The Self Perceived Level of Preparation of Pre-service General Education Teachers to Instruct Students with Disabilities in an Inclusion Setting

by

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Abstract

The number of students with disabilities being served in the general education classroom

is growing each year. General education teachers often feel ill-equipped to appropriately address

the needs of students with disabilities because doing so requires more specialized instruction

than they have been trained to provide. Teachers who are confident that they are adequately

trained believe that they can prevail over external factors that may impede student learning.

Teacher preparation programs are charged with the challenge of making sure that general

education teachers feel prepared to work with student with disabilities. However, currently there

is no consensus on how general education teachers should be trained to work with students with

disabilities. Holland et al. (2008) found that the most commonly used method by teacher

preparation programs to prepare pre-service general education teachers to work with students

with disabilities is to require only one disability-focused course. This study examined the

perceived level of preparedness pre-service general education teachers have for working with

students with disabilities at the end of a teacher education program which required only one

disability-focused course. The results of this study suggest that the most commonly used

practice by teacher preparation programs, requiring one disability-focused course of all majors, is

sufficient enough to provide pre-service teachers with the confidence that they are prepared

enough to work with students with disabilities in an inclusion setting.

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CHAPTER 1. INTRODUCTION

Public education is viewed by many as a birthright of all citizens of the United States.

Unfortunately, for many years that same view did not apply to students with disabilities. As

recently as the 1950s, many states enacted statutes that authorized school officials to exclude

students with disabilities from attending public schools (Yell, Rogers, & Lodge Rodgers, 1998).

Of the states that did allow students with disabilities to attend school, little more was offered in

terms of education beyond just admittance to the school. Almost 70% of students with

disabilities were taught in separate classrooms or buildings, away from their nondisabled peers

(Gordon, 2006).

In the past 30 years, the educational landscape for students with disabilities has changed

significantly. It is no longer acceptable to exclude students with disabilities from the public

schools or the general education classroom. The number of students with disabilities educated

for the majority of the school day in the general education classroom is growing. Between the

years of 1986 and 1996, the percentage of students with disabilities educated in the general

education classroom increased by nineteen percent (U. S. Department of Education, 1996).

According to the Office of Special Education and Rehabilitative Services, it was reported that

around seventy-six percent of students with disabilities are educated in the general education

classroom for some part of the school day (U.S. Department of Education, 2002).

The increasingly diverse population of learners within the public schools has caused the

role of classroom teachers to significantly change. Teachers in the general education classroom

are responsible for ensuring that all students, including those with disabilities, achieve the same grade level standard. A report by the Study of Personnel Needs in Special Education indicated that 95% of all general education teachers either currently teach students with disabilities or have done so in the past (Carlson, Chen, Schroll, Klein, & Westat, 2002). Today's general education teachers have to be prepared to educate a diverse group of students to achieve high standards (Eichinger, Rizzo, & Sironik, 1991; Levine & Education Schools, 2006). Every child in the classroom must be able to achieve the same learning standard regardless of their individual needs.

Previously, general education teachers were only prepared to teach students whose abilities fell within the average range of achievement and did not require any special assistance (Singh, 2007). Students who were outside the "middle" teaching range were referred for special services which shifted the responsibility for instruction to the special education teacher. Current education mandates have changed that practice by requiring general education and special education teachers to collaborate so that students with disabilities can be included in the general education classroom. A common expectation for general education teachers is for them to have the ability to utilize a variety of different evidence-based instructional practices in the classroom. General education teachers are expected to implement these instructional practices through various frameworks designed to educate students with unique learning needs. Some of the frameworks noted most in literature that enhance the education of students with unique learning needs in the general education classroom are: response to intervention (RTI), positive behavior intervention supports (PBIS), and universal design for learning (UDL) (Cheney, et al., 2010; Chitiyo & Wheeler, 2009; Edyburn, 2005; Greenwood, Tapia, Abbott, & Walton, 2003; Jackson,

Pretti-Frontczak, Harjusola-Webb, Grisham-Brown, & Romani, 2009; Jiménez, Graf, & Rose, 2007; Stanford & Reeves, 2009; Vansupaa, Rogers, & Chen, 2008; Volonino & Zigmond, 2007).

General education teachers need to enter the classroom properly prepared to implement the wide assortment of evidence based instructional frameworks that have been shown to help a diverse student population. Unfortunately, with the current structure of teacher preparation programs this is not happening. The majority of teacher preparation programs only require students to take only one disability-focused course which only offers information about various disabilities (Holland, Detgen, Gutekunst, Institute of Education Sciences, & Regional, 2008). Introductory special education courses were designed to change teachers' negative attitudes towards students with disabilities (Darling -Hammond, Chung, & Frelow, 2002; Gunning, & Mensah, 2011). The literature shows that negative attitudes of general educators towards students with disabilities (Lambe & Bones, 2007; Shippen, Crites, Houchins, Ramsey, & Simon, 2005) leads to negative student outcomes (Ferguson, 2003; Jussim, 2005; van den Bergh, Denessen, Hornstra, Voeten , & Holland, 2010). Although research has shown that introductory courses are successful in improving teacher's attitudes towards students with disabilities (Shippen, Crites, Houchins, Ramsey, & Simon, 2005), there is little evidence to show if these courses actually prepare general education teachers for the instructional challenges they will encounter once they enter the classroom (Suat Khoh, Ee Ling, Wong, & Chong, 2008).

The typical introductory special education course does not offer training in instructional strategies necessary to work with students with disabilities in an inclusive setting which leaves teachers lacking in the skills they need to actually work with students with disabilities in an inclusive setting (Suat Khoh, Ee Ling, Wong, & Chong, 2008). Simply changing negative attitudes towards students with disabilities alone is not enough to improve student achievement.

Research has shown that a teacher's sense of self-efficacy, or confidence in their ability, is an important determinant in student achievement as well (Darling -Hammond, et al, 2002; Suat Khoh, et al., 2008). General education teachers who believe they can successfully instruct students with disabilities are more likely to include such students in their classrooms than are those teachers who doubt their ability (Suat Khoh, et al., 2008).

General education teachers' skills and attitudes have been identified as important factors to the success of the inclusion of students with disabilities in the general education classroom (D'Alonzo, Giordano, & Cross, 1996). Even when general education teachers are willing to work with students with disabilities in the general education classroom, many fear that their lack of training and preparation makes their role as primary teacher inappropriate and inadequate (Bender, Vail, & Scott, 1995). The teacher's beliefs about his/her knowledge and skills to effectively teach students with disabilities in the general education classroom can significantly influence various aspects of his/her teaching and student learning (Dembo, & Gibson, 1985; Gunning, & Mensah, 2011).

Unfortunately, general education teachers are graduating unprepared to meet the diverse needs of everyone inside the classroom because most teacher preparation programs are not equipped to prepare current and future teachers for the realities of the new classroom (Levine & Education Schools, 2006). Providing pre-service teachers with the knowledge and skills needed to meet the diverse needs of students with disabilities in an inclusive setting is essential for teacher preparation programs (D'Alonzo, et al., 1996). The extent to which teacher-preparation programs prepare general education teachers to use research-based methods and make data-driven instructional decisions determine teachers' level of confidence and their ability to be effective teachers to all students in the general education classroom (Conderman & Johnston-

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Rodriguez, 2009). When teachers feel properly trained, student outcomes are improved and the

teachers are more likely to remain in the profession (Smith, Robb, West, & Tyler, 2010). The

diversity of the current student population requires a restructuring of teacher preparation

programs in order to address the realities of today's classroom (Singh, 2007). This is especially

true if the goal of teacher preparation programs is to produce teachers ready and willing to

assume the roles and responsibilities that will be expected of them once they enter the classroom.

Statement of the Problem

Students with disabilities are becoming permanent members of the general education

classroom today. For these students to be successful, general education teachers not only need to

accept them, they also need to believe that they have been properly prepared to work with

students with disabilities (Jenkins & Ornelles, 2009). There has been various research showing a

strong relationship between teacher confidence and student achievement (Drake, 1977; Garriott,

et al., 2003; Gunning & Mensah, 2011; Harvey, Yssel, Bauserman, & Merbler, 2010; Kirk, 1998;

Kozleski, et al., 2002; Yeo, Ang, Chong, Huan, & Quek, 2008). However, little research has

been conducted on teacher preparation programs' role in developing the confidence of pre-

service teachers to work with students with disabilities.

Brown, Welsh, Hill, and Cipko (2008) attempted to examine the role of teacher

preparation programs in developing the confidence of pre-service teachers to work with students

with disabilities by examining a method of increasing pre-service teacher's efficacy by

embedding special education instruction in a general education course. The researchers

developed a self-report survey assessing knowledge of and attitudes toward teaching students

with learning disabilities for pre-service general education teachers enrolled in a required

evaluation and measurement course. A pretest–posttest, control group design was utilized for the

study. Treatment, which was embedded throughout the semester, consisted of large group instruction and structured small group activities regarding the nature of learning disabilities and accommodations and adaptations appropriate for instruction and assessment of students with learning disabilities. The results indicated that embedded instruction significantly increased pre-service teacher's knowledge of inclusion terminology and assessment adaptations and improved confidence levels in meeting the needs of students with learning disabilities. Although the results of this study showed a method that was favorable for developing the knowledge and confidence of pre-service teachers to work with students with disabilities, it appears that this is not was is actually being done.

In 2008, Holland et al. examined the extent to which elementary education teacher preparation programs in thirty-six randomly selected colleges and universities in the six Southeast Region states integrated content related to students with disabilities into their programs. The researchers analyzed how teacher preparation programs incorporated disability content into their programs by using course catalogues, syllabi, and related program documents obtained from web sites. Interviews were also conducted with the six purposefully chosen department chairs of elementary education preparation programs. Analysis of the data revealed seven strategies that were used by the sample population. Those strategies are: (a) pursuing a program mission with disability-focused priorities, (b) requiring disability-focused courses, (c) embedding disability content in other required courses, (d) incorporating disability content into field experiences, (e) aligning mission and coursework requirements, (f) sharing course experiences between general and special education, and (g) practicing collaborative program design. The researchers found that the most prevalent strategy used by teacher preparation programs was requiring disability-focused courses. Eighty-six percent of the sample programs

required pre-service teachers to enroll in a disability-focused course and 70% of those programs require its students to take only one course.

Research has shown that introductory special education courses have had a positive effect on changing the attitudes of pre-service teachers towards the inclusion of students with disabilities (Campbell, Gilmore, & Cuskelly, 2003; D'Alonzo, et al., 1996; Ford, Pugach, & Otis-Wilborn, 2001; Garriott, Snyder, & Miller, 2003; Hsien, 2007; Kozleski, Pugach, Yinger, & American Association of Colleges for Teacher Education, 2002; Shippen, et al., 2005; Singh, 2007; Sobel & Taylor, 2005). However, changing the attitudes of teachers does not necessarily prepare them to effectively instruct students with disabilities in an inclusive setting (Sobel, Iceman-Sands, & Basile, 2007). Current literature suggests that one stand-alone course in special education may not be sufficient to increase general education teachers' competence and confidence when it comes to working with students with disabilities (Brown, et al., 2008). Sobel and Taylor (2005) found that at the end of general education teacher preparation programs where only one introductory special education course was required, pre-service teachers were concerned with their ability to adapt instructional methods to meet the needs of diverse learners. For inclusion to truly be successful, the issue of whether general education teachers feel adequately prepared by their teacher preparation program to implement inclusion needs to be examined further.

Purpose of the Study

General education teachers' feelings of preparedness affect their competence and confidence about their ability to work with students with disabilities in an inclusion setting (Bender, et al., 1995). Three out of five graduates from schools of education surveyed for the Levine report (2006) stated that their training program did not adequately prepare them for what

they actually do in the classroom on a daily basis. The problem this study attempted to examine is the lack of research about how prepared pre-service general education teachers feel they are to teach students with disabilities at the end of a preparation program which only required one disability-focused course. This study further investigates the findings from Holland et al. (2008) who identified the strategies used by teacher preparation programs for preparing general education teachers to teach students with disabilities in the general education classroom. Holland et al. found that requiring one disability-focused course was the most frequently used strategy. This study examined the extent to which requiring only one disability-focused course was successful in helping pre-service teachers feel prepared to teach students with disabilities. This information can be used to help develop curricula for teacher preparation programs to better prepare general education teachers to work with student with disabilities.

Research Questions

Based on the literature review and the need for further research, the following research questions will be addressed in this study.

1.   To what extent do pre-service teachers majoring in elementary education who completed only one disability focused course perceive that they are prepared to instruct students with disabilities in the general education classroom?

2.   To what extent do pre-service teachers majoring in secondary education who completed only one disability focused course perceive that they are prepared to instruct students with disabilities in the general education classroom?

3.   To what extent is there a statistically significant difference between the mean scores of pre-service teachers majoring in elementary education and pre-service teachers majoring in secondary education on the *INTASC Readiness Survey–Modified*?

Hypotheses

The following null hypotheses were formulated to respond to research questions two and three.

HØ1   There is no statistically significant difference in the observed perceived level of preparedness of pre-service teachers who are majoring in elementary education and a score of 280 on the *INTASC Readiness Survey–Modified.*

HØ2   There is no statistically significant difference in the observed perceived level of preparedness of pre-service teachers who are majoring in secondary education and a score of 280 on the *INTASC Readiness Survey–Modified.*

HØ3   There is no statistically significant difference between the mean scores of pre-service teachers majoring in elementary education and pre-service teachers majoring in secondary education on the *INTASC Readiness Survey–Modified.*

Limitations

Limitations are the boundaries that limit the scope of inquiry. In this study, there are several limitations that should be considered. First, the information in the study is gathered from two universities in the southeast region of the United States. Although there is a significant size difference in the universities — one with approximately 26,000 students and the other with approximately 9,000 students — the cultural backgrounds of the participants are very similar. Therefore, the racial, gender, economic, and ethnicity composite may not match that of the national census. Second, the instrument used in this study was a self-report measure. This method of data collection depends on the ability and willingness of the respondent to provide accurate and honest input to the questions. Therefore, some possibility existed that participants responded to questions in a manner that reflected socially acceptable answers. Third, the

instruments were distributed at the last class meeting before participants were scheduled to graduate. During this meeting participants were required to fill out certification paperwork and several other surveys related to their internship experiences. The length of the survey from this study may have affected the participation rate of the sample population. Based on the limitations discussed, generalizability of the results from this study may be affected.

Definition of Terms

The following are definitions of terms used within this dissertation. Each definition is provided to give the reader a better understanding of the key terms. For the purpose of this study, the following terms should be considered as follows:

Elementary education major: Teacher preparation program which prepares students and certifies them to teach students in grades Kindergarten–5.

Evidence-based instructional practices: Instructional practice that has been thoroughly researched in educational literature.

General education classroom: Classroom where the focus of instruction is on the grade level standards.

General education teacher: Classroom teachers not specifically trained to work with students with disabilities.

Introductory special education course: The required course all students in a teacher preparation program must take which introduces students to special education laws and practices.

Pre-service teacher: An undergraduate student enrolled in a teacher preparation program with no prior teaching experience.

Secondary education major: Teacher preparation program which prepares students and certifies them to teach students in grades 6-12.

Special Education Teacher: Teacher with specialized training to work with students with disabilities.

Student with Disability: A student who qualifies for special education services under the Individuals with Disabilities Education Improvement Act (IDEIA; 2004).

Teacher Preparation Program: An accredited college or university program which prepares students to teach K–12 students.

Teacher Self-Efficacy: A teacher's belief that he or she is capable of being a successful teacher.

CHAPTER 2. REVIEW OF LITERATURE

Introduction

Students with disabilities are becoming a regular part of the general education classroom. Classrooms are becoming more diverse as a result of a worldwide movement towards the increasing inclusion of students with disabilities within general education settings (Roll-Pettersson, 2008). Several societal changes, such as shifts in the attitudes of the general public about the aptitudes and rights of persons with disabilities as well as a rise in the number and strength of advocacy groups, has shown to be an impetus to the inclusion of students with disabilities into the general education classroom (D'Alonzo, Giordano, & Vanleeuwen, 1997).

The success of inclusion depends on many factors, including needed revisions and changes in policies, regulatory systems and administrative structures, the availability of materials and resources, and in particular qualified classroom teachers. Teachers in the general education classroom are expected to ensure that students with disabilities achieve the same grade level standard as the rest of the students. Today's general education teachers must be prepared to educate a diverse group of students to achieve high standards (Levine & Education Schools, 2006). Therefore, teachers must utilize a variety of different instructional practices which require proficiency in various evidence-based practices such as response to intervention (RTI), positive behavior intervention supports (PBIS), and universal design for learning (UDL) in order to educate a diverse group of students with unique needs. This chapter is divided into three

major sections: legislative history of inclusion, current expected role of general education teachers and, the training of general education teachers.

Legislative History of Inclusion

In 1975, when the federal law P.L. 94-142, the Education for All Handicapped Children Act (EAHCA) was passed, schools across the country were forced to not only admit students with disabilities, they were also forced to provide an appropriate education. The EAHCA was written with the intention of providing the special supports and services students with disabilities needed to help them benefit from a free and appropriate public education (Turnbull, Beegle, & Stowe, 2001). Before the passage of the EAHCA, an estimated 4,000,000 children with disabilities in the United Stated did not receive the necessary supports in school, while another 1,000,000 students with disabilities received no schooling whatsoever (Friend & Reising, 1993).

This groundbreaking law provided federal funds to states that offer special education services in accordance with certain requirements outlined in the law. The EAHCA mandated that students with disabilities had the right to nondiscriminatory testing, evaluation, and placement procedures; education in the least restrictive environment (LRE); procedural due process; and a free and appropriate public education (FAPE) (Yell, et al., 1998). Schools could no longer enroll students with disabilities into the school without providing an appropriate education. Public schools were mandated to give students with disabilities the education they were entitled to receive just like every other student in the United States.

In order for students with disabilities to receive an education of the same caliber as students without disabilities, many educators felt that including students with disabilities into the general education classroom was the only way to provide the highest quality of education possible (Zigmond, Kloo, & Volonino, 2009). The concept of including students with

disabilities in the general education classroom is not a new one. For years, researchers could find little empirical data to support the theory that special class placement was more beneficial than the general education classroom (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010). Researchers speculated that too many students whose needs could be met in the general education classroom were being identified for more restrictive services (Rao, 2009). The separation of general and special education services restricted the educational opportunities available to all students (Rao, 2009).

After the passage of EAHCA, researchers began to identify the most appropriate ways to meet the needs of students with disabilities. In the late 1970s and early 1980s, schools attempted to provide FAPE to all students in their LRE by "mainstreaming" students with disabilities. Mainstreaming referred to the integration of students with disabilities into the general education classroom for part of the school day (Bateman, 2006). Students with disabilities were provided all of their academic instruction in the special education classrooms and then they were "mainstreamed" into the general education classroom with their nondisabled peers "to the maximum extent appropriate". Students were typically included for nonacademic activities such as lunch, recess, physical education, art and music (Bateman, 2006). Mainstreaming was used primarily for social interactions (Gordon, 2006). Neither general education nor special education teachers fully accepted mainstreaming, therefore it was considered a failed practice (Turnbull, et al., 2001). When the practice of mainstreaming failed to provide students with disabilities the FAPE or LRE to meet their unique needs and meet EAHCA requirements, the focus turned to inclusion with the Regular Education Initiative (REI).

Regular Education Initiative

In the mid-80s the paradigm shifted to what is known as the Regular Education Initiative (REI). The REI was a catalyst for focusing on the importance of serving at-risk students, culturally diverse students, and students with disabilities in the general education setting (Rao, 2009). The categorical nature of programs and the pull-out approach failed to meet the needs of students with learning problems (Coates, 1989). A paper by Wang, Reynolds, and Walberg (1986) stated that pull-out programs promoted the belief that learning problems were the result of student deficits rather than flawed learning environments. Teachers felt that as long as some of the students in the classroom were learning then they were doing a good job. If the students with disabilities were not learning in the classroom then the problem was the student and not the classroom instruction (Wang, et al., 1986). This belief hindered teachers from using effective teaching strategies which could meet many types of needs. Experts stated that students with disabilities and students who are at-risk have similar educational needs (Coates, 1989; Rao, 2009).

Therefore, with the appropriate supports, all students could successfully learn in the general education classroom. The proponents of REI argued that the best way to meet the needs of all students in general education classrooms was to provide appropriate instruction to all the students inside the general education classroom itself (Rao, 2009). REI gave more responsibility to general education teachers and staff in the education of students with disabilities. Students with disabilities would still receive special education services, but would also participate in the general education classroom with the general education teacher assuming responsibility for at least part of the students' education (Bateman, 2006). Educators began to realize that special education was a part of the larger organization and not something separate. General and special

educators would have to coordinate and collaborate in order for the organization as a whole to be successful (Fuchs & Fuchs, 1994).

Out of the REI grew the consultative model of special education. The consultative model involves the special education teacher providing support indirectly to the student by meeting with the general education teacher to solve problems (Huefner, 1988). The general education teacher and the special education teacher plan together and share responsibility for the instructional outcomes of the student with a disability. This model is not designed for the special education teacher to directly deliver specialized instruction to the students with disabilities within the general education classroom. It was designed to enable general education teachers to successfully instruct students with disabilities inside the general education classroom, reducing the need for pull-out services (Huefner, 1988). For consultation to be successful, both teachers must see each other as equals and as having different resources to offer (Bauwens, Hourcade, & Friend, 1989). In this model, the student receives all of his/her services inside general education classroom from the general education teacher.

Another model of inclusion that grew out of REI was the Integrated Classroom Model (ICM). The ICM was developed in collaboration with the University of Washington and the Issaquah, Washington, School District in 1980 as an education alternative for elementary students with mild disabilities (Affleck, Madge, Adams, & Lowenbraun, 1988). In an integrated classroom, students with mild disabilities received all of their instruction inside the general education classroom alongside their nondisabled peers for the entire school day. ICM differed from the consultative model in that only one teacher was responsible for the planning and implementation of instruction. The teacher of an integrated classroom was either a previous special education teacher or a general education teacher who had received the training necessary

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to become certified in special education (Affleck, et al.). A part-time aide was also provided to

assist the teacher in the classroom. The ICM shaped general education to meet the needs of

students with disabilities and expanded special education to meet the needs of at-risk students

(Affleck, et al.). Table 1 summarizes the early models of inclusion previously described and the

level of responsibility the general education teacher had for the instruction of students with

disabilities.

Table 1

Early Inclusion Models

Model	Implementation Method	Purpose	Level of General Education Teacher's Instructional Responsibility for Students with Disabilities
Mainstreaming	Students with Disabilities integrated for nonacademic periods of school day	Social Interaction	Low
Regular Education Initiative (REI)	Students with Disabilities integrated some academic periods of the school day	Social Interaction and exposure to General Education curriculum	Moderate
Consultation	Students with Disabilities receive all academic instruction inside general education classroom	Social Interaction and exposure to General Education curriculum	Moderate/High
Integrated Classroom Model	Students with Disabilities receive all academic instruction inside general education classroom	Social Interaction and exposure to General Education curriculum	High

Many general education teachers disagreed with the basic principles of REI (Coates,

1989). The REI pushed for all students to be included in the general education classroom based

upon a disability label, without regard for individual needs. Serving all students based upon a disability category resulted in fragmented programs and services (Kavale, 2000). REI also required general education teachers to take the lead in the actual education of students with disabilities, yet many general education teachers were not aware of this role nor were they prepared to assume this role.

Coates (1989) sought to investigate general education teachers' attitudes and perceptions towards REI. He randomly chose 94 teachers and asked them to respond to a 15-item questionnaire using a 5-point Likert scale. The survey also included two open-ended questions in which the participants were asked (a) what they thought should be done to improve the current system of identifying and serving seriously underachieving students, and (b) what practices were currently in place for identifying and serving educationally handicapped students that, in their opinion, should be discontinued. The teachers reported that they considered resource rooms to be an effective delivery system, and that most believed that students with mild disabilities could not be effectively educated in the general education classroom even with instructional support. The teachers also felt that the current special education system could be improved by expanding services to provide more time in the resource room for students with disabilities as well as expanding resource room services to students who were considered "slow learners".

When the EAHCA was amended and renamed the Individuals with Disabilities Education Act (IDEA) in 1990, the popularity of the consultation model decreased (Kavale, 2000). The amendments refocused the nation's attention from that of including everyone in the general education classroom to that of providing the appropriate services to meet the individualized needs of students with disabilities. The original law in 1975 defined LRE as "the setting where students with disabilities receive special education services and experiences the greatest success

towards progress" (Jiménez, et al., 2007, p. 45), the exact setting was never specifically stated.

The law only stated that the setting should be appropriate. The LRE requirement was never

intended to force all students with disabilities to be educated in the general education classroom.

The intention was for students with disabilities to be given access to public education, something

they had previously been denied (Zigmond, et al., 2009).

Even though research demonstrated higher performance of students with disabilities

when provided greater access to the general education curriculum (Jiménez, et al. 2007; Rea,

McLaughlin, & Walther-Thomas, 2002; Volonino & Zigmond, 2007), members of the

reauthorization committee realized that was not the most "appropriate" option for all students

with disabilities. Therefore, language was added in the law that pushed for IEP teams to revert

back to considering a continuum of service options when writing each individualized program.

The continuum of service options was not a new concept to special education. In 1970,

Deno introduced the cascade of services which became the guiding framework for the continuum

of services. The cascade of services was designed to facilitate the tailoring of services to the

individual's unique needs rather than simply fitting the individual into something that was

designed for a particular group (Deno, 1970). The services for students with disabilities were to

be selected from a continuum of service options and be provided in the 'least restrictive

environment' (LRE), to the "maximum extent possible". The continuum ranged from the least

restrictive to the most restrictive setting. Inclusion in a general classroom for 80% or more of the

school day was the least restrictive while pull-out services in a special education classroom, a

special education school, home instruction, and hospital instruction or institutionalization were

more restrictive placements. The term 'continuum' implied that no setting was permanent and

the goal of all settings outside of the general classroom was to eventually move the student back

into the general education classroom (Zigmond, et al., 2009). The LRE was not a placement for students with disabilities; it was the mechanism through which students' individual needs are matched with specific educational services (Gordon, 2006). The continuum of service options for students with disabilities is outlined in Table 2 from least restrictive to most restrictive.

Table 2

Continuum of Services from Least Restrictive to Most Restrictive

Service Delivery Model	Description of Model
Inclusion in the General Education Classroom	Students receive the majority of their education program in a general education classroom and receive special education and related services outside the regular classroom for less than 21% of the school day.
Resource Room	Students receive special education and related services outside the general education classroom for at least 21% but no more than 60% of the school day.
Separate Class	Students receive special education and related services outside the general education classroom for more than 60% of the school day.
Alternative Placement	Students receive special education and related services in special schools, home environment, hospitals, or institutions.

In order to be determined the most appropriate LRE for a student with a disability, the service setting must provide for the student's unique learning and social needs, as well as take place in a setting as close as possible to students without disabilities (Fuchs, Fuchs, & Fernstrom, 1993). Educators were encouraged to use a cross-categorical approach to deliver services to students with diverse needs in the general education classroom. A cross-categorical approach considered the students' instructional needs and not disability specific needs (Kavale, 2000). Students are grouped according to their instructional needs rather than by their disability labels.

This approach allowed the teacher to focus on the instructionally relevant needs of his/her students. Service options have to truly be individualized; students with disabilities could no longer be automatically placed based upon a disability area.

The 1997 amendments of IDEA focused on improving the educational outcome of students with disabilities. The goal was to prepare students with disabilities to lead productive and independent adult lives (Gordon, 2006). Prior to 1997, the post-school outcomes for students with disabilities were not evaluated. Many educators had the notion that different post-school outcomes for students with disabilities were acceptable because their education was individualized (Griffin & Warden, 2006). The underachievement of students with disabilities was no longer acceptable. Underachievement was linked to low expectations as a result of separate classes, curricula, expectations and limited access to the general curriculum (Zigmond, et al., 2009). Special education had become so unconnected with general education that the underachievement of students with disabilities became the norm (Griffin & Warden, 2006).

The 1997 amendments attempted to raise expectations for students by adding new previsions and reemphasizing those that were being overlooked. IDEA expanded the IEP team to require the general education teacher to be an active member. The rights of students with disabilities to participate in the general education curriculum were also reemphasized, as well as the right to participate in the general education assessments. The importance of inclusion and the LRE was once again brought to the forefront. The amendments required special education teachers to include a statement in the IEP which explained the extent in which the student with a disability would not participate in general education classroom with nondisabled peers. Educators began to realize that in order for students with disabilities to benefit from the general education curriculum and participate in general education assessments, the students needed to

have more access to the general education curriculum as well as the classroom. This realization brought the concept of inclusion to the forefront once again. Even though inclusion and mainstreaming are thought of as the same thing, they are actually very different. In mainstreaming, students with disabilities are placed in general education classrooms with appropriate supports for certain periods a day. The special education teacher is still considered the primary teacher. In inclusion, students with disabilities attend general education classrooms most of the day and the general education teacher is considered the primary teacher (Gordon, 2006).

In 2001, the educational achievement of all students in the United States was of concern; therefore, Congress passed the *No Child Left Behind Act* (NCLB). NCLB was a landmark bill whose purpose was to reduce the achievement gap between students and help all students, including those with disabilities, become proficient in math, reading, and science by the 2013–2014 school year (Jones, Zirkel, & Barrack, 2008). This legislation required schools to make Adequate Yearly Progress (AYP) as measured by a state-wide assessment. AYP was the minimum level of improvement to be met each year. Schools were to be evaluated based upon the percentage of students achieving academic progress. If a school did not make AYP, it was considered a failing school and faced sanctions from the state and federal government. NBLB required that the assessment data of students with disabilities be included in the analysis of a school's AYP status. To show that students with disabilities were making progress towards the 2013–2014 proficiency goal, they were required to take the same grade level standards-based assessments as their nondisabled peers. NCLB also required that all classroom teachers of core academic subjects be highly qualified in the subject that they taught. According to NCLB, a

highly qualified teacher is one who had obtained a full state certification and had a high level of content knowledge.

NCLB had such an impact on special education that IDEA was reauthorized and renamed the Individuals with Disabilities Education Improvement Act (IDEIA) in 2004 so that its mandates would be more closely aligned with that of NCLB. Instead of focusing solely on access to the general education curriculum, IDEIA (2004) advocated for accountability measures and standards that every child, regardless of disability, must meet (Gordon, 2006). Prior to 2004, IDEA stated that students with disabilities had the right to participate in statewide assessment, but it is now mandated by IDEIA that the all students have to participate in some form of standards based assessment (Turnball, et al., 2001). IDEIA required that IEPs include a section on student participation in assessments and any needed accommodations. IDEIA also recognized that in order for students with disabilities to meet the 2013–2014 proficiency goal of NCLB, they too had to be taught by teachers proficient in the core content areas. Therefore, a mandate was included that required all special education teachers who were the exclusive instructors in a core content area to be highly qualified in that area, similar to the requirements for general education teachers (Gordon, 2006). To be considered highly qualified in an area, teachers had meet some minimum requirement set forth by the state. They were required to either pass a test or complete coursework.

The passage of NCLB and the 2004 reauthorization of IDEA led to increased attention to students with disabilities' access to the general education curriculum. Although students with disabilities have been included in general education classrooms in some form for many years, the rationale behind the inclusion into general education classrooms changed from one of simply providing access to that of an increased emphasis on accountability (Gordon, 2006).

Education professionals are now faced with the challenge of making sure that students with disabilities meet grade level standards and are proficient enough to pass various state and district level assessments. The charge of ensuring that students with disabilities are successful on state assessments is not that of special education teachers alone. General education teachers are just as responsible, if not more responsible, for making sure that students with disabilities are successful in the general education curriculum. A summary of Federal laws that impacted the education of students with disabilities is listed in Table 3.

Table 3

Federal Laws that Impacted the Education of Students with Disabilities

Year	Law	Impact on Public Schools
1975	The Education for All Handicapped Children Act (EAHCA) was enacted. This was also known as P.L. 94-142.	EAHCA, mandated a free appropriate public education for all children with disabilities, ensured due process rights, and mandated IEPs and LRE.
1990	The EAHCA was amended and renamed the Individuals with Disabilities Education Act (IDEA).	This amendment called for the addition of transition services for students with disabilities, defined assistive technology devices and services, and added autism and traumatic brain injury to the list eligibility categories, and strengthened the laws commitment to greater inclusion in community schools (LRE)
1997	IDEA reauthorized	This amendment called for students with disabilities to be included in state and district-wide assessments. Also, General Education Teachers became a required member of the IEP team.
2001	No Child Left Behind	This law called for all students, including students with disabilities, to be proficient in math and reading by the year 2014.

(table continues)

Table 3 (continued)

Year	Law	Impact on Public Schools
2004	IDEA reauthorized and renamed the Individuals with Disabilities Education Improvement Act (IDEIA)	Called for more accountability at the state and local levels. Also, required school districts to provide adequate instruction and intervention for students to help keep them out of special education.

Inclusion

The Federal mandates which focused on the educational achievement of all students led schools to practice a more inclusive school model. 'Inclusion' was a term used to describe the ideology that each child, to the maximum extent appropriate, should be educated in the school and classroom he or she would otherwise attend if he or she did not have a disability (Kavale, 2000). It was the philosophical belief system of welcoming all students into the learning community (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010). It involved bringing support services to the child (instead of moving the child to the services) and required only that the student would benefit from being in the general education setting (instead of achievement at same level as other students) (Kavale, 2000). Inclusion implied that students were taught outside the general education classroom only when all available methods have been tried and failed to meet the needs of students with disabilities. If a student was pulled out of the general education classroom for instruction in another placement, the intent was for the pull-out to be temporary and for the student to be reintegrated into the general education classroom as soon as possible (Fuchs, et al., 1993).

In an inclusive model, the general education teacher did not relinquish all responsibility for students with disabilities but instead worked cooperatively with special education teachers to provide a quality program for all students (Trent & Artiles, 1998). There were several models of

inclusion, ranging from the special education teacher simply consulting with the general education teacher outside the classroom about accommodations and supports needed for the students to the special education teacher teaching alongside the general education teacher inside the general education classroom. Another example of an inclusion model was a full-inclusion model, or "pull in" model. In a full-inclusion model, the student spent the majority of the school day in a general education classroom, and services were brought to the student, either by a special education co-teacher or a consultant. In a partial-inclusion model, or "pull out" model, a student would spend part of the day in a resource classroom where the student received more intensive or individualized instruction provided by a special education teacher (U.S. Government Accountability Office, 2009).

Inclusion itself simply meant that students with disabilities would receive needed special education services within the general education classroom. It involved bringing the supported services to the student rather than moving the student to the services. The concept of inclusion and its many forms grew among the education community. Between the years of 1986 and 1996, the percentage of students with disabilities educated in the general education classroom increased by nineteen percent (U. S. Department of Education, 1996). According to the Office of Special Education and Rehabilitative Services, it was reported that around seventy-six percent of students with disabilities are educated in the general education classroom for some part of the school day (U.S. Department of Education, 2002). No matter the specific way in which one chose to implement inclusion, in order for inclusion to be successful, both the general education and special education teachers understood their expected roles and responsibilities.

Expected Role of General Education Teachers

The current educational trends and policy demands have been a catalyst for change in the expected roles of general education teachers (Valli & Buese, 2007). The public schools today have changed from a process-based system, focusing on what students are taught, to an outcome-based system, concerned with what students learn (Levine & Education Schools, 2006). Today's teachers are expected to instruct a classroom of students with diverse needs in order for all of them to achieve rigorous academic standards. According to education data for fall 2007, nearly 57 percent of students with disabilities served under IDEA from the ages of 6 through 21 spent more than 80 percent of their school day in the general classroom setting (U.S. Government Accountability Office, 2009).

General education teachers are still responsible for typical classroom duties such as making lesson plans and delivering instruction; however, their job description has also expanded greatly over the years. Many of their duties now include tasks that were previously thought to be the responsibility of the special education teacher. Historically, special education teachers have been the only "experts" on individualized instruction, progress monitoring and directly teaching students with disabilities, but that is no longer the case. General education teachers are expected to assume a more active role in developing the individualized instruction program (IEP) by helping to determine appropriate accommodations and modifications that students need to access the general education curriculum.

Recent policy changes require general education teachers to also have greater knowledge about inclusive processes and practices. General education teachers need to be knowledgeable of intervention strategies that are available to assist all students in the classroom. However, it does not appear that general education teachers are learning about their new roles and responsibilities

(Brown, et al., 2008). In a 2003 study by Garriott, Snyder, and Miller, pre-service general

education teachers were surveyed in an attempt to find out where they believed students with

mild disabilities should receive their education and why they held this belief. On the first day of

an "Introduction to Education" course, the participants were given a questionnaire using the

forced-choice format. Participants were asked if they felt students with disabilities should

receive their educational services in general education classrooms or special education

classrooms and why. Fifty-five percent of the students surveyed responded that services should

be given in the general education class and forty-five percent stated that services should be given

in a special education placement. The majority of respondents who believed that students with

mild disabilities should be educated in a special setting (78%) felt that these students need more

individualized attention than they could receive in general education. In addition, the

respondents believed that students with disabilities might distract their nondisabled peers from

learning and would demand too much of the teacher's attention.

Many general education teachers have not received training on how to instruct students

with a variety of learning styles, nor are they aware of how to choose scientifically validated

curricula and academic programs that address at risk students' needs (Murawski & Hughes,

2009). General education teachers need to be made aware of some of the specialized strategies

that are available to assist all students in the classroom. The use of evidence-based practices

allows teachers to provide instruction in an effective manner. The practices teachers are

expected to use are outlined in Table 4.

Table 4

Education Practices

Practice	Description of Practice
Evidence Based Practices	Approaches to teaching, programs used with students, classroom procedures, and teaching strategies that have consistently produced good reliable results as such in research literature
Response to Intervention (RTI)	A framework for providing comprehensive support to all students
Positive Behavior Supports and Interventions (PBIS)	A decision making framework that guides selection, integration, and implementation of evidence-based behavioral practices through a multi-tiered model for improving academic and behavior outcomes for all students
Universal Design of Learning (UDL)	Framework for designing curricula that enables all students to gain knowledge, skills, and enthusiasm for learning.

Evidence-Based Practices

General education teachers are expected to be knowledgeable of evidence-based practices as well as use them in the classroom on a daily basis. According to NCLB, teachers are required to utilize evidence-based practices in the classroom. Evidence-based practices are different from what many teachers know as best practices. Evidence-based practices' are approaches to teaching, programs used with students, classroom procedures, and teaching strategies that have consistently produced effective results and is noted as such in research literature (Rao, 2009). On the other hand, best practices are instructional strategies and techniques that have been passed along to teachers through "word of mouth" because they worked for other professionals. Best practices may or may not be effective strategies, but there is no scientific data to support their practice; therefore, they are not considered evidence-based practices. Evidence-based

practices are used to ensure that all students receive the highest quality of instruction. Research

has shown that effective teaching techniques yield better educational outcomes in shorter

amounts of time (Volonino & Zigmond, 2007).

NCLB refers to evidence-based practices as scientifically based research. According to

IDEIA (2004), scientifically based research is inquiry that: (a) employs systematic, empirical

methods that draw on observation or experiment; (b) involves rigorous data analyses that are

adequate to test the stated hypotheses and justify the general conclusions drawn; (c) relies on

measurements or observational methods that provide reliable and valid data across evaluators

and observers, across multiple measurements and observations, and across studies by the same or

different investigators; (d) is evaluated using experimental or quasi-experimental designs in

which individuals, entities, programs, or activities are assigned to different conditions and with

appropriate controls to evaluate the effects of the condition of interest, with a preference for

random assignment experiments, or other designs to the extent that those designs contain within-

condition or across-condition controls; (e) ensures that experimental studies are presented in

sufficient detail and clarity to allow for replication or, at a minimum, offer the opportunity to

build systematically on their findings; and (f) has been accepted by a peer-reviewed journal or

approved by a panel of independent experts through a comparably rigorous, objective, and

scientific review (Emmons, et al., 2009). The use of research based practices extends to

evaluation methods as well as instructional methods. Proven evaluation and instructional

methods are designed around what best meets the needs of the individual student. Every student

in the classroom must be given an opportunity to master the standards in a way that is

appropriate for him or her. Teachers can use evidence based practices to help students master

the standards through the implementation of the RTI framework.

Response to Intervention (RTI)

General education teachers are expected to be aware of and proficient in using Response to Intervention (RTI). IDEIA (2004) set out to reduce the over identification of students for special education services by suggesting a different process be used when referring students for special education services. It was believed that there were a significant number of students being identified for special education services because of inappropriate teacher referrals. The burden of referring students for special education services fell upon the general education teachers, yet many did not have the skills needed to differentiate between an actual disability and inadequate instructional methods (Goodman & Webb, 2006). Instead of automatically testing a student once a referral was made, it was suggested that data demonstrating a student's response to evidence-based interventions be used as well to help with the identification process (National Center on Response to Intervention, 2010).

RTI provides high-quality instruction and interventions matched to student needs as well as frequent monitoring of student progress (Holland, et al., 2008). RTI is a multi-leveled, problem solving model that addresses the learning difficulties of all students throughout several tiers (Jackson, et al., 2009). The model requires teachers to use evidence-based practices throughout three levels of prevention. The number of tiers included in the RTI frameworks can be different from district to district. However, regardless of the number of tiers of intervention each district chooses to implement, each tier is usually classified under one of the three levels of prevention: primary, secondary, or tertiary (National Center on Response to Intervention, 2010).

The primary level represents instruction and services that are available to all students. This is typically provided in the general education classroom. The underlying assumption in this level is that all students in the general education classroom receive quality instruction that will be

effective for only approximately 80% of the students (Murawski & Hughes, 2009). Within this level, curriculum based measures (CBM) are periodically used as benchmarks by the general education teacher to identify students who do not respond to instruction. Students who are identified as needing additional support move to the secondary level of prevention.

The secondary level targets short-term instruction for small groups of students who need extra help. The students in need of additional help are identified with the use of CBM data. At this level, CBM data are collected more often than in the primary level. Students receive concentrated instruction that is more intensive and individually focused than that of the general education curriculum. Such intensive instruction is considered short-term and is provided through the collaboration between the general education teacher and a specialist (Murawski & Hughes, 2009). If a student fails to make adequate progress after the implementation of the intensive interventions, he/she is then moved to the tertiary level. The tertiary level represents the most intensive level of instruction and is usually provided in a one-to-one context. It includes specialized, individualized instruction to target each student's area of need (Murawski & Hughes, 2009). Students receive different tiers of support depending upon how they respond to interventions at any one level. Figure 1 depicts the progression of support across the multi-level problem solving model of RTI.
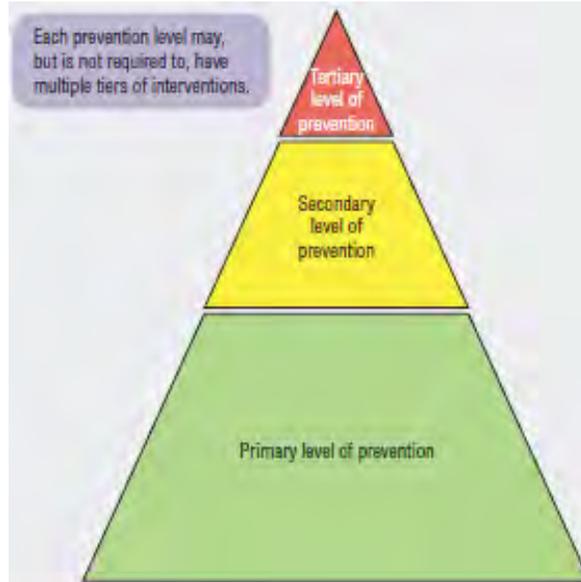
Figure 1. Progression of Support (National Center on Response to Intervention, 2010).

RTI is used as the preferred framework for the referral of at-risk students because it is believed that it will lead to a reduction in the number of referrals made due to lack of adequate instruction (Vaughn, Linan-Thompson, & Hickman, 2003). The significant number of inappropriate teacher referrals has been attributed to a deficit in general education teacher preparation and competence when it comes to working with at-risk students (Goodman & Webb, 2006; Vaughn, et al., 2003).

Goodman and Webb (2006) attempted to explain the reasons for inappropriate teacher referrals of students by examining the curriculum-based reading assessment data of third- and fourth-grade students who were referred for a special education evaluation based on a presumed reading disability. The researchers assumed that if students referred for special education earn a passing score on the state-mandated, criterion-referenced reading achievement test, it could be

presumed that, even though the referral was for a suspected reading disability, the factors that prompted the referral were unrelated to the reading process.

Examination of test data indicated that over half of the students referred for special education evaluation based on a presumed reading disability met minimum grade level reading standards on the state-mandated, criterion-referenced reading achievement test. Of those who passed the test, sixteen percent qualified for services as having a reading disability. Goodman and Webb (2006) note that these results point out the need for teacher educators to ensure that evidence-based practices trickle down to the practitioners responsible for identifying struggling students and implementing intervention assistance on a daily basis. In addition to ensuring that teachers have validated intervention models and methods, teacher preparation programs also need to develop expertise in accurately and separately differentiating students who have a disability from other students who are not achieving for some other reason.

RTI models are outcome-driven and incorporate both prevention and an intervention focus (Jackson, Pretti-Frontczak, Harjusola-Webb, Grisham-Brown, & Romani, 2009). They provide a structure in which educational teams can identify areas of concern and engage in a process of providing immediate support for struggling students. The principles of RTI present a new way of organizing efforts for supporting the progress of all students. RTI is not just a model for identifying students with disabilities; it is also a framework for providing quality instruction for a diverse group of students (Murawski & Hughes, 2009).

Proponents of the RTI model believe that effective intervention in the general education classroom can ultimately reduce the number of students placed in special education (Goodman & Webb, 2006). Although the implementation of the RTI model appears to be promising, the model does require some special skills for effective execution. The RTI emphasis on proactive

instruction, ongoing assessment, data-based decision making, and intensive instruction greatly affects the role of the general education teacher and classroom (Murawski & Hughes, 2009). To accurately implement this framework, general education teachers must be trained to use an array of different instructional interventions, forms of assessment, and data collection procedures. In addition to the RTI framework, general education teachers also need to be aware of Positive Behavior Interventions and Supports (PBIS).

Positive Behavior Interventions and Supports (PBIS)

A third set of practices general education teachers are expected to be knowledgeable of are PBIS. The 2004 reauthorization of IDEIA included the suggestion that teachers should consider using PBIS to address behaviors that interfere with the learning of all students, including students with disabilities (Chitiyo & Wheeler, 2009). PBIS is consistent with the RTI framework because they both use a multi-tier process. However, PBIS also incorporates the use of methods that increase productive behavior while decreasing the problem behavior of all students (Cheney, et al., 2010).

PBIS is described as a decision making framework that, through a three-tiered model, guides selection, integration, and implementation of the best evidence-based behavioral practices for improving important academic and behavior outcomes for all students (Chitiyo & Wheeler, 2009). PBIS differs from traditional and punitive behavioral management strategies in that they include the conditions, circumstances, and systems impacting the child as well as the variables that impact behavior (Chitiyo & Wheeler, 2009).

Teachers systematically teach and reinforce socially valued behaviors across the tiers. PBIS is not a curriculum; it is an approach to improving behavior by using a variety of strategies such as: positive reinforcement, clear and specific requests, group contingencies, direct

instruction, self-monitoring, modifying antecedents and consequences, and teaching and practicing social skills in school (Cheney, et al., 2010). Like RTI, PBIS consists of three levels of support which are: (a) universal support; (b) secondary (group) support, and (c) tertiary (individual) support.

Universal support is a school wide proactive approach that targets all students across a broad range of school settings. It involves a clear definition of universal behavioral expectations, teaching of universal expectations to all students in all settings, and a universal positive reinforcement system (Chitiyo & Wheeler, 2009). Secondary support targets specific subgroups of students who are unresponsive to universal supports. Interventions at this level include setting specific instruction of expectations, social skills instruction, behavioral contracts, and use of group reinforcement systems. Individual supports are designed for students who display chronic problem behaviors that do not respond to school wide and group supports. These students usually require more intensive supports that are based on functional behavioral assessment (FBA) and individual behavior intervention plans.

When teachers effectively implement PBIS, they can reduce inappropriate behavior (aggression, disruptions, social withdrawal), improve academic learning (achievement, on task, engagement), and enhance social and interpersonal relations (social skills and language) in the classroom (Cheney, et al., 2010). Although research has shown that effective implementation of evidence-based classroom management can greatly reduce problem behaviors in the classroom (Braddock, 1999; Ebber, Lewis-Palmer, & Pachiano, 2002; Horner, 2000), it is not happening in practice. Chitiyo and Wheeler (2009) sought to investigate the difficulties encountered by teachers in their efforts to adopt PBIS practices. The researchers used a sample of convenience and sent out a survey to 40 teachers who were the only ones in the school district involved in the

PBIS implementation program. The participants had received training through workshops conducted through a federally funded PBIS initiative.

Participants were given a questionnaire designed by the researchers made up of PBIS components according to best and effective practices identified by literature on PBIS. The first question on the questionnaire had 24 items in a Likert type format (1- to 7-point scale). The 24 items were classified into four categories: specific skills, techniques, shared values, and other areas. The second question had five items in a checklist format and the participants were asked to indicate the components of PBIS they used with a check. Questions 3 to 5 were open-ended questions asking participants to state, in their own words, specific problems encountered during the PBIS implementation, areas that required technical assistance, and how implementation should be changed in the future. The final question asked for the participants' demographic information. Data analysis revealed that teachers need to view the practices as easy to implement in order to "buy into" using them. Teacher preparation programs can help with this "buying in" by providing pre-service teachers with adequate training, support, and preparation for difficulties they may encounter with implementation of effective behavioral strategies in an inclusive setting. In addition to behavioral strategies, general education teachers need to be knowledgeable of various instructional strategies and practices such as Universal Design for Learning (UDL).

Universal Design for Learning (UDL)

An additional practice general education teachers are expected to implement is universal design for learning (UDL). The diversity of students in classrooms goes beyond just cultural and ethnic differences; it also includes differences in learning styles. The "one size fits all" method of teaching is no longer appropriate when ensuring everyone become proficient in grade level

standards. One way for teachers to make the general education curriculum more accessible to diverse learners — regardless of ability, learning style, language or culture — is through the use of UDL. The concept of universal design originates from the field of architecture. It is based on the concept of simplifying life for everyone by making products, communication systems, and the built environment more usable by more people (Jiménez, et al., 2007). It is much easier to build a home or working space that is accessible and easily reachable than to adapt or retrofit an environment for living.

In the 1980s the Center for Applied Special Technology (CAST) was founded and began to define and extend the principles of universal design to the learning environment. The principles for UDL have been defined as providing students with multiple means of representation, expression, and engagement in the classroom. The principles of UDL were based on Vygotsky's (1978) work describing the Zone of Proximal Development, which is the range in which learning takes place, and recent advances in neuroscience research, mapping the way the brain processes information. For that reason, UDL was not a single practice or method but a framework that encompassed several existing methods relevant to its principles for enhancing the learning process for diverse learners.

This framework required teachers to change their view of teaching. Their views on the learning process and their initial approach to planning and instruction for all learners were all a part of that change. UDL involved planning ahead for student success by diversifying instruction in the planning stages rather than attending to instructional needs after a student failed (Stanford & Reeves, 2009). Instruction was designed to meet the needs of a diverse group of students rather than simply making ongoing adjustments for individual students with special needs (Jiménez, et al., 2007). UDL embraced all learners by requiring that teachers gather facts

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and design instruction based on requirements and interests. Teachers determined what was most

important for student success, and then made a pathway for student achievement. From the onset

of instructional planning for multileveled students, teachers using UDL consider differing

learning processes and student-made products. Instead of waiting for students to fail, to lag

behind in progress, or to struggle, instruction was planned so that each student's individual needs

are met on the front end of the learning process (Stanford & Reeves, 2009). The underlying

principles of UDL were made up of three major components which are described in Table 5.

Table 5

UDL Components

Component	Description of Component
Multiple means of representation	Students were given various ways of acquiring information and knowledge
Multiple means of expression	Students were provided with various alternatives for demonstrating what they knew
Multiple means of engagement	Student's interest were tapped into, challenged appropriately, and motivated them to learn

In a UDL classroom, multiple means of expression supported strategic learning and

created several alternatives for demonstrating student knowledge. It provided alternatives for

students who experienced difficulty demonstrating knowledge through more traditional means

(Jiménez, et al., 2007). Multiple means of engagement supported affective learning by tapping

into students' interests and offering appropriate challenges to increase their motivation.

With UDL, instruction was no longer viewed as "one size fits all" but instead, instruction was planned for learner success. Students experience positive academic gains when learning preferences are identified, taught to, and nurtured (Stanford & Reeves, 2009). To adequately address the changing demographics of the public school population, all teachers must learn to design unique instructional programs that actively support learners with and without disabilities within the general education classroom (Jiménez, et al., 2007).

Spooner, Baker, Harris, Delzell and Browder (2007) sought to investigate the effects of pre-service teacher training about UDL within lesson plans. The researchers investigated whether all teachers could learn to use UDL in planning instruction for students with disabilities. Spooner, et al. (2007) examined the implementation of UDL components within the instructional plans of in-service and pre-service general and special education teachers across four university teacher-education courses. Researchers provided experimental group participants with one hour of instruction in UDL principles, including their application to planning instructional lessons. At pretest, participants in both experimental and control groups were given a case study of a child with a disability describing the student's strengths, interests, and three general curricular goals. Researchers asked participants to create a lesson plan within a span of 20 minutes, focusing on one curricular area. Investigators provided a comparable, but novel case study at post-test. Lesson plans for both groups were scored according to the degree to which the student made the lesson accessible for all learners including the child with the disability. Students in the experimental group showed significant gains from pretest to posttest and outperformed their control group counterparts. These results indicate that with explicit instruction in preparation courses, pre-service and in-service educators can design more accessible lessons for all students including those with specific learning needs. In addition to UDL principles, general education

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teachers are also expected to be aware of the various professional roles they will perform once in the classroom.

Professional Roles of Classroom Teachers

In addition to the expanded knowledge base general education teachers are expected to possess when entering the classroom, they will also be expected to be involved in several forms of professional collaboration. Collaboration is the interaction between professionals who offer different areas of expertise yet share responsibilities and goals (Murawski & Hughes, 2009). Teachers need to actively collaborate with their colleagues to ensure (a) lessons are research based, (b) lessons address the wide variety of needs in the general education classroom, (c) lessons ensure access to the general education curriculum for diverse learners, (d) ongoing data collection and progress monitoring is occurring, and (e) students in the more intensive levels of RTI are able to receive specialized and more individualized instruction in small groups (Murawski & Hughes, 2009).

Chitiyo and Wheeler (2009) note that collaboration with other professionals is an imperative skill for the successful implementation of various evidence-based practices. The more teachers can collaborate and share the strategies specific to their field, the more likely that all students in the general education classroom will truly benefit from a strong research-based instruction. Given the importance of collaboration, teacher preparation programs must prepare future teachers with the essential knowledge base, skills, and disposition to collaborate effectively. It has been suggested that the best way to acquire the collaborative knowledge, skills, and dispositions needed to successfully collaborate is through facilitation in authentic settings in authentic collaborative structures and decision-making activities (Burstein, Kretschmer, Smith, & Gudoski, 1999; Cramer, 2006; Sprague, & Pennell, 2000).

Professional Collaboration

General education teachers need to be prepared to participate in several forms of professional collaboration. The ability of teachers to collaborate and solve problems is key to the success of students with disabilities in the general education classroom (Griffin & Warden, 2006). Some forms of professional collaboration include: (a) Consultation, (b) Peer support system, (c) Teacher assistance teams, and (d) Co-teaching/Collaboration (Rao, 2009). Consultation is an inclusion model in which the general education teacher and the special education teacher work together to address an ongoing situation in the general education classroom. In this model the general education teacher and the special education teacher plans and problem solves together outside the classroom. The general education teacher has the responsibility of actually implementing the plans that were collaboratively developed. Planning for a class collaboratively allows special educators proactive input in the lesson, even if they are not present for the lesson implementation (Murawski & Hughes, 2009). This enables special educators to coach their general education counterparts on instructional strategies that provide students with access to the general education curriculum.

The peer support system involves two or more general education teachers working together to solve problems and generate ideas. This is the equivalent to what many schools call a grade level meeting. Peer support systems allow educators to combine their talents and information as well as work together to meet the needs of a diverse group of students. Teachers bring a common set of knowledge and skills as well as different areas of specialty. For example, one teacher may be an expert in teaching mathematics while the other is an expert in using technology in the classroom. Working together, the groups of teachers collectively possess both the breadth and the depth to meet the needs of a diverse group of students within the general

education classroom. Teacher assistance teams are another avenue in which the general

education teacher can receive support for a problem in the classroom from a team of

multidisciplinary professionals which can include a special education teacher. Griffin and

Warden (2006) investigated the benefits of a pre-service collaboration program on the ability of

pre-service participants to meet the competencies critical for collaboration in a school setting.

Participants included pairs of special education and general education pre-service teachers with

minors in special education in the semester before their student teaching. The researchers

developed a survey regarding pre-service teachers' perceptions of the use of collaboration skills

learned through the field experience and in coursework of the collaboration program. The

survey contained three parts with a 5-point Likert scale as well as a space to provide any

additional comments or recommendations regarding their pre-service collaboration program.

Griffin and Warden (2006) found that the majority of the benefits of collaboration cited

by participants were student-centered. For example, collaboration between professionals

produced remarkable opportunities for hands-on application of concepts, kept the students with

special learning needs more "in the loop" of the curriculum, and deepened both teachers'

understanding of their curriculum, thus encouraging more interdisciplinary instruction.

Respondents also reported that the collaboration program enhanced their comfort level and

feelings of being prepared as a novice teacher to (a) co-teach, (b) work with different personality

types, (c) think "outside of the box," (d) advocate for co-teaching as a viable collaborative

structure, (e) work effectively with other staff members to better meet students' needs, and (f)

explain student needs to educators and parents. The researchers concluded that collaborative

knowledge, skills, and dispositions which are practiced in an authentic setting helps prepare pre-

service teachers for the task of collaborating with other adults to provide inclusive instruction to a wide range of learners.

Co-Teaching

Co-teaching, or cooperative teaching, is the only form of professional collaboration in which the full responsibility of classroom instruction is not that of the general education teacher alone. All of the previously mentioned forms of collaboration require the general education teacher to bear the full responsibility of instruction in the classroom. Co-teaching grew rapidly in response to factors recognized during the early days of mainstreaming, including the need for special education teachers and general education teachers to work in constructive and coordinated ways (Bauer, 1975; Walker, 1974).

According to the National Center for Restructuring and Inclusion (1995), co-teaching is the most common service delivery model for teaching students with disabilities in the general education classroom. Co-teaching is the vehicle through which legislative expectations can be met and students with disabilities can receive the specially designed instruction they need simultaneously (Friend, et al., 2010). Co-teaching is a combination of previous inclusion initiatives such as REI, mainstreaming, and ICM. It involves the collaborative problem solving elements of the collaboration model along with the additional staff support inside the general education classroom like with the Integrated Classroom Model. Co-teaching is a service delivery option which was designed to address the needs of students in an inclusive classroom by having a general education teacher and a special education teacher teach together in the same classroom to meet the individual needs of students with disabilities (Murawski & Dieker, 2008).

Friend and Reising (1993) define co-teaching as two or more professionals delivering substantive instruction to a diverse or blended group of students in a single physical space. With

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co-teaching, educators possessing distinct sets of knowledge and skills work together to teach academically heterogeneous groups of student in the general education classroom (Bauwens & Hourcade, 1991). In co-teaching, the general education teacher is considered the expert in the curriculum while the special education teacher is the expert in the process of learning and the individualized nature of some students' needs (Friend, et al., 2010). The role of the special education teacher expands to include going into the general education classroom and helping the general education teacher implement instruction for all students, even those not eligible for special education services (Zigmond, et al., 2009).

The critical feature in co-teaching is that both educators simultaneously teach for a planned and scheduled part of the instructional day (Hourcade & Bauwens, 2001). True co-teaching can only exist when both professionals co-plan, co-instruct and co-assess a diverse group of students. Both teachers provide substantive instruction to all students on a daily and consistent basis. Effective instruction in inclusive classrooms requires cooperation, teaming, and a shift in roles and responsibilities (Kluth & Straut, 2003). Neither teacher is considered the main teacher of the class; they are equals (Murawski & Hughes, 2009). Co-teaching can be characterized as a means of bringing the strengths of two teachers with different expertise together in a manner that allows them to better meet student needs (Bauwens, et al., 1989; Friend & Reising, 1993; Hourcade & Bauwens, 2001).

Although research on student achievement in co-teaching classrooms is limited, some of what is available generally shows positive results. Rea, et al. (2002) conducted an investigation comparing the performance of middle school students with learning disabilities who were served in inclusive classrooms with similar students served in pull-out special education programs. Students were compared across dimensions of academic achievement, daily school attendance,

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and disciplinary infractions. Thirty-six participants received special education services through an inclusive support model and twenty-two received special education services through a resource or "pull-out" model. The researchers used archival qualitative and quantitative data from IEPs, special education eligibility records, individual student evaluation reports, class schedules, attendance records, discipline records, report cards, and student scholastic records to explore the relationship between the placement of students with learning disabilities and academic achievement, behavior, and attendance. Retrospective data on participants going back two years were collected and analyzed.

Rich descriptions of the two service settings were generated to document similarities and differences between the two programs. The school implementing the inclusion model delivered services based on a team teaching and collaborative planning. General and special education teachers co-taught four periods per day and had one period of individual planning and one period of team planning. During team planning, teachers discussed curriculum concerns, classroom management, instructional strategies, and student progress. During individual planning time, co-teachers met frequently to plan academic content, presentation format, practice activities, and evaluation procedures. Once a week, during the individual planning time, all special education teachers met to coordinate their work, collaborate on challenging cases and issues, exchange information, and share successes. Co-teaching in the general education classrooms took a variety of forms.

At the school that used the pull-out model of service delivery, interaction between general and special education teachers consisted of reviews of student progress focused on problem areas in which special educators offered possible solutions and general educators provided a list of skills, incomplete assignments, or tests students needed assistance with in the

resource room. Meetings usually took place before or after school. Most of the students with disabilities were encouraged to keep assignment notebooks to take home. Special educators relied heavily on those notebooks to remain apprised of the status of their students. Special education teachers were not members of grade-level general education teams, and they did not attend ongoing team meetings on a routine basis. Instead, their presence was typically requested if a student was experiencing an academic or behavioral crisis. The expertise of special educators was also tapped when a student without a label presented a challenge with which the team wanted assistance. The students were taught their four core courses (language arts, mathematics, science, and social studies) in the general education classroom by general education teachers working alone. Pull-out services were scheduled during elective periods. Students gave up either one or both of their elective classes to receive special education services.

Systematic examination of IEPs revealed that the inclusive and pull-out programs differed significantly in several features, including number and types of goals, number and types of objectives, number and types of accommodations, and amount of time per week students received special education services. IEP goals for students in the inclusive setting reflected school district learning expectations for all 8th-graders while goals for students in the pull-out model focused on academic deficits. The researchers found that included classes focused on general education curricula to a greater extent than in pull-out programs where the focus was remediation.

Three indicators of student outcomes were measured: academic achievement, behavior, and school attendance. Measures of academic achievement included final course grades in the 8th grade language arts, mathematics, science, and social studies curricula; standard scores on reading, mathematics, science, and social studies subtests of the *Iowa Test of Basic Skills* (ITBS);

and the state's academic proficiency test, the *Literacy Passport Test* (LPT). Data for student behavior were collected from scholastic records and cross-referenced for accuracy with district records. Attendance information was gathered from student attendance records and cross-referenced for accuracy with district computerized attendance records.

Analysis revealed that students served in inclusive classrooms earned significantly higher grades in all four areas of academic instruction. Ninety-one percent of students in the inclusive classroom passed language arts with a grade of C or better and only sixty-three percent of students in the pull-out setting passed. Eighty-one percent of students in the inclusive setting made a C or better for their final report card grade in mathematics and seventy-two percent of pull-out students passed. Statistical analyses of data indicated no significant differences between the two groups relative to behaviors that warranted in-school or out-of-school suspensions. Attendance data from both schools revealed that students in inclusive classrooms attended significantly more days of school than did students in pull-out special education programs.

The researchers noted five key findings that could be concluded from this study: (1) students with disabilities served in inclusive classrooms achieved higher course grades in language arts, mathematics, science, and social studies than students with learning disabilities in pull-out programs; (2) the group served in inclusive programs achieved comparable scores on the reading comprehension, science, and social studies subtests of the ITBS, which questions the assumption that that small group instruction will necessarily result in improved scores or pass rates on standardized tests; (3) students with disabilities served in inclusive classrooms demonstrated comparable scores to those in pull-out programs on reading, writing, and mathematics subtests of a state proficiency test; (4) students with disabilities served in inclusive classrooms did not experience more in-school or out of-school suspensions than did students in

pull-out programs which suggests that increased demands of full-time general education placement do not result in greater acting-out behavior; and (5) students with disabilities served in inclusive classrooms attended more days of school than those in pull-out programs. Results of this study indicate that inclusion can have a positive effect on the academic achievement of students with disabilities; however, it can only be successful if all participants know and understand the role they are expected to play. General education teachers need explicit training about collaboration and their role in its implementation at the pre-service level in order for the practice to be effective at the in-service level. The different models of collaboration described previously are summarized in Table 6.

Table 6

Collaboration Models

Component	Description of Model
Consultation	The general education teacher and special education teacher plans and problem solves collaboratively outside the classroom.
Peer support	Involves two or more general education teachers working together to solve problems and generate ideas
Teacher assistance team	An avenue in which the general education teacher can receive support for a problem in the classroom from a team of multidisciplinary professionals
Co-teaching/Collaboration	The general education teacher and the special education teacher working together to provide instruction inside the general education classroom

Teacher Confidence and Efficacy

A key attribute of effective teaching is a teacher's confidence in his or her ability to be an effective teacher. A teacher's beliefs and confidence to teach are important characteristics that

predict teaching ability and student achievement (Jenkins & Ornelles, 2009). General education teachers often report that they do not feel confident enough in their knowledge and skills to effectively teach students with disabilities (Brown, et al., 2008; D'Alonzo, et al., 1996; Lambe, & Bones, 2007). It has been reported that only one-third of general education teachers feel well prepared to teach students with disabilities (U.S. Department of Education, 2001). Smith and Smith (2000) found that teacher preparation has a great effect on general education teacher's mindset to teach students with disabilities. Despite this knowledge, many graduates from teacher preparation programs have expressed anxiety about their skills for teaching students with disabilities in the general education classroom (Brown, et al., 2008; D'Alonzo, et al., 1996; Lambe, & Bones, 2007).

Teacher self-efficacy has been widely researched as an important indication of effective teaching (Gibson & Dembo, 1984; Yeo, et al., 2008). Teacher efficacy derived from the social cognitive theory of self efficacy. One of the most commonly used definitions of self-efficacy emerged from Bandura's (1977) social cognitive theory which suggested that individuals will pursue activities and situations in which they feel competent and avoid situations in which they doubt their capabilities. Gibson and Dembo (1984) describe teacher efficacy as a teacher's belief that he or she can help even the most difficult or unmotivated students. Based on that description, if a teacher believes he or she will succeed in teaching a subject or lesson to a particular group of students, then he or she is more likely to actually be successful in that subject or lesson.

There has been much research about the different types of teacher self-efficacy and its impact on student achievement (Gibson & Dembo, 1984). Investigations have found that teachers with high self-efficacy behaved differently from their colleagues (Brown, et al., 2008;

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Tschannen-Moran, Hoy, & Hoy, 1998). Teachers with a strong sense of efficacy are open to new ideas and more willing to experiment with different instructional practices (Tschannen-Moran, et al., 1998). They are also less likely to refer a student to special education (Brownell, et al., 1996; Roll-Pettersson, 2008; Tschannen-Moran, et al., 1998). When faced with the challenge of meeting students' diverse learning and behavioral needs, teachers with high self-efficacy were more likely to persist and invest more time and effort into seeking and using alternative instructional approaches (Gibson & Dembo, 1984).

Research has shown that teachers' confidence levels are raised when exposed to training techniques that address inclusion of students with disabilities in the general education classroom (Brown, et al., 2008). Therefore, it is important for teacher preparation programs to develop a pre-service teacher's sense of confidence. Teachers self-perceived level of preparedness indicates their confidence about their knowledge and skills to fulfill educational requirements for all students (Jenkins & Ornelles, 2009).

Training of General Education Teachers

Teacher preparation programs across the nation have been under considerable criticism because it is believed that current programs do little to improve student achievement (Levine & Education Schools, 2006). Traditional preparation for general education teachers involves formal training for initial certification, often referred to as pre-service training. Most pre-service teachers receive their training through teacher preparation programs administered by institutions of higher education (U.S. Government Accountability Office, 2009). These traditional programs typically include courses in subject matter and instructional strategies, as well as field-based experiences. Under this traditional approach, prospective teachers must complete all of their certification requirements before beginning to teach. For many, the certification requirements

only require them to take one disability focused course, which has been shown to improve attitudes and instructional competencies. Nevertheless, Powers (1992) found that the level of improvement in attitudes and instructional competencies was still unacceptably low.

There appears to be a gap between what is being taught in schools of education and what is actually happening in the public schools. This is evident by the comments in a 2009 speech by the U.S. Secretary of Education in which he stated that America's university-based teacher preparation programs needed "revolutionary change" (Duncan, 2010). Graduates of teacher preparation programs feel that they are insufficiently prepared for today's classroom (Brown, et al., 2008). Current education regulations require that students with disabilities meet the same content standard as all students. However, teachers are not being prepared for the new outcome based accountability driven system that demands that the educational achievement of all students be raised (Levine & Education Schools, 2006). In a 2002 report on teacher quality, the U.S. Department of Education (USDOE) concluded that teacher preparation was of little or no demonstrated value for enhancing student achievement (U.S. Government Accountability Office, 2009).

General education teachers are expected to be more cognizant of special education practices and ways to implement such practices. A major challenge for teacher preparation programs is that of preparing general education teachers for broader roles in the classroom (Rao, 2009). Traditional programs typically provide extensive instruction in pedagogy and practice teaching (National Association of State Directors of Teacher Education and Certification, 2003) in one particular area of specialty. However, today's teachers are required to have a greater extent of knowledge and skills that go beyond one distinct focus of study. Current federal mandates have challenged the ability of teacher preparation programs to prepare teachers

to meet the various demands of today's classroom by including the education of students with disabilities in current educational reform bills. This is evident not only in federal laws, but also by the standards of several accreditation agencies for teacher preparation programs.

The new requirements of the Higher Education Opportunity Act for teacher preparation programs in higher education state that teacher preparation programs must provide assurances that general education teachers will receive training about providing instruction to diverse populations, including students with disabilities (Smith, et al., 2010). Current standards of the National Council for Accreditation of Teacher Education (NCATE) require teacher preparation programs to prepare all pre-service teachers in the area of education of students with disabilities (Brown, et al., 2008). Even with the current push by federal mandates and accreditation agencies to prepare general education teachers to work with students with disabilities, it appears that many teacher preparation programs are not moving in the same direction.

Research has shown that general education teachers do not feel prepared to teach students with disabilities. For example, D'Alonzo, et al. (1997) administered questionnaires which focused on the benefits and problems of inclusion to 336 in-service teachers. The participants were familiar with the concept of inclusion because their schools were using an inclusive model to educate students with disabilities. Approximately 81.8% of the respondents agreed that there were problems with instruction in inclusion classrooms, and 83% of the respondents agreed that personnel should be prepared by universities to handle inclusion. Difficulties with classroom management in an inclusive classroom were also listed as a problem by 82.4% of the respondents. The majority of the teachers surveyed viewed inclusion as problematic because they did not feel that they had sufficient training in college to effectively instruct or manage an inclusive classroom.

More recently, Conderman and Johnson-Rodreguez (2009) conducted a pilot study to examine beginning general and special education teachers' perceptions of their preparation and importance of skills associated with their collaborative roles under IDEIA. The participants were secondary and elementary general and special education teachers with 6 or fewer years of teaching experience who were randomly chosen from the state teacher directory. The survey consisted of a three part forced choice and open-ended questions. In Part 1, respondents indicated their level of preparedness and their perception of the importance of 20 skills related to inclusion and collaboration based on the Interstate New Teacher Assessment and Support Consortium (INTASC) standards. Participants rated each skill on a 4-point Likert-type scale ranging from 1 (*not prepared*) to 4 (*very prepared*) and a corresponding 4-point Likert-type scale assessing one's sense of the importance of each skill ranging from 1 (*not important*) to 4 (*very important*). Part 2 of the survey consisted of demographic data and in Part 3 participants responded to five open-ended questions. The open-ended questions related to the most useful components from their teacher-preparation program regarding working with students with disabilities, their most challenging situation, current training needs, advice for beginning teachers, and whether they anticipate remaining a teacher for three more years.

Analysis revealed that three of the four subgroups noted that they were well prepared in being sensitive to children and families from various cultures. Although many teachers felt that they value diversity, they also noted the challenges of working effectively with at-risk students and their families. Overall, general education teachers felt less prepared in skills associated with curriculum and assessment, such as making accommodations and modifications, providing student access to the general education curriculum, and using individualized assessments and

progress monitoring. The pre-service teacher studies described above are summarized in Table

7.

Table 7

Pre-service Teacher Studies

Researchers	Purpose	Research Design	Findings
D'Alonzo, Giordano, & Vanleenuwen (1997)	To obtain data on the attitudes of general educators about inclusion	33 item questionnaire was administered to 336 in service general education teacher	The majority of the teachers felt that inclusion was problematic because they did not feel that they had sufficient training to manage an inclusive classroom
Conderman & Johnson-Rodreguez (2009)	To look at beginning teachers perception of preparation and importance of collaborative skills learned	3 part forced choice and open ended questions survey given to 46 beginning teachers	General education teachers felt less prepared in skills associated with curriculum and assessment, such as making accommodations and modifications, providing student access to the general education curriculum, and using individualized assessments and progress monitoring.

Three out of five graduates from schools of education surveyed for the Levine report

(2006) stated that their training program did not adequately prepare them for what they actually

do in the classroom on a daily basis. A 2009 survey by the Government Accountability Office

(GAO) found that an estimated 70% of teacher preparation programs recently had taken steps in

the last 3 years or were planning to take steps in the next 2 years to improve prospective

teachers' training on instructing students with disabilities, but noted ongoing challenges to

provide this training. Some of the most frequently noted challenges in the GAO survey included

institutions not having enough program or credit hours due to state standards (60%), difficulty arranging field experiences, including student teaching for prospective teachers (54%), and limited faculty with experience working with students with disabilities (54%).

Although the AYP and highly qualified mandates of NCLB and IDEA have forced general education teachers to take a more active role in the education of students with disabilities, it does not appear that general education teachers are learning about their new roles and responsibilities (Garriott, et al., 2003). Research has shown that general education teachers today feel that they lack the preparation and experience when it comes to educating students with disabilities (Campbell, et al., 2003; Hsien, 2007; Ross-Hill, 2009; Shippen, et al., 2005; Utley, 2009). General education teachers who lack the knowledge, skills, and confidence to work with students with disabilities are unlikely to consistently make classroom accommodations (Utley, 2009). In addition to the inconsistency of classroom accommodations, lack of preparation and experience also leads teachers to display poor attitudes towards the idea of inclusion and working with students with disabilities. Studies have shown a correlation between the attitudes of general education teachers towards inclusion and the less frequent implementation of effective instructional strategies in inclusive settings (Bauwens & Hourcade, 1991; Bender, et al. 1995; Hourcade & Bauwens, 2001; Kamens, et al. 2003; Ross-Hill, 2009).

Bender, et al. (1995) investigated the types of instructional strategies offered in mainstream classes. The researchers asked 127 mainstream teachers in Grades 1 through 8 to complete a self-evaluation concerning instructional strategies used in their general education classes. The teachers were also asked to complete a questionnaire concerning their attitudes toward their own efficacy and towards mainstreaming. Analysis of data showed that teachers' attitudes towards mainstreaming correlated with each measure of instructional strategy usage,

suggesting that teachers with a more positive attitude toward mainstreaming tended to report more utilization of effective mainstream instructional strategies. The authors report that this study directly linked negative attitudes towards mainstreaming to the reduced amount of effective instructional strategies utilized in the inclusive classroom.

Literature suggests that when teachers have negative attitudes about the inclusion of students with disabilities, their practice is likely to be implemented ineffectively and eventually not at all (Bauwens & Hourcade, 1991; Bender, et al., 1995; Hourcade & Bauwens, 2001; Kamens, et al., 2003; Ross-Hill, 2009). Teacher preparation programs have been shown to change pre-service teacher's attitudes towards students with disabilities (Campbell, et al., 2003; Ford, et al., 2001; Garriott, et al.,2003; Hsien, 2007; Kozleski, et al., 2002; Shippen, et al., 2005; Singh, 2007; Sobel & Taylor, 2005). However, changing the attitudes of teachers alone does not necessarily prepare them to effectively instruct students with disabilities in an inclusive setting. Even general education teachers with positive attitudes towards inclusion are reluctant in practice to have students with disabilities in their classrooms (Lombardi & Hunka, 2001).

Teacher preparation is a contributing factor to the success of inclusion (D'Alonzo, et al., 1996; Rao, 2009) (see Figure 2). Providing pre-service teachers with the knowledge and skills needed to meet the diverse needs of students with disabilities in an inclusive setting is essential for teacher preparation programs (Yeo, et al., 2008). This is especially true if the goal of teacher preparation programs is to produce teachers ready and willing to assume the roles and responsibilities that will be expected of them once they enter the classroom. Therefore, teacher preparation programs need to develop pre-service teachers' sense of self efficacy, or level of confidence, as well as various teaching theories and practices (Yeo, et al., 2008).
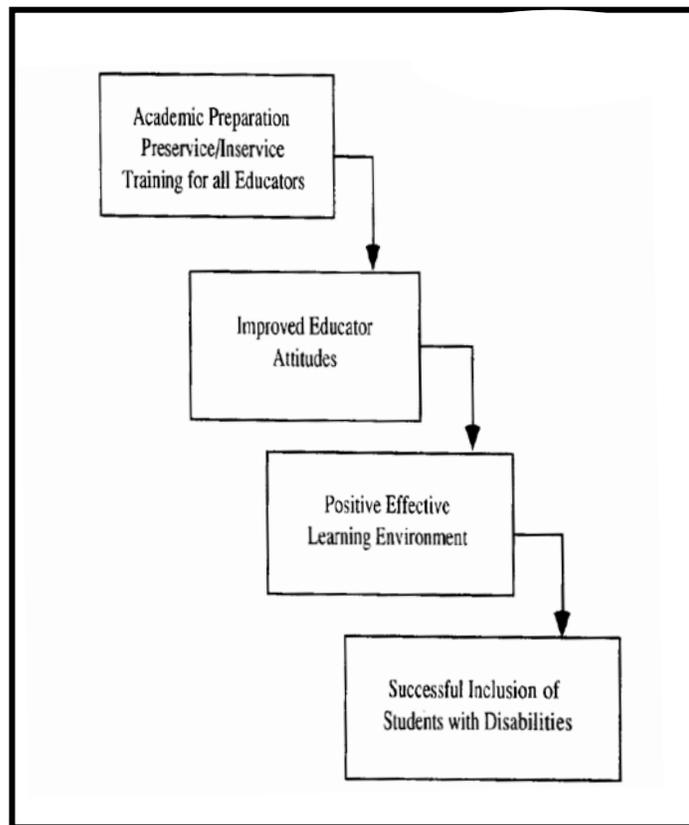
Figure 2. Factors in the Success of Inclusion (D'Alonzo, et al., 1996)

Interstate New Teacher Assessment and Support Consortium (INTASC) Standards

The Interstate New Teacher Assessment and Support Consortium, which is a program of

the Council of Chief State School Officers (CCSSO), is a consortium of state education agencies

and professional organizations which is guided by the premise that "An effective teacher must be

able to integrate content knowledge with the specific strengths and needs of students to assure

that all students learn and perform at high levels." INTASC developed a set of performance

standards (see Appendix A) that were designed to outline the common principles and

foundations of teaching practice that cut across all subject areas and grade levels and that are

necessary to improve student achievement. The standards are organized around ten principles

reflecting the requisite knowledge, skills, and dispositions necessary for teachers starting their

careers. The principles serve as guidance for teacher preparation programs. Those principles are:

1. The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

2. The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development.

3. The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

4. The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

5. The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

6. The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

7. The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

8. The teacher understands and uses formal and informal assessment strategies to evaluate and ensure continuous intellectual, social and physical development of the learner.

9.	The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

10.	The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being (INTASC, 2001).

The INTASC standards are consistent with federal education mandates including the IDEA and are based on the underlying belief that all students should have access to the general education curriculum. In order to obtain initial licensing, beginning teachers must show that they are proficient in these ten standards. This is done by meeting the requirements of teacher preparation programs such as course work or by developing portfolios demonstrating beginning teacher competencies based on the INTASC standards.

Elementary Education and Secondary Education Preparation

Elementary education and secondary education programs differ greatly in their methods of preparation. Elementary education programs are typically known as generalist programs. Generalist programs prepare teachers to teach a variety of subjects equally with no focus on a particular subject matter. The required courses for elementary education majors frequently consists of some sort of introduction to education; a course in educational psychology; six or seven methods courses for teaching reading, social studies, arithmetic, science, art and music; and student teaching (Feiman-Nemser, 1990). Elementary education programs tend to focus on how to teach instead of what to teach; while on the other hand, secondary education programs tend to be more subject specific. The professional sequence of courses is not as extensive for

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secondary education majors. The sequence will commonly involve a course in adolescent psychology, a general methods course, a subject-specific methods course and student teaching (Feiman-Nemser, 1990). Secondary education programs tend to emphasize what to teach more than how to teach a particular subject. Elementary education majors also normally complete more credit hours of education specific classes than secondary education majors. On an average, elementary education majors complete of 50 of their 125 hours of credit in education specific courses while secondary education majors tend to average only 26 hours of credit in education specific courses (Feiman-Nemser, 1990).

Teacher Preparation Programs Special Education Curricula

The curricula of teacher preparation programs are usually a mix of courses, ranging from methods to the philosophy and history of education, rather than focusing on preparing general education teacher for what is actually needed in real classrooms (Holland, et al., 2008). The majority of these programs focus on ensuring that teachers are proficient in subject matter giving little attention to the other things teachers need to know when they enter the classroom (Levine & Education Schools, 2006). The federal government's accountability office (U.S. Government Accountability Office, 2009) recently released a report about the preparedness of teachers to work with students with disabilities and found that about 95% of traditional teacher preparation programs nationwide require courses, with varying levels of emphasis, on students with disabilities. However, only 73% of elementary and 67% of secondary students were required to take a separate course about students with disabilities.

Holland, et al. (2008) conducted a study to examine the extent to which elementary education teacher preparation programs integrated content related to students with disabilities as part of the preparation program. The researchers found that disability content is integrated into

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teacher preparation programs through a variety of strategies. Those strategies range from the most prevalent (86%) approach of requiring one disability-focused course to a few institutions (11%) that offer a program leading to dual licensure in elementary education and special education. Even with the current federal mandates and accreditation standards, the majority of teacher preparation programs still only require one introductory special education course for general education majors. A summary of the findings are shown on Table 8.

Table 8

Elementary Education Teacher Preparation Programs Strategies for Integrating Disability Content (Holland, et al., 2008)

Strategy	Detail of Strategy	Percentage of Programs using Strategy
Requiring disability-focused courses	Require at least one course	86
	Require more than one course	26
	All programs that require field experience	63
Incorporating disability content into field experiences	Disability courses across programs that include fieldwork	33
Embedding disability content in other required courses	Embed in reading courses	37
	Embed in math courses	17
	Embed in multicultural courses	38
	Embed in methods courses	23
Practicing collaborative program design	Programs that offer a dual license	11
	Programs that offer a merged program	3

The typical introductory special education course consist broadly of philosophical, legislative, and practice foundations of including students with disabilities in general education settings. The GAO (2009) survey found that most of the courses on students with disabilities required by traditional teacher preparation programs included information on major categories of disabilities (90%); relevant state and federal laws (89%); and instructional strategies to meet the diverse needs of students, such as differentiated instruction (88%), determining and utilizing accommodations for instruction and assessment (86%), and Response to Intervention (80%). These topics have been shown to increase pre-service teachers' knowledge and attitude towards inclusion (Campbell, et al., 2003; Ford, et al., 2001; Garriott, et al., 2003; Hsien, 2007; Kozleski, et al., 2002; Shippen, et al., 2005; Singh, 2007; Sobel & Taylor, 2005). Increased knowledge and attitudes towards students inclusion by general education teachers has shown to have a positive impact on the educational performance of students with disabilities in the general education classroom (D'Alonzo, et al.,1997; Ferguson, Meyer, Junipter, & Zingo, 1992; McDonnell, McDonnell, Hardman, & McCune, 1991).

Jones and Messenheimer-Young (1989) surveyed a random sampling of 200 college and universities and identified two topics that they believed needed to be explicitly addressed in order to adequately prepare teachers for inclusive classrooms. Those topics were: (a) exceptionalities, information focused on such topics as legislation and characteristics of exceptional learners; and (b) mainstreaming, information focused on curriculum accommodations and application of instructional strategies. Stand-alone courses in special education usually focus on the characteristics and categories of exceptionalities as well as etiology, legal issues, and available resources and services. There is little if any instruction emphasizing accommodations and instructional strategies involved in these courses. Current

literature suggests that one stand-alone course in special education may not be sufficient enough to increase the skill, general education teachers' competence and confidence when it comes to working with students with disabilities (Brown, et al., 2008).

Kamens et al. (2003) suggest that information about special education should be integrated throughout the teacher preparation program, not just compacted all into one course. They note that there is a critical need for training pre-service teachers on the use of alternative teaching strategies and making accommodations. Cultivation of these skills is likely to enhance the ability of general education teachers to provide effective instruction to students with disabilities. If all students are to be taught in the general education classroom, then all general education teachers must be prepared to teach all students. Teacher preparation programs should present knowledge and examples of addressing individual student differences as well as promote and practice the skills necessary for accommodating those individual differences (Shade & Stewart, 2001). Coursework on inclusion, collaboration, or educating students with disabilities is insufficient without opportunities to practice those skills in authentic settings (Conderman & Johnston-Rodriguez, 2009). The extent to which teacher preparation programs prepare general and special education teachers to use research-based methods and make data-driven instructional decisions determine teachers' abilities to be effective teachers (Conderman & Johnston-Rodriguez, 2009). Properly trained teachers improve student outcomes and are more likely to remain in the profession (Smith, et al., 2010).

In a white paper on preparing future educators to work with students with disabilities commissioned by the American Association of Colleges for Teacher Education, Kozleski, et al. (2002) five recommendations were made to support an effort to better prepare general education teachers to work with students with disabilities. Those recommendations were to: (a) renew the

teacher education curriculum to establish a shared language that supports the collaboration of general and special education teachers; (b) establish collaborative clinical experiences for general and special educators; (c) ensure competence of new teachers to work effectively with students with disabilities; (d) support of ongoing development of new teachers during their first three years of teaching; and (e) establish a process for shared governance of teacher education that reflects the collective responsibilities of teacher educators, content specialists, and practicing teachers (p. 5).

Traditionally, teacher preparation programs have viewed general education and special education as two separate entities thus resulting in totally separate training experiences. This separate training has resulted in two distinct educational systems being formed that have their own curricular goals and pedagogy (Buell, Hallam, Gamel-Mccormick, & Scheer, 1999). In a majority of current teacher preparation programs, general education teachers are prepared in one track while special education teachers are prepared completely separately (Sobel, et al., 2007). This form of training produces teachers with different sets of knowledge and information. Special education teachers have limited knowledge about general education curriculum and teaching practices, while general education teachers remain equally uninformed about special education.

The traditional way of preparing teachers may no longer be the best way. The current demands on general education teachers requires them to have an increased understanding of working with students with disabilities (Brown, et al., 2008). Sobel and Taylor (2005) found that at the end of general education teacher preparation programs where only one introductory special education course was required, students were concerned with their ability to adapt instructional methods to meet the needs of diverse learners. General education teachers with the most training

on working with students with disabilities tend to be the most successful in the inclusive classroom (Ross-Hill, 2009). Unfortunately, few general education teachers are receiving that training before they enter into the workforce.

To investigate current teacher preparation programs, Harvey, et al. (2010) conducted an exploratory investigation using a national sample of faculty members from teacher-education institutions' departments of special education, elementary education, secondary education, and curriculum and instruction. The researchers wanted to study faculty members' perceptions of pre-service teacher training efforts in inclusion and collaboration for teacher education majors.

Analysis of data revealed that thirty-five percent of the institutions sampled were offering an introductory special education course across all majors. However, only three percent offered courses in assessment/planning and classroom management; two percent offered courses on interventions; and eleven percent offered no field experiences concerning inclusion. Analysis of the narrative inquiry section of the survey revealed that special educators indicated that coursework in collaboration was provided, whereas curriculum and instruction respondents and elementary or secondary educators indicated that collaboration courses were not necessarily part of a teacher-education major's course of study.

In a 1998 survey of deans of schools of education, about 60% indicated that pre-service teachers in their programs were not being prepared to meet the needs of a diverse student population (Futrell, Gomez, & Bedden, 2003). Teacher preparation programs are currently charged with the task of improving their current practice, but to do a fundamentally different job. This means that whatever teacher education programs did in the past, even if thought to be perfect, no longer meets the needs of the schools.

CHAPTER 3. METHODS

Education professionals are now faced with the challenge of making sure that students

with disabilities meet grade level standards and are proficient enough to pass various state and

district level assessments. The charge of ensuring that students with disabilities are successful

on state assessments is not that of special education teachers alone. General education teachers

are just as responsible, if not more responsible for making sure that students with disabilities are

successful in the general education curriculum. The current federal educational mandates, such

as *No Child Left Behind* (NCLB) of 2001 and *The Individuals with Disabilities Education*

Improvement Act (IDEIA) *of 2004,* have forced general education teachers to take a more active

role in the education of students with disabilities; however, it does not appear that general

education teachers are learning about their new roles and responsibilities prior to entering the

classroom.

Traditionally, teacher preparation programs have viewed general education and special

education as two separate entities thus resulting in totally separate training experiences. This

separate training has resulted in two distinct educational systems being formed that have their

own curricular goals and pedagogy (Buell, et al.,1999). In a majority of current teacher

preparation programs, general education teachers are prepared in one track while special

education teachers are prepared completely separately (Sobel, et al., 2007). This form of training

produces teachers with different sets of knowledge and information. Special education teachers

have limited knowledge about general education curriculum and teaching practices, while

general education teachers remain equally uninformed about special education. The traditional way of preparing teachers may no longer be the best way.

The current demands on general education teachers require them to have an increased understanding of working with students with disabilities (Brown, et al., 2008). Sobel and Taylor (2005) found that at the end of general education teacher preparation programs where only one introductory special education course was required, students were concerned with their ability to adapt instructional methods to meet the needs of diverse learners. General education teachers with the most training regarding instruction for students with disabilities tend to be the most successful in the inclusive classroom (Ross-Hill, 2009). Unfortunately, few general education teachers receive that training before they enter into the workforce. In a 1998 survey of deans of schools of education, about 60% indicated that pre-service teachers in their programs were not prepared to meet the needs of a diverse student population (Futrell, et al., 2003). Teacher preparation programs are currently charged with the task of improving their current practice. This means that whatever teacher education programs did in the past, even if thought to be perfect, no longer meets the needs of the schools.

Statement of the Research Problem

The problem this study examined is the lack of research regarding general education teachers' perceptions of their level of preparedness for working with students with disabilities after completing a preparation program which required only one introductory special education course. This study extended on the findings from Holland et al. (2008) who identified the strategies used by teacher preparation programs for preparing general education teachers to teach students with disabilities in the general education classroom. Holland et al. (2008) identified requiring one disability-focused course as the most frequently used strategy. Using Holland et

al.'s (2008) findings, this study examined the extent to which requiring only one disability-focused course is successfully in ensuring that pre-service teachers feel prepared to teach students with disabilities.

Purpose of the Study

Current federal mandates have challenged teacher preparation programs to prepare all teachers to meet the regulations set forth for the education of students with disabilities. Today's teachers are required to have a greater extent of knowledge and skills than the teachers of years past. This is evident not only in federal laws, but also by the standards of several accreditation agencies for teacher preparation programs. The requirements of the *Higher Education Opportunity Act* of 2008 state that teacher preparation programs must provide assurances that general education teachers will receive training about providing instruction to diverse populations, including students with disabilities (Smith, et al., 2010). Even with the current push by federal mandates and accreditation agencies to prepare general education teachers to work with students with disabilities, it appears that many teacher preparation programs are not moving in the same direction. Three out of five graduates from schools of education surveyed for the Levine report (2006) stated that their training program did not adequately prepare them for what they actually do in the classroom on a daily basis.

Research has shown that general education teachers today often lack the preparation and experience when it comes to educating students with disabilities (Campbell, et al., 2003; Hsien, 2007; Ross-Hill, 2009; Shippen, et al.,2005; Utley, 2009). This limited amount of preparation results in fluctuations in the amount of accommodations made for students with disabilities because they lack the knowledge skills and confidence to do so (Utley, 2009). In addition to the inconsistency of classroom accommodations, lack of preparation and experience also leads to

poor attitudes towards the idea of inclusion and working with students with disabilities. Literature has shown that when teachers have negative attitudes about the inclusion of students with disabilities, their practice is likely to be implemented ineffectively and eventually not at all (Bauwens & Hourcade, 1991; Bender, et al., 1995; Hourcade & Bauwens, 2001; Kamens, et al., 2003; Ross-Hill, 2009).

In a white paper on preparing future educators to work with students with disabilities commissioned by the American Association of Colleges for Teacher Education, Kozleski et al. (2002) made five recommendations to support an effort to better prepare general education teachers to instruct students with disabilities. One of those recommendations was to ensure the competence of new teachers to effectively instruct with students with disabilities. General education teachers who feel that they have been properly prepared to teach students with disabilities tend to be the most successful in the inclusive classroom (Ross-Hill, 2009). The purpose of this study was to determine whether or not pre-service teachers enrolled in a program which only required one disability-focused course felt prepared to teach students with disabilities.

Research Questions

Based on the literature review and the need for further research, the following research questions were addressed in this study:

1.   To what extent do pre-service teachers majoring in elementary education who completed only one disability focused course perceive that they are prepared to instruct students with disabilities in the general education classroom?

2.   To what extent do pre-service teachers majoring in secondary education who completed only one disability focused course perceive that they are prepared to instruct students with disabilities in the general education classroom?

3.   To what extent is there a statistically significant difference between the mean scores of pre-service teachers majoring in elementary education and pre-service teachers majoring in secondary education on the *INTASC Readiness Survey-Modified*?

Method

This study was designed to fill the gap in previous teacher preparation research by analyzing general education pre-service teachers' perceived level of preparedness to instruct students with disabilities in the general education classroom at the end of a teacher preparation program which only required one disability-focused course. The purpose of this study was to identify effective teacher preparation practices in preparing general education teachers to instruct students with disabilities. The following sections are used to describe the methods implemented in this research project. Specifically, this chapter is organized around the description of (a) participants, (b) instrumentation, (c) procedures, (d) variables, and (e) data analysis.

Participants

The participants of this study were pre-service undergraduate students majoring in either an elementary (K–6) general education program (N = 98) or a secondary (6–12) general education program (N = 71). There were a total of 169 participants in this study. The participants had finished all course work and were at the end of their student teaching internships. The pre-service teachers were recruited through enrollment in student teaching or internships at Auburn University (N = 114) and Columbus State University (N = 55).

Participation was strictly voluntary. Participants consented to being included in the study by completing and returning the survey.

The optimal sample size was determined by performing a power analysis. Power was defined as the probability of rejecting the null hypothesis when in fact it was the correct decision for the researcher to make (Mertler & Vannatta, 2005). The formula used to determine power for the statistical analysis used in this study was: $104 + v$ (number of variables) = sample size (Green, 1991). When calculating this equation, the number of variables used in this study was 2, yielding $104 + 2 = 106$. In other words, the participation of at least 106 subjects is optimal for the generalizability of the findings. This study had 169 participants. Table 9 outlines the characteristics of the participant sample.

Table 9

Participant Characteristics

Characteristic	Number of Participants
Gender	
Male	20
Female	148
No Response	1
Ethnicity	
African American	14
Latino/a	4
White	143
Asian	4

(table continues)

Table 9 (continued)

Characteristic	Number of Participants
Other	4
Degree Program	
Elementary Education Major	98
Secondary Education Major	71

Instrumentation

Two instruments were used to gather data for this study. These instruments were a Demographics questionnaire and the *Interstate New Teacher Assessment and Support Consortium (INTASC) Readiness Survey–Modified*. The researcher developed the demographics questionnaire for the purpose of this study. The content and structure of each instrument is described below.

Demographics questionnaire. The demographic questionnaire (see Appendix B) was used to obtain demographic information for each participant. Demographic information was collected using fill-in-the-blank options. Data collected included years of teaching experience, gender, cultural background, grade level planning to teach, teacher education program enrolled in, number of courses taken that dealt with educating individuals with disabilities, and perceived level of competence to teach students with disabilities.

Interstate New Teacher Assessment and Support Consortium (INTASC) readiness survey–modified. The perceived level of preparedness of elementary and secondary general education teachers' to teach students with disabilities in the general education classroom was measured by the Interstate New Teacher Assessment and Support Consortium (INTASC) Readiness Survey–Modified. The INTASC Readiness Survey–Modified (see Appendix C)

measures perceptions of teaching skill readiness in areas of knowledge, disposition and performance as outlined on the ten INTASC standards. The researcher obtained the original survey, the INTASC Readiness Survey, from Dr. Elizabeth Foster from the University of North Carolina Wilmington. Dr. Foster used the original survey to measure interns and novice teachers' perceived level of preparedness in association with the ten INTASC standards. The original INTASC Readiness Survey was a Likert-type instrument that was closely aligned with the 10 INTASC Standards. The researcher modified the original survey by adding a new subsection. The new subsection added an additional seven items to the survey. The additional items specifically focused on special education knowledge.

INTASC is a consortium of state education agencies, higher education institutions, and national educational organizations that is concerned with the education, licensing and ongoing professional development of teachers. The organization is guided by the premise that an effective teacher must be able to integrate content knowledge with pedagogical understanding to assure that all students learn and perform at high levels. The INTASC model core standards represent those principles which should be present in all teaching regardless of the subject or grade taught, and serves as a framework for the systematic reform of teacher preparation and professional development (INTASC, 2001). The INTASC standards are consistent with the IDEA and are based on the underlying belief that all students should have access to the general education curriculum. Survey items, which reflected the 10 INTASC principles, included what all teachers need to know (knowledge) and do (skills) in order to support students with disabilities in the general education classroom.

The ten INTASC standards that were utilized to form the indicators for the survey are as follows:

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1. The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

2. The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development.

3. The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

4. The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

5. The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

6. The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

7. The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

8. The teacher understands and uses formal and informal assessment strategies to evaluate and ensure continuous intellectual, social and physical development of the learner.

9. The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

10. The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

In the original instrument, the survey included 63 items measuring the ten beginning teacher standards: (1) Content Knowledge (items 1–7); (2) Developmental Appropriateness (items 8–15); (3) Differentiated Instruction (items 16–21); (4) Varied Instructional Strategies (items 22–26); (5) Motivational Techniques and Learning Environment (items 27–32); (6) Communication and Media Use (items 33–38); (7) Planning for Instruction (items 39–42); (8) Formal and Informal Assessment (items 43–48); (9) Reflective Practice and Professional Growth (items 49–54); and (10) School and Community Relationships (items 55–63).

In the modified version, a subcategory of special education knowledge was added (items 64–70). The subcategory items were derived from the Council for Exceptional Children (CEC) professional standards. The CEC professional standards were developed to ensure that all educators are well prepared to support the learning of individuals with disabilities. The CEC standards are aligned to the INTASC standards for teacher licensure.

The items on the INTASC Readiness Survey–Modified are ranked on a five-point Likert-type scale as follows: 1 = Not Yet Prepared, 2 = Poorly Prepared, 3 = Marginally Prepared, 4 = Adequately Prepared, and 5 = Well Prepared. The internal consistency reliability estimate for the original INTASC Readiness Survey is .978. There was no validity information available for the original survey. Since a subcategory was added and no validity information was available for the original survey, internal consistency reliability measures and content validity were reexamined.

Internal Consistency Reliability

Each of the eleven subscales of the INTASC Readiness Survey–Modified was tested for internal consistency reliability. Cronbach's alpha coefficient was used to compute internal consistency reliability. The alpha coefficients for the subsets were: content knowledge = .79, developmental appropriateness = .72, differentiated instruction = .71, varied instructional strategies = .81, motivational techniques and learning environment = .91, communication and media use =.83, planning for instruction = .70, formal and informal assessment = .81, reflective practice and professional growth = .73; school and community relationships = .85; and special education knowledge = .83. Table 10 displays the Cronbach alpha levels for each section of the INTASC Readiness Survey–Modified. The alpha level for the entire survey as a whole is .97; therefore, a high level of reliability was attained for this study.

Table 10

Cronbach's Alpha Levels for Each Section of the INTASC Readiness Survey–Modified

Section	Cronbach Alpha Level
Content Knowledge	.79
Developmental Appropriateness	.72
Differentiated Instruction	.71
Varied Instructional Strategies	.81
Motivational Techniques and Learning Environment	.91
Communication and Media Use	.83
Planning for Instruction	.70
Formal and Informal Assessment	.81

(table continues)

Table 10 (continued)

Section	Cronbach Alpha Level
Reflective Practice and Professional Growth	.73
School and Community Relationships	.85
Special Education Knowledge	.83

Content Validity

To verify content validity, the INTASC Readiness Survey–Modified was reviewed by a panel of experts in special education on the faculty at Auburn University with Ph.D.'s along with a description of each of the INTASC standards. The survey items were reviewed by the panel, but not quantified. The panel reviewed the standards as well as the survey items and confirmed that the instrument demonstrated content validity. In addition, the panel also reviewed the newly developed survey items which specifically addressed special education knowledge along with CEC professional standards and verified the content validity of the instrument.

Procedures

The research sites for this study were Auburn University in Auburn, Alabama and Columbus State University in Columbus, Georgia. Before research began, approval to conduct the study was granted by the Institutional Review Board for Research Involving Human Subjects at Auburn University and Columbus State University (see Appendices D & E). The researcher then received permission from the Director of the Professional Education Services at Auburn University and the Director of the Office of Student Advising and Field Experiences at Columbus State University to attend each internship meeting at the end of the semester. Three hundred survey packets were prepared for distribution. Enclosed in each survey packet was: (a)

an information letter explaining the research study and any possible risk to the participants and

their rights (see Appendix F), (b) a demographics questionnaire, and (c) the survey instrument.

The survey packets were distributed by the researcher at the beginning of each internship

meeting to each potential participant. Participation in the research project was on a voluntary

basis. Those who chose to participate completed the survey and placed it back in the envelope to

be turned in at the end of the meeting. Those who did not choose to participate also turned in an

envelope at the end of the meeting; however, it contained an uncompleted survey.   All

information obtained for this study was recorded in such a manner that participants could not be

identified directly or through identifiers linked to the subjects. All surveys were numbered and

participants did not write their name on any items to ensure confidentiality. Approximately 169

survey packets were returned yielding a 56% return rate.

Variables of the Study

Independent Variables

The independent variable in the study were major program of study, representing

elementary (K–5) general education majors and secondary (6–12) general education majors.

Dependent Variables

The dependent variable was the perceived level of preparedness based on the INTASC

Readiness Survey–Modified instrument completed by the participants. The questionnaire was

based on a five-point Likert-type scale.

Data Analysis

A one-sample t-test statistical procedure was conducted on the INTASC Readiness

Survey–Modified scores to evaluate whether the mean of the perceived level of preparedness for

pre-service teachers in elementary general education programs was significantly different from a

test value of 280. A one sample *t*-test statistical procedure compares the mean score of a sample group to a known value (Ary, Jacobs, Razavieh, & Sorensen, 2009). A second one sample *t*-test was conducted to evaluate if the mean of the perceived level of preparedness for pre-service teachers in secondary general education programs was significantly different from a test value of 280. The test value of 280 represented a point on the scale which ranged from 70 to 350. A test value of 280 (a rating of 4 for 70 items) indicated that the respondents felt that they were adequately prepared to instruct students with disabilities in an inclusion setting. Individuals who scored higher than the value of 280 perceived themselves as moderately to highly prepared to instruct students with disabilities in an inclusion setting, and those who scored lower than 280 perceived themselves as mildly not prepared to instruct students with disabilities in an inclusion setting. Those who fell exactly on the test value were uncertain of their level of preparedness.

An independent-samples *t*-test statistical procedure was conducted to compare the perceived level of preparedness for pre-service teachers in an elementary program of study and the perceived level of preparedness of pre-service teachers in a secondary program of study. An independent samples *t*-test statistical procedure compares the mean scores of two independent groups on a given variable (Ary, et al., 2009). The independent samples *t*-test evaluates whether the mean value of the test variable for one group differs significantly from the mean value of the test variable for the second group.

Descriptive statistics were calculated to examine the means of elementary and secondary participant responses for each subsection of the survey. In addition, each subsection was assigned a test value which indicated an adequate level of precieved preparedness on the scale for that subsection. The survey contained 11 subsections ranging from five to nine Likert-type items in each individual subsection. Individuals who scored higher than the test value percieved

themselves as moderately to highly prepared in that particular subsection. Individuals who scored lower than the test value perceived themselves as mildly not prepared in that particulr subsection. The subsections, number of items for each subsection,test values, and the range of possible scores are presented in Table 11.

Table 11

Subsections, Number of Items, Test Values, and Range

Section	Number of Items	Test Values	Range
Content Knowledge	7	28	7–35
Developmental Appropriateness	8	32	8–40
Differentiated Instruction	6	24	6–30
Varied Instructional Strategies	5	20	5–25
Motivational Techniques and Learning Environment	6	24	6–30
Communication and Media Use	6	24	6–30
Planning for Instruction	4	16	4–20
Formal and Informal Assessment	6	24	6–30
Reflective Practice; and Professional Growth	6	24	6–30
School and Community Relationships	9	36	9–45
Special Education Knowledge	7	28	7–35
Total	70	280	70–350

Results

A one-sample *t*-test statistical procedure was conducted to ascertain the level of pre-service general education teachers' level of preparedness to work with students with disabilities compared to a test score of 280 on the INTASC Readiness Survey–Modified. A test value of

280 indicated a perceived adequate level of preparedness to instruct students with disabilities in an inclusion setting. The one sample *t*-test indicated a significant difference in the perceived level of preparedness of pre-service teachers who are majoring in elementary education (M = 302.7, SD = 34.7) based on a score of 280 or higher on the INTASC Readiness Survey–Modified, *t* (97) = 86.4, p = .000. In addition, a one sample *t*-test indicated a significant difference in the perceived level of preparedness of pre-service teachers who are majoring in secondary education (M = 304.1, SD = 35.8) based on a score of 280 or higher on the INTASC Readiness Survey–Modified, *t* (70) = 71.6, p = .000. The results suggest that both pre-service teachers in the elementary and secondary programs perceived themselves as prepared to teach students with disabilities in an inclusion setting.

The independent sample *t*-test statistical procedure was implemented to compare the perceived level of preparedness for pre-service teachers majoring in elementary education and the perceived level of preparedness for pre-service teachers majoring in secondary education. There was not a statistically significant difference in the perceived level of preparedness for pre-service teachers in an elementary education program (M = 302.6, SD = 34.4) and the perceived level of preparedness for pre-service teachers in a secondary education program (M = 302.3, SD = 35.6), *t* (177) = .061, p = .952 on the INTASC Readiness Survey–Modified. Table 12 shows the mean scores and standard deviations for elementary education majors and secondary education majors. The results suggest that there was no difference among both programs (elementary and secondary) in the preparation of pre-service teachers to teach students with disabilities because participants in the elementary and secondary programs perceived themselves as at least adequately prepared to teach students with disabilities in an inclusion setting.

Table 12

Means and Standard Deviations of Perceived Preparedness

	N	Mean	Standard Deviation
Elementary Education Majors	98	302.7	34.7
Secondary Education Majors	71	304.1	35.8

Data were analyzed for each subsection and compared to a test value to indicate the perceived level of preparedness. Table 13 displays the mean score by major for each subsection and the test value. The test value for each subsection (a rating of 4 for each of the items in the particular subsection) indicated that the respondents felt that they were adequately prepared in that individual subsection. The test value for the subsection of content knowledge was 28. The mean score for elementary pre-service teachers was 30.2 and the mean score for secondary pre-service teachers was 31.0 for content knowledge. The test value for the subsection of developmental appropriateness was 32. The mean score for elementary pre-service teachers was 34.5 and the mean score for secondary pre-service teachers was 34.6 for developmental appropriateness. The test value for the subsection of differentiated instruction was 24. The mean score for elementary pre-service teachers was 24.7 and the mean score for secondary pre-service teachers was 24.9 for differentiated instruction. The test value for the subsection of varied instructional strategies was 20. The mean score for elementary pre-service teachers was 21.5 and the mean score for secondary pre-service teachers was 21.6 for varied instructional strategies. The test value for the subsection of motivational techniques and learning environment was 24. The mean score for elementary pre-service teachers was 26.1 and the mean score for secondary pre-service teachers was 26.3 for motivational techniques and learning environment.

The test value for the subsection of communication and media use was 24. The mean score for elementary pre-service teachers was 25.5 and the mean score for secondary pre-service teachers was 26.1 for communication and media use. The test value for the subsection of planning for instruction was 16. The mean score for elementary pre-service teachers was 17.2 and the mean score for secondary pre-service teachers was 18.2 for planning for instruction. The test value for the subsection of formal and informal assessment was 24. The mean score for elementary pre-service teachers was 25.9 and the mean score for secondary pre-service teachers was 25.5 for formal and informal assessment. The test value for the subsection of reflective practice and professional growth was 24. The mean score for elementary pre-service teachers was 25.8 and the mean score for secondary pre-service teachers was 25.9 for reflective practice and professional growth. The test value for the subsection of school and community relationships was 36. The mean score for both elementary pre-service teachers and secondary pre-service teachers was 40.2 for school and community relationships. The test value for the subsection of special education knowledge was 28. The mean score for elementary pre-service teachers was 30.4 and the mean score for secondary pre-service teachers was 29.4 for special education knowledge.

Table 13

Subsections Mean Scores

Subsections	Elementary Mean Score	Secondary Mean Score	Test Value	Range
Content Knowledge	30.20	31.04	28	7–35
Developmental Appropriateness	34.48	34.57	32	8–40
Differentiated Instruction	24.71	24.97	24	6–30
Varied Instructional Strategies	21.50	21.60	20	5–25
Motivational Techniques and Learning Environment	26.13	26.29	24	6–30
Communication and Media Use	25.51	26.12	24	6–30
Planning for Instruction	17.23	18.26	16	4–20
Formal and Informal Assessment	25.89	25.53	24	6–30
Reflective Practice; Professional Growth	25.81	25.92	24	6–30
School and Community Relationships	40.29	40.23	36	9–45
Special Education Knowledge	30.40	29.46	28	7–35

Implications

As the number of students with disabilities served in the general education classroom grows each year, it is imperative that beginning general education teachers be adequately prepared to educate all students. These results suggest that both pre-service teachers majoring in elementary education and secondary education perceived themselves as prepared to teach students with disabilities. Also, the results suggest that there were no significant differences

between the level of preparedness among pre-service teachers majoring in elementary education and pre-service teachers majoring in secondary education.

It is interesting to note that pre-service elementary education and secondary education teachers indicated a moderate perceived level of preparedness or higher in all subsections except for the subsection of differentiated instruction. This is important because differentiating instruction is a cornerstone for working with individuals with disabilities in an inclusion setting. If general and special education teachers are going to utilize evidence-based practices such as UDL and PBIS in an RTI framework, they need to be prepared to shape instruction to meet individual needs. The ability to differentiate instruction is crucial if one is going to meet the current federal mandates of NCLB and IDEIA. These mandates state that students with disabilities will have access to the general education curriculum as well as meet grade level standards. To do so requires general education teachers to have the ability to provide a learning environment which can accommodate all learning modalities, therefore building upon student strengths.

Teacher preparation program curricula include courses in subject matter and instructional strategies for all levels. Yet, typically the course of study for students majoring in elementary education focus more on instructional strategies and the course of study for secondary majors focus more on subject matter. Even with the differences in the focus of the preparation programs, both programs appear to be lacking in the same areas. Based on these results it seems that both levels of teacher preparation programs need to include courses that provide ways of incorporating differential instructional strategies into the general education curriculum

Another interesting finding is that both pre-service elementary education and secondary education teachers felt the most prepared in the area of school and community relationships.

This subsection included statements such as "I am willing to consult with other adults regarding the education and well-being of my students". High perceptions of preparedness in this subsection suggest that teacher preparation programs are preparing pre-service teachers for the various types of professional collaboration that will be needed once they enter the classroom. Current education mandates call for increased accountability in the classroom. Collaboration with other professionals to help student achievement is a major facet of accountability. This skill is also an essential aspect in the inclusion of students with disabilities in the general education classroom.

Limitations

Some limitations of the current study should be considered when interpreting the results. One limitation is that the cultural backgrounds of all the participants are very similar. As a result, the racial, gender, economic, and ethnicity composite may not match that of the national census. Another limitation is that the instrument used in this study was a self-report measure. The data collection of self-report measures depends on the ability and willingness of the participants to provide accurate and honest input to the questions. For that reason, it is possible that participants could have responded to questions in a manner that reflected socially acceptable answers which could be different from what they actually believe. An additional limitation was that the surveys were distributed at the last class meeting before participants were scheduled to graduate. During this meeting participants were required to fill out certification paperwork and several other surveys related to their internship experiences. The time chosen to conduct the survey, along with the length of the survey, may have affected the participation rate of the sample. Another limitation, is the large standard deviation of elementary education scores (34.7) and the secondary education scores (35.8). The standard deviation is a statistic that indicates

the amount of variability within a dataset. The large standard deviation of the data suggests that the scores are widely dispersed from the mean.

CHAPTER 4. CONCLUSIONS AND RECOMMENDATIONS

The various education reform efforts and the inclusion movement over the past thirty five years have led to a dramatic change in the look of the typical American classroom. In addition to the student population becoming more diverse, students with disabilities are included at an increasing rate. In 2005, approximately 54% of students receiving special education services spent 80% or more of their day in a general education classroom (U.S. Department of Education, 2006). It has been estimated that the number increases at a rate of 3.4% each year (U.S. Department of Education, 2002). Current federal mandates require that students with disabilities not only be included in the general education classroom but also be proficient in the curriculum as well. The goal of all students being successful in the general education classroom requires teachers to have knowledge and skills to serve an increasingly diverse population.

Teacher preparation programs across the nation have been under a considerable amount of criticism because it is believed that current programs do little to improve student achievement (Levine & Education Schools, 2006). There appears to be a gap between what is being taught in schools of education and what is actually happening in the public schools. The curricula of teacher preparation programs are usually a mix of courses, ranging from methods to the philosophy and history of education, rather than focusing on preparing general education teachers for what is actually needed in real classrooms (Holland, et al., 2008). The majority of these programs focus on ensuring that teachers are proficient in subject matter giving little attention to the other things teachers need to know when they enter the classroom (Levine &

Education Schools, 2006) such as how to work with students with disabililities in an inclusion setting.

Teachers that feel confident and adequately prepared to teach students with disabilities are more likely to do a better job of teaching thus increasing the achievement of all students in the classroom (Darling-Hammond et al., 2002). Therefore, the purpose of this study was to examine the perceived level of preparedness pre-service general education teachers have for working with students with disabilities at the end of a teacher education program which required only one disability-focused course.

The first research question was: To what extent do pre-service teachers majoring in elementary education at the end of their teacher preparation program which required only one disability focused course perceive that they are prepared to instruct students with disabilities in the general education classroom? The null hypothesis was written as follows: There is no statistically significant difference in the observed perceived level of preparedness of pre-service teachers who are majoring in elementary education and a score of 280 on the INTASC Readiness Survey–Modified. The results indicate that elementary education majors at the end of their teacher preparation program perceived themselves as at least moderately prepared to provide instruction to students with disabilities. This implies that pre-service elementary teachers feel at least adequately prepared to enter a classroom with students with disabilities. This perception of preparedness indicates that pre-service elementary teachers may be able to successfully work with students with disabilities once they enter the classroom. Teachers who believe that they are properly trained to work with students with disabilities are more confident about their teaching abilities once they actually enter the classroom (Brown, et al., 2008; Brownell, Pajares, & Florida Educational Research Council, 1996; Roll-Pettersson, 2008; Tschannen-Moran, et al.,

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1998; Yeo, et al., 2008). Research has shown that when a teacher has confidence in one's ability to affect student learning then student achievement increases (Brown, et al., 2008; Brownell, et al., 1996; Roll-Pettersson, 2008).

The second research question was: To what extent do pre-service teachers majoring in secondary education at the end of their teacher preparation program which required only one disability focused course perceive that they are prepared to instruct students with disabilities in the general education classroom? The null hypothesis was written as follows: There is no statistically significant difference in the observed perceived level of preparedness of pre-service teachers who are majoring in secondary education and a score of 280 on the INTASC Readiness Survey–Modified. This may mean that pre-service secondary education teachers feel adequately confident to instruct students with disabilities. Teachers who are confident that they are adequately trained believe that they can prevail over external factors that may impede student learning (Brown, et al., 2008; Brownell, et al., 1996; Roll-Pettersson, 2008; Tschannen-Moran, et al., 1998). Teachers' self-perception of teaching competence contributes to teacher efficacy and to the consequences that stem from efficacy beliefs (Brownell, et al., 1996; Roll-Pettersson, 2008; Tschannen-Moran, et al., 1998). Teachers' confidence in their teaching ability has been connected to productive teacher behaviors and positive student outcomes (Roll-Pettersson, 2008; Tschannen-Moran, et al., 1998).

The third research question was: To what extent is there a statistically significant difference between the mean scores of pre-service teachers majoring in elementary education and pre-service teachers majoring in secondary education on the INTASC Readiness Survey–Modified. The null hypothesis was written as follows: There is no statistically significant difference between the mean scores of pre-service teachers majoring in elementary education and

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pre-service teachers majoring in secondary education on the INTASC Readiness Survey–

Modified. This suggest that the requirement of only one disability-focused course for all general

education majors is adequate enough to give pre-service general education teachers the

perception that they are prepared to teach students with disabilities in an inclusion setting. This

indicates that teacher preparation programs' number one method of preparing general education

teachers to work with students with disabilities, which, according to Holland et al. (2008), is

requiring students to take only one disability-focused course, helps pre-service teachers feel that

they are sufficiently prepared to work with students with disabilities.

The independent variable in the study was major program of study representing

elementary (K–5) general education majors and secondary (6–12) general education majors. The

dependent variable was the perceived level of level of preparedness based on the INTASC

Readiness Survey–Modified instrument completed by the participants. The questionnaire is

based on a five-point Likert scale. Research questions one and two were examined by

conducting a one-sample *t*-test to compare the mean score of pre-service teachers majoring in

elementary education and the mean score of pre-service teachers majoring in secondary general

education programs perceived level of preparedness on the INTASC Readiness Survey–Modified

to a test value of 280 which indicates at least an adequate level of perceived preparedness. The

results suggest that both elementary education and secondary education pre-service teachers

perceive themselves as at least adequately prepared to instruct students with disabilities in an

inclusion setting.

Research question three was examined by conducting an independent sample *t*-test which

compared the mean scores of the perceived level of preparedness of participants enrolled in the

elementary education program of study to the perceived level of preparedness of participants

enrolled in the secondary education program of study. The results of the testing show that there is no significant difference in the perceived level of preparedness to instruct students with disabilities in an inclusion setting between elementary education and secondary education majors.

The subsections of the INTASC Readiness Survey–Modified were examined through descriptive analysis. The subsections of the survey are: (a) content knowledge, (b) developmental appropriateness, (c) differentiated instruction, (d) varied instructional strategies, (e) motivational techniques and learning environment, (f) communication and media use, (g) planning for instruction,(h) formal and informal assessment, (i) reflective practice and professional growth, (j) school and community relationships, and (k) special education knowledge. The findings indicated that both pre-service elementary education and secondary education teachers feel at least adequately prepared in all areas except differentiated instruction and school and community relationships. In the subsection of differentiated instruction, pre-service elementary education and secondary education teachers indicated a neutral perceived level of preparedness. This is interesting because all respondents indicated that they felt prepared to work with students with disabilities, yet in an area that is a major component of working with students with disabilities they did not feel this same level of preparedness. On the contrary, the respondents indicated that they felt very well prepared in the area of school and community relationships. The ability to collaborate with other professionals is an essential component of working with students with disabilities. Pre-service elementary education and secondary education teachers perceive that they are knowledgeable about what is needed to successfully work with students with disabilities; however, they do not feel that they are prepared enough to actually implement the various instructional strategies that are needed.

Implications and Future Research

As the number of students with disabilities being served in the general education classroom is grows each year, it is imperative that the new teachers entering into the classrooms are not only adequately prepared to educate all students but also feel confident that they are adequately prepared. General education teachers often feel ill-equipped to appropriately address the needs of students with disabilities because doing so requires more specialized instruction than they have been trained to provide. In a study by Kamens, et al., (2000), teachers stressed the need for further preparation in six areas related to students with disabilities: (a) behavioral concerns, conflict resolution, and social skills; (b) identification of students with special needs; (c) adaptation of curriculum and materials; (d) adaptation of instructional strategies; (e) legal regulations and individual education programs (IEP); and (f) co-teaching, teaming and collaboration. Their results show that it is imperative that teacher preparation programs do a better job of preparing all pre-service teachers to work with students with disabilities.

Currently there is no consensus on how general education teachers should be trained to work with students with disabilities. As Holland et al. (2008) observed, teacher preparation programs are utilizing a variety of different methods such as: (a) pursuing a program mission with disability-focused priorities; (b) requiring disability-focused courses; (c) embedding disability content in other required courses; (d) incorporating disability content into field experiences; (e) aligning mission and coursework requirements; (f) sharing course experiences between general and special education; and (g) practicing collaborative program design. Although the effectiveness of the different training strategies have not been studied extensively, the results of this study suggest that the most commonly used practice by teacher preparation programs, requiring one disability-focused course of all majors, is sufficient enough to provide

pre-service teachers with the confidence that they are prepared enough to work with students with disabilities in an inclusion setting. It appears that pre-service elementary education and secondary education teachers are learning about what skills are needed to work with disabilities; however, it seems that they are not learning how to actually work with students with disabilities. This research highlights the need for coursework on how to differentiate instruction to be included in general education teacher preparation programs.

This study was designed to assess perceived levels of preparedness and confidence to work with students with disabilities; however, it does not directly assess pre-service teacher's skills in actually instructing students with disabilities. Therefore, future research should focus on investigating if the level of confidence and preparedness to work with students with disabilities that pre-service teachers perceive at the end of their program correlates with the level of instructional skills that they actually possess once they enter the classroom. The information gathered from such research will enable teacher preparation programs to design better curricula to meet the need of future general education teachers. It will also help school districts determine how to best support new teachers in the classroom.

These results indicate that teacher preparation programs which require only one disability-focused course adequately builds the confidence of pre-service general education teachers in providing instruction to students with disabilities. However, it should be noted that these pre-service teachers have yet to enter the work force which requires daily teaching responsibilities. Therefore, one does not know the programs' effectiveness for preparing these teachers for actual daily instructional responsibilities, including addressing the needs of students with disabilities. Future research is needed to determine if this level of confidence is maintained

after pre-service teachers have entered the workforce for a period of at least one year and investigate how teachers differentiate instruction in an inclusion setting.

If the practice of inclusion is going to be successful then teacher preparation programs need to take a more aggressive approach in preparing general education teachers to work with students with disabilities. The early education of pre-service teachers appears to have the most influence on a teacher's efficacy. Once efficacy beliefs are established, they are resistant to change (Tschannen-Moran, et al., 1998). Therefore, the course requirements and the contents of general education programs need to be reviewed and revamped so that pre-service general education teachers feel that they are prepared to work with students with disabilities once they enter the classroom, thus increasing the likelihood that general education teachers will have a high sense of efficacy and do a better job of meeting the needs of students with disabilities in inclusion setting.

Limitations

Limitations of the current study include: (a) limited diversity of participants; (b) utilization of a self report measure; (c) timing of the administration of the survey; (d) the length of the survey; and (e) the large standard deviation of the means. The limited diversity of participants indicates that the sample is not representative of the region in which the study took place. The data collection of self-report measures depends on the ability and willingness of the participants to be forthright with responses. It is possible that participants responses could be different from what they actually believe because they responded in a manner that they felt was socially acceptable. The timing of the administration of the surveys could also be a limitation because the participants were already scheduled to graduate and they were just meeting to fill out certification paperwork and complete several other surveys related to their internship experiences. The participants could have felt overwhelmed and ready to leave. The length of the

survey may have also been a limitation that affected the participation rate of the sample

population. The large standard deviation of elementary education scores (34.7) and the

secondary education scores (35.8) suggests that there is a large variance in the scores from the

mean.

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Appendix 1

INTASC Performance Standards

INTASC STANDARDS FOR BEGINNING TEACHERS

#1:   The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

Performance Indicators of Standard
Lesson plans; samples of student work; integrated, interdisciplinary units; video; bibliography of materials (curriculum, library, software, etc.); field trips; interactive bulletin boards; photos of an activity; learning centers

Knowledge
1. Understands major concepts, assumptions, debates, processes of inquiry, and ways of knowing that are central to the discipline(s) s/he teaches.
2. Understands how students' conceptual frameworks and their misconceptions for an area of knowledge can influence their learning.
3. Can relate his/her disciplinary knowledge to other subject areas.

Dispositions
1. Realizes that subject matter knowledge is not a fixed body of facts but is complex and ever-evolving. S/he seeks to keep abreast of new ideas and understandings in the field.
2. Appreciates multiple perspectives and conveys to learners how knowledge is developed from the vantage point of the knower.
3. Has enthusiasm for the discipline(s) s/he teaches and sees connections to everyday life.
4. Is committed to continuous learning and engages in professional discourse about subject matter knowledge and children's learning of the discipline.

Performances
1. Effectively uses multiple representations and explanations of disciplinary concepts that capture key ideas and link them to students' prior understandings.
2. Can represent and use differing viewpoints, theories, "ways of knowing" and methods of inquiry in his/her teaching of subject matter concepts.
3. Can evaluate teaching resource and curriculum materials for their comprehensiveness, accuracy, and usefulness for representing particular ideas and concepts.
4. Engages students in generating knowledge and testing hypotheses according to the methods of inquiry and standards of evidence used in the discipline.
5. Develops and uses curricula that encourage students to see, question, and interpret ideas from diverse perspectives.
6. Can create interdisciplinary learning experiences that allow students to integrate knowledge, skills, and methods of inquiry from several subject areas.

INTASC STANDARDS FOR BEGINNING TEACHERS

#2: **The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development.**

Performance Indicators of Standard
Lesson plan; sample tests; materials list-manipulative; photo; samples of checklists used to record development; field trips; strategies; floor plan; running records for reading; floor plan

Knowledge
1. Understands how learning occurs--how students construct knowledge, acquire skills, and develop habits of mind-and knows how to use instructional strategies that promote student learning.
2. Understands that students' physical, social, emotional, moral and cognitive development influence learning and knows how to address these factors when making instructional decisions.
3. Is aware of expected developmental progressions and ranges of individual variation within each domain (physical, social, emotional, moral and cognitive), can identify levels of readiness in learning, and understands how development in any one domain may affect performance in others.

Dispositions
1. Appreciates individual variation each area of development, shows respect for the diverse talents of all learners, and is committed to help them develop self-confidence and competence.
2. Is disposed to using students' strengths as a basis for growth, and their errors as an opportunity for learning.

Performances
1. Assesses individual and group performance in order to design instruction that meets learners' current needs in each domain (cognitive, social, emotional, moral, and physical) and that leads to the next level of development.
2. Stimulates student reflection on prior knowledge and links new ideas to already familiar ideas, making connections to students' experiences, providing opportunities for active engagement, manipulation, and testing of ideas and materials, and encouraging students to assume responsibility for shaping their learning tasks.
3. Accesses students' thinking and experiences as a basis for instructional activities by, for example, encouraging discussion, listening and responding to group interaction, and eliciting samples of student thinking orally and in writing.

INTASC STANDARDS FOR BEGINNING TEACHERS

#3   The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

Performance Indicators of Standard
Differentiated lesson plans demonstrating a variety of teaching strategies; video of student performances; centers; photographs, scrapbook; bulletin boards; lesson plans; learning center; classroom management plans; copy of assessments

Knowledge
1. Understands and can identify differences in approaches to learning and performance, including different learning styles, multiple intelligences, and performance modes, and can design instruction that helps use students' strengths as the basis for growth.
2. Knows about areas of exceptionality in learning--including learning disabilities, visual and perceptual difficulties, and special physical or mental challenges.
3. Knows about the process of second language acquisition and about strategies to support the learning of students whose first language is not English.
4. Understands how students' learning is influenced by individual experiences, talents, and prior learning, as well as language, culture, family and community values.
5. Has a well-grounded framework for understanding cultural and community diversity and knows how to learn about and incorporate students' experiences, culture, and community resources into instruction.

Dispositions
1. Believes that all children can learn at high levels and persists in helping all children achieve success.
2. Appreciates and values human diversity, shows respect for students varied talents and perspectives, and is committed to the pursuit of "individually configured excellence."
3. Respects students as individuals with differing personal and family background and various skills, talents, and interests.
4. Is sensitive to community and cultural norms.
5. Makes students feel valued for their potential as people, and helps them learn to value each other.

Performances
1. Identifies and designs instructions appropriate to students' stages of development, learning styles, strengths, and needs.
2. Uses teaching approaches that are sensitive to the multiple experiences of learners and that address different learning and performance modes.
3. Makes appropriate provisions (in terms of time and circumstances for work, tasks assigned, communication and response modes) for individual students who have particular learning differences or needs.
4. Can identify when and how to access appropriate services or resources to meet exceptional learning needs.

5. Seeks to understand students' families, cultures, and communities, and uses this information as a basis for connecting instructions to students' experiences (e.g. drawing explicit connections between subject matter and community matters, making assignments that can be related to students' experiences and cultures).
6. Brings multiple perspectives to the discussion of subject matter, including attention to students' personal, family, and community experiences and cultural norms.
7. Creates a learning community in which individual differences are respected.

INTASC STANDARDS FOR BEGINNING TEACHERS

#4 The teacher understands and uses and variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

Performance Indicators of Standard
Video, lesson plans, units, explanation of grouping procedures used in classroom, collection of pre and post test data; interpretation and plan for implementing changes in instruction based on this information; collection and work samples showing growth, tests, samples of student questions; mentor teacher's evaluations

Knowledge
1. Understands the cognitive processes associated with various kinds of learning (e.g. critical and creative thinking, problem structuring and problem solving, invention, memorization and recall) and how these processes can be stimulated.
2. Understands principles and techniques, along with advantages and limitations, associated with various instructional strategies (e.g. cooperative learning, direct instruction, discovery learning, whole group discussion, independent study, interdisciplinary instruction).
3. Knows how to enhance learning through the use of a wide variety of materials as well as human and technological resources (e.g. computers, audio-visual technologies, videotapes and discs, local experts, primary documents and artifacts, texts, reference books, literature, and other print resources).

Dispositions
1. Values the development of students' critical thinking, independent problem solving, and performance capabilities.
2. Values flexibility and reciprocity in the teaching process as necessary for adapting instruction to student responses, ideas, and needs.

Performances
1. Evaluates how to achieve learning goals, choosing alternative teaching strategies and materials to achieve
2. different instructional purposes and to meet student needs (e.g. developmental stages, prior knowledge, learning styles, and interests).
3. Uses multiple teaching and learning strategies to engage students in active learning opportunities that promote the development of critical thinking, problem solving, and performance capabilities and that help student assume responsibility for identifying and using learning resources.
4. Constantly monitors and adjusts strategies in response to learner feedback.
5. Varies his/her role in the instructional process (e.g. instructor, facilitator, coach, audience) in relation to the content and purposes of instruction and the needs of students.
6. Develops a variety of clear, accurate presentations and representations of concepts, using alternative explanations to assist students' understanding and presenting diverse perspectives to encourage critical thinking.

INTASC STANDARDS FOR BEGINNING TEACHERS

#5: **The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.**

Performance Indicators of Standard
Management plan; incentive system; communication with parents explaining plan; pictures of classroom; development of cooperative activities focusing on group processes; video, pre/post testing; picture of interactive bulletin board; student work samples from group projects; student artwork

Knowledge
1. Can use knowledge about human motivation and behavior drawn from the foundational sciences of psychology, anthropology, and sociology to develop strategies for organizing and supporting individual and group work.
3. Understands how social groups function and influence people, and how people influence groups.
4. Knows how to help people work productively and cooperatively with each other in complex social settings.
4. Understands the principles of effective classroom management and can use range strategies to promote positive relationships, cooperation, and purposeful learning in the classroom.
3. Recognizes factors and situations that are likely to promote or diminish intrinsic motivation, and knows how to help students become self-motivated.

Dispositions
1. Takes responsibility for establishing a positive climate in the classroom and participates in maintaining such a climate in the school as a whole.
2. Understands how participation supports commitment, and is committed to the expression and use of democratic values in the classroom.
3. Values the role of students in promoting each other's learning and recognizes the importance of peer relationship establishing a climate of learning.
4. Recognizes the value of intrinsic motivation to students' life-long growth and learning.
5. Is committed to the continuous development of individual students' abilities and considers how different motivational strategies are likely to encourage this development for each student.

Performance
1. Creates a smoothly functioning learning community in which students assume responsibility for themselves and one another, participate in decision making, work collaboratively and independently, and engage in purposeful learning activities.
2. Engages students in individual and cooperative learning activities that help them develop the motivation to achieve by, for example, relating lessons to students' personal interests, allowing students to have choices in their learning, and leading students to ask questions and pursue problems that are meaningful to them.

3. Organizes, allocates, and manages the resources of time, space, activities, and attention to provide active and equitable engagement of students in productive tasks.
4. Maximizes the amount of class time in learning by creating expectations and processes for communication and behavior along with a physical setting conductive to classroom goals.
5. Helps the group to develop shared values and expectations for student interactions, academic discussion, and individual and group responsibility that create a positive classroom climate of openness, mutual respect, support, and inquiry.
6. Analyzes the classroom environment and makes decisions and adjustments to enhance social relationships, student motivation and engagement, and productive work.
7. Organizes, prepares students for, and monitors independent and group work that allows for full and varied participation of all individuals.

INTASC STANDARDS FOR BEGINNING TEACHERS

#6:   The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Performance Indicators of Standard
Video, student evaluations, communications to parents, lesson plans; audio tape; student evaluations

Knowledge
1. Understands communication theory, language development, and the role of language in learning.
2. Understands how cultural and gender differences can affect communication in the classroom.
3. Recognizes the importance of nonverbal as well as verbal communication.
4. Knows about and can sue effective verbal, nonverbal, and media communication techniques.

Dispositions
1. Recognizes the power of language for fostering self-expression, identity development, and learning.
2. Values many ways in which people seeks to communicate and encourages many modes of communication in the classroom.
3. Is a thoughtful and responsive listener.
4. Appreciates the cultural dimensions of communication, responds appropriately, and seeks to foster culturally sensitive communication by and among all students in the class.

Performances
1. Models effective communication strategies in conveying ideas and information and in asking questions (e.g. monitoring the effects of messages, restating ideas and drawing connections, using visual, aural, and kinesthetic cues, being sensitive to nonverbal cues given and received).
2. Supports and expands learner expression in speaking, writing, and other media
3. Knows how to ask questions and stimulate discussion in different ways for particular purposes for example, probing for learner understanding, helping students articulate their ideas and thinking processes, promoting risk-taking and problem solving, facilitating factual recall, encouraging convergent and divergent thinking, stimulating curiosity, helping students to question.
4. Communicates in ways that demonstrate a sensitivity to cultural and gender differences (e.g. appropriate use of eye contact, interpretation of body language and verbal statements, acknowledgment of and responsiveness to different modes of communication and participation).
4. Knows how to use a variety of media communication tools, including audio-visual aids and computers, to enrich learning opportunities.

INTASC STANDARDS FOR BEGINNING TEACHERS

#7:   The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Performance Indicators of Standard
Unit plans; lesson plans

Knowledge
1. Understands learning theory, subject matter, curriculum development and knows how to use this knowledge in planning instruction to meet curriculum goals.
2. Knows how to take contextual considerations (instructional materials, individual student interests, needs, and aptitudes, and community resources) into account in planning instruction that creates an effective bridge between curriculum goals and students' experiences.
3. Knows when and how to adjust plans based on student responses and other contingencies.

Dispositions
1. Values both long term and short term planning.
2. Believes that plans must always be open to adjustment and revision based on student needs and changing circumstances.
3. Values planning as a collegial activity.

Performances
1. As an individual and a member of a team, the teacher selects and creates learning experiences that are appropriate for curriculum goals, relevant to learners, and based upon principles of effective instruction (e.g. that activate students' prior knowledge, anticipate preconceptions, encourage exploration and problem solving, and build new skills on those previously acquired).
2. Plans for learning opportunities that recognize and address variation in learning styles and performance modes.
3 Creates lessons and activities that operate and multiple levels to meet the developmental and individual needs of diverse learners and help each progress.
4. Creates short-range and long-term plans that are linked to student needs and performance, and adapts to the plans to capitalize on student progress and motivation.
5. Responds to unanticipated sources of input, evaluates plans in relation to short and long-range goals, and systematically adjusts plans to meet student needs and enhance learning.

INTASC STANDARDS FOR BEGINNING TEACHERS

#8: **The teacher understands and uses formal and informal assessment strategies to evaluate and ensure to continuous intellectual, social and physical development of the learner.**

Performance Indicators of Standard
Observation checklist, formal tests, quizzes, writing samples, work samples, performances, video, record of conferences (parent/teachers)

Knowledge
1. Understands the characteristics, uses, advantages, and limitations of different types of assessments (e.g. criterion-referenced and norm-referenced instruments, traditional standardized and performance-based tests, observations systems, and assessments of student work) for evaluating how students learn, what they know and are able to do and what kinds of experiences will support their further growth and development.
2. Knows how to select, construct, and use assessment strategies and instruments appropriate to the learning outcomes being evaluated and to other diagnostic purposes.
3. Understands measurement theory and assessment-related issues, such as validity, reliability, bias, and scoring concerns.

Dispositions
1. Values ongoing assessment as essential to the instructional process and recognizes that many different assessment strategies, accurately and systematically used, are necessary for monitoring and promoting student learning.
2. Is committed to using assessment to identify student strengths and promote student growth rather than to deny students access to learning opportunities.

Performances
1. Appropriately uses a variety of formal and informal assessment techniques (e.g. observation, portfolios of student work, teacher-made tests, performance tasks, projects, student self-assessments, peer assessment, and standardized tests) to enhance her or his knowledge of learners, evaluate students' progress and performances, and modify teaching and learning strategies.
2. Solicits and uses information about students' experiences, learning behavior, needs, and progress from parents, other colleagues, and the students themselves.
3. Uses assessment strategies to involve learners in self-assessment activities, to help them become aware of their strengths and needs, and to encourage them to set personal goals for learning.
4. Evaluates the effect of class activities on both individuals and the class as a whole, collecting information through observation of classroom interactions, questioning, and analysis of student work.
5. Monitors his or her own teaching strategies and behavior in relation to student success, modifying plans and instructional approaches accordingly.
6. Maintains useful records of student work and performance and can communicate student progress knowledgeably and responsibly, based on appropriate indicators, to students, parent, and other colleagues.

INTASC STANDARDS FOR BEGINNING TEACHERS

#9:   The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Performance Indicators of Standard
Modifications of plans and units, log, attendance at professional meetings/presentations; attendance/participation at workshops; articles; committee work; civic involvement; journals; teacher-mentor communication letters

Knowledge
1. Understands methods of inquiry that provide him/her with a variety of self-assessment and problem-solving strategies for reflecting on his/her practice, influences on students' growth and learning and the complex interactions between them.
2. Is aware of major areas of research on teaching and of resources available for professional learning (e.g. professional literature, colleagues, professional associations, professional development activities).

Dispositions
1. Values critical thinking and self-directed learning as habits of mind.
2. Is committed to reflection, assessment, and learning as an ongoing process,
3. Is willing to give and receive help.
4. Is committed to seeking out, developing, and continually refining practices that address the individual needs of students.
5. Recognizes his/her professional responsibility for engaging in and supporting appropriate professional practices for self and colleagues.

Performances
1. Uses classroom observation, information about students, and research as sources for evaluating the outcomes of teaching and learning and a basis for experimenting with, reflecting on, and revising practice.
2. Seeks out professional literature, colleagues, and other resources to support his/her own development as a learner and a teacher.
3. Draws upon professional colleagues within the school and other professional arenas as supports for reflection, problem-solving and new ideas, actively sharing experiences and seeking and giving feedback.

INTASC STANDARDS FOR BEGINNING TEACHERS

#10: **The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.**

Performance Indicators of Standard
Documentation of conferences; home visits; use of community agencies; newspaper articles; pictures from open house; notes from PTA meeting; example of thank you cards/notes; picture of speaker; lists of duties; personal notes; agendas

Knowledge
1. Understands schools as organizations within the larger community context and understands the operations of the relevant aspects of the system(s) within which s/he works.
2. Understands how factors in the students' environment outside of school (e.g. family circumstances, community environments, health and economic conditions) may influence students' life and learning.
3. Understands and implements laws related to students' rights and teacher responsibilities (e.g. for equal education; appropriate education for handicapped students, confidentiality, privacy, appropriate treatment of students, reporting in situations related to possible child abuse).

Dispositions
1. Values and appreciates the importance of all aspects of a child's experience.
2. Is concerned about all aspects of a child's well-being (cognitive, emotional, social, and physical), and is alert to signs of difficulties.
3. Is willing to consult with other adults regarding the education and well-being of his/her students.
4. Respects the privacy of students and confidentiality of information.
5. Is willing to work with other professionals to improve the overall learning environment for students.

Performances
1. Participated in collegial activities designed to make the entire school a productive learning environment.
2. Makes links with the learners' other environments on behalf of students, by consulting with parents, counselors, teachers of other classes and activities within the schools, and professionals in other community agencies.
3. Can identify and use community resources to foster student learning.
4. Establishes respectful and productive relationships with parents and guardians from diverse home and community situations, and seeks to develop cooperative partnerships in support of student learning and well being.
5. Talks with and listens to the student, is sensitive and responsive to clues of distress, investigates situations, and seeks outside help as needed and appropriate to remedy problems.
6. Acts as an advocate for students.

Appendix 2

Demographic Questionnaire

<u>Preparing General Education Teachers</u>

Please answer the following questions if applicable:

How many years of teaching experience do you have?_____

Gender: Female_____   Male_____

Cultural Background: **What grade level do you plan to teach:**

African-American:_____   Pre K_____
Hispanic: _____   K–3 _____
White: _____   4–5 _____
Asian: _____   6–8 _____
Other: _____   9–12 _____

Teacher Education Program Enrolled in:

Undergraduate (Early Childhood)   _____
Undergraduate (Elementary Education)   _____
Undergraduate (Middle Grades)   Content Area: _____
Undergraduate (Secondary Education)   Content Area: _____
Undergraduate (Special Education)   _____
Master's (initial certification, general education, K-12)   _____
Master's (initial certification, special education, K-12)   _____
Master's (general education)   _____
Master's (special education)   _____

Number of courses in K-3, 4-5, 6-8, 9-12 that dealt with educating individuals with disabilities:

0 _____

1 _____

2 _____

3 _____

4 _____

5+ _____

Do you feel competent to teach students with disabilities?

Yes_____   Sort Of _____   No_____

Appendix 3

INTASC Readiness Survey–Modified

Directions: Read each statement and think about yourself. Are you able to do the items listed? Determine if you have been "Well-Prepared" for each standard and performance indicator, or "Adequately Prepared" or "Marginally Prepared" or "Poorly Prepared" or "Not Yet Prepared." Fill in the circle which best describes your view of your competence and preparation. Number "1" is the lowest level of preparation and number "5" is the highest.

Answer each item beginning with "I, …	Not Yet Prepared	Poorly Prepared	Marginally Prepared	Adequately Prepared	Well-Prepared
1. understand key concepts of my discipline.	1	2	3	4	5
2. can create learning experiences that make subject matter more meaningful for students.	1	2	3	4	5
3. have developed enthusiasm for my discipline and see connections to everyday life.	1	2	3	4	5
4. am committed to continuous learning.	1	2	3	4	5
5. can use different viewpoints or theories in my teaching of subject matter.	1	2	3	4	5
6. develop and use curricula that encourage students to see, question and interpret ideas from diverse perspectives.	1	2	3	4	5
7. can create interdisciplinary learning experiences that allow students to integrate knowledge, skills and methods from -several subject areas.	1	2	3	4	5
8. understand how students construct knowledge and acquire skills, as well as how to use instructional strategies that - promote student learning.	1	2	3	4	5
9. understand that students' physical, emotional, moral and cognitive development influence learning and know how to address these factors when making instructional decisions.	1	2	3	4	5

Answer each item beginning with "I, …	Not Yet Prepared	Poorly Prepared	Marginally Prepared	Adequately Prepared	Well-Prepared
10. know about developmental progressions and ranges of individual variation within each domain.	1	2	3	4	5
11. use students· strengths as a basis for growth and their errors as an opportunity for learning.	1	2	3	4	5
12. assess individual students' and groups of students' performance in order to design instruction that meets learners' current -domain needs.	1	2	3	4	5
13. stimulate students reflection on prior knowledge.	1	2	3	4	5
14. link new ideas to already familiar ideas, making connections to students' experiences.	1	2	3	4	5
15. assess students' thinking and experiences as a basis for instructional activities.	1	2	3	4	5
16. understand and can identify differences in approaches to learning and performance, including different learning styles and -multiple intelligences.	1	2	3	4	5
17. know about areas of exceptionality, including learning disabilities, visual and perceptual difficulties and special -physical or mental challenges.	1	2	3	4	5
18. know about the process of second language acquisition and about strategies to support the learning of students whose first language is not English.	1	2	3	4	5
19. appreciate and value human diversity.	1	2	3	4	5

Answer each item beginning with "I, …	Not Yet Prepared	Poorly Prepared	Marginally Prepared	Adequately Prepared	Well-Prepared
20. am sensitive to community and cultural norms and make students feel valued for their potential as people, helping them to value each other.	1	2	3	4	5
21. provide appropriate amounts of time and work for individual students who have particular needs.	1	2	3	4	5
22. understand cognitive processes (critical and creative thinking, problem-solving) and how these can be stimulated during learning experiences.	1	2	3	4	5
23. value the development of students' critical thinking and independent problem-solving capabilities.	1	2	3	4	5
24. choose alternative teaching strategies and materials to achieve different instructional purposes.	1	2	3	4	5
25. promote critical thinking and use multiple teaching and learning strategies.	1	2	3	4	5
26. constantly monitor and adjust strategies in response to learner feedback.	1	2	3	4	5
27. can use knowledge about human motivation and behavior to develop strategies for organizing and supporting individual and group work.	1	2	3	4	5
28. know how to help people work productively and cooperatively with each other.	1	2	3	4	5
29. take responsibility for establishing a positive climate in the classroom and maintaining such a climate in the school as a whole.	1	2	3	4	5

Answer each item beginning with "I, …	Not Yet Prepared	Poorly Prepared	Marginally Prepared	Adequately Prepared	Well-Prepared
30. engage students in individual and cooperative learning activities to help them develop the motivation to achieve.	1	2	3	4	5
31. organize and manage the resources of time, space, activity and attention to provide active and equitable engagement of students in productive tasks.	1	2	3	4	5
32. analyze the classroom environment and make decisions and adjustments to enhance social relationships, student motivation, and productive work.	1	2	3	4	5
33. understand communication theory, language development and the role of language in learning.	1	2	3	4	5
34. understand how cultural and gender differences can affect communication in the classroom.	1	2	3	4	5
35. recognize the power of language for fostering self-expression, identity development, and learning.	1	2	3	4	5
36. model effective communication strategies in conveying ideas and information.	1	2	3	4	5
37. know how to ask questions and stimulate discussion in different ways.	1	2	3	4	5
38. communicate in ways that demonstrate a sensitivity to cultural and gender differences.	1	2	3	4	5
39. understand learning theory, subject matter, and curriculum development, and know how to use this knowledge in planning instruction to meet curriculum goals.	1	2	3	4	5
40. value both long-and short-term planning.	1	2	3	4	5

Answer each item beginning with "I, …	Not Yet Prepared	Poorly Prepared	Marginally Prepared	Adequately Prepared	Well-Prepared
41. value planning as a collegial activity.	1	2	3	4	5
42. create short-range and long-term plans that are linked to student needs and adjusted as situations/needs require.	1	2	3	4	5
43. understand the advantages and limitations of different types of assessments (e.g., criterion-referenced, norm-referenced, standardized and performance-based tests, observations systems, and assessments of student work).	1	2	3	4	5
44. know how to select, construct, and use assessment strategies and instruments.	1	2	3	4	5
45. understand measurement theory and assessment-related issues, such as validity, reliability, bias, and scoring concerns.	1	2	3	4	5
46. am committed to using assessment to identify student strengths and promote student growth rather than to deny students access to learning opportunities.	1	2	3	4	5
47. use a variety of formal and informal assessment techniques (e.g., observation, tests, performance tasks, etc.) to enhance knowledge about the learners and to modify teaching and learning strategies.	1	2	3	4	5
48. continually collect information through observation of classroom interactions, questioning, and analysis of student work to evaluate the effect of activities on students.	1	2	3	4	5

Answer each item beginning with "I, …	Not Yet Prepared	Poorly Prepared	Marginally Prepared	Adequately Prepared	Well-Prepared
49. understand methods of inquiry that provide me with a variety of self-assessment strategies for reflection on my practice.	1	2	3	4	5
50. am aware of major areas of research on teaching and of resources available for professional learning.	1	2	3	4	5
51. am committed to reflection, assessment, and learning as an ongoing process.	1	2	3	4	5
52. recognize my professional responsibility for engaging in and supporting professional practices for myself and colleagues.	1	2	3	4	5
53. use classroom observations, information about students, and research as sources for evaluating outcomes of teaching and a basis for reflecting on, and revising practice.	1	2	3	4	5
54. seek out professional literature, colleagues, and other sources to support my development as a teacher.	1	2	3	4	5
55. understand schools as organizations within the larger community context.	1	2	3	4	5
56. understand how the factors in the students' environment (outside school) may influence students' lives and learning.	1	2	3	4	5
57. am concerned about all aspects of a child's well-being.	1	2	3	4	5
58. am willing to consult with other adults regarding the education and well-being of my students.	1	2	3	4	5
59. respect the privacy of students and confidentiality of information.	1	2	3	4	5

Answer each item beginning with "I, …	Not Yet Prepared	Poorly Prepared	Marginally Prepared	Adequately Prepared	Well-Prepared
60. participate in collegial activities designed to make the entire school a productive learning environment.	1	2	3	4	5
61. make links with the learners' other environments on behalf of students by consulting with parents, counselors, and teachers of other classes and other community agencies.	1	2	3	4	5
62. establish respectful and productive relationships with parents and guardians.	1	2	3	4	5
63. act as an advocate for students.	1	2	3	4	5
64. know the rights and responsibilities of students, parents, teachers, and other professionals, and schools related to exceptional learning needs.	1	2	3	4	5
65. can select, adapt, and use instructional strategies and materials according to characteristics of the individual with exceptional learning needs.	1	2	3	4	5
66. know basic classroom management theories and strategies for individuals with exceptional learning needs.	1	2	3	4	5
67. Create an environment that encourages self-advocacy and increased independence.	1	2	3	4	5
68. Identify and prioritize areas of the general curriculum and accommodations for individuals with exceptional learning needs.	1	2	3	4	5
69. incorporate and implement instructional and assistive technology into the educational program.	1	2	3	4	5

Answer each item beginning with "I, …	Not Yet Prepared	Poorly Prepared	Marginally Prepared	Adequately Prepared	Well-Prepared
70. Evaluate instruction and monitor progress of individuals with exceptional learning needs.	1	2	3	4	5

Appendix 4

Auburn University Institutional Review Board Approval Letter

Revisions approved for protocol #10-306 EP 1010

Human Subjects [hsubjec@auburn.edu]

Sent: Monday, November 15, 2010 5:27 PM
To: Toni Franklin
Cc: Everett Martin; Margaret Flores
Attachments: Investigators Responsibil~1.docx (15 KB)

Dear Ms. Franklin,

Your revisions to your protocol entitled "Preparation of General Education Teachers to Work with Students with Disabilities" have been reviewed. Your protocol has received final approval as "Expedited"

If you need your information letter quickly, please let us know. Otherwise it will be forwarded later to you.

This e-mail serves as official notice that your protocol has been approved. A formal approval letter will not be sent unless you notify us that you need one. By accepting this approval, you also accept your responsibilities associated with this approval. Details of your responsibilities are attached. Please print and retain.

Please note that you may not begin your research that involves human subjects until you receive your information letter with an IRB approval stamp applied. You must use copies of that document when you consent participants, and provide a copy (signed or unsigned) for them to keep.

Your protocol will expire on October 26, 2011. Put that date on your calendar now. About three weeks before that time you will need to submit a final report or renewal request. (You might send yourself a delayed e-mail reminder for late next September.)

If you have any questions, please let us know.

Best wishes for success with your research!

Office of Research Compliance
307 Samford Hall
Auburn University, AL 36849
(334) 844-5966
hsubjec@auburn.edu

Appendix 5

Columbus State University Institutional Review Board Approval Letter

Human Subjects proposals submitted to CSU

David Schwimmer [schwimmer_david@colstate.edu]
Sent: Friday, February 25, 2011 4:50 PM
To: Vanessa Hinton; Toni Franklin
Cc: zuiderveen_jeffrey@colstate.edu; nicks_clayton@colstate.edu; murray_robert3@colstate.edu; kuforiji_paulina@colstate.edu; schwartz_sergiu@colstate.edu; phillips_april2@colstate.edu; mangum_mike@colstate.edu

Dear Ms. Hinton and Franklin:

Your proposals submitted to the Columbus State University Human Subjects Review (HSR) Committee on February 14, 2011, have been approved by the Committee. There were recommendations by committee members to recheck some terminology in the proposals, but the approval is otherwise unqualified. Good luck with the projects;

Sincerely,
David Schwimmer

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_____

David R. Schwimmer, PhD
Professor of Geology
Chair, Human Subjects Review Committee
Dep't. of Earth and Spaces Sciences
Columbus State University
Columbus, GA 31907-5645, USA

tel: 706 569-3028
fax: 706 569-3133
email: schwimmer_david@colstate.edu

Appendix 6

Information Letter

AUBURN
UNIVERSITY

2084 HALEY CENTER

AUBURN, AL 36849-5222

TELEPHONE:

334-844-7670

FAX:

334-844-7677

COLLEGE OF EDUCATION

DEPARTMENT OF SPECIAL EDUCATION, REHABILITATION,
COUNSELING/SCHOOL PSYCHOLOGY

INFORMATION LETTER
for a Research Study entitled
"Preparation of general education teachers to teach students with disabilities"

You are invited to participate in a research study to investigate pre-service general education teachers' perceived level of preparedness to teach students with disabilities. The study is being conducted by Toni M. Franklin, Doctoral Candidate in the Auburn University Department of Special Education, Rehabilitation, Counseling/School Psychology. You were selected as a possible participant because you are a pre-service teacher and are age 19 or older.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to complete a questionnaire about your background and fill out a 63 item survey about the level of preparedness you feel you have based on Interstate New Teacher Assessment and Support Consortium standards. Your total time commitment will be approximately 45 minutes.

Are there any risks or discomforts? The risks associated with participating in this study are coercion to participate and psychological stress due to filling out a standards based survey. To minimize risk of coercion, I will provide every student with an informational letter and survey packet so that the choice to participate or not participate is not obvious to others. To minimize risks associated with anxiety, I emphasize that participation is voluntary with no penalty for nonparticipation or for withdrawing your consent to participate. Your responses will be anonymous, meaning that there will be no way for the researcher to connect your name with your responses.

Are there any benefits to yourself or others? If you participate in this study, you can expect to feel personal gratification that your responses will inform the field of teacher preparation and shape future teachers' preparation in the area teaching students with disabilities. I cannot promise you that you will receive any or all of the benefits described.
Will you receive compensation for participating? There is no compensation, but I thank you for your time.

Are there any costs? If you decide to participate, there will be no costs to you.

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary. If you change your mind about participating, you can withdraw at any time, even after submitting the survey. There will be a code number written on the top of the first page of the survey. Keep a record of that number, and if you want to withdraw your survey after submitting it, you only will need to give us that number (no name) so that we can locate the survey and shred it. Your name will never be associated with that number in order to keep your responses anonymous. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of Special Education, Rehabilitation, Counseling/School Psychology.

Page 1 of 2

Any data obtained in connection with this study will remain anonymous. The researcher will have no way to connect your name to the information that you provide. The survey that you complete will have a number written on the top of the front page. Please record this number. This is the only way to connect your name to the information that you provide. If, at any time, you would like to discontinue or withdraw your participation, provide the researcher with the number and your survey will be destroyed by shredding.

If you have questions about this study, *please ask them now or* contact Toni Franklin at 706-888-0351 or Margaret Flores at 334-844-2107. A copy of this document will be given to you to keep.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, THE DATA YOU PROVIDE WILL SERVE AS YOUR AGREEMENT TO DO SO. THIS LETTER IS YOURS TO KEEP.

Toni M. Franklin   12/1/10
Investigator's signature   **Date**

_____**Toni Franklin**_____
Print Name

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