication Devices)

16. Other

82. If you selected OTHER on the previous question, please list and describe additional

preparation you received while in attendance at the University of Maryland, which

prepared you to support STUDENTS WITH SEVERE DISABILITIES in INCLUSIVE

environments (e.g., pre-school classrooms, general education classes, lunch, recess, after-

school activities, post-secondary settings). (Short answer)

83. Please list (and describe) additional preparation that might have BETTER prepared

you to support STUDENTS WITH SEVERE DISABILITIES in INCLUSIVE

environments (e.g., pre-school classrooms, general education classes, lunch, recess, after-

school activities, post-secondary settings). (Short answer)

84. Please describe any courses, activities, or additional preparation you received AFTER

attending University of Maryland that was beneficial in preparing you to support

STUDENTS WITH SEVERE DISABILITIES in INCLUSIVE environments (e.g., pre-school classrooms, general education classes, lunch, recess, after-school activities, post-secondary settings). (Short answer)

Part 7: TEACHING EXPERIENCES

The following questions are for those respondents who are CURRENTLY TEACHING. For those respondents not currently teaching, please scroll to the bottom of the page and click on the 'NEXT' button, which will bring you to the next page.

85. How many years have you been teaching within an early intervention, pre-school, elementary school, middle school, high school, community-based, or post secondary setting?

86. What age level are you currently teaching?

   A. Early Childhood Intervention (Infant-Toddler)

   B. Early Childhood Intervention (Ages 3-5)

   C. Early Childhood (Pre-K)

   D. Primary Elementary School (Grades K, 1, 2 & 3)

   E. Intermediate Elementary School (Grades 4 & 5)

   F. Middle School (Grades 6, 7 & 8)

   G. High School (Grades 9-12, ages 14 to 21)

   H. Post-Secondary (Community based, Community College, or University; ages 18-21 still receiving services via LSS)

87. Please categorize the students with whom you currently work most closely (check all that apply).

   1. Students with Learning Disabilities (LD)

   2. Students with Mental Retardation (MR)

   3. Students with Autism

4. Students with Emotional Disabilities (ED)

5. Students with Physical and Health Disabilities (PHD)

6. Students with Speech Language Impairment (SLI)

7. Students with Other Health Impairments (OHI)

8. Students with Traumatic Brain Injury (TBI)

9. Students with Multiple Disabilities (MD)

10. Students with Developmental Delays (DD)

11. Students with Hearing Impairments (HI)

12. Students with Visual Impairments (VI)

13. Students with Concurrent Visual and Hearing Impairments (Deaf-Blindness)

88. Please check the position that most closely reflects your current teaching position (check all that apply).

1. Early intervention teacher (Home-based)

2. Early intervention teacher (Center / Facility based)

3. Early intervention teacher (Self-Contained classroom within a general education school)

4. Special education teacher (Self-Contained Facility or Special Education Center)

5. Special education teacher (Self-Contained classroom within a general education school)

6. Special education teacher (Co-Taught)

7. Special education teacher (Resource)

8. Special education teacher (Community-Based)

9. Inclusion facilitator

10. Transition teacher

11. Vocational coordinator

12. Other

89. Approximately what portion of your day do you spend teaching STUDENTS WITH SEVERE DISABILITIES?

A. 0%

B. 20%

C. 40%

D. 60%

E. 80%

F. 100%

90. Approximately what portion of your day do you spend teaching / SUPPORTING STUDENTS WITH SEVERE DISABILITIES in INCLUSIVE environments (e.g., pre-school classrooms, general education classes, lunch, recess, after-school activities, post-secondary settings)?

A. 0%

B. 20%

C. 40%

D. 60%

E. 80%

F. 100%

91. Please list the state in which you are teaching (fill in the blank).

92.Please indicate which demographic term is most representative of the area in which you teach.

  A. Urban

  B. Suburban

  C. Rural

Part 8: PREVIOUS TEACHING EXPERIENCES

This section of questions pertains to respondents who are NO LONGER TEACHING. If you are currently teaching, please scroll down to the bottom of the page and click on the 'NEXT' button, which brings you to the next page.

93. Please describe your current employment situation.

   A. Employed outside of the field of education.

   B. Leave of absence.

   C. Full time student.

   D. Family / Medical Leave or Maternity Leave.

   E. Employed in the field of education but outside of the classroom (e.g., supervisor, administrator, principal, advocate, consultant, technical assistance, aide).

   F. Unemployed.

94. How many years did you teach before leaving (fill in the blank)?

95. With what age level did you previously work most closely when teaching?

   A. Early Childhood Intervention (Infant-Toddler)

   B. Early Childhood Intervention (Ages 3-5)

   C. Early Childhood (Pre-K)

   D. Primary Elementary School (Grades K, 1, 2 & 3)

   E. Intermediate Elementary School (Grades 4 & 5)

   F. Middle School (Grades 6, 7, & 8)

   G. High School (Grades 9, 10, 11, & 12; Ages 14-21)

H. Post Secondary (Community based, Community College, or University; ages 18 to

21 still receiving services via LSS)

96. Please categorize the students with whom you worked most closely before you left

teaching (check all that apply).

1. Students with Learning Disabilities (LD)

2. Students with Mental Retardation (MR)

3. Students with Autism

4. Students with Emotional Disabilities (ED)

5. Students with Physical and Health Disabilities (PHD)

6. Students with Speech Language Impairment (SLI)

7. Students with Other Health Impairments (OHI)

8. Students with Traumatic Brain Injury (TBI)

9. Students with Multiple Disabilities (MD)

10. Students with Developmental Delays (DD)

11. Students with Hearing Impairments (HI)

12. Students with Visual Impairments (VI)

13. Students with Concurrent Visual and Hearing Impairments (Deaf-Blindness)

97. Please check the position that most closely reflects your previous teaching position

(check all that apply).

1. Early intervention teacher (Home-based)

2. Early intervention teacher (Center / Facility based)

3. Early intervention teacher (Self-Contained class in a general

education school)

4. Special education teacher (Self-Contained facility or Special Education Center)

5. Special education teacher (Self-Contained class in a general education school)

6. Special education teacher (Co-taught)

7. Special education teacher (Resource)

8. Special education teacher (Community-Based)

9. Inclusion facilitator

10. Transition teacher

11. Vocational coordinator

12. Other

98. Approximately what portion of your day did you spend teaching STUDENTS WITH SEVERE DISABILITIES?

A. 0%

B. 20%

C. 40%

D. 60%

E. 80%

F. 100%

99. Approximately what portion of your day did you spend teaching / SUPPORTING STUDENTS WITH SEVERE DISABILITIES in INCLUSIVE environments (e.g., pre-school, general education classes, lunch, recess, after-school activities, post-secondary settings)?

A. 0%

B. 20%

C. 40%

D. 60%

E. 80%

F. 100%

100. Please list the state(s) in which you previously taught (fill in the blank).

101. Please indicate which demographic term is most representative of the area in which you previously taught the longest.

A. Urban

B. Suburban

C. Rural

102. Please describe the reason for leaving the teaching profession, even if only temporarily (short answer).

APPENDIX B: SAMPLE INTRODUCTORY E-MAIL SENT TO RESPONDENTS

Dear --------,

In a few weeks I will be contacting you to ask for your participation in completing a survey as part of a research investigation for a doctoral dissertation. As a graduate of the special education undergraduate or graduate program (or both!) at the University of Maryland, you may have a unique perspective on the preparation you received to teach students with severe disabilities.

By clicking on an electronic link you will access a web-based survey. Your participation is strictly voluntary and you may choose not to answer specific questions. No identifying personal information is contained within the survey and your answers will be strictly confidential.

To encourage your participation, your name and address could be entered into a drawing for up to $50! If you answer the survey in the first 48 hours (days 1 and 2) and reply back to this e-mail address: hcyoung@wam.umd.edu with your name and mailing address, your name will be entered in a random drawing to win $50!

Once data collection is completed after 3 weeks, a random drawing will take place. If you win the $50, you will be contacted via e-mail and a check will be sent to your mailing address. The results of this study will be published in a doctoral dissertation and possibly in subsequent research journals.

If you have any questions, feel free to contact me at the University of Maryland at 301-405-7914 or via e-mail at hcyoung@wam.umd.edu. I want to 'Thank you' in advance for your participation in this very important study!

Sincerely,

Heather C. Young, M.A.

Faculty Research Assistant

1236 Benjamin Building

Department of Special Education

University of Maryland

College Park, MD 20742

(301) 405-7914

hcyoung@wam.umd.edu

APPENDIX C: SAMPLE E-MAIL WITH SURVEY LINK TO RESPONDENTS

Dear --------,

        I am contacting you to ask for your participation in completing a survey as part of a research investigation for a doctoral dissertation. As a graduate of the special education undergraduate or graduate program (or both!) at the University of Maryland, you may have a unique perspective on the preparation you received to teach students with severe disabilities. By clicking on the following link:

http://cgi.umd.edu/survey/display?qualityindicators/hcyoung518

you will access an electronic survey. A description of the survey's purpose and a question about your willingness to participate are on the first page. Your participation is strictly voluntary and you may choose not to answer specific questions. No identifying personal information is contained within the survey. Your answers are strictly confidential.

        To encourage your participation, your name and address will be entered into a drawing for either $50, $30 or $20. If you answer the survey and reply back to this e-mail address: hcyoung@wam.umd.edu with your name and mailing address in the first two 48 hours (days 1 and 2), your name will be entered in a drawing to win $50. If you answer the survey in the first week (days 3 to 7), and reply back to this e-mail address with your name and address, you will be entered in a drawing to win $30. If you answer the survey in the last two weeks (weeks 2 and 3), and reply back to this e-mail address with your name and address, you will be entered in a drawing to win $20.

Once data collection is completed after 3 weeks, a random drawing will take place. If you win the $50, $30, or $20 amount, you will be contacted via e-mail and a check will be sent to your mailing address. The results of this study will be published in a doctoral dissertation and possibly in subsequent research journals.

If you have any questions, feel free to contact me at the University of Maryland at 301-405-7914 or via e-mail at hcyoung@wam.umd.edu. I want to 'Thank you' in advance for your participation in this very important study!

Sincerely,

Heather C. Young, M.A.

Faculty Research Assistant

1236 Benjamin Building

Department of Special Education

University of Maryland

College Park, MD 20742

(301) 405-7914

hcyoung@wam.umd.edu

APPENDIX D: SAMPLE REMINDER E-MAIL TO RESPONDENTS FOR SURVEY

Dear --------,

This is a reminder to ask for your participation in completing a survey as part of a research investigation for a doctoral dissertation. As a graduate of the special education undergraduate or graduate program (or both!) at the University of Maryland, you may have a unique perspective On the preparation you received to teach students with severe disabilities. By clicking on the following link:

http://cgi.umd.edu/survey/display?qualityindicators/hcyoung518

you will access an electronic survey. A description of the survey's purpose and a question about your willingness to participate are on the first page. Your participation is strictly voluntary and you may choose not to answer specific questions. No identifying personal information is contained within the survey. Your answers are strictly confidential.

To encourage your participation, your name and address will be entered into a drawing for either $30 or $20. If you answer the survey and reply back to this e-mail address: hcyoung@wam.umd.edu with your name and mailing address in the first week (days 3 to 7), and reply back to this e-mail address with your name and address, you will be entered in a drawing to win $30. If you answer the survey in the last two weeks (weeks 2 and 3), and reply back to this e-mail address with your name and address, you will be entered in a drawing to win $20.

Once data collection is completed after 3 weeks, a random drawing will take place. If you win the $30, or $20 amount, you will be contacted via e-mail and a check will be sent to your mailing address. The results of this study will be published in a doctoral dissertation and possibly in subsequent research journals.

If you have any questions, feel free to contact me at the University of Maryland at 301-405-7914 or via e-mail at hcyoung@wam.umd.edu. I want to 'Thank you' in advance for your participation in this very important study!

Sincerely,

Heather C. Young, M.A.

Faculty Research Assistant

1236 Benjamin Building

Department of Special Education

University of Maryland

College Park, MD 20742

(301) 405-7914

hcyoung@wam.umd.edu

APPENDIX E: SAMPLE FINAL REMINDER E-MAILTO RESPONDENTS FOR SURVEY

Dear --------,

This is the last reminder to ask for your participation in completing a survey as part of a research investigation for a doctoral dissertation. As a graduate of the special education undergraduate or graduate program (or both!) at the University of Maryland, you may have a unique perspective on the preparation you received to teach students with severe disabilities. By clicking on the following link:

http://cgi.umd.edu/survey/display?qualityindicators/hcyoung518

you will access an electronic survey. A description of the survey's purpose and a question about your willingness to participate are on the first page. Your participation is strictly voluntary and you may choose not to answer specific questions. No identifying personal information is contained within the survey. Your answers are strictly confidential.

To encourage your participation, your name and address will be entered into a drawing for $20. If you answer the survey and reply back to this e-mail address: hcyoung@wam.umd.edu with your name and mailing address in the last two weeks (weeks 2 and 3), and reply back to this e-mail address with your name and address, you will be entered in a drawing to win $20.

Once data collection is completed after 3 weeks, a random drawing will take place. If you win the $20 amount, you will be contacted via e-mail and a check will be sent to your mailing address. The results of this study will be published in a doctoral dissertation and possibly in subsequent research journals.

If you have any questions, feel free to contact me at the University of Maryland at 301-405-7914 or via e-mail at hcyoung@wam.umd.edu. I want to 'Thank you' in advance for your participation in this very important study!

Sincerely,

Heather C. Young, M.A.

Faculty Research Assistant

1236 Benjamin Building

Department of Special Education

University of Maryland

College Park, MD 20742

(301) 405-7914

hcyoung@wam.umd.edu

QUALITY INDICATORS FOR INCLUSIVE SCHOOLS

Maryland State Department of Education
Maryland Coalition for Inclusive Education

In December 1997, the *Maryland State Department of Education* convened a Task Force to address issues and concerns raised by local school administrators, teachers, and parents regarding the inclusion of students with disabilities in general education settings. Members of the Task Force believe inclusion is a *process*, not a place or destination.

Over the course of a year, the group described the state of inclusive education practices, formulated a shared vision for inclusive education environments in Maryland schools, defined the quality indicators of inclusive schools, identified obstacles and issues that impede moving toward the vision, and finally explored directions and resources needed for schools to build inclusive education services.

One of the outcomes of the Task Force Report was the drafting of **Quality Indicators of Inclusive Schools**. These are being used in schools across Maryland to identify areas for focusing professional development activities and school improvement goals.

Directions:

Please check off in one of the three columns (not yet, in progress, in place) where you think your school is in practicing the quality indicators listed on the following pages.

If you think this is an area in which your school should place a <u>priority for school improvement</u>, please check off the box in the last column.

THANK YOU!

The neighborhood school is that school assigned on the basis of the student's residence. Some school systems make exceptions due to family concerns such as day care or system practices such as magnet school participation. These exceptions apply to all students, including students with disabilities. Thus, the neighborhood school is considered to be that school the student would attend if he or she did not have a disability.

QUALITY INDICATORS FOR INCLUSIVE SCHOOLS

A Survey of School-wide Practices that Promote Inclusive Schooling

School: _____   Date: _____

Assignment and Scheduling	*My school's Inclusive Practice*			✓ *Check if priority for school improve-ment*
	Not yet	*In progress*	*In place*	
1. School administrators welcome all students				1
2. Schools invite and plan for the inclusion of students currently placed in special education "programs"				1
3. Students are assigned to their age-appropriate grade				1
4. Classrooms reflect the natural proportion of students with disabilities (not to exceed 15%)				1

5. Students with disabilities access the same physical locations for instruction and non-instructional activities as students without disabilities				1
6. Students without disabilities consider students with disabilities to be members of their class				1
7. Students with disabilities receive most, if not all, of their special education and related services within the general education classroom, based on their Individual Education Program (IEP)				1
8. The school administrator schedules special education staff according to school-wide need for student support and student's IEPs, not on the basis of disability type, program, or label alone				1

9. The school administrator design schedules for students and teachers to allow for				
a. heterogeneous student groups and				1
b. general collaborative planning opportunities among the faculty				1
10. Students with disabilities ride the same buses as students without disabilities in their neighborhood				1

Collaborative Planning and Teaching	My school's Inclusive Practice			✓ Check if priority for school improve-ment
	Not yet	In progress	In place	
11. Administrators design the school schedule to provide opportunities for classroom and support/special education teachers to plan together				1
12. Instructional teams use collaborative				1

planning and problem solving strategies to meet the needs of all students				
13. Proactive planning and problem solving are focal points of team meetings				1
14. All staff view the instruction of students with disabilities as a shared responsibility between special and general educators				1
15. Instructional staff select co-teaching methods on the basis of student need and curriculum content when two adults are instructors in the class				1
16. The roles and responsibilities of teachers and other staff are clearly defined				1
17. Adults in the classrooms share roles and responsibilities such that distinctions between "specialist" and classroom teacher are not obvious				1
18. Instructional assistants are trained and included as responsible contributors to the entire class				1

				1
19. Grade-to-grade and school-to-school articulation strategies are in place to facilitate the sharing of successful instructional strategies as students transfer to another grade and school				
20. Instructional planning teams welcome parents as active team members and include students as appropriate				1

School Leadership	My school's Inclusive Practice			✓ Check if priority for school improve-ment
	Not yet	In progress	In place	
21. School administrators identify faculty needs and develop incentives and support strategies to promote teacher acceptance and use of inclusive education practices				1
22. School administrators use problem solving				1

	Not yet	In progress	In place	✓ Check if priority for school improvement
strategies and collaborative planning with faculty to build school-wide supports and collaborative instructional models				
23. School improvement teams actively plan to improve the inclusion of students with disabilities				1
24. School Improvement Plans address school-based needs for including students with disabilities				1
25. Professional development activities always include applications for students with disabilities				1

Individual Student Supports	*My school's Inclusive Practice*			✓ *Check if priority for school improve-ment*
	Not yet	*In progress*	*In place*	

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				1
26. Schools use a unified system to identify and plan for meeting the social, behavioral, or academic needs of students at risk				1
27. Teachers use structured peer support strategies in classes for enhancing social, behavioral, and academic performance				1
28. School faculty develop strategies to support all students as active participants in extracurricular and school-wide activities				1
29. Students who have challenging behavior receive functional behavior assessments and have positive behavior support plans that are regularly reviewed and updated				1
30. Teams plan to promote student independence to the maximum extent possible and fade dependence on individual supports				1

Instructional Practices	My school's Inclusive Practice			✓ Check if priority for school improve-ment
	Not yet	In progress	In place	
31. All students receive instruction within a single general education curricular framework				1
32. Teachers differentiate instruction for a variety of learners' needs				1
33. Teachers plan accommodations to curriculum goals and classroom instruction for students with disabilities, using the same or similar materials for assignments, homework, and tests				1
34. Teachers provide instruction on IEP goals across all subject areas within the general education curriculum, as appropriate				1
35. Teachers use a variety of active student				1

learning strategies designed to reach and engage all learners in instruction				
36. Teachers in grade-level teams group and re-group students for instruction on the basis of learner styles, abilities, interests, and curricular focus, and not on the basis of ability alone				1
37. Students use Assistive Technology in classrooms as needed for meaningful participation in instructional activities				1
38. All students access computer technology as a tool for learning				1

Student Assessment and Grading	My school's Inclusive Practice			✓ Check if priority for school improv e-ment
	Not yet	In progress	In place	
39. 100% of students participate in statewide assessments		_____%		1
40. Accommodations for participation in assessments are incorporated into instructional activities				1
41. Students with IEPs are given report cards that are modified to incorporate progress on IEP goals and are provided on the same schedule as other students				1
42. Realistic measures of actual performance are reported on progress reports and report cards				1

QUALITY INDICATORS SUMMARY (To be completed by Action Planning Team)

Assignment and Scheduling: _____% in place.

Any Priority areas for school improvement?

_____

Collaborative Planning and Teaching: _____% in place.

Any Priority areas for school improvement?

_____

School Leadership: _____% in place.

Any Priority areas for school improvement?

_____

Individual Student Supports: _____% in place.

Any Priority areas for school improvement?

_____

Instructional Practices: _____% in place.

Any Priority areas for school improvement:

_____

Student Assessment and Grading: _____% in place.

Any Priority areas for school improvement:

_____

References

Agran, M., & Alper, S., (2000). Curriculum and instruction in general education: Implications for service delivery and teacher preparation. The *Journal of the Association for Persons with Severe Handicaps, 25*, 167-174.

Ayres, B. J., Meyer, L. H., Erevelles, N., & Seunghee, P., (1994). Easy for you to say: teacher perspectives on implementing most promising practices. *The Journal of The Association for Persons with Severe Handicaps,*19, 84-93.

Barnett, C., & Monda-Amaya, L.E. (1998). Principal's knowledge of attitudes towards inclusion. *Remedial and Special Education, 19*, 181-193.

Baumgart, D., & Ferguson, D.L. (1990). Personnel preparation: Directions for the next decade. In L.H. Meyer, C.A. Peck, & L. Brown (Eds.), Critical Issues in the lives of people with severe disabilities 313-352. Baltimore: Paul H. Brookes.

Billingsley, B. (2003). *Special education teacher retention and attrition: A critical analysis of the literature* (COPSSE Document No. RS-2E). Gainsville, FL: University of Florida, Center on Personnel Studies in Special Education.

Blanton, L.P. (1992). Preservice education: essential knowledge for the effective special education teacher. *Teacher Education and Special Education, 15*, 87-96.

Blanton, L., Sindelar, P., Correa, V., Hardman, M., McDonnell, J., & Kuhel, K. (2003). *Conceptions of beginning teacher quality: Models of conducting research.* (COPSSE Document No. RS-6). Gainsville, FL: University of Florida, Center on Personnel Studies in Special Education.

Bowen, M., & Klass, P.H. (1993). Low-incidence special education teacher preparation: A supply and capacity pilot study. *Teacher Education and Special Education, 16*, 245-257.

Browder, D. (1997). Educating students with severe disabilities: Enhancing the conversation between research and practice. *Journal of Special Education,* 31, 137-144.

Brown, L., Branston, M.B., Hamre-Nietupski, S., Johnson, F., Wilcox, B., & Gruenewald, L. (1979a). A rationale for comprehensive longitudinal interactions between severe handicapped students and nonhandicapped students and other citizens. *AAESPH Review,* 4, 3-14.

Brown, L., Branston, M.B., Hamre-Nietupski, S., Pumpian, I., Certo, N., & Gruenewald, L. (1979b). A strategy for developing chronological-age-appropirate and functional curricular content for severely handicapped adolescents and young adults. *Journal of Special Education,* 13, 81-90.

Brown, L., Ford, A., Nisbet, J., Sweet, M., Donnellan, A., & Gruenewald, L. (1983). Opportunities available when severely handicapped students attend chronological age-appropriate regular schools. *The Journal of the Association for Persons with Severe Handicaps,* 8, 16-24.

Brown, L., Long, E., Udvari-Solner, A., Davis, L., VanDeventer, P., Ahlgren, C., Johnson, F., Gruenewald, L., & Jorgensen, J. (1989). The home school: Why students with severe intellectual disabilities must attend the schools of their brothers, sisters, friends, and neighbors. *The Journal of the Association for Persons with Severe Handicaps,* 14, 1-7.

Brown, L., Schwatrz, P., Udvari-Solner, A., Frattura Kampschroer, E., Johnson, F., Jorgensen, J., & Gruenewald, L. (1991). How much time should students with severe intellectual disabilities spend in regular education classrooms and

elsewhere? *The Journal of the Association for Persons with Severe Handicaps,* 16, 37-47.

Bruneau-Balderrama, O. (1997). Inclusion: Making it work for teachers, too. *Clearing House*, 70, 328-333.

Buck, G., Morsink, C., Griffin, C., Hines, T., & Lenk, L. (1992). Preservice training: The role of field-based experiences in the preparation of effective special educators. *Teacher Education and Special Education*, 15, 108-123.

Buell, M.; Hallam, R.; Gamel-McCormick, M. and Scheer, S. (1999). A survey of general and special education teachers' perceptions and in-service needs concerning inclusion. *International Journal of Disability, Development and Education,* 46, 143-156.

Condermand, G.; Katsiyannis, A. and Franks, D. (2001). Program assessment practices in special education teacher preparation programs. *Preventing School Failure*, 45, 182-186.

Council for Exceptional Children. (1999, Nov/Dec). The Debate: Multicategorical vs. categorical licensure. *CEC Today*, 27-29.

Council for Exceptional Children, (2001). Special Education Content Standards. *Retrieved from* http://www.cec.sped.org/ps/perf_based_stds/standards.html#standards

Daane, C.J., Beirne-Smith, M., & Latham, D. (2001). Administrators' and teachers' perceptions of the collaborative efforts of inclusion in the elementary grades. *Education*, 121, 331-338.

Davis, P.S., Monda-Amaya, L.E., & Hammitte, D. (1996). Where have we been and

where are we going? Views from the presidents. *Teacher Education and Special Education,* 19, 235-247.

Education for all Handicapped Children Act, P.L. 94-142 (1975)

Dillman, D. (2000). Internet and interactive voice response systems. *In: Mail and Internet Surveys: The Tailored Design Method*. 2nd Edition.:J. Wiley: New York.

Eichinger, J., & Downing, J. (1992). An administrator and teacher perspective on program quality indicators for students with severe disabilities. *Journal of the Association for Persons with Severe Handicaps*, 17, 213-217.

Eichinger, J., & Downing, J. (2000). Restructuring special education certification: What should be done? *The Journal of the Association for Persons with Severe Handicaps*, 25, 109-112.

Ferguson, D.L. (2000). Are we thinking big enough yet? *The Association for Persons with Severe Handicaps,* 25, 117-118.

Ferguson, D.L., Meyer, G., Jeanchild, L., Juniper, L., & Zingo, J. (1992). Figuring out what to do with the grownups: how teachers make inclusion "work" for students with disabilities. *Journal of the Association for Persons with Severe Handicaps*, 17, 218-226.

Finley-Snyder, R. (1999). Inclusion: A qualitative study of inservice general education teachers' attitudes and concerns. *Education,* 120, 173-180, 68.

Fink, A. (1995). The survey handbook. *The Survey Kit* (1), Sage Publications; Thousand Oaks, CA.

Fisher, M. & Meyer, L. (2002). Development and social competence after two years for

students enrolled in inclusive and self-contained educational programs. *Research and Practice for Persons with Severe Disabilities,* 27, 165-174.

Fox, L., & Gilles Williams, D. (1992). Preparing teachers of students with severe disabilities. *Teacher Education and Special Education,* 15, 97-107.

Fox, T. & Williams, W. (1998). *Best Practice Guidelines for Meeting the Needs of All Students in Local Schools.* (Revised Edition) Burlington, VT: University of Vermont, Univeristy Affiliated Program. Center for Developmental Disabilities.

Fritz, M. (1990). A comparison of social interactions using a friendship awareness activity. *Education and Training in Mental Retardation, 25,* 352-359.

Gemmell-Crosby, S., & Hanzlik, J. R. (1994, Dec). Preschool teachers' perception of including children with disabilities. *Education and Training in Mental Retardation and Developmental Disabilities*, 279-290.

Giangreco, M.F., & Putnam, J.W. (1990). Supporting the education of students with severe disabilities in regular classroom environments. In L.H. Meyer, C.A. Peck, & L. Brown (Eds.), Critical Issues in the lives of people with severe disabilities (pp.245-270). Baltimore: Paul H. Brookes.

Grenot-Schyer, M. (1994). The nature of interactions between students with severe disabilities and their friends and acquaintances without disabilities. *The Journal of The Association for Persons with Severe Handicaps,* 19, 253-262.

Hamre-Nietupski, S., Hendrickson, J., Nietupski, & Sassa, G., (1993, June). Perceptions of teachers of students with moderate, severe, or profound disabilities on facilitating friendships with nondisabled peers. *Education and Training in Mental Retardation,* 111-127.

Halvorsen, A. & Neary, T. (1996a). *District level needs assessment for inclusive education* (Revised Edition) Hayward, CA: CSU Hayward, California Confederation on Inclusive Education.

Halvorsen, A. & Neary, T. (1996b). *Site level needs assessment for inclusive education* (Revised Edition) Hayward, CA: CSU Hayward, California Confederation on Inclusive Education.

Halvorsen, A. & Neary, T. (2001). Building inclusive schools: Tools and strategies for success. Boston: Allyn and Bacon.

Haring, T., Breen, C., Pitts-Conway, V., Lee, M., & Gaylord-Ross, R. (1987). Adolescent peer tutoring and special friend experiences. *The Journal of The Association for Persons with Severe Handicaps, 12,* 280-286.

Helmstetter, E., Curry, C.A., Brennan, M., & Sampson-Saul, M. (1998). Comparison of general and special education classrooms of students with severe disabilities. *Education and Training in Mental Retardation and Developmental Disabilities,* 33, 216-227.

Helmstetter, E., Peck, C., & Giangreco, M. (1994). Outcomes of interactions with peers with moderate or severe disabilities: A statewide survey of high school students. *The Journal of The Association for Persons with Severe Handicaps, 19,* 263-276.

Henning, M. B. & Mitchell, L. (2002). Preparing for Inclusion. *Child Study Journal,* 32. 19-29.

Hunt, P., Farron-Davis, F., Beckstead, S., Curtis, D., & Goetz, L. (1994). Evaluating the

effects of placement of students with severe disabilities in general education versus special classes. *The Journal of The Association for Persons with Severe Handicaps,* 19, 200-214.

Hunt, P., Soto, G., Maier, J., & Doering, K. (2003). Collaborative teaming to support students at risk and students with severe disabilities in general education classrooms. *Exceptional Children,* 69, 315-332.

Individuals with Disabilities Education Act (1990). P.L 101-476.

Individuals with Disabilities Education Act (1997). P.L. 105-17.

Institute for Community Inclusion (ICI) (1995). *Massachusetts Inclusion Initiative – Inclusion Practices Survey***;** Graduate College of Education, University of Massachusetts, Boston MA.

Jackson, L., Ryndak, D. L., & Billingsley, F., (2000). Useful practices in inclusive education: a preliminary view of what experts in moderate to severe disabilities are saying. *The Journal of the Association for Persons with Severe Handicaps,* 25, 129-141.

Janney, R.E., & Snell, M.E. (1996). How teachers use peer interactions to include students with moderate and severe disabilities in elementary general education classes. *Journal of the Association for Persons with Severe Handicaps*, 21, 72-80.

Janney, E.R., Snell, M.E., Beers, M.K., & Raynes, M. (1995). Integrating students with moderate and severe disabilities into general education classes. *Exceptional Children*, 61, 425-439.

Jorgenson, C., McSheehan, M., & Sonnenmeier, R. (2002). *Essential Best Practices in*

Inclusive Schools. Durham, New Hampshire: Univeristy of New Hampshire, Institute on Disability / UCE.

Kearney, C.A., & Durand, V.M. (1992). How prepared are our teachers for mainstreamed classroom settings? A survey of postsecondary schools of education in New York state. *Exceptional Children,* 59, 6-11.

Keefe, E.B., Rossi, P.J., de Valenzuela, J.S., & Hawarth, S. (2000). Reconceptualizing teacher preparation for inclusive classrooms: A description of the dual license program at the University of New Mexico. *Journal of the Association of Persons with Severe Handicaps*, *25* (2), 72-82.

Kerns, G.M. (1997). Preparation for role changes in general education and special education: Dual certification graduates' perspectives. *Education,* 117, 306-315.

Kleinert, H., Smith, P., & Hudson, M. (1990). *Quality program indicators manual for students with moderate and severe handicaps.* Lexington, KY: University of Kentucky, Interdisciplinary Human Development Institute.

Kluth, P.; Villa, R. and Thousand, J. (2002). "Our School Doesn't Offer Inclusion" and other legal blunders. *Educational Leadership*, 24-27.

Lesar, S., Benner, S.M., Habel, J., & Coleman, L. (1997). Preparing general education teachers for inclusive settings: A constructivist teacher education program. *Teacher Education and Special Education,* 20, 204-220.

Lindsey, P., & Strawderman, C. (1995). The quest for teachers: On reviewing a decade of reform efforts. *Teacher Education and Special Education,* 18, 253-261.

Litwin, M. (1995). How to measure survey reliability and validity. *The Survey Kit* (7), Thousand Oaks, CA: Sage Publications.

Logan, K.R., & Malone, D.M. (1998). Comparing instructional contexts of students

 with and without severe disabilities in general education classrooms. *Exceptional*

 Children, 64, 343-358.

Maheady, L. (1997). Preparing teachers for instructing multiple ability groups. *Teacher*

 Education and Special Education 20, 322-339.

Maryland Developmental Disabilities Council (2003). Inclusive education in Maryland:

 A blueprint for change. *A Report on Least Restrictive Environments (LRE) for*

 Students with Developmental Disabilities Receiving Special Education Services in

 Maryland. Baltimore, MD.

Maryland State Department of Education and the Maryland Coalition for Inclusive

 Education (2002). *Quality Indicators for Inclusive Schools:* A Survey of School-

 wide Practices that Promote Inclusive Schooling. Baltimore, Maryland.

Mattson, B. and McGregor, G. (1997). Reform in teacher education: Preparing teachers

 to meet the needs of diverse students. Pittsburgh, PA: Consortium on Inclusive

 Schooling Practices.

McCormic, L., Noonan, M.J., Ogata, V., & Heck, R. (2001). Co-teacher relationship

 and program quality: implications for preparing teachers for inclusive preschool

 settings. *Education and Training in Mental Retardation and Developmental*

 Disabilities, 36, 119-132.

McDonnell, J., (1998, September). Instruction for students with severe disabilities in

 general education settings. *Education and Training in Mental Retardation and*

 Developmental Disabilities, 33, 199-215.

McLaughlin, M.J., Valdivieso, C.H., Spence, K.L., & Fuller B.C. (1988). Special

education teacher preparation: A synthesis of four research studies. *Exceptional Children,* 55, 215-221.

McLeskey, J., Tyler, N., & Flippin, S., (2003). *The supply and demand for special education teachers: A Review of research regarding the nature of the chronic shortage in special education*. (COPSSE Document No. RS-1E). Gainsville, FL: University of Florida, Center on Personnel Studies in Special Education.

Meyer, L. (1987). *Program Quality Indicators (PQI): A checklist of most promising practices in educational programs for student with severe disabilities,* Syracuse, New York: Syracuse University.

Meyer, L., Eichenger, J., & Downing, J. (1992). *Program Quality Indicators (PQI): A checklist of most promising practices in educational programs for student with severe disabilities,* (Revised Edition) Syracuse, New York: Syracuse University.

Meyer, L., Eichenger, J., & Park-Lee, S. (1987). A validation of program quality indicators in educational services for students with severe disabilities. *Journal of the Association for Persons with Severe Handicaps,* 12, p. 251-263.

Monahan, R.G., Marino, S.B., & Miller, R. (1997). Teacher attitudes toward inclusion: Implications for teacher education in schools 2000. *Education,* 117, 316-320.

Montie, Vandercook, York, Flower, Johnson & Macdonald (1992). *Inclusion Practice Priorities Instrument***;** Achieving Membership Program; Institute on Community Integration, University of Minnesota.

National Council for Accreditation of Teacher Education, NCATE (2004, February 6). About NCATE. *Retrieved February 6, 2004 from* http://www.ncate.org/ncate/m_ncate.htm

National Council for Accreditation of Teacher Education, NCATE (2004, June 10).

    Glossary of NCATE Terms. *Retrieved June 10th, 2004 from*

    http://www.ncate.org/search/glossary.htm

No Child Left Behind Act (2002). P.L. 107-110

Pivik, J., McComas, J., & LaFlamme, M. (2002). Barriers and facilitators to inclusive

    education. *Exceptional Children* 69, 97-107.

Praisner, C. (2003). Attitudes of elementary school principals toward the inclusion of

    students with disabilities. *Exceptional Children,* 69, 135-145.

Pugach, M. (1987). The national education reports and special education: Implications

    for teacher preparation. *Exceptional Children,* 53, 308-314.

Pugach, M. (1995). On the Failure of imagination in inclusive schooling. *Journal of*

    Special Education, 29, 212-224.

Pugach, M. (1996). Reflections on current issues facing teacher education/special

    education. *Teacher Education and Special Education,* 19, 207-208.

Rainforth, B. (2000). Preparing teachers to educate students with severe disabilities in

    inclusive settings despite contextual constraints. *The Journal of the Association*

    for Persons with Severe Handicaps, 25, 83-91.

Reed, F., & Monda-Amaya, L.E. (1995). Preparing pre-service general educators for

    inclusion: A survey of teacher preparation programs in Illinois. *Teacher*

    Education and Special Education, 18, 262-274.

Rosenberg, M.S. (1996). Current issues facing teacher education and special education.

    Teacher Education and Special Education, 19, 209-210.

Rosenberg, M. S. (1996). Defining the role of the special educator: a question of

balance. *Teacher Education and Special Education,* 19, 226-227.

Rosenberg, M.S., & Rock, E.E. (1994). Alternative certification in special education:
Efficacy of a collaborative, field-based teacher preparation program. *Teacher
Education and Special Education*, 17, 141-153.

Ryndak, D.L., & Kennedy, C.H. (2000). Meeting the needs of students with severe
disabilities: Issues and practices in teacher education. *The Association for
Persons with Severe Handicaps,* 23, 69-71.

Ryndak, D.L., Clark, D., Conroy, M., & Holthaus-Stuart, D. (2001). Preparing teachers
to meet the needs of students with severe disabilities: Program configuration and
expertise. *The Association for Persons with Severe Handicaps,* 26, 96-105.

Salend, S.J., & Garrick Duhaney, L.M. (1999). The impact of inclusion on students with
and without disabilities and their educators. *Remedial and Special Education,* 20,
114-126.

Salisbury, C. & McGregor, G. (2002). The administrative climate and context of
inclusive schools. *Exceptional Children,* 68, 259-274.

Sasso, G. & Rude, H. (1988). The social effects of integration on nonhandicapped
children. *Education and Training in Mental Retardation,* 23, 18-23.

Simon, M. Karasoff, P. & Smith, A. *Effective Practice Checklist from Effective Practices
for Inclusive Programs: A Technical Assistance Planning Guide***.**

Smith, A. (2000). Challenges facing institutions of higher education preparing inclusive
educators. *The Journal of the Association of Persons with Severe Handicaps,* 25*,*
113-116.

Smith, J.D., & Hilton, A. (1997, March). The preparation and training of the educational

community for the inclusion of students with developmental disabilities: The

MRDD position. *Education and Training in Mental Retardation and*

Developmental Disabilities, 32, 3-10.

Snell, M.B., Martin, K., & Orelove, F.P. (1997). Meeting the demands for specialized

teachers of students with severe disabilities. *Teacher Education and Special*

Education, 20, 221-233.

Spooner, F., & Johnson, L. (1996). To stay the course or change: Reflections on

preparing personnel in special education. *Teacher Education and Special*

Education, 19, 197-199.

Stainback, W. & Stainback, S. (1987). Facilitating Friendships. *Education and Training*

in Mental Retardation, 22, 18-25.

Stainback, S. & Stainback, W. (1988). Educating students with severe disabilities.

TEACHING Exceptional Children, 20, 16-19.

Stainback, S., Stainback, W., & Hatcher, C. (1983). Nonhandicapped peer involvement

in the education of severely handicapped students. *The Journal of the Association*

for Persons with Severe Handicaps, 8, 39-42.

Stainback, W., Stainback, S., Raschke, D., & Anderson, R. (1981). Three methods for

encouraging interactions between severely retarded and nonhandicapped students.

Education and Training of the Mentally Retarded, 16, 188-192.

Staub, D. & Hunt, P. (1993). The effects of social interaction training on high school

peer tutors of schoolmates with severe disabilities. *Exceptional Children,* 60, 41-

57.

Swize, M., Rogers-Connolly, T., Kronberg, R., Delaney, M., Anderson, N., Filbin, J., &

McGrath, K. (1990). *Colorado Effective Education Model, Implementation Site Checklist.* Denver, Colorado: Colorado Department of Education.

TASH (2000). *Resolution on the people for whom TASH advocates.* (Final Draft). TASH; Baltimore.

TASH (2002). *Resolution on Teacher Education* (Final Draft). TASH; Baltimore.

U.S. Department of Education (2002). *Twenty-third Annual report to congress on the implementation of the Individuals with Disabilities Education Act.* Jessup, MD: Education Publications Center

U.S. Department of Education, Office of the Under Secretary. (2003). *No Child Left Behind: A Toolkit for Teachers.* Jessup, MD: Education Publications Center

Villa, R.; Thousand, J. and Chapple, J. (1996). Preparing teachers to support inclusion: Preservice and inservice programs. *Theory Into Practice,* 35, 42-50.

Villa, R. A., Thousand, J. S., Meyers, H., & Nevin, A., (1996). Teacher and administrator perceptions of heterogeneous education. *Exceptional Children,* 63, 29-45.

Werts, M. G., Wolery, M., Snyder, E. D., & Caldwell, N.K., (1996). Teachers' perceptions of the supports critical to the success of inclusion programs. *Journal of the Association for Person with Severe Handicaps,* 21, 9-21.

Wigle, Stanley E. and Wilcox, Daryl J. (1996). Inclusion: Criteria for the Preparation of Education Personnel. *Remedial & Special Education*, 17, 323-329.

Wilcox, B. and Nicholson, N. (1990). *Building Inclusive Schools: Contemporary Practices Discrepancy Analysis.* In "The Complete School: Including ALL Students with Disabilities. Guidelines for Principals." Indianapolis, IN: Indiana Univeristy.

Wisniewski, L., & Alper, S. (1994). Including students with severe disabilities in

general education settings. *Remedial and Special Education,* 15, 4-13.

Wolery, M., Werts, M. G., Caldwell, N. K., Snyder, E. D., & Lisowski, L., (1995,

March). Experienced teachers' perceptions of resources and supports for

inclusion. *Education and Training in Mental Retardation and Developmental*

Disabilities, 15-26.

Wood, M., (1998). Whose job is it anyway? Educational roles in inclusion. *Exceptional*

Children, 64, 181-195.

York, J., & Tundidor, M. (1995). Issues raised in the name of inclusion: perspectives of

educators, parents, and students. *Journal of the Association for Person with*

Severe Handicaps, 20, 31-44.

York, J., Vandercook, T., MacDonald, C., Heise-Neff, C., & Caughey, E. (1992).

Feedback about integrating middle-school students with severe disabilities in

general education classes. *Exceptional Children,* 244-258.