Inclusion and Collaboration: Impact of Preservice Teachers' Experiences on Their Knowledge, Attitudes and Perceived Sense of Efficacy

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ABSTRACT

The Individuals with Disabilities Education Improvement Act (IDEA, 2004) requires students with disabilities be educated in the least restrictive environment (LRE). As students with disabilities are educated alongside their non-disabled peers, there are increased demands placed on general education teachers. Because of the shift in educational responsibilities, it is important for preservice teachers to acquire the knowledge, dispositions and instructional strategies necessary to succeed in educating students with disabilities before they enter the classroom. The purpose of this study was to examine whether preservice teachers' knowledge, attitudes and perceived abilities (sense of efficacy) toward teaching students with disabilities would be influenced by: 1) being enrolled in a one-semester special education introductory course, 2) being randomly assigned by course section to watch a co-teaching video or in vivo observation, and 3) demographic variables.

One hundred and fifty-three general and special education preservice teachers enrolled in an introductory special education course at a large southeastern university participated in a pre- and post-survey. Students were randomly assigned by course sections to observe a one-hour video about co-teaching or observe co-teaching in vivo for one hour to determine if there were differential effects in the knowledge, attitudes, and perceived abilities toward educating students with disabilities by the end of the one-semester course. Participants responded to a pre-and post-survey instrument that incorporated demographic information, knowledge questions (i.e., law, disability characteristics, and teaching strategies), an Attitudes Questionnaire (AQ), the Preservice Inclusion Survey (PSIS), and the short version of the Teacher Sense of Efficacy Scale (TSES).

The data were analyzed using SPSS. Pre-and post-survey results suggested a significant difference in the knowledge, attitudes and perceived abilities (sense of efficacy) of preservice teachers enrolled in the one-semester special education course. Significant differences were found in dependent variables based on the two observation conditions. Additionally, significant differences between primary/elementary and secondary preservice teachers on the post-survey attitudes (AQ) and sense of efficacy scales (TSES) were found. Correlational analyses also were conducted resulting in positive correlations between dependent variables and demographics. Lastly, multiple regression analyses of post-survey responses indicated attitudes predicted sense of efficacy in educating students with disabilities.

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CHAPTER I

INTRODUCTION

Historically offered in two separate educational settings, general education and special education each provided different instructional services. In 1975, the Education for All Handicapped Children's Act (PL 94-142), now the Individual with Disabilities Education Act (IDEA, 2004), mandates that public schools receiving federal funds are to provide equal access to education for all children regardless of disability. Schools receiving federal funding are required to evaluate students with disabilities and create an individualized educational plan, considering parental input, to educate students in the least restrictive environment (LRE), with the first educational placement consideration being a general classroom setting. A decade after The Education for All Handicapped Children Act (1975) was passed; the Regular Education Initiative (REI, Will, 1986) was initiated with the primary goal to promote the collaboration between general and special educators, with general education teachers taking a more responsible lead in educating students with disabilities in general education settings. Just over a decade ago, the reauthorized of the Elementary and Secondary Education Act (ESEA), now known as the No Child Left Behind Act (NCLB), sought "to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach or exceed minimum proficiency on challenging state academic achievement standards and state academic assessments" (Sec. 1001, Part A, Title I of ESEA; 20 U.S.C. 6301). Today, given the accountability mandates of NCLB and the reauthorization of the Individuals with Disabilities Education Act (IDEA, 2004), general education teachers are facing

enormous pressure to ensure that all students within their classrooms meet the same academic standards and achieve the same academic outcomes.

Currently, almost all general educators play a direct role in teaching students with disabilities. According to the Study of Personnel Needs in Special Education (SPeNSE) conducted in 2001, 96% of general educators were currently teaching or had taught students with disabilities. Because of their direct role, there are increased demands for general educators to develop knowledge and understanding of all 13 disability categories as defined by IDEA, instructional and behavioral strategies, and effective and appropriate accommodations and modifications for students with disabilities. In addition, teachers must have knowledge of inclusive practices, develop skills in working collaboratively with other educators and parents, and develop effective leadership skills needed for the multifaceted demands of inclusive classrooms.

Rationale for the Study

Over the last few decades, general educators have witnessed increasing integration of students with disabilities into general education settings. According to the U.S. Department of Education (2011), over half (56.8%) of all students with disabilities participate in the general education setting for 80% of the school day. Although general educators play a direct part in educating students with disabilities, they tend to feel unprepared to fill this role (Brownell, Adams, Sindelar, Waldron, & Vanhover, 2006). Scruggs and Mastropieri (1996) conducted a meta-analysis of 28 studies published between 1958 and 1995 and found that a majority of general education teachers (65%) supported the idea of inclusion yet only 30% indicated they had received adequate training, reporting they needed additional resources to make inclusion successful.

According to Cook (2002), a lack of knowledge about disability characteristics can negatively affect the ability of general education teachers to accept students with disabilities. Because of a lack of knowledge about disabilities, teachers may regard students with disabilities as a homogeneous group (Bassett et al., 1997). According to Coates (1989), participants (n = 94), responding to a 5-point Likert scale, disagreed that they had been sufficiently prepared to teach students with disabilities and considered resource rooms an effective place for service delivery, believing that students with mild disabilities could not be effectively educated in general education classrooms, even with instructional support. Further, Coates reported that some general education teachers believed the special education resource setting should be expanded to accommodate students who were not eligible for special education services but who were in need of additional instructional assistance.

Like many inservice teachers, preservice general education teachers may experience feelings of unpreparedness and exclusionary attitudes. Shade and Stewart (2001) investigated the attitudes of general and secondary education majors who completed an introductory exceptionalities course. Using the 48-item Mainstreaming Inventory (Baker, Kapperman, & Montemurro, 1981), Shade and Stewart assessed overall attitudes toward students with disabilities, inclusion, and confidence in working with students with disabilities in general education classrooms. They found that general education preservice teachers enrolled in an introductory special education course and special education preservice teachers enrolled in an overview of special education course both exhibited statistically significant total test gain scores showing that attitudes were positively changed after completing coursework. However, there was no gain in general

educators' class placement score, indicating their attitudes about including students with disabilities in general education settings did not become more positive. Campbell, Gilmore, and Cuskelly (2003) along with Garriott, Miller, and Snyder (2003) reported that preservice teachers' attitudes toward including students with disabilities were more positive following university coursework. According to Bender and Ikechukwu (1989), general educators who took additional special education courses than required were more likely to indicate they would use effective instructional strategies and had higher efficacy beliefs than peers who took fewer special education courses. In general, limited preparedness is cause for concern in that general education preservice teachers now have responsibilities that were once reserved for teachers certified in special education.

The shift in the delivery of services to favor inclusive general class settings and elevated expectations for students with disabilities create profound implications for teacher education programs. Teacher preparation programs must reassess how they teach and prepare preservice teachers to meet the educational needs of students with disabilities within the requirements in the general education settings. This may be difficult since the requirements for special education coursework within teacher preparation programs vary from state to state. In many incidences, general educators are required to take only one or two courses related to special education issues (Cameron & Cook, 2007).

In addition to varied program requirements that contribute to varying levels of expertise, significant differences may exist in the attitudes, beliefs and instructional competencies of preservice teachers enrolled in teacher education programs. Negative attitudes may develop toward students with disabilities due to naïve beliefs, lack of knowledge about learning differences and instructional strategies, and low teacher

efficacy beliefs. These attitudes can strongly influence what and how preservice teachers learn. Consequently, teacher preparation programs must not ignore the attitudes and beliefs of entering student teachers (Pajares, 1992). Teacher educators must focus on preservice teacher attitudes and beliefs to facilitate change in the teaching-learning process (Fang, 1996). Renzaglia, Hutchins and Lee (1997) stated, "Although teaching preservice educators the skills associated with effective instruction is a focus of teacher education programs, cultivating and developing teacher candidates' attitudes and beliefs that will serve to inform professional practice and decision making throughout their careers are also priority outcomes" (p. 261). In addition, researchers have attempted to understand what makes an effective teacher. According to Brownell and Pajares (1999), teacher efficacy beliefs significantly affect classroom effectiveness. Therefore, teacher educators must understand these beliefs and provide preservice teachers with experiences that will nurture positive attitudes, which can ultimately foster effective educational practices.

Despite a growing body of literature that highlights the importance of positive attitudes towards inclusion, (Carroll, Forlin, & Jobling, 2003, Evans, 2004; Garriott et al. 2003), much of the research literature is several years old, thus warranting the need for current research. Today there is more visibility of individuals with disabilities in the mainstream media (e.g. war veterans who have lost limbs or sustained traumatic brain injury, Special Olympics, Paralympics). Celebrities now openly discuss disabilities, such as autism, and participate in *End the 'R' Word Campaign.* Peer tutoring of students with disabilities has emerged as a common practice in high schools. With the relatively recent

passage of the Americans with Disabilities Act (1990), there is a need to take a fresh look at attitudes and beliefs.

With minimal research addressing how teacher education programs can promote positive attitudes and interactions between preservice teachers and individuals with disabilities (Carroll et al., 2003; Tait & Purdie, 2000), Sindelar, Brownell and Billingsley (2010) proposed a research agenda for special education teacher education, paying particular attention to preservice preparation. According to Sindelar and colleagues, previous research is limited and unfocused, producing a weak foundation for future research. In spite of professional standards (e.g., Council for Exceptional Children, 2009), there is a lack of empirically validated training content in special education. Sindelar et al. offered suggestions for future research; for example, what variables foster high-quality instruction in teacher education programs? How do the entering knowledge and beliefs of preservice students influence their learning? How does the teacher education curriculum support SET development? Without the empirical research needed to address these questions, preservice preparation programs may continue to produce teachers who enter the classroom feeling unprepared to meet diverse learning needs, thus providing students with disabilities limited opportunities to attain desired educational outcomes. The purpose of this empirical study is to add to the teacher education literature on variables that foster high-quality instruction in teacher education programs who are preparing preservice teachers to educate students with diverse learning needs in general classroom settings.

Purpose of the Study

The primary purpose of this study is to determine if preservice educators' knowledge (i.e., special education laws, disability characteristics and best practices), attitudes (i.e., inclusion and co-teaching), and sense of teacher efficacy beliefs toward educating students with disabilities differ as a function of: (a) completing an introductory special education course, (b) participating in either a video presentation (*Power of 2*, 2nd ed., Friend, 2005) or an in vivo observation of co-teaching, and (c) as a function of specific participant demographics. Additional purposes are to examine the relationships among these variables and to determine the extent to which knowledge and attitudes predict teacher self-efficacy beliefs.

Research Questions

After reviewing and analyzing the related literature on knowledge, attitudes and perceived abilities (sense of efficacy) of preservice teachers toward educating students with disabilities, the following research questions were developed.

1. Do the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities improve after participating in a one-semester introductory special education course as measured by a pre-and post-survey?
2. Do the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities differ as a function of participating in a one-hour co-teaching video versus a one-hour in vivo observation of co-teaching as measured by a pre- and post-survey?

3. Do the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities differ as a function of teaching level or area (i.e., primary/elementary, secondary, and special education), as measured by a post-survey taken at the end of a one-semester introductory special education course?
4. What are the relationships between variables (knowledge, attitudes, perceived sense of efficacy, amount of previous interaction with individuals with disabilities, self-reported confidence, and level of experience teaching students with disabilities) as measured by a post-survey taken at the end of a one-semester introductory special education course?
5. What is the relative power of knowledge and attitudes as measured by a post-survey at the end of a one-semester introductory special education course, to predict self-efficacy as measured by the Teachers' Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001).

Hypotheses

Hypotheses address the knowledge, attitudes, and perceived abilities (sense of efficacy) toward educating students with disabilities after taking a one-semester introductory special education course, the differential effects of observing a one-hour video on co-teaching or an one-hour in vivo co-taught classroom, and the differential effects of demographic characteristics. Additional hypotheses address the relationships among these variables and determine the extent to which knowledge and attitudes predict teacher self-efficacy.

H_o1 There is no significant difference in the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities after participating in a one-semester introductory special education course based on the pre-and post-survey results.

H_o2: There is no significant difference in the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities as a function of participation in a video on co-teaching versus a one-hour in vivo observation of co-teaching based on the pre-and post-survey results.

H_o3: There is no significant difference in the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities as a function of teaching level or area (e.g. primary/elementary, secondary, and special education), as measured by a post-survey taken at the end of a one-semester introductory special education course.

H_o4: The relationships between the variables (knowledge, attitudes, sense of efficacy, amount of previous experience with individuals with disabilities self- reported confidence, and level of experience teaching students with disabilities) as measured by a post-survey taken at the end of a one-semester introductory special education course are not statistically different from 0.

H_o5: The variables (knowledge and attitudes) as measured by the post-survey at the end of the one-hour introductory special education course, do not significantly differ in their power to predict self-efficacy as measured by the Teacher's Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001).

Operational Definitions

Operational definitions facilitate the understanding of terms used throughout the study. Although there may be other acceptable definitions, for the purpose of this study, the following operational definitions apply. Each term is consistently used within the study.

1. *Collaboration:* Working jointly with others, willingly cooperating with others and sharing in goal setting, problem solving and goal achievement (Mastropieri & Scruggs, 2010). In addition, collaboration includes co-teaching as defined below.
2. *Co-teaching:* "…two or more professionals jointly deliver substantive instruction to a diverse or blended group, of students in a single physical space" (Cook & Friend, 1995, p.1).
3. *Disabilities:* IDEA's 13 disability categories: specific learning disabilities, speech/language impairments, intellectual disabilities, emotional and behavioral disorders, autism, other health impaired, traumatic brain injury, visual impairments including blindness, deafness, deaf-blind, hearing impairments, multiple disabilities and orthopedic impairments.
4. *Inservice teacher:* One who is actively instructing in a teaching role, serving as the primary person responsible for instruction.
5. *Preservice teacher:* One who is being trained to undertake a teaching role, while not serving as the primary person responsible for the instruction.

Many preservice teachers report feeling unprepared to educate students with disabilities. Teacher education programs must equip preservice teachers for the responsibilities of the direct role they will soon undertake in educating students with various disabilities within general classroom settings. This direct role requires knowledge of disabilities, positive attitudes toward educating students with disabilities, and the ability to implement a variety of effective inclusive strategies. The review of literature that framed this study is presented in the next chapter.

CHAPTER II

INTRODUCTION

Prior to the passage of the Education for All Handicapped Children's Act in 1975, students with disabilities may or may not have been provided access to public education. If students with a disability were enrolled in a public school, they typically were provided educational services within a special education setting based on the assumption that general educators did not have the skills to educate students with disabilities and students with disabilities needed to be taught by specialists. After the passage of the Education for All Handicapped Children's Act, which stated that students with disabilities should be provided a free, appropriate, public education, the self-contained classroom gave way to the resource room model. Students were still educated in the special education classroom for a portion of their instruction and integrated or *mainstreamed* into general classrooms for other activities (e.g. art, music). The former dual education system (i.e., general and special) has given way to a more unified system that attempts to meet the needs of individuals with disabilities primarily within general education settings.

As current legislation (IDEA, 2004) requires students to be educated in the Least Restrictive Environment (LRE), a greater numbers of students with disabilities are included in general classroom settings, requiring an increased need for accommodations, modifications, and the implementation of effective instructional strategies and services. Previous research indicates that novice teachers have reported a lack of knowledge regarding effective teaching strategies and collaboration practices (Mastropieri, 2001), while preservice teachers often lack the preparation and experience needed to educate

students with disabilities (Carlson, Brauen, Klein, Schroll, & Willig, 2002; Garriott et al. 2003; Gartin, Rao, McGee, & Jordan, 2001).

Smith, Polloway, Patton and Dowdy (2012) identified barriers that can hinder the successful implementation of inclusion: knowledge barriers and attitudinal barriers. *Knowledge barriers* are simply an educators' limited knowledge about students with disabilities and inclusive settings. Cook (2002) found that lack of knowledge about disabilities could affect the ability of teachers to accept students with disabilities, while limited knowledge has been shown to increase the fear and anxiety of working with individuals with disabilities (D'Alonzo, Giordano, & VanLeeuwen, 1997). Shippen, Crites, Houchins, Tamsey, and Simon (2005) found that an introductory university course on exceptionality that increased knowledge about inclusion significantly changed the attitudes of preservice teachers, significantly decreasing their level of anxiety and hostility toward working with students with disabilities in a general education setting.

According to Smith et al. (2012), *attitudinal barriers*, which focus on the beliefs of teachers, administrators and other staff members about students with disabilities, can also hinder the success of inclusion. Teacher attitudes are arguably one of the most critical variables in the success of inclusion. According to Wilczenski (1992; 1995), the development of positive attitudes in educators is central to the accomplishment of inclusive education. Preservice teachers enter teacher education programs with a variety of attitudes and beliefs about students with disabilities and their responsibilities for educating them. Therefore, preparing preservice teachers to educate students with disabilities in general classrooms (e.g., inclusion) is a challenging goal for teacher education programs (Shade & Stewart, 2001). Tait and Purdie (2000) suggested that if

preservice teachers finish their teacher education program without having developed positive views toward inclusion, the level of accommodations provided to students with disabilities in general education classrooms could be negatively affected.

Ensuring preservice teachers have adequate knowledge about disabilities and attending to their attitudes toward educating students with disabilities is a starting point; however, knowledge and positive attitudes alone may not be enough to guarantee success. Carlson, Lee, Schroll, and Pei (2004) found that an important factor in teacher quality in special education is self-efficacy beliefs. Bandura (1997) described self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 2).

Theoretical Framework

The construct of self-efficacy comes from Bandura's (1977) social cognitive theory, which suggests that individuals pursue activities in which they feel comfortable and avoid activities in which they doubt their capability to perform successfully. Social cognitive theory maintains that efficacy beliefs influence the choices people make along with the effort and perseverance with which they engage in activities. Bandura postulated that, "self-efficacy beliefs influence the course of action people choose to pursue, how much effort they put forth in given endeavors, how long they would persevere in the face of obstacles and failures, their resilience to adversity, whether their thought patterns are self-hindering or self-aiding, how much stress and depression they experience in coping with taxing environmental demands, and the level of accomplishments they realize" (p. 3). According to Bandura, an efficacy expectation is the conviction that one can successfully execute the behavior required to produce an outcome. If one's perception is,

a performance has been successful, then self-efficacy raises. However, if one perceives failure, self-efficacy lowers.

Bandura (1977) suggested four sources of self-efficacy: performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal. In performance accomplishments, the source of self-efficacy comes from the mastery of personal experiences. Because successes can raise mastery expectations and failures can lower them, strong efficacy expectations can develop through repeated success. Secondly, many expectations derive from vicarious experiences, observing other people's performance in threatening activities without adverse consequences. The observer generates expectations that he/she too will improve if he/she intensifies and persists in his/her own efforts. If the efforts of modeled behavior have clear outcomes rather than modeled actions that remain ambiguous, more efficacy information is conveyed. In addition, "diversified modeling, in which the activities observers regard as hazardous are repeatedly shown to be safe by a variety of models, is superior to exposure to the same performances by a single model" (Bandura, p. 1977). Thirdly, verbal persuasion influences human behavior. Through suggestion, people come to believe they can successfully cope with what has overwhelmed them in the past. Through verbal persuasion, or suggestion, individuals can be led into believing they can successfully cope with events that have occurred in the past. However, verbal persuasion tends to be a weaker influence than the other three sources because an authentic experiential base is not provided. Lastly, emotional arousal can affect self-efficacy for coping with threatening situations. An individual's vulnerability to stress is related at least in part to physiological arousal. Thus, situations that are perceived as stressful can elicit emotional

arousal within an individual that shapes one's self-efficacy. In fact, fear-provoking thoughts about one's lack of ability can arouse elevated levels of anxiety that exceed the actual fear experienced during the actual situation. Therefore, a negative high arousal could debilitate one's performance. An individual is more likely to expect success if he/she is not overwhelmed by aversive arousal.

Bandura warned that because self-efficacy beliefs relate to judgments of capability to perform, it is important that the beliefs of self-efficacy are assessed in correspondence with the specific task being judged. According to Bandura (1977), individuals have beliefs and personal characteristics that influence, and are influenced by, the interrelation of the environment, perceptions and behaviors. He described this interrelation as reciprocal determination in which the three components interact as people have life experiences, a mutual influence between the three factors.

The validity of the construct of self-efficacy has received support from a growing body of findings in diverse fields. The power of self-efficacy to predict effortful behavior has been demonstrated in a variety of settings, especially those related to clinical problems such as addiction (Marlatt, Baer, & Quigley, 1995), stress (Jerusalem & Mittag, 1995), and athletic performance (Lee, 1982). The concept of teacher efficacy stems from self-efficacy. Like Bandura's self-efficacy, teacher efficacy is a self-perception, not an objective measure of teaching effectiveness. Ashton and Webb (1986) defined teacher efficacy as "a teacher's situation-specific expectation that he/she can help students learn" (p. 4). Teacher efficacy contains two constructs: teaching efficacy (TE) and personal efficacy (PE). In general, teaching efficacy is the belief that educators can influence

student learning. Personal efficacy refers to the teacher's confidence in his/her own teaching (Ashton & Webb, 1986; Gibson & Dembo, 1984).

One factor that affects a teacher's judgment of his/her teaching abilities is preservice teacher preparation (Brownell & Pajares, 1999). Therefore, teacher educators whose goal is to increase self-efficacy beliefs in preservice teachers to work with students with disabilities need to create opportunities for them to increase their sense of efficacy. Even when individuals perceive that specific actions will likely bring about desired behavior, they will not engage in that behavior if they believe they do not possess the requisite skills (Bandura, 1986). Preservice teachers should be exposed to students with disabilities in inclusive settings and have opportunities to both observe and participate in planning and teaching students with disabilities to build performance accomplishments as described by Bandura. With support and feedback, these first-hand experiences can contribute to the growth of teacher efficacy beliefs and produce perceptions of success while working with students with disabilities. As Bandura noted, vicarious experiences can enhance self-efficacy beliefs; consequently, the experiences of preservice teachers, (e.g., observing classrooms, listening to and interacting with cooperating teachers, and interacting with children in classrooms) can influence self-efficacy beliefs. Through vicarious experiences, preservice teachers should be exposed to diversified models within coursework and field placements. Although verbal persuasion is the weakest source of self-efficacy, it is important for teacher educators to provide opportunities for discussion about implementing effective instructional strategies, and collaboration with educational peers and parents. Lastly, because some preservice teachers may have limited experience with working with students with disabilities, teacher educators should attempt to address

and alleviate any negative emotional arousal (e.g. fear, anxiety) about working with individuals with disabilities.

Related Literature

The Context: Inclusion

Over the last 37 years, the concept and practice of including students with disabilities in the general classroom setting have evolved. Early efforts of including students with disabilities in general education classrooms, characterized as additive in nature, only added new approaches to already existing practices. In essence, no educational restructuring took place (Pugach, 1995). To describe an evolving educational arrangement that involved students with disabilities "earning their way" into the general curriculum, alongside their peers without disabilities, the term *mainstreaming* began to be used. With little educational restructuring, students with mild disabilities participated in a general education classroom if they could meet traditional expectations with minimal assistance. Therefore, students with disabilities were mainstreamed into non-academic portions of the general education curriculum such as art and music (Idol, 1997).

A decade after The Education for All Handicapped Children Act (1975) was passed, Madeline Will, Assistant Secretary of the U. S. Department of Education led the way for the Regular Education Initiative (REI, Will, 1986). The primary goal of REI was to promote the collaboration between general and special educators, with general education teachers taking a more responsible lead in educating students with disabilities in general education settings. However, REI was vague in defining how much responsibility general education teachers should assume.

The term "*mainstreaming*" soon gave way to the term "*inclusion*". Although the term inclusion is not mentioned in the Individuals with Disabilities Education Act (IDEA, 2004), Elkins (1994) suggested that inclusion is "more an ideological commitment than an empirically validated solution to educating students with special needs" (p. 101). Developed from a strong human rights and social justice perspective (Forlin, 1995), and based on the assumption that teachers would accept students with a disability into regular classes and be responsible for meeting their needs (Westwood, 1993), the concept of inclusion is founded on the philosophy that students with disabilities should be *fully* integrated into the general educational setting. Thus instruction should be based on a student's abilities, not his/her disabilities (Friend & Bursuck, 2002), which is one way to meet the legal requirements for educating students with disabilities in the least restrictive environment (LRE). A tenet of *full inclusion movement* is that all students with a disability, whether cognitive, physical or both, be included in the general education classroom all day every day. Proponents of full inclusion believe that pulling a child out of the classroom to provide special education services or placing the child in a self-contained classroom is inherently unequal and inferior, therefore, immoral. They argue that both the student with disabilities and his or her peers benefit from full inclusion, an argument that often places greater emphasis on social interaction than academic achievement.

Although the full inclusion philosophy platform sounds attractive, it may not sufficiently meet needs of students who may require in-depth attention. Kauffman and Hallahan (1995) warned against embracing the deceptive language of full inclusion. They directed attention to The Cascade of Services Model (Reynolds, 1962; Deno, 1970) as a

basic feature of special education programming since the least restrictive environment (LRE) is a necessary protection that ensures flexibility and individualization of placement for students who may be overlooked and/or overwhelmed in general education. The Cascade of Services Model (or Continuum of Services) suggests that special education services be defined in terms of restrictiveness in relation to the general education program. Levels of service range from the regular classroom with no special services to very specialized and intensive services provided in a hospital or residential treatment facility. The model further suggests that children should move downward to environments that are more restrictive to receive appropriate educational services, and should move upward to less restrictive programs wherever possible. A continuum of placements includes placement in a 1) full-time in a general education classroom, 2) part-time in a special education resource room, 3) fulltime in a special education self-contained classroom, 4) in a separate special education school, 5) at a residential facility, and 6) homebound or in a hospital.

The basis for the Cascade of Services Model contends that in accordance with IDEA each student should be assessed and placed individually, based on needs. Believing that students should be educated in the least restrictive environment with nondisabled peers to the maximum extent possible, supporters of the continuum of services also believe that it is immoral and illegal to place every student in the exact same placement regardless of individual needs and that not every student with a disability will benefit. Many students with disabilities may commonly need a more structured environment, for either academic or behavior purposes.

Current Research on Inclusion

There has been no clear, systematic “roadmap” for implementing the inclusion of students with disabilities. Little has been written about how schools move toward inclusion or how the process is best supported and facilitated. Kavale and Forness (2000) emphasized that "inclusion is not something that simply happens, but something that requires careful thought and preparation ... implemented with proper attitudes, accommodations, and adaptations in place" (p. 287). The percentage of students with disabilities enrolled in general education classroom settings is gradually increasing. During the 2003-2004 school year, 50% of all students with disabilities were educated in a general education class 80% of the time or more compared to 58% in the fall of 2008 (U.S. Department of Education, 2011). In addition, almost 80% of all students with disabilities are in a general classroom setting for at least 40% of the school day.

Past research showed general educators were divided over the inclusion of students with disabilities within their classroom with many educators possessing negative attitudes toward inclusion (Coates, 1989), while others seemed to have more positive attitudes (Villa, Thousand, Meyers, & Nevin, 1996). Scruggs and Mastropieri (1996) conducted a quantitative research synthesis of 28 investigations surrounding the attitudes of general education teachers regarding inclusion. Of the 10,000 general education teachers surveyed, two thirds of the teachers supported inclusion but considerably fewer expressed a willingness to include students with disabilities within their classrooms. Less than a third believed the general classroom was the best placement for students with disabilities with responses varying according to the disabling condition and the implicit

obligations of the teacher. Only about a fourth of those surveyed believed they had sufficient class time, were currently prepared, or had sufficient training.

Notable advantages of inclusion include academic improvement. Hunt, Doering, and Hirose-Hatae (2001) conducted a program evaluation of an across-program collaboration intervention using general and special education collaborative teaming. The program was implemented to increase the academic achievement and social participation for students with and without disabilities. Results suggested that the consistent implementation of the academic and social support was associated with increases in academic skills, self-confidence and social interactions with classmates. Conversely, Smith et al. (2012) noted disadvantages of inclusion, which included a lack of empirical data supporting the inclusion model, a lack of collaboration skills among general and special educators, and the belief that students with disabilities do better in a special education settings. As inclusive practices become more commonplace, it is necessary to examine teachers' attitudes and beliefs about inclusionary practices and the creation of class environments that support diverse learners.

Collaboration and Co-teaching

Collaboration among general and special educators is a necessity for successful inclusion (Smith et al., 2012). Because of current legislation, (IDEA, 2004, which mandates the least restrictive environment, and NCLB, 2001, which requires that all students, including students with disabilities except for the one to two percent with severe disabilities, participate in standardized accountability tests), it is impossible for general and special educators to continue working in isolation. According to Friend and Cook (2007), collaboration is a significant component of the reauthorization of IDEA and is

widely recognized as a prerequisite for inclusive education (Harvey, Yssel, Bauserman, & Merbler, 2010). Co-teaching is an outgrowth of collaboration and has become a viable method in providing support for both students with disabilities and general educators. Cook and Friend (1995) described five variations of co-teaching. The *one teach and one assist* variation requires one educator to maintain the instructional lead in the classroom while the other teacher circulates throughout the room, providing assistance and support to the students as needed. *Station teaching* involves dividing the instructional content, as well as the physical space of the classroom, into two or more sections. Each teacher assumes responsibility for teaching a portion of the content at a prearranged station, and students rotate through each station. *Parallel teaching* requires teachers to plan instruction together. The class is divided into two sections with each teacher delivering instruction within heterogeneous groupings. *Alternative teaching* allows for a large group and small group configuration and permits intensive instruction for students with special learning needs in a reduced teacher to-student ratio. The other instructor simultaneously provides instruction to the large group. *Team teaching* encourages parity between both teachers in planning and instruction. The teachers continually alternate the role of primary instructor within individual lessons.

Although co-teaching is described in the literature, actual evidence about the prevalence and success of co-teaching is limited. Murawski and Swanson (2001) conducted a meta-analysis of 89 articles and found only six quantitative studies that could generate an effect size because (a) different grade levels were involved, (b) not all reported on the types of disabilities within the classrooms, and (c) dependent measures varied. Therefore, results should be interpreted with caution. Based on their review of the

research, Murawski and Swanson made the following statement about the effectiveness of co-teaching: “The limited data suggest that co-teaching can have a positive impact on student achievement. These results indicate that there is a potential for positive results in the areas of achievement using co-teaching as a service delivery option for students with special needs in a general education setting.” (p. 265). Nevertheless, reported benefits of co-teaching include improved instruction, increased enthusiasm for teaching, more communication, and more opportunity to generalize skills to the general classroom environment (Scruggs, Mastropieri, & McDuffie, 2007).

Historically, there has been a lack of preparation in the areas of co-teaching and collaboration at the preservice level (Mastropieri & Scruggs, 2001). Carlson et al. (2002) reported that only 53% of special education teachers and 29% of general education teachers recalled having coursework in collaboration. Conderman, Morin, and Stephens (2005) conducted a nationwide survey of special education student teaching practices. The results indicated that traditional paper-type assignments top the list of student requirements with less attention given to tasks such as collaboration which involved working with paraprofessionals, parents and collaborating with general education teachers. One year later, White and Mason (2006) conducted a study of 147 beginning special education teachers and noted 54% reported problems collaborating with general education teachers.

Because general education preservice teachers may have limited exposure to collaboration during their teacher education programs, they may neglect accessing special educators to assist them in improving their knowledge and skills to teach in an inclusive setting. Cahill and Mitra (2008) stated that general educators felt anxious and resentful

when working with special education teachers due to the lack of special education content in their coursework. According to the Study of Personnel Needs in Special Education (SPeNSE, 2001) of general education teachers who had been teaching for six years or less, only a third participated in preservice preparation in collaboration with special educators. In addition, slightly over half participated in detailed and specific preparation on adapting instruction.

Not only do general educators feel unprepared in collaborative practices, Buell, Hallam, Gamel-McCormick, and Scheer (1999) found in an inclusive setting, that although special education teachers exhibited greater confidence and preparedness in meeting the needs of students with disabilities than general educators, they felt unprepared to collaborate, lacking experience in working collaboratively with general educators. For special educators, depth of content knowledge may be problematic and can result in the perception that general educators know more than special educators do. According to Mastropieri, Scruggs, and Graetz (2005), general educators tend to take on the responsibility of lesson planning and instruction while the special educators take on the responsibility of remediation and developing accommodations and/or modifications. Consequently, students may view the special educator as an *assistant* in the classroom.

Although many tout the benefits of collaboration between general and special educators in inclusive settings, there are concerns stemming from the differences in perceived roles, teaching styles and philosophical orientations (Salend, Johansen, Mumper, Chase, Pike, & Sorney, 1997). Carter, Prater, Jackson, and Marchant (2009) found that "teachers' philosophical beliefs about disabilities had an effect on their collaborative experience and influenced their opinions of classroom accommodations and

adaptations" (p. 67). Teacher attitudes influence the success of collaboration and willingness to implement accommodations (Smith et al. 2012). It is imperative that general and special education teachers are skilled in collaboration to meet accountability standards, discuss students' needs, problem solve, demonstrate instructional strategies, share resources, and network with other professionals.

Because of the disparities of roles, less than positive attitudes, co-teaching challenges, and the increased use of co-teaching as a means of providing instructional support to students with disabilities, there is a need to provide general and special education preservice teachers opportunities for collaboration at the preservice level (McHatton & Daniel, 2008). By learning to form collaborative relationships, general educators can maintain good working relationships, provide more support to students with disabilities and build on teachers' existing knowledge and skills. In conclusion, inclusive education for students with disabilities appears to be here to stay, at least in the near future, even though research is mixed on the effectiveness of inclusion. Though limited research is available to support this premise, most special education scholars appear to agree that one means of ensuring effective inclusion is the collaboration between general and special educators, specifically co-teaching. Given the current mandates of NCLB (2001) and IDEA (2004), teacher education programs must take steps that afford preservice general and special education preservice teachers the opportunity to interact and form relationships while preparing for inclusive classroom settings.

Awareness/Knowledge

General education teachers "play a primary role in the education of students with disabilities… [but] often report feeling unprepared to undertake the role," (Brownell et al.

2006, p. 171). In a national survey of secondary teachers, Rojewski and Pollard (1990) reported 90% of the respondents indicated that their undergraduate program did not effectively prepare them to teach students with disabilities. General educators have very limited preparation in instructing students with disabilities in comparison with their special education peers. In a study of university preparation courses, Cameron and Cook (2007) reported that on average general educators took 1.5 courses in which inclusion and special education content was a major focus, as opposed to approximately 11 courses taken by special educators.

It is important to demystify disabilities and lead preservice teachers to understand the importance of "seeing the person first." By discussing the need to move beyond just understanding the disability definitions and characteristics, preservice educators can expand their perceptions of disabilities and more fully appreciate getting to know the student first (Ford, Pugach, & Otis-Wilborn, 2001). In an Australian study of 220-preservice teachers enrolled in a special education course, Forlin, Jobling, and Carroll (2001) identified several factors (i.e., sympathy, uncertainty, coping, discomfort) that related to interactions with individuals with disabilities. Initially, the researchers found that preservice teachers had a high level of sympathy toward individuals with disabilities, were fearful of becoming disabled, and felt vulnerable interacting with individuals with disabilities. Throughout the 10-week course, preservice teachers attended a one-hour lecture and a two-hour tutorial that explored previous lectured topics more in-depth and provided opportunities for preservice teachers to interact with individuals with disabilities. One opportunity provided the pairing of each preservice teacher with a "buddy," a student with a disability within the local school system. Upon completing the

course, preservice teachers indicated less frustration due to not knowing how to help (*sympathy*) and were more confident about how to help (*uncertainty*). They were more likely to notice the person first and then the disability (*coping*). In addition, they were less concerned during direct contact with people with a disability (*discomfort*).

Garriott et al. (2003) conducted a study on the inclusion of students with mild disabilities in the general education setting. Responses affirmed the fact that preservice educators did not feel prepared to teach students with disabilities. Preservice teachers were relatively evenly divided with approximately half (55%) indicating that educating students with mild disabilities should take place in the general education setting, while 45% considered the special education classroom to be the best setting, indicating that students with mild disabilities needed more individualized attention than could be provided in the general classroom setting. Preservice teachers reported they believed students with mild disabilities would distract typical peers, demand increased attention from teachers, and therefore, should be taught in a special education setting. As one preservice teacher wrote, "The teachers need to be specialized in the special education field to facilitate the learning capabilities in special education students. Teachers with regular education classes don't have the knowledge or experience, so the students with learning disabilities should be in special education classes" (p. 51). To determine whether a gain in perceived knowledge changed preservice teachers' attitudes toward inclusion, Gartin and colleagues (2001) surveyed 202 preservice general education teachers enrolled in a three-hour special education introductory course. Results indicated a significant gain in the areas of knowledge of and attitudes toward inclusion.

Campbell et al. (2003) implemented a pre- and post-survey of 274 preservice teachers enrolled in a course that combined formal instruction and field experiences in working with individuals with Down syndrome. At the end of the study, preservice teachers had acquired knowledge of Down syndrome and more positive attitudes towards inclusion. Results also demonstrated that raising awareness of one disability might lead to changes in attitudes towards disabilities in general with preservice teachers reporting greater ease when working with individuals with disabilities.

Garriott et al. (2003) acknowledged that in order to alleviate the fears and misconceptions that preservice teachers have about their ability to educate students with disabilities, preservice teachers should be provided the knowledge and skills needed to feel competent to accommodate a variety of learning needs. Therefore, providing preservice teachers with the knowledge to educate students with disabilities in an inclusive setting is very important. However, an even greater challenge for teacher educators may be to affect positive attitudinal change toward inclusion.

Attitudes/Beliefs

Preservice teachers enter the teaching profession with a variety of backgrounds, beliefs and attitudes that may directly affect their behavior with students with disabilities, influencing the classroom environment and student outcomes. The term *belief* has been defined in a variety of ways. Kagan (1992) stated that beliefs are an accumulation of knowledge, which is constant and opposed to change. Because preservice teachers have spent so many hours as students, they have developed models and images of what school looks like and what happens in classrooms. In addition, Tomlinson et al. (1994) stated beliefs are too strong to reshape completely, meaning preservice teachers bring with them

"mental imprints" of what teaching and learning look like. Because novice teachers encounter numerous challenges and hurdles, regardless of the beliefs teachers learned and/or changed during their preservice programs, they will return to their own "mental imprints." In contrast, Richardson (1996) defined the term *belief* as a proposition that an individual considers true. Preservice teachers enter programs with various personal philosophies about the purpose of education, and about special education and inclusive practices. Since teacher perceptions of learning and behavioral characteristics of students with disabilities appear to mediate actual teacher behavior, Richardson stated it is important for students to grapple with philosophical questions during the early stages of their teacher preparation. He stated that beliefs and actions have an interactive relation in which beliefs drive actions; therefore, "beliefs should be surfaced and acknowledged during the teacher education program if the program is to make a difference in the deep structure of knowledge and beliefs held by the students" (p. 106).

Because of prior experiences, students enter programs with dispositional knowledge that "can assist" or "hinder" their professional growth. LePage, Neilson, and Fearn (2008) stated that dispositions significantly influence teacher quality. According to the National Council for the Accreditation of Teacher Education (NCATE, 2008) dispositions are the values, commitments and professional ethics that influence behaviors toward students, families, colleagues, and committees. NCATE encourages teacher candidates to demonstrate knowledge, skills, and professional dispositions in order to provide learning opportunities supporting students' intellectual, social, and personal development with emphasis on performance outcomes. The most common topic of

research on dispositions and special education is teacher attitudes towards inclusion (Shippen et al. 2005; Stempien & Loeb, 2002).

In order to explore the dispositional knowledge special education graduate student candidates bring with them as they enter a special education program, LePage et al. (2008) conducted a qualitative study. Approximately 150 students enrolled in either a special education preliminary certification program or a dual program for students who planned to work in inclusive settings with certification credentials in both elementary and special education participated in the study. The researchers analyzed vision statements, collected student products, interviewed students and collected surveys over a two-year period to better understand and enhance the teacher education process. Results of the study showed that preservice teachers who entered the traditional special education program and students in a dual program possessed a variety of perceptions and attitudes. Overall, initial vision statements were often incomplete, uninformed and unarticulated. Early in the study, preservice teachers in the traditional special education program worked from the assumption that students with disabilities have low esteem and face insurmountable challenges. Their main goal was to transform the child's view of him/herself. However, the students in the dual program articulated a vision that emphasized citizenship and the need for education to equalize opportunity for all students. At an early stage, many preservice teachers already had developed assumptions about students' strengths, weaknesses, and self-esteem, demonstrating the importance for teacher educators to allow students to struggle with philosophical questions.

In a study conducted by Shippen et al. (2005), preservice undergraduate and graduate students enrolled in an exceptionality course at three different universities

completed the Preservice Inclusion Survey (PSIS), a modified version of the Response to Inclusion Survey (Soodak, Podell, & Lehman, 1998). The purpose of the study was to compare the perceptions of future educators on two dichotomous scales (i.e., hostility/receptivity and anxiety/calmness) regarding serving students with disabilities in general education settings. Participants were enrolled in a general education teaching program, a special education teaching program or a dual certification program. The investigators found the introductory exceptionality course significantly changed the attitudes of preservice teachers by decreasing their level of anxiety and hostility toward working with students with disabilities in a general education setting. At the end of the course, general educators still possessed a higher level of anxiety about including students with disabilities than the other two groups. However, the information provided in the course (i.e., nature and needs of individuals with disabilities) had the greatest calming effect on the general educators, which was one of two dichotomous scales (*anxious/calming*) measured. If general education teachers are less anxious about including students with disabilities, inclusion may more likely be successful.

In order to address diversity within the classroom, Stamopoulous (2006) challenged preservice teachers to reflect on their values and beliefs based on their perceptions of a Community Links Program (CLP). As part of a third year early childhood course, preservice teachers participated in 25 hours of community service to engage in authentic recreational experiences with individuals with disabilities. Notable outcomes for the preservice teacher participants included building positive attitudes toward individuals with disabilities, a deeper understanding of diversity, and greater confidence in developing inclusive classrooms.

Knowledge of the nature of various disabilities is one variable that can contribute to the attitudes, beliefs and interactions of inservice and preservice teachers in educating students with disabilities. According to Cook, Tankersley, Cook and Landrum (2000), when a student's needs fall out of a teacher's boundary of instructional tolerance, or if problematic behavior exists that decreases the effectiveness of the teacher's instruction, negative attitudes may form toward that student. Avramidis, Bayliss and Burden (2000) found general education preservice student teachers held positive attitudes towards special education. However, when they actually experienced children with emotional/behavioral disorders and physical difficulties, the preservice teachers experienced stress and their positive views dropped. According to Soodak and colleagues (1998), characteristically, students with intellectual disabilities and emotional/behavioral problems were rated less positively than students with physical disabilities. Hastings and Oakford (2003) conducted a study to determine the impact of disability category (intellectual disabilities versus emotional and behavioral problems) and general education student teachers' preparation (being prepared to work with younger or older students) on their attitudes toward inclusion. Findings indicated the preservice student teachers expressed more negative attitudes towards the inclusion of students with behavioral and emotional problems than towards students with intellectual disabilities.

In 2002, Cook conducted a study of the inclusive attitudes of 181 general education preservice teachers enrolled in an infusion preparation program using a slightly modified version of the Opinions Relative to Integration of Students with Disabilities Scale (ORI; Antonak & Larrivee, 1995). Cook examined attitudes toward inclusion and self-reported strength and weakness among preservice general education teachers along

with attitudes toward inclusion based on the types of disabilities. Results indicated that attitudes toward inclusion were more positive for students with learning disabilities than they were for students with behavioral disorders, intellectual disabilities, and multiple disabilities. These findings support the prediction of tolerance theory while also replicating previous reports that teachers provided a high level of support for inclusion of students with mild disabilities who required only minor academic assistance and did not demand the teacher's attention (Scruggs & Mastropieri, 1996).

A teacher's attitude is a variable that can influence how effectively students with disabilities are included within the general education classroom. One concern that may arise throughout the inclusion process is the belief that the inclusion of students with disabilities in a general education classroom is unfair to students achieving in the average range (Garriott et al., 2003). In addition, there is the belief that inclusion makes unfair and unreasonable demands on the general education teacher (Zambelli & Bonni, 2004).

Popular concepts of fairness give the notion of equal benefits and the assumption that unequal treatment must be justified (Berry, 2008). When considering applications of the law, typically, "*fair*" means everyone is treated equally under the law. However, Lavoie (1989) defined "fairness" as students receiving the supports and/or instruction they need, not that everyone receives the same support and/or instruction. As long as students do not become dependent and resources are sufficient, in theory, the implementation of need-based fairness should not be a problem.

In order to examine attitudes toward inclusion in relation to fairness, Berry (2008) conducted a longitudinal study of 47 general education graduate students and novice teachers enrolled in six different sections of a special education survey course. The

course involved optional readings on fairness, an activity based on Blanchard's (1986) definition of fairness, and the video *How Difficult Can This Be? The F.A.T. City Workshop* (Lavoie, 1989). Using journals, student commented on course resources, class activities, and personal connections. At the end of the semester, students were informed of the research project and invited to participate by submitting their journals. Five main themes emerged on the topic of "fairness" in the classroom: Twenty-two participants (47%) stated the importance of fairness and noted that it is the teacher's responsibility to establish or maintain the fairness norm within the classroom. Twenty-three participants (49%) discussed the definition of fairness; many welcoming the opportunity to take a closer look at the definition. Fifteen participants (30%) conveyed awareness of students' views of fairness and unfairness in that children typically view fairness with equality. Fifteen participants (32%) discussed fairness as related to assessment, grading and classroom management, which was new information for participants. Twenty-three participants (49%) wrote about concerns involving the unfair effects on students and teachers. For students with and without disabilities, participants were apprehensive about the effects of differentiated instruction.

It is important for preservice teachers to develop their understanding of fairness. According to Berry (2008), in order for teachers to confront and alleviate fears and to provide novice teachers with an appropriate theory, it is important that perceptions of "fairness" are recognized and understood by teacher educators. By understanding fairness as defined by Lavoie (1989), preservice teachers can begin to develop positive attitudes toward teaching and meeting the needs of students with disabilities.

To investigate the beliefs, skills and practices of general and special education preservice teachers regarding planning and making accommodations for students with intellectual disabilities in inclusive settings, Cameron and Cook (2007) used a modified version of the *Teacher's Beliefs and Attitudes toward Planning for Mainstreamed Students* (TBAP, 1994). Inclusion content was infused throughout the participants' teacher education program rather than one or two isolated courses. The survey was administered to all participants during the initial 20 minutes of the course in which they were enrolled. Participants were in their final semester of undergraduate teacher training. Findings indicated that preservice special educators rated themselves significantly higher than the preservice general educators on beliefs, skills and intended practices. However, general educators' ratings were closest to special educators in the area of beliefs. In the attitudinal category, participants in both groups rated their beliefs and intended practices higher than their skill. Overall, the infusion program proved more effective at generating positive beliefs and intentions over skills, especially for general educators. Positive beliefs and intentions alone are not sufficient for effectively implementing inclusive practices. Because of their self-reported low skill ratings, it is unlikely these preservice teachers will begin their teaching career making the appropriate adaptations for students with intellectual disabilities included within their classroom.

Silverman (2007) examined the relationship between the attitudes toward inclusion and beliefs about knowledge and learning of 71 preservice general and special educators using the *Opinions Relative to Integration of Students with Disabilities* (ORI) and the *Epistemic Beliefs Inventory* (EBI) along with demographic information.

Confirming the hypothesis, participants who held positive attitudes toward inclusion tend to believe that all students are capable of learning. They found a negative relationship (r = -0.36, p < .002) between the ORI total score and the EBI total score; low EBI total scores indicate high-level epistemological beliefs. Silverman's findings suggest that teacher educators should address preservice teachers' beliefs about the learning capabilities of students with disabilities.

Because of the widespread increase in inclusion in schools, it is important that teachers hold attitudes and beliefs and develop skills associated with sensitive, effective inclusive teaching. Because preservice teachers may lack knowledge and preparation to teach students with disabilities, a decreased level of confidence can occur which could affect overall attitudes toward inclusion. According to Cameron and Cook (2007), teacher preparation programs should assess preservice attitudes toward inclusion and beliefs about learning using the results as a baseline to direct the planning of new teacher preparation to foster the development of positive attitudes, beliefs, and instructional skills.

Teacher and Personal Efficacy

Researchers have attempted to understand what makes an effective teacher. According to Brownell and Pajares (1999), teacher efficacy beliefs significantly affect classroom effectiveness. Teachers who believe they will be successful tend to set higher goals for themselves and their students, try harder to achieve their goals and persevere through obstacles more than teachers who were doubtful of their success (Ross & Bruce, 2007). Brownell and Pajares (1999) posited that teachers with higher efficacy beliefs would persevere more in creating accommodations for students with learning and

behavior problems and, consequently, reported greater success in educating these students. Teachers with strong efficacy beliefs have a positive impact on students. They tend to view student failure as motivation to greater teacher effort instead of viewing the causes of students' failure beyond their control, providing additional assistance to students experiencing learning difficulties (Gibson & Dembo, 1984). A high sense of efficacy enables teachers to be less critical of students when they made mistakes (Ashton & Webb, 1986). They are sensitive to the learning differences of students with disabilities, use their skills to teach students, and believe that learning will improve (Cook et al., 2000). Teachers with a sense of high efficacy have confidence in their capability to work with students, to try new ideas, especially techniques that involve risks, techniques that are difficult and require shared control with the students (Ross, 1998). They stimulate student autonomy by using strategies that keep students on task and attend more closely to the needs of students with lower ability (Woolfolk, Rosoff & Hoy, 1990).

In contrast to teachers with high efficacy beliefs, teachers with low efficacy beliefs give up more easily on students experiencing academic difficulty because quick results are not evident, possess a pessimistic view toward student motivation, and have a rigid classroom environment (Woolfolk & Hoy, 1990). Teachers with low efficacy beliefs concentrate on the efforts of the upper group, give less attention to the needs of students with lower ability, view this group as a potential source of disruption (Ashton, Webb & Doda, 1983). Freytag (2001) indicated that general educators have a lower sense of overall teacher efficacy than special educators did in inclusive settings. However, Brownell and Pajares (1999) found that general educators feel confident instructing and

managing students with disabilities if they have taken coursework that addressed the needs of students with disabilities, instructional adaptations, and behavior management techniques.

Villa and colleagues (1996) noted that teacher commitment often emerges at the end of an actual experience in an inclusive setting, after the teachers gain mastery of the professional expertise needed to implement inclusive programs. Reporting similar findings, Le Roy and Simpson (1996) studied the impact of inclusion over a three-year period and found that as teachers' experiences with children with disabilities increased, their confidence to teach these children also increased. However, further research is warranted to carefully investigate the types of preparation experiences and supports needed by preservice teachers to develop the confidence level of preservice teachers in educating students with disabilities.

Conclusions

Current legal, political and philosophical demands dictate that most students with disabilities receive a significant portion of their education within general education settings. Consequently, teachers are required to meet students' individual needs. Although many general education teachers believe students with disabilities should be included within the general education classroom, they do not believe they have the skills required to meet the individual needs of their students. Through a growing body of research identifying prerequisites for effective inclusion, researchers have identified positive attitudes as being important in addition to knowledge and skills (Cook, 2002). Because the classroom teacher is the greatest determinant of student learning, it is

important to examine the attitudes and beliefs of preservice teachers before they reach the classroom (Darling-Hammond & Youngs, 2002).

Pugach (1996) stated that preservice teachers should be required to practice creating alternative approaches to teaching, should experience collaboration with others in the school to understand how important relationships are, and observe how teachers build a sense of community within their classrooms. Woloshyn, Bennett, and Berrill (2003) recommended that teacher preparation programs integrate special education practices into core curriculum courses, integrate some form of special education into all practicum practices and have the opportunities to observe and interact with students with diverse needs. When general education teachers are successful in collaborative relationships with special education colleagues, they may perceive themselves as more capable of instructing students with disabilities. By improving collaboration and co-teaching skills at the preservice level, improved results may become evident at the inservice level.

The research base on preparation of preservice educators to meet the needs of students with disabilities in inclusive settings is limited and/or dated. There has been limited research focused on redesigning preservice teacher training programs in order to facilitate positive attitudes between teachers and students with disabilities (Forlin, Jobling, & Carroll, 2001, Forlin et al. 2001). Previous research has identified the importance of knowledge about disabilities and appropriate strategies, positive, open and accepting attitudes, certain demographic characteristics (e.g. previous interaction with individuals with disabilities) and self-efficacy beliefs though no single published study has examined them together. According to Sindelar et al. (2010), research needs to

examine the entering knowledge and beliefs of preservice students and variables that foster high-quality instruction in teacher education programs.

This study is designed to determine if preservice educators' knowledge of special education laws and best practices, attitudes about inclusion and co-teaching, and perceived sense of teacher efficacy toward educating students with disabilities differ as a function of (a) completing an introductory special education course, (b) participating in either a video presentation or an in vivo observation of co-teaching, and (c) as a function of participant demographics; to examine the relationships among these variables; and to determine the extent to which knowledge and attitudes predict self-efficacy beliefs.

CHAPTER III

METHODOLOGY

Research Design

Addressing the research questions required various quantitative data analyses. Mean differences between the dependent variables were investigated by a series of paired *t* tests and ANOVAs. Gains from pre-survey to post-survey were determined for participants enrolled in the course. In addition, an experimental group design was used to explore differences in post-test scores for two groups. Students within courses were heterogeneous and course sections were randomly assigned one of two conditions. Participants in each group 1) watched a video about co-teaching, or 2) observed a co-teaching classroom in vivo. Further differences between dependent variables were explored via ANOVAs for participants based on demographic characteristics (e.g., education majors, amount of interaction, and level of confidence in working with individuals with disabilities). Finally, relationships among variables were explored by correlational analyses and a multiple regression was used to determine the relative power of selected variables (i.e., knowledge and attitudes) to predict self-efficacy beliefs.

Design of the Study

The design of this study was a pre- and post-survey design, which assessed preservice teachers' knowledge, attitudes, and perceived abilities (sense of efficacy) toward educating students with disabilities. Participants completed both the on-line pre- and post-survey that included an Attitudes Questionnaire (AQ), the Preservice Inclusion Survey (PSIS), a Teacher Self-Efficacy Scale (TSES) and 30 questions taken from the course textbook test bank (Mastropieri & Scruggs, 2010, *The inclusive classroom:*

Strategies for effective differentiated instruction, 4th ed.). Additionally, only the pre-survey instrument included relevant participant demographic information. All course sections used a common syllabus, the same textbook, and the same assignments/artifacts.

Through random course assignment, students in three sections were assigned to view a one-hour co-teaching video while students in four sections participated in a one-hour observation of in vivo co-teaching. A total of four instructors taught the seven participating courses. One instructor taught four of the seven introductory sections, therefore, two of her classes were assigned to watch the co-teaching video; two to observing co-teaching in vivo with day and night sections balanced between the conditions. Instructors attended regular planning meetings with the program coordinator. The study conformed to IRB guidelines. Participants were offered extra credit for permission to use their data (1% of the total possible final grade points). An alternate assignment was available if a student did not want to participate in the study.

Sample Frame

Consent was obtained (see Appendix A) and primary reliability data were initially collected from 177 participants, 19-53 years of age (M = 23.12), enrolled in eight upper level undergraduate introductory special education courses, one of which had an intensified urban education focus, at a large southeastern university during the spring semester of 2011; 169 participants completed both pre- and post- surveys. Because of the nature and dissimilar requirements of the urban focus course, participants (n =19) were discontinued from the study leaving 158 participants. The special education introductory course chosen for the study is required for all teacher education students pursuing a licensure in teaching. Students enroll in this course prior to a teaching internship.

Students within the introductory courses primarily included juniors and seniors though a few graduate students seeking initial teaching licensure and already in teaching positions also were enrolled. Some participants were enrolled in a practicum field experience concurrently, while others were not. Participants were enrolled in the following programs: early childhood education, primary/elementary education, secondary education (which included those preparing to teach middle school grades), special education, art education, and English as a second language (ESL).

Seventy-two participants watched the one-hour co-teaching video. Sixty-three participants observed a co-taught classroom for one hour, selecting co-teachers from a pre-approved teacher list. Seventeen participants did not observe a teacher from the approved co-teaching list. However, a review of the written summaries submitted by the participants indicated they had similar experiences. Therefore, they were grouped with the participants who did observe a teacher from the approved list (n = 80). One participant did not participate in either assignment (i.e., condition) and was thus eliminated from the analyses on effects of observation condition.

Instrumentation

The survey instrument consisted of five components: 1) demographic information, 2) an Attitudes Questionnaire (AQ developed by Bell & Bowlin, 2011), 3) the Preservice Inclusion Survey (PSIS), 4) the Teachers' Sense of Efficacy Survey (TSES), and 5) 30 routine multiple-choice questions taken from the text test bank (Mastropieri & Scruggs, 2010, *The inclusive classroom: Strategies for effective differentiated instruction*, 4th ed.). The first group of items, demographic information, addressed participants' age, gender, educational status, grade level of expected certification, experience working with

individuals with disabilities, formal training level, level of experience and confidence in working with students with disabilities, and amount and type of interactions with a person with a disability (see Appendix B).

The Attitudes Questionnaire (AQ), developed by the researcher and a professor in special education, used a 5-point Likert scale designed to measure each participant's level of agreement on 8 items assessing attitudes about fairness and meeting the needs of students with disabilities (see Appendix C). Adopting Lavoie's (1989) definition of fairness, the questions are designed to assess how willing participants are to provide students with disabilities what they need to succeed as opposed to providing the same experience for all. Specific topics assessed by these items include what constitutes an appropriate education, differential types and amounts of instructional support, different instructional assistance, instructional and assessment accommodations, roles and responsibilities of a general education teacher and a willingness to collaborate and co-teach. Included in the AQ were two collaboration and co-teaching items from the Teacher Attitudes toward Inclusion Scale (TATIS- Cullen, Gregory, & Noto, 2010). Internal consistency reliability of the AQ instrument for this sample determined by calculating an alpha coefficient is acceptable (r = .83).

The Preservice Inclusion Survey (PSIS) developed by Shippen et al. (2005), is a modified form of the Response to Inclusion Survey (Soodak, Podell & Lehman, 1998). The PSIS used a one-paragraph hypothetical scenario about serving students with disabilities in inclusive classes (see Appendix D). In that scenario, general and special educators were informed of an administration decision two weeks before the beginning of the school year, requiring the inclusion of students with disabilities within the general

education setting. For this study, the scenario was adapted to require collaboration and co-teaching and included the same disabilities as the original form of the PSIS (see Appendix E): hearing impairments, learning disabilities, intellectual disabilities, behavioral disorders, and physical disabilities requiring the use of a wheelchair.

Participants responded to a list of 17 adjectives using a 5-point Likert-type scale (i.e., negative, somewhat negative, neutral, somewhat positive and positive), to indicate their feelings about collaboration and co-teaching. Positively and negatively worded, items were counterbalanced. According to Shippen et al. (2005), the PSIS and the original Response to Inclusion Survey demonstrated the same factor structure. That is, the first factor (*hostility/receptivity*) contained adjective pairs such as angry/not angry and enthusiastic/unenthusiastic. The second factor (*anxiety/calmness*) contained adjective pairs such as fearless/scared and relaxed/anxious. Results of a 3-week test-retest reliability analysis yielded a reliability coefficient for the hostility/receptivity subscale of .93, while the reliability coefficient for the anxiety/calmness subscale was .91. The reliability coefficient for the entire instrument was .96. Three experts in the field of special education conducted a content validity analysis. The expert reviewers rated each of the 17 items on the *PSIS* as relevant, somewhat relevant, or irrelevant. The ratings were assigned a Likert type range of 1 to 3 (e.g., 1 = irrelevant, 2 = somewhat relevant, and 3 = relevant). The mean score for seven of the 17 items was 3.00 indicating that all three reviewers rated these items as relevant. For six of the 17 items the mean score was 2.67. For three of the 17 items the mean was 2.33 and for one item, the mean score was 1.33. For this study, the internal consistency reliability of the PSIS calculated for this sample (r = .92) is strong.

The Teacher Sense of Efficacy Scale (TSES) sometimes referred to as the *Ohio State Teacher Efficacy Scale,* measures beliefs in the capability to make a difference in student learning and to effectively reach students who are difficult or unmotivated (see Appendix F). Respondents rate their capability in instructional strategies, student engagement, and classroom management. The TSES has a long form (24 items) and a short form (12 items). Positive correlations with other measures of personal teaching efficacy (Hoy & Woolfolk, 1993; 10-item adaptation of the Gibson and Dembo TES) provide evidence for construct validity. Tschannen-Moran and Hoy (2001) reported high internal consistency for the scale (r = .90). Three moderately correlated factors were found when a factor analysis was conducted: *Efficacy in Student Engagement, Efficacy in Instructional Practices,* and *Efficacy in Classroom Management*. For the short form, which was used in this study, *Efficacy in Student Engagement* included Items 2, 4, 7, and 11. *Efficacy in Instructional Practices* included Items 5, 9, 10, and 12. *Efficacy in Classroom Management* included Items 1, 3, 6, and 8. Reliability coefficients for the short form produced a TSES Total Score-TSES .90, Engagement .81, Instruction .86, and Management .86. The internal consistency reliability of the TSES as determined by this sample (r = .92) is strong.

There are a variety of measures used to assess educator attitudes, knowledge, and skills for working with students with disabilities. However, no one measure is without its limitations and many need further testing and validation. For example, the TSES is considered superior to previous teacher efficacy measures because it has a unified and stable factor structure and assesses a broad range of capabilities related to ‘good teaching’, but more research is needed (Tschannen-Moran & Hoy, 2001). Nevertheless,

there is evidence that this measure, along with the PSIS, can yield some information about teachers' attitudes and beliefs, and sense of efficacy for educating students with disabilities. However, less is known about the Attitudes Questionnaire, developed for this study, though preliminary data (i.e., alpha coefficients) suggest strong internal consistency.

Thirty multiple-choice questions, with four choices, were selected from the textbook test bank (Mastropieri & Scruggs, 2010, *The inclusive classroom: Strategies for effective differentiated instruction*, 4th ed.). Using the test bank, three ten-question sets were developed to assess preservice teachers' knowledge in three distinct areas: legal issues and policies, disabilities characteristics, and teaching strategies. The questions and answer options were reviewed and modified by the researcher and a professor in special education with expertise in test construction to ensure adherence to sound test construction principles (Payne, 2003). These questions, covering a broad range of special education knowledge, were used to assess incoming preservice educators' knowledge and the impact of course material on post-survey knowledge gains (Appendix G).

Content Validity

In an attempt to ensure content validity related to the AQ, the re-written portion of the PSIS and the 30 questions taken from the course textbook, the researcher assembled a panel of education experts to examine the on-line survey instrument. These experts had a variety of teaching experiences with individuals with disabilities (i.e., three professors in special education and a graduate teaching assistant with experiences in working with students with high and low incidence disabilities). The panel of experts accessed the on-line survey with instructions to complete the survey, record the amount of time required

for completion, and to complete an item-by-item analysis of the survey instruments (i.e., knowledge, AQ, and PSIS) with a focus on identifying any unclear or misleading statements. After thorough review, members of the panel made several recommendations that focused on improving the imprecise or unclear wording of statements. Appropriate changes were made to ensure clarity and accuracy.

Procedures

The principal investigator (PI) contacted professors/instructors of all eight sections of an introductory special education course to explain the research project and obtain permission to ask students to participate. Following professor/instructor consent, the primary investigator visited the first day of class of each course section. Students in each section were given a written Study Information Sheet (Appendix A), explaining the research project and requesting consent to use their information for the research project. Once the researcher gained permission to utilize the data from the survey, participants completed the on-line pre-survey (Appendix G). To maintain confidentiality, participants used their university net id to access the on-line survey.

Class sections were randomly pre-assigned to either: 1) watch a video about co-teaching, or 2) observe a co-teaching classroom in vivo. For both conditions, each participant was required to write a two to three page, double-spaced paper regarding his/her observation, incorporating a reflection. For this assignment, the researcher provided the same directions, expectations and guided questions via each class's Blackboard site. Participants assigned to watch the co-teaching video were required to attend one of five viewing times scheduled at the university library. If a scheduling conflict occurred, students scheduled an alternative make-up date and time. For

participants in the in vivo observation, the primary investigator supplied a list of 53 names of effective co-teachers, recommended by several local education agency central office staff and co-teacher coordinators. Participants were able to select grade level and subject matter that reflected their own interests.

Data Collection

All data were collected in a pre-and post-surveys created by SPSS mrInterview 5.0. Each participant took the pre-survey on the first day of the introductory special education class session. Participants took the post-survey during the last week of the spring semester. All information was stored electronically through the mrInterview software.

Data Analyses

Statistical Package for the Social Sciences (SPSS) version 18, a computer statistical software program, was used for data analysis. Descriptive statistics (i.e., means and standard deviations) were calculated for all variables. Means and standard deviations for knowledge (as measured by 30 items from the textbook test bank questions), attitudes (Attitude Questionnaire or AQ), the Preservice Inclusion Survey (PSIS), and perceived ability means (Teacher Sense of Efficacy Scale; TSES) were calculated. For the PSIS, items assessing feelings about collaboration and co-teaching were counterbalanced between negative and positive; therefore, data were re-coded so that higher scores reflected positive feelings and lower scores reflected negative feelings. The research questions are re-stated, followed by the proposed data analysis.

1. Do the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities improve after participating in a one-semester introductory special education course as measured by a pre-and post-survey?

To answer Research Question 1, paired *t*-tests for equality of means on the measures of knowledge, attitudes and perceived abilities (sense of efficacy) were used to analyses the pre- and post-survey data for participants in all seven courses.

2. Do the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities differ as a function of participating in a one-hour co-teaching video versus a one-hour in vivo observation of co-teaching as measured by a pre- and post-survey?
3. Do the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities differ as a function of teaching level or area (e.g., primary/elementary, secondary, and special education), as measured by a post-survey taken at the end of a one-semester introductory special education course?

To answer questions 2 and 3, a series of repeated-measures analyses of variance (ANOVA) were used to evaluate differences in the dependent variables: knowledge (test bank items) attitudes (AQ and PSIS) and teacher efficacy (TSES). In addition, for question 3, Tukey's post hoc multiple comparisons were used to determine if any differences existed between groups (i.e., teaching level) on the dependent variables. A confidence level of .05 was used.

4. What are the relationships between variables (knowledge, attitudes, perceived sense of efficacy, amount of previous interaction with individuals with disabilities, self-reported confidence, and level of experience teaching students with disabilities) as measured by a post-survey taken at the end of a one-semester introductory special education course?

To answer question 4, relationships among variables were determined by Spearman rho correlations.

5. What is the relative power of knowledge and attitudes as measured by a post-survey at the end of a one-semester introductory special education course, to predict self-efficacy as measured by the Teachers' Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001)?

To answer questions 5, stepwise multiple regressions were conducted to determine the relative power of knowledge and attitudes to predict the sense of self-efficacy score.

CHAPTER IV

RESULTS

The purpose of this study was to examine preservice teachers' knowledge, attitudes and perceived abilities (sense of efficacy) toward educating students with disabilities. Demographic information gathered during the pre-survey, and pre- and post-survey scores on an Attitudes Questionnaire (AQ), the Preservice Inclusion Survey (PSIS), the Teachers' Sense of Efficacy Survey (TSES), and 30 multiple-choice questions (Mastropieri & Scruggs, 2010, *The inclusive classroom: Strategies for effective differentiated instruction*, 4th ed.) test bank for participants who observed a co-teaching video or who observed in vivo co-teaching are presented. Appropriate tests of significance were used to determine significance of differences between pre- and post-measures means, and post-measures means based on observation condition. Additionally, relationships among variables were determined by Spearman rho correlations. Finally, a stepwise multiple regression was conducted to determine the relative power of knowledge and attitudes to predict teacher self-efficacy. Results for each of the five research questions are presented.

Response Rate and Participation

Preservice and inservice undergraduate and graduate students (n = 158) enrolled in one of seven upper level, introductory special education courses at a large southeastern university completed an on-line pre- and post-survey. Gender demographics were 20% (n = 32) males, 80% (n = 126) females. Class rankings included 8% (n = 13) juniors, 80% (n = 125) seniors, and 12% (n = 20) graduate students (receiving undergraduate credit). A post-survey demographic question was included to identify the grade level participants

were planning to teach. Participant responses included 4% (n = 7) early childhood, 42% (n = 67) primary/elementary, 37% (n = 59) secondary, 8% (n = 13) special education, and 4% (n = 7) other. All demographics are displayed in Table 1. Five preservice teachers were eliminated from the data analyses because they failed to complete the post-survey, leaving 153 participants who completed both surveys.

Data Analyses

Statistical analyses to address the research questions included paired *t*-tests, a series of repeated measures analysis of variance (ANOVA), correlational analyses (i.e., Spearman rho), and multiple regression analyses. All scales, with the exception of the AQ pre- and post-surveys, were generally normally distributed with skewness ranging from -.76 to +.26 and kurtosis ranging from -.56 to +1.02 . The skewness and kurtosis for the AQ pre-survey were -1.91 and 5.15 respectively, while the AQ post-survey results indicated a skewness and kurtosis of -3.00 and 11.53 respectively. Parametric tests were conducted with the exception of the AQ post-survey, in which the Kruskal-Wallis, a non-parametric test, was run for the ANOVAs. Because students were randomly assigned to conditions in intact classes, preliminary ANOVAs were conducted to rule out any differences in the dependent measures based on class instructor as the grouping variable. With one exception, ANOVA results indicated no significant differences ($p > .05$) on any of the dependent measures based on class instructor (Table 2). Post-hoc analysis (i.e., Tukey's HSD) indicated that one class had significantly higher post-test scores on the knowledge measure (p =.002).

Table 1

Demographics of Participating Preservice Teachers Enrolled in a One-Semester Introductory Special Education Course.

Characteristics	*n*	%
Gender		
Female	126	80
Male	32	20
College Level		
Junior	13	8
Senior	125	79
Graduate	20	13
Age		
19-23	130	82
24-30	18	13
31-51	10	5
Training to Teach		
Early Childhood	9	6
Primary/Elementary	69	44
Secondary	59	37
Special Education	14	9
Other	7	4

Note: Middle School Education Majors are included with Other (*n* = 7).
N = 158

Table 2

Knowledge, Attitudes and Sense of Efficacy Means and Standard Deviations of Preservice Teachers' Pre- and Post-Survey Responses Based on Instructor.

Course Section	Awareness *M* (*SD*)	Awareness2 *M* (*SD*)	AQ *M* (*SD*)	AQ2 *M* (*SD*)	PSIS *M* (*SD*)	PSIS2 *M* (*SD*)	TSES *M* (*SD*)	TSES2 *M* (*SD*)
Section 1 (N=19)	16.84(3.30)	24.32(2.50)	4.58 (.59)	4.91 (.12)	3.48 (.73)	4.27 (.59)	6.48 (.88)	8.17 (.53)
Section 2 (N=19)	15.42 (3.92)	18.79 (2.80)	4.57 (.32)	4.74 (.52)	3.63 (.57)	4.03 (.50)	7.13 (.99)	8.22 (.66)
Section 3 (N=14)	15.00 (3.96)	20.43 (2.47)	4.46 (.46)	4.74 (.29)	3.54 (.74)	3.95 (.71)	6.88 (.82)	8.05 (.78)
Section 4 (N=25)	16.00 (3.27)	19.20 (3.27)	4.77 (.23)	4.89 (.21)	3.62 (.51)	4.04 (.47)	6.53 (.98)	7.96 (.82)
Section 5 (N=26)	16.23 (2.93)	19.35 (2.88)	4.55 (.45)	4.86 (.33)	3.36 (.75)	4.11 (.64)	6.98 (.90)	8.39 (.60)
Section 6 (N=26)	16.61 (2.87)	20.69 (2.45)	4.69 (.37)	4.74 (.36)	3.31 (.80)	3.64 (.61)	6.96 (1.13)	7.88 (.68)
Section 7 (N=24)	14.58 (4.09)	19.46 (2.57)	4.69 (.48)	4.85 (.25)	3.38 (.73)	3.97 (.57)	7.04 (1.03)	7.98 (.76)
Total (N=153)	15.86 (3.47)	20.22 (3.16)	4.63 (.43)	4.82 (.32)	3.46 (.70)	3.99 (.60)	6.86 (.99)	8.09 (.71)

Research Question 1: Do the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities improve after participating in a one-semester introductory special education course as measured by a pre-and post-survey? To address this hypothesis, null hypothesis one was tested.

H_o1 There is no significant difference in the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities after participating in a one-semester introductory special education course based on the pre-and post-survey results.

Paired t-tests for equality of means were used to analyze pre- and post-survey data. Analyses revealed significant differences between the mean scores of the participants on all dependent variables in the pre- and post-survey with alpha set at .05 (Table 3). Preservice teachers knowledge (30 test bank items) of legal issues, disability characteristics and instructional strategies significantly increased by the end of the introductory course, $t(152) = -14.28$, $p < .001$. Preservice teachers' attitudes toward educating students with disabilities (8 item AQ) significantly improved by the end of the course, $t(152) = -6.11$, $p < .001$. Preservice teachers' attitudes toward collaboration and co-teaching (17 item PSIS) significantly improved by the end of the course, $t(152) = -10.26$, $p < .001$. Finally, preservice teachers' sense of self-efficacy (12 item TSES) significantly improved by the end of the course, $t(152) = -15.44$, $p < .001$.

Table 3

Knowledge, Attitudes and Sense of Efficacy Means and Standard Deviations of Preservice Teachers' Pre- and Post-Survey Responses

Variable	Pre-survey		Post-survey	
	M	*(SD)*	*M*	*(SD)*
Awareness/Knowledge	15.86	(3.46)	20.21	(3.16)
Attitude Questionnaire (AQ)	4.62	(0.42)	4.82	(0.31)
Preservice Inclusion Survey (PSIS)	3.46	(0.69)	3.99	(0.60)
Teacher Sense of Efficacy Scale (TSES)	6.80	(0.98)	8.08	(0.70)

Note. $N = 153$.

Research Question 2: Do the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities differ as a function of participating in a one-hour co-teaching video versus a one-hour in vivo observation of co-teaching as measured by a pre- and post-survey? To address this hypothesis, null hypothesis two was tested.

H_o2: There is no significant difference in the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities as a function of participation in a video on co-teaching versus a one-hour in vivo observation of co-teaching based on the pre-and post-survey results.

To determine if any significant differences exist between the mean scores for participants who watched the one-hour co-teaching video and the mean score of those who participated in a one-hour in vivo observation of a co-taught classroom, a series of repeated-measures analyses of variance (ANOVA) were used to evaluate differences in knowledge, attitudes (AQ and PSIS) and teacher sense of efficacy (TSES). In interpreting the ANOVAs, the alpha level was set at .05. Means and standard deviations on the knowledge, attitudes and efficacy measures of the two groups are presented in Table 4.

Results of a repeated-measures analysis of variance of participants' knowledge indicated no significant differences in participants' scores from pre- to post-surveys as a function of the observation condition, $F(1, 150) = .101$, $p = .751$. Similarly, results of a repeated-measures analysis of variance of participants' attitudes as measured by the Attitudes Questionnaire (AQ) indicated no significant differences in participant scores from pre- to post survey as a function of the observation condition, $F(1, 150) = .224$,

p = .636. In addition, a repeated-measures analysis of variance indicated no significant differences in gains in attitudes as measured by the Preservice Inclusion Survey (PSIS), based on video versus in vivo observation, $F(1, 150) = 0.00$, p = .988. Results indicated a significant difference on the main effect of condition, $F(1,150) = 6.89$, p =.010, η_p^2=.044, observed power = .72. Effect sizes were calculated using partial eta-squared which can be interpreted as a 0.1 having a "small" effect, 0.6 a "medium" effect and 0.14 to infinity, a "large" effect. As a rule of thumb, these correspond to effect sizes as defined by Cohen's *d* (Cohen, 1988). Both at pre- and post-survey, participants who watched the video had significantly higher levels of PSIS, but both observation groups made similar gains (see Figure 1). Results of a repeated-measures analysis of variance for the TSES indicated significant differences in participant scores from the pre- and post-surveys as a function of the observation condition, $F(1, 150) = .677$, p = .042, η_p^2= .027, observed power = .53. Results indicate similar gains in knowledge and attitudes for participants in both observation groups. However, participants in the video observation group made greater gains on the TSES than those in the in vivo condition. The null hypothesis is partially supported. Although a significant difference was found, there is a possibility that a Type I error may have occurred.

Table 4

Knowledge, Attitudes, and Sense of Efficacy Pre-and Post-Survey Means between Conditions

Variable	Video		In Vivo	
	Pre-Survey	Post-Survey	Pre-Survey	Post-Survey
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*
Knowledge	16.00 (3.48)	20.45(3.65)	15.77(3.48)	20.03 (2.65)
Attitudes Questionnaire	4.63 (.43)	4.84 (.32)	4.62 (.40)	4.80 (.31)
Preservice Inclusion Survey	3.59 (.63)	4.12 (.53)	3.36 (.72)	3.89 (.61)
Teacher's Sense of Efficacy	6.73 (.96)	8.12 (.73)	6.99 (.98)	8.05 (.68)

Note: N = 152.

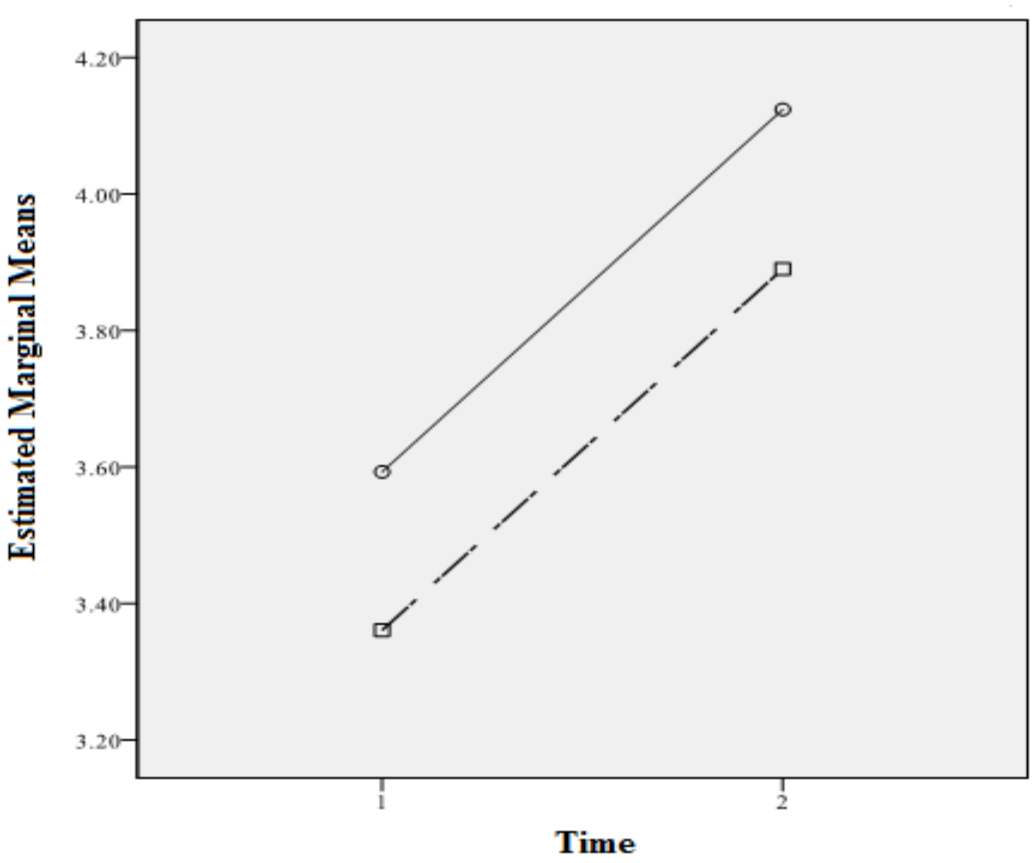

Figure 1. Results of PSIS Pre- and Post-Surveys Based on Co-teaching Video Observation and In vivo Observation

Research Question 3: Do the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities differ as a function of teaching level or area (e.g., primary/elementary, secondary, and special education), as measured by a post-survey taken at the end of a one-semester introductory special education course? To address this hypothesis, null hypothesis three was tested.

H_o3: There is no significant difference in the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities as a function of teaching level or area (e.g. primary/elementary, secondary, and special education), as measured by a post-survey taken at the end of a one-semester introductory special education course.

With the exception of the AQ post-survey, all scales were generally normally distributed; therefore parametric tests were conducted. To determine if differences in knowledge, attitudes and perceived efficacy differed at the end of the course based on level of teaching (primary/elementary, secondary, or special education), a one-way ANOVA was performed for all scales except the AQ post-survey. One hundred thirty-nine participants were included in this analysis. Sixty-seven primary/elementary preservice teachers, 59 secondary preservice teachers and 13 special education preservice teachers were identified. Participants who had chosen early childhood (n = 7) or other (n = 7) as their level of teaching were not included in the analysis due to small sample size. Means and standard deviations for all three groups on the dependent variables from the pre-and post-survey are presented in Table 5.

No significant differences were found in the awareness/knowledge post-survey scores across the three groups, $F(2, 136), = 1.25$, $p = .289$, nor in differences in attitudes toward collaboration and co-teaching as measured by PSIS post-survey scores, $F(2, 136), = 1.93$, $p = .148$. Because assumptions of normality were violated for the AQ post-survey, Kruskal-Wallis was used to examine differences based on level of teaching, results indicated a significance, $X^2 (2) = 9.183$, $p = .010$. To determine how the groups differed, a Mann Whitney U was used producing a significant difference between the median score for the primary/elementary group (5.00) and the median score of the secondary group (4.87), $p = .003$. Significant differences were also found on perceived abilities (sense of efficacy) as measured by the TSES post-survey, $F(2, 136), = 6.46$, $p = .002$, $\eta_p^2 = .087$, observed power = .90. The Tukey's post-hoc comparisons of the three groups indicated that the primary/elementary group ($M = 8.28$) had a significantly higher post-survey TSES mean than the secondary group ($M = 7.84$), $p = .001$.

Table 5

Knowledge, Attitudes, and Sense of Efficacy Pre- and Post-survey Means and Standard Deviations of Primary and Elementary, Secondary, and Special Education Preservice Teachers

Teaching Area	Pre-survey		Post-survey	
	M	(*SD*)	*M*	(*SD*)
Knowledge				
Primary/Elementary	15.44	(3.43)	20.08	(3.06)
Secondary	16.20	(3.12)	20.35	(3.08)
Special Education	16.92	(4.90)	21.61	(4.11)
Total	15.90	(3.47)	20.34	(3.18)
Attitude Questionnaire				
Primary/Elementary	4.73	(.28)	4.88	(.20)
Secondary	4.41	(.52)	4.70	(.42)
Special Education	4.82	(.22)	4.87	(.19)
Total	4.60	(.43)	4.81	(.33)
Preservice Inclusion Survey				
Primary/Elementary	3.39	(.65)	4.05	(.53)
Secondary	3.35	(.70)	3.84	(.68)
Special Education	3.97	(.67)	4.07	(.54)
Total	3.43	(.69)	3.96	(.61)
Teachers' Sense of Efficacy				
Primary/Elementary	6.78	(1.00)	8.28	(.60)
Secondary	6.77	(.79)	7.84	(.75)
Special Education	6.98	(1.39)	8.09	(.71)
Total	6.80	(.96)	8.07	(.70)

Note: primary/elementary (n = 67), secondary (n = 59), special education (n = 13). Not included were early childhood (n = 7) and other (n = 7).

Research Question 4: What are the relationships between variables (knowledge, attitudes, perceived sense of efficacy, amount of previous interaction with individuals with disabilities, self-reported confidence, and level of experience teaching students with disabilities) as measured by a post-survey taken at the end of a one-semester introductory special education course? To address this hypothesis, null hypothesis four was tested.

H_o4: The relationships between the variables (knowledge, attitudes, sense of efficacy, amount of previous experience with individuals with disabilities self-reported confidence, and level of experience teaching students with disabilities) as measured by a post-survey taken at the end of a one-semester introductory special education course are not statistically different from 0.

Demographic information along with means and standard deviations of pre-service teachers' level of experience, confidence and amount of interaction are presented in Table 6. In interpreting a Spearman rho correlation, a small positive correlation can range from .1 to .3, a positive medium correlation can range from .3 to .5 and a large positive correlation can range from .5 to 1.0. A small negative correlation can range from -.1 to -.3, a medium negative correlation can range from -.3 to -.5 and a large negative correlation can range from -.5 to -1.0 (Gravetter & Wallnau, 2008). Correlational analyses depicting the relationships between demographic variables (amount of previous interaction with individuals with disabilities, self-reported confidence, and level of experience teaching students with disabilities), along with dependent variables as measured by post-survey instruments are presented in Table 7. Relationships ranged from -.04 to +1.00; seven of the 18 relationships are significant at .05 or greater.

The relationship between the two attitude post-measures (i.e., AQ and PSIS) is positive and significant, medium in strength, (r = .56, p = .000). Though both measure attitudes, the AQ questionnaire targets the concept of "fairness" for both general and special education students, while the PSIS targets the emotions of preservice teachers about co-teaching and collaboration. In addition, the relationship between both the AQ and PSIS are positive and medium with the TSES (r = .41, p = .000, and r = .50, p = .000 respectively) which indicates positive attitudes are related to sense of efficacy. Knowledge is not significantly correlated with the other dependent measures (p > .05).

Results indicate that the TSES post-survey score and self-reported amount of interaction with individuals with disabilities are significantly positively correlated (r = .16, p =.04). As the amount of interaction with individuals with disabilities increases, there is a slight tendency on sense of efficacy to increase. Similarly, there is a significant small but positive relationship between attitudes as measured by AQ and self-reported level of confidence (r = .19, p =.02). In addition, there is a small but positive relationship between the PSIS and self-reported level of confidence (r = .22, p =.007). Thus, as positive attitudes increase so does confidence in teaching individuals with disabilities. Similarly, relationship between attitudes as measured by the PSIS and self-reported level of experience teaching an individual with a disability is small but significant (r = .18, p =.02), indicating that those who have more experience tend to have more positive attitudes toward including students with disabilities.

Table 6

Demographics (Level of Experience, Confidence and Interaction) of Participating Preservice Teachers Enrolled in a One-Semester

Demographics	*n*	%	*M*	*SD*
Level of experience				
None	81	51		
Little (< 1 week)	35	22		
Some (2-4 weeks)	22	14		
Much (5 weeks >)	20	13		
Total	158		1.88	1.07
Level of Confidence				
Very Low	24	15		
Low	68	43		
Average	47	30		
High	19	12		
Total	158		2.39	.887
Significant/Considerable Interactions				
None	16	10		
Little	60	38		
Some	60	38		
Much	22	14		
Total	158		2.56	.856

Note: N = 158

Table 7

A Correlation Matrix of Knowledge, Attitudes, Sense of Efficacy, and Demographics (Interactions, Confidence and Level of Experience in Working with Individuals with Disabilities) Based on Post-Survey Results

	Awareness2	Attitude Questionnaire2	Preservice Inclusion Survey2	Teacher Sense of Efficacy Scale2	I have had significant/ considerable interactions with a person with a disability	My level of confidence in teaching students with disabilities	My level of experience teaching a student with a disability
Awareness2	1.00	.14	.11	-.04	.04	.08	.04
Attitude Questionnaire2		1.00	.56**	.41**	.08	.19*	.13
Preservice Inclusion Survey2			1.00	.50**	.13	.22**	.18*
Teacher Sense of Efficacy Scale2				1.00	.16*	.12	.10
I have had significant/considerable interactions with a person with a disability					1.00	.26**	.41**
My level of confidence in teaching students with disabilities						1.00	.23**
My level of experience teaching a student with a disability							1.00

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2 tailed).

N =153

Research Question 5: What is the relative power of knowledge and attitudes as measured by a post-survey at the end of a one-semester introductory special education course, to predict self-efficacy as measured by the Teachers' Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001). To address this hypothesis, null hypothesis five was tested.

H_o5: The variables (knowledge and attitudes) as measured by the post-survey at the end of the one-hour introductory special education course, do not significantly differ in their power to predict self-efficacy as measured by the Teacher's Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001).

Results of a stepwise multiple regression (Table 8) show the relative predictive power of Knowledge, AQ, and PSIS for predicting sense of efficacy as measured by the TSES. The results of the regression indicated only one measure contributed unique variance to the regression equation; the PSIS explained 21% of the variance in the TSES (R^2= .21, *df* (1, 125), $p < .05$). Knowledge and AQ did not add significantly to the prediction above the effects of PSIS.

Table 8

Summary of Regression Analysis for Variables Predicting Sense of Efficacy

Variable	*B*	*SE B*	*t*	Sig.(*p*)
(Constant)	5.93	.342	17.36	.000
Preservice Inclusion Survey (PSIS)	.541	.085	6.38	.000*

Note. Dependent Variable: TSES 2
*$p < .05$
$R^2 = .213$

CHAPTER V

DISCUSSION

Over the last four decades, increasing emphasis has been placed on providing students with disabilities equal access to the general curriculum and, concomitantly, expectations for the academic achievement of students with disabilities have increased. Perhaps not surprisingly, many teachers believe that "with the move toward inclusive schools, the roles of special education and general education teachers are less clearly defined," (Vaughn, Bos, & Schumm, 2007, p. 172). Due to increased expectations, most classrooms will include students with disabilities and almost all teachers will be required to meet the diverse needs of students. Consequently, preservice teachers must possess knowledge and skills, positive attitudes and confidence in their capacity to provide effective inclusive education. The purpose of this study was to investigate the knowledge, attitudes and perceived abilities (sense of efficacy) of preservice teachers toward educating students with disabilities.

The theoretical framework of this inquiry is Albert Bandura's social cognitive theory (1977), which is supported by research from the disciplines of psychology, education and teacher education. Participants were enrolled in a one-semester introductory special education course. Results are based on data collected from on-line pre-and post-surveys and the implementation of an experiment. In this chapter, the findings of the five research questions and the relation of findings to previous literature and Bandura's social learning theory are discussed. Finally, implications for teacher education programs, limitations and suggestions for future research are presented.

Findings

The body of empirical knowledge in special education teacher education has been criticized as weak (Carroll et al., 2003; Tait & Purdie, 2000). Knowledge barriers and attitudinal barriers, as described by Smith et al. (2012), can hinder the successful implementation of inclusion. Limited knowledge is related to increased fear and anxiety in working with individuals with disabilities (D'Alonzo, Giordano, & VanLeeuwen, 1997). Cook (2002) found that lack of knowledge about disabilities could affect the willingness of teachers to accept students with disabilities. Teacher preparation courses that have focused on attitude change towards inclusive education, as well as the knowledge and skills required, have resulted in new graduates being more supportive of students with special educational needs (Carroll, Forlin, & Jobling, 2003; Lancaster & Bain, 2010; Shade & Stewart, 2001). Nevertheless, Sindelar et al. (2010) challenged the field to more conclusively determine the variables that foster high-quality instruction in teacher education preparation. A portion of this study was designed to help address this challenge.

One purpose of this study was to determine if knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities improved after participating in a one-semester introductory special education course. Mean differences analyses yielded significant differences between the pre- and post-survey mean scores on all variables assessed (i.e., knowledge, attitudes, and sense of efficacy of preservice educators toward educating students with disabilities). Specifically, differences in pre-and post-survey measures of knowledge (i.e., test bank questions taken from Mastropieri & Scruggs, 2010, *The inclusive classroom: Strategies for effective*

differentiated instruction, 4th ed.), attitudes (i.e., AQ and PSIS) and sense of efficacy (i.e., TSES) were all significant at $p < .001$.

The findings of this study support the impact stand-alone courses can have in positively influencing the knowledge, attitudes and perceived abilities (sense of efficacy) of preservice teachers. Shippen et al. (2005) used a pre- and post-survey at the beginning and end of a survey of exceptionalities course to compare the perceptions of preservice teachers on two dichotomous scales (i.e., hostility/receptivity and anxiety/calmness) regarding serving students with disabilities in a general education setting. Results indicated a significant positive change in attitudes of both general and special education preservice teachers. Although the general education preservice teachers had a higher level of anxiety than special education preservice teachers did overall, their self-reported anxiety decreased as a function of course participation. Similarly, Gartin et al. (2001) used a pre-and post-survey in a survey of exceptionalities course. Results indicated a significant gain in knowledge *and* significantly more positive attitudes towards inclusion as information was gained about students with disabilities. Through a growing body of research of effective inclusive teachers, positive attitudes have been identified as being equally important as knowledge and skills as prerequisites (Cook, 2002; Forlin, Loreman, Sharma, & Earle, 2007). Recently, Forlin and Chambers (2011) found the greater the preservice teachers' knowledge base, the more positive they were towards inclusion. However, as preservice teachers become more cognizant of their expectations and aware of the actual implications for them personally, it caused them to predict an increase in stress.

Although teacher efficacy beliefs significantly affect classroom effectiveness (Brownell and Pajares, 1999), few studies have examined the sense of efficacy beliefs of preservice teachers. Buell et al. (1999) surveyed 289 general and special educators' perceptions towards inclusion. Results indicated that special educators rated their efficacy, ability and understanding higher than did general educators. These findings are consistent with Freytag (2001) who found a significant mean difference between general and special education teachers' efficacy scores; findings indicated special education teachers had higher teaching and personal teaching efficacy beliefs than did general educators. In 2007, Cameron and Cook examined the beliefs, intended practices and skills of preservice teachers in planning and accommodating students with intellectual disabilities. Special education preservice teachers rated their beliefs, intended practices and skills higher than did general education preservice teachers. However, both groups rated their beliefs and intended practices higher than their skills.

Because some preservice teachers may not have a direct opportunity to experience personal interactions with individuals with disabilities during introductory courses, one particular aspect of Bandura's social cognitive model (i.e., emotional arousal) may play a role in participants' perceived abilities (sense of efficacy). In judging one's vulnerability to stress, people rely partly on their state of physiological arousal (Bandura, 1977). Thus, situations that are perceived as stressful can elicit emotional arousal within an individual negatively impacting one's sense of self-efficacy. The PSIS was used as a pre-and post-survey to measure preservice teachers' attitudes toward co-teaching and collaboration of general and special education teachers based on a hypothetical scenario. After reading the scenario, preservice teachers responded to 17 adjectives that described how they felt

about being told they would be directly involved in a co-teaching and collaborative partnership. After taking the introductory course, results indicated preservice teachers' feelings toward co-teaching and collaboration significantly improved, indicating that the course had an overall positive influence on participants' sense of efficacy for educating students with disabilities.

Importantly, in order to further consider what variables constitute high-quality teacher education, this study included implementation of an experimental condition (i.e., in vivo observation versus video observation of collaborative co-teaching). Mean differences analyses indicated no significant differences in the knowledge and attitudes of preservice educators toward educating students with disabilities as a function of participation in a one-hour co-teaching video versus a one-hour in vivo observation of co-teaching. However, a significant difference was found between participants who watched the video and participants who observed in vivo in perceived abilities (sense of efficacy) with those who watched the video showing greater gains. One of Bandura's four sources of efficacy (i.e., vicarious experiences) may have been at work. Students were exposed to co-teaching experiences outside of the classroom setting by either observing a one-hour co-taught classroom or watching a one-hour video on co-teaching. Bandura (1977) suggests diversified modeling is superior to being exposed to the same performance by a single performer, in this case the instructor. Throughout the video, an array of classroom settings and styles of co-teaching were displayed. Through these digital, vicarious experiences, participant observers had the opportunity to generate expectations that he/she can improve if he/she persists in his/her own efforts.

By providing preservice teachers vicarious experiences interacting with individuals with disabilities, teacher educators may begin to help preservice teachers build a stronger sense of efficacy toward educating students with disabilities. This might enable preservice teachers to begin pursuing activities and situations in which they feel more competent since the interpretation of the outcome of one's choices and performance influences one's environment and self-belief, thus influencing later performances. The experimental aspect of this study contributes to the limited research that has been conducted in determining effective teaching methods used in teacher preparation courses. Participants who viewed the *Power of 2* video exhibited slightly more gains in self-efficacy than those who observed collaborative co-teaching, though they also exhibited gains. The results suggest that teacher educators can use high quality video presentations in lieu of direct observations when the goal is to provide introductory exposure to models of effective inclusion to enhance teaching self-efficacy toward students with disabilities, a practice that can save significant time and effort.

The results of this study are somewhat similar to those reported by Lancaster and Bain (2010) who examined the self-efficacy of preservice teachers involved in two different approaches to working with diverse learners. Thirty-six preservice teachers were involved in one of two approaches- one based on a field-based placement and the other employing a course design approach. There was an increase in self-efficacy for participants in both of these conditions, however, there was no significant difference based on exposure to the different approaches. Lancaster and Bain found that preservice teachers made gains in self-efficacy for teaching diverse populations via both types of experience. Woloshyn et al. (2003) recommended that teacher education programs

provide preservice teachers opportunities to observe and interact with students with disabilities. Furthermore, additional contact with individuals with disabilities during training, either through site-based programs (Richards & Clough, 2004) or through course experiences (Forlin, 2003; Lancaster & Bain, 2010), has been found to yield more positive attitudes and support for inclusion.

A third goal of this study was to evaluate the knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities as a function of teaching level or area (e.g. primary/elementary, secondary, and special education). Mean differences analyses indicated that knowledge, attitudes, and perceived abilities (sense of efficacy) of preservice educators toward educating students with disabilities differed as a function of teaching level and area. The Attitude Questionnaire (AQ) and Teachers' Sense of Efficacy (TSES) post-survey means were significantly higher for preservice teachers preparing to teach at the primary/elementary level than those preservice teachers preparing to teach at the secondary level. Consistent with McHatton and McCray (2007), differences in perceptions between elementary and secondary preservice teachers were found. After completing a one-semester course; elementary majors had more favorable perceptions toward inclusion overall, even though both groups were less open to the inclusion of students with more significant disabilities (i.e., students with behaviors disorders, intellectual disabilities and multiple disabilities). Although this study yielded similar results for primary/elementary and secondary preservice teachers, no differences were found for special education preservice teachers. The current study's small sample size of

preservice special education participants limited representativeness and may have precluded finding a statistically significant difference.

The fourth goal of this study was to determine the relationship between demographic variables and post-survey measures of knowledge, attitudes, and sense of self-efficacy. Surprisingly, and in contrast with previous research (Forlin & Chambers, 2011), the 30 item measure of knowledge of (legal issues, disability characteristics and teaching strategies) was not significantly related to any of the other attitude, efficacy, or demographic variables. Interestingly, there was a small positive correlation between self-reported amount of interactions with individuals with disabilities and teacher self-efficacy, but not with other variables. As the amount of interaction with individuals with disabilities increases, sense of efficacy tends to increase. This finding is consistent with Richards and Clough (2004) who found that the preservice teachers indicated that they would require further training in the area of strategies to support students with special needs. Therefore, teacher educators should incorporate a deeper examination of inclusion and further contact opportunities for preservice teachers with people with disabilities. Similar to previous research (Shippen et al., 2005; Stamopoulous, 2006), there was a small positive correlation between reported level of confidence and attitudes, as measured by the AQ and PSIS. Finally, there was a small positive correlation between self-reported level of experience teaching a student with a disability and attitudes as measured by the PSIS. In general, the small or insignificant relationships between the demographic variables and the post survey measures suggest that entering experiences may have limited impact on knowledge, attitudes and self-efficacy for preservice teachers who participate in a well-designed and comprehensive course on educating students with

disabilities. These results begin to address a question raised by Sindelar et al (2010): How do entering knowledge and beliefs of preservice students influence their learning?

A final goal of the study was to determine the relative strength of knowledge and attitudinal variables to predict teacher self-efficacy in the context of inclusive special education. Results of a stepwise multiple regression indicated that attitudes as measured by the PSIS significantly predicted teachers' sense of self-efficacy accounting for 21% of the variance in the Teachers' Sense of Efficacy Scale score. Neither knowledge nor attitudes (AQ) related to fairness contributed significantly to the prediction of self-efficacy above the effects of emotionally-related attitudes assessed by the PSIS. Although participants in this study were not required to interact with individuals with disabilities, these findings have some parallels to previous studies (e.g., Forlin, Jobling, & Carroll, 2001; Stamopoulous, 2006) which showed that interacting with individuals with disabilities contributed to positive attitudes toward individuals with disabilities, a deeper understanding of diversity, and greater confidence in developing inclusive classrooms.

Implications

Results showed an increase in the knowledge, attitudes and sense of efficacy of preservice teachers after being enrolled in a one-semester stand-alone introductory special education course. Similar gains were made regardless of exposure to collaborative co-teaching (authentic, in-vivo observation and the observation of a co-teaching video) but self-efficacy was slightly stronger for those who watched the video. Elementary preservice teacher had more positive attitudes (i.e., views of fairness and emotional receptivity) than secondary preservice counterparts did. Entering experiences with individuals with disabilities had only a small impact on attitudes and sense of self-

efficacy at the end of the course. At the end of the course, only emotion-based attitudes significantly predicted sense of self-efficacy.

These findings have several implications in teacher education. Results support the importance of offering courses in special education to all teacher candidates. Previous exposure has a relatively small impact on end of course knowledge, attitudes and sense of efficacy, implying that teacher education can have a strong influence despite previous exposure. Results also support the importance of attitudes- emotionally receptive toward inclusion, which was the only significant predictor of self-efficacy at the end of the course. Teacher educators need to continue to address preservice teachers' attitudes toward inclusion. Based on results of this study, an effective video is as effective as or better than in vivo, requiring limited resources (i.e., time, travel). Videos may serve as good alternatives such as avatars that are being implemented at the University of Central Florida. In this innovative virtual teaching environment for teacher training, the students are virtual but the teachers and instruction are real. Prospective teachers are able to focus on the delivery of a lesson to accommodate the diversity of students, along with classroom management (Andreasen, & Haciomeroglu, 2009). Interestingly, knowledge did not predict self-efficacy. However, teacher educators should continue to carefully select content to focus on until further research is conducted.

Limitations

Limitations include sample constraints. The sample, which consisted of 158 participants from a large, southeastern university, may not be representative of preservice teachers from across the country, limiting generalizability. In addition, only 13 participants were seeking a special education licensure. Of those participants (n = 80)

observing in vivo, 17 did not observe co-teachers from the approved co-teacher list. These participants may not have observed effective co-teaching during their one-hour in vivo observation. Furthermore, participants who observed an in vivo classroom taught by an approved co-teacher may not have observed an effectively co-taught lesson. In addition, all surveys were based on self-report; no social validity was collected.

A variety of survey instruments were used in this study. Although reliability coefficients for all instruments were acceptable, the 8-item Attitudes Questionnaire (AQ) was created for this study and has no previous or external validity evidence. The 30 text-test bank questions bear further analysis, given the relatively low correlations between knowledge and other variables in the study. Additionally, a significant difference was found on the knowledge portion of the post-survey for participants enrolled in the researcher's course section, presumably because the researcher was more aware of the specific nature of the knowledge items than the other instructors who participated. Because students were heterogeneously enrolled in the various class sections, this difference would not presumably affect results of analyses, with the possible exception of those based on experimental condition.

To assess attitudes toward inclusive co-teaching, the scenario for this study was modeled after The Preservice Inclusion Survey (PSIS) used by Shippen (2005). The scenario was worded to reflect collaboration and co-teaching specifically. Reliability data are strong but there are no external validity data for this modified form of the PSIS. Finally, the term "*disabilities*" was defined in Chapter 1 and included all 13 disabilities as defined by IDEA. It is important to note that throughout this study, disabilities were treated together and giftedness was not addressed.

Future Research

Scattered and pieced together, the empirical foundation on which special education teacher preparation has been built looks more like "Swiss cheese than concrete" (Sindelar et al., 2010). Specifically, more research needs to be conducted to address two questions recently posed by Sindelar and colleagues: What variables foster high-quality instruction in teacher education programs? How do the entering knowledge and beliefs of preservice students influence their learning? The current study contributes to the knowledge base mainly by addressing the first question. This is one of the few studies to address several critical key variables within a single study and attempt to predict self-efficacy.

Future research should explore attitudes, beliefs and sense of efficacy toward students with high and low incidence disabilities. Current findings should be extended to focus on discrete disabilities, and differing abilities, including giftedness. In order for teacher education programs to make curriculum adjustments, additional research is necessary to determine the most effective ways to present knowledge of disabilities, inclusion, collaboration, and the implementation of effective teaching methods. Researchers should determine what knowledge is most essential for building self-efficacy and ultimately successful collaborative educators. Finally, researchers should determine how gains in knowledge, attitudes and self-efficacy could be maintained and enhanced into internship student teaching and beyond. Because of the increasingly blurred lines between general education and special education teaching roles, more research is needed to determine the content knowledge beginning special education teachers need in order to teach academic subjects and how content knowledge can be integrated with knowledge

related to intervention and assessment (Sindelar et al., 2010). Furthermore, limited research has focused on both secondary general education teachers and secondary special educators despite the role each plays in educating and influencing students with disabilities. Because of current policy and educational reforms, future research is critical in helping determine how to best prepare teachers who will be teaching at the secondary level.

Conclusions

Rethinking the demands of general and special educators' roles is an emerging trend that has the potential to reframe debates about how to prepare preservice teachers in meeting the demands of a diverse population in the classroom (Pugach & Blanton, 2011). The meaningful education of students with and without disabilities relies on the partnership between general and special educators (Buell et al., 1999). If preservice teachers do not possess the knowledge, skills, and dispositions to implement inclusion, students with disabilities will have diminished opportunity to attain desired outcomes within the general classroom setting (Goodlad & Field, 1993).

In order to address preservice teacher preparation in a more inclusive and direct manner, teacher education programs must address role of collaborative co-teaching in a growing reform. With the rapidly changing landscape of education, teacher preparation programs should incorporate increased knowledge and skills, educational experiences, and/or enhanced practices in the field. Cameron and Cook (2007) asserted that, "…specific coursework devoted to inclusion and linked to high quality field experiences is necessary to generate high levels of inclusive teaching skills such as appropriate planning and instructional adaptations." Efforts to increase understanding of inclusion

and issues surrounding inclusion are likely to produce more confidence in a teacher's ability to affect students in a positive manner.

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APPENDICES

Appendix A

Study Information Sheet

Preservice teachers' attitudes toward and sense of efficacy to meet the needs of students with disabilities

Dear Participant,

I am a doctoral student at the University of Tennessee, Knoxville, College of Education, Health and Human Sciences, Theory and Practice in Teacher Education. I am conducting a study to examine preservice teachers' attitudes about their roles and sense of efficacy in meeting the needs of students with disabilities. Specifically, I will be comparing participants' pre-survey and post-survey responses to demographic questions, the Attitudes Questionnaire (AQ), the Preservice Inclusion Survey (PSIS), the Teacher Sense of Efficacy Scale (TSES-short form), and a pre/post-test based on readings from the course text test bank related to knowledge of legal issues, disability characteristics, and instructional strategies for students with disabilities (Special Education Knowledge or SEK).

You have been selected as a participant because you are currently enrolled in an introductory special education course. You will be asked to complete the demographic information, AQ, PSIS, TSES, and SEK questions on the first and last day of class. You will be completing this information to determine the effectiveness of instruction and experiences in this special education course. Consequently, I am simply requesting permission to evaluate and analyze data that will be collected as a routine part of the course.

I do not anticipate you will encounter any risk or discomfort from participating in this research. Your demographic information, AQ, PSIS, TSES, and SEK answers will be anonymous and your identity will not be indicated on any of the forms you are asked to complete.

Though I do not anticipate any direct benefits to you because of your participation data, your information will yield insights about preservice teachers' attitudes about roles, collaboration and sense of teacher efficacy. Data will be stored securely and no individual references will be made in oral or written reports, which could link participants to the study. All surveys will be filed for three years in Bailey Education Complex Room A425 at the University of Tennessee, Knoxville, TN.

Consent to use your individual data in this research is voluntary; you may decline the use of your individual data without penalty. Return of this signed form constitutes your consent to participate. An additional copy is available for your records and further reference. If you have any questions about the study or the procedures, you may contact me, Tammy Bowlin, at tbowlin1@utk.edu or (865) 974-3435. If you have questions about your rights as a participant, contact Research Compliance Services of the Office of Research at (865) 974-3466. Thank you for your assistance in this study.

Sincerely,

Tammy Bowlin

_____/_____**Signature/Date (signature affirms consent to use data as described above)**

Appendix B

Demographics

1) Age: _____ **2) Gender**: Male _____ Female _____

3) College level: Freshman ___ Sophomore ___ Junior___ Senior ___ Graduate ___

4) I am training to teach in:

Early Childhood _____ Secondary _____ Other ____
Primary/Elementary _____ Special Education _____ None ____

5) My highest level of education is:

Secondary School or its equivalent _____ Master's Degree _____
Bachelor's Degree or its equivalent _____ Other, please specify _____

6) How many years of university education have you completed? _____

7) I have had significant/considerable interactions with a person with a disability
None_____ Some _____ Much _____

8) What type(s) of interactions have you had in working with a person with a disability?

Babysitting _____ Camp _____ Peer tutor _____ other _____
Friend _____ Church _____ Family member _____

9) I have had training in working with and/or educating students with disabilities.

None _____ Some _____ High (at least 40 hours) _____

10) My knowledge of the legislation as it pertains to children with disabilities is

None _____ Poor _____ Average _____ Good _____ Very good _____

11) My level of confidence in teaching students with disabilities is:

Very Low _____ Low _____ Average _____ High _____ Very High _____

12) My level of experience teaching a student with a disability is:

None _____ Some _____ High (at least 30 days) _____

Appendix C

Attitudes Questionnaire (AQ)

Please answer the following questions using the scale below, from Disagree to Agree.

13) All students deserve an appropriate education, even if this means teachers must spend extra time and resources to meet their needs.

Disagree ___ Somewhat Disagree ___ Neutral ___ Somewhat Agree ___ Agree ___

14) Students need different types and amounts of instructional support in order to succeed.

Disagree ___ Somewhat Disagree ___ Neutral ___ Somewhat Agree ___ Agree ___

15) Students with disabilities and/or who are English language learners deserve extra or different instructional assistance in order to be successful.

Disagree ___ Somewhat Disagree ___ Neutral ___ Somewhat Agree ___ Agree ___

16) Providing instructional accommodations (e.g., copies of notes, extended time, books on tape) for students with disabilities is fair to other students.

Disagree ___ Somewhat Disagree ___ Neutral ___ Somewhat Agree ___ Agree ___

17) Providing assessment accommodations (e.g., extended time, oral testing) for students with disabilities is fair to other students.

Disagree ___ Somewhat Disagree ___ Neutral ___ Somewhat Agree ___ Agree ___

18) The responsibility for educating students with mild/moderate disabilities in general education classrooms should be shared between the general and special education teachers.

Disagree ___ Somewhat Disagree ___ Neutral ___ Somewhat Agree ___ Agree ___

19) I would welcome the opportunity to team teach as a model for meeting the needs of students with mild/moderate disabilities in a regular classroom.

Disagree ___ Somewhat Disagree ___ Neutral ___ Somewhat Agree ___ Agree ___

20) I would welcome the opportunity to participate in a consultative teacher model (i.e., regular collaborative meetings between special and general education teachers to share ideas, methods, and materials) as a means of addressing the needs of students with mild/moderate disabilities in regular classrooms.
Disagree ___ Somewhat Disagree ___ Neutral ___ Somewhat Agree ___ Agree ___

Appendix D

Preservice Inclusion Survey (PSIS)

Circle the word that best describes your feelings after reading the following scenario.

Scenario:

Circle the word that best describes your feelings after reading the following scenario. The administrator of your school calls you in for a conference two weeks before school is out. He/She informs you that next year the school will make an effort to include students with disabilities in general classes as often as appropriate. The special education teacher is also in attendance at this conference and he/she is hearing this information for the first time, too. The administrator goes on to say that the students with disabilities that will be in your class have identified exceptionalities in the areas of hearing impairment, learning disabilities, mental retardation, behavioral disorders, and physical impairments requiring the use of a wheelchair. You walk out of the meeting feeling...

1. Enthusiastic	Somewhat Enthusiastic	Neutral	Somewhat Unenthusiastic	Unenthusiastic
2. Scared	Somewhat Scared	Neutral	Somewhat	Fearless
3. Anxious	Somewhat Anxious	Neutral	Somewhat Relaxed	Relaxed
4. Comfortable	Somewhat Comfortable	Neutral	Somewhat Uncomfortable	Uncomfortable
5. Angry	Somewhat Angry	Neutral	Somewhat Not Angry	Not Angry
6. Unwilling	Somewhat Unwilling	Neutral	Somewhat Willing	Willing
7. Interested	Somewhat Interested	Neutral	Somewhat Disinterested	Disinterested
8. Confident	Somewhat Confident	Neutral	Somewhat Insecure	Insecure
9. Nervous	Somewhat Nervous	Neutral	Somewhat Calm	Calm
10. Pleased	Somewhat Pleased	Neutral	Somewhat Displeased	Displeased
11. Weak	Somewhat Weak	Neutral	Somewhat Powerful	Powerful
12. Annoyed	Somewhat Annoyed	Neutral	Somewhat Indifferent	Indifferent
13. Accepting	Somewhat Accepting	Neutral	Somewhat Opposing	Opposing
14. Prepared	Somewhat Prepared	Neutral	Somewhat Unprepared	Unprepared
15. Resistant	Somewhat Resistant	Neutral	Somewhat Cooperative	Cooperative
16. Happy	Somewhat Happy	Neutral	Somewhat Unhappy	Unhappy
17. Pessimistic	Somewhat Pessimistic	Neutral	Somewhat Optimistic	Optimistic

Appendix E

Preservice Inclusion Survey (PSIS) created for this study

Circle the word that best describes your feelings after reading the following scenario.

General Educator Scenario:
As a general educator, you have just been hired for a teaching position beginning this fall. The administrator of your school calls you in for a conference to discuss changes in the upcoming year. Your administrator informs you that for the upcoming school year, he/she would like for you to collaborate with the special education teacher. The special education teacher is also in attendance at this conference and he/she is hearing this information for the first time. Collaboration efforts will include dialogue, shared planning time, shared and creative decision making and possibly co-teaching a class together. The goal of this collaborative effort is to provide appropriate services to students with disabilities, including students who have identified exceptionalities in the areas of hearing impairment, learning disabilities, mental retardation, behavioral disorders, and physical impairments requiring the use of a wheelchair. You walk out of the meeting feeling...

Special Educator Scenario:
As a special educator, you have just been hired for a teaching position beginning this fall. The administrator of your school calls you in for a conference to discuss changes in the upcoming year. Your administrator informs you that for the upcoming school year, he/she would like for you to collaborate with the general education teacher. The general education teacher is also in attendance at this conference and he/she is hearing this information for the first time. Collaboration efforts will include dialogue, shared planning time, shared and creative decision making and possibly co-teaching a class together. The goal of this collaborative effort is to provide appropriate services to students with disabilities, including students who have identified exceptionalities in the areas of hearing impairment, learning disabilities, mental retardation, behavioral disorders, and physical impairments requiring the use of a wheelchair. You walk out of the meeting feeling...

1. Enthusiastic	Somewhat Enthusiastic	Neutral	Somewhat Unenthusiastic	Unenthusiastic
2. Scared	Somewhat Scared	Neutral	Somewhat	Fearless
3. Anxious	Somewhat Anxious	Neutral	Somewhat Relaxed	Relaxed
4. Comfortable	Somewhat Comfortable	Neutral	Somewhat Uncomfortable	Uncomfortable
5. Angry	Somewhat Angry	Neutral	Somewhat Not Angry	Not Angry
6. Unwilling	Somewhat Unwilling	Neutral	Somewhat Willing	Willing
7. Interested	Somewhat Interested	Neutral	Somewhat Disinterested	Disinterested
8. Confident	Somewhat Confident	Neutral	Somewhat Insecure	Insecure
9. Nervous	Somewhat Nervous	Neutral	Somewhat Calm	Calm
10. Pleased	Somewhat Pleased	Neutral	Somewhat Displeased	Displeased
11. Weak	Somewhat Weak	Neutral	Somewhat Powerful	Powerful
12. Annoyed	Somewhat Annoyed	Neutral	Somewhat Indifferent	Indifferent
13. Accepting	Somewhat Accepting	Neutral	Somewhat Opposing	Opposing
14. Prepared	Somewhat Prepared	Neutral	Somewhat Unprepared	Unprepared
15. Resistant	Somewhat Resistant	Neutral	Somewhat Cooperative	Cooperative
16. Happy	Somewhat Happy	Neutral	Somewhat Unhappy	Unhappy
17. Pessimistic	Somewhat Pessimistic	Neutral	Somewhat Optimistic	Optimistic

Appendix F

Teachers' Sense of Efficacy Scale (short form)

Teacher Beliefs

Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.

		How much can you do?								
		Nothing		Very Little		Some Influence		Quite A Bit		A Great Deal
1.	How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2.	How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3.	How much can you do to get students to believe they can do well in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4.	How much can you do to help your students value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5.	To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6.	How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7.	How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8.	How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9.	How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10.	To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11.	How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12.	How well can you implement alternative strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Appendix G

402 On-line Pre-Survey

Instructions

The following survey will take approximately 20-30 minutes to complete. Your participation in this survey will not count as a grade within the course. However, you will receive extra credit once you have completed the pre-and post-surveys. Do not deliberate over the answers, spending too much time on any one question. Answer to the best of your ability, then proceed to the next question.

Age in years:

Gender
- Male
- Female

Race
- African American
- Asian
- Caucasian
- Hispanic
- Native Indian
- Other, please specify

College Level
- Freshman
- Sophomore
- Junior
- Senior
- Graduate

My highest level of education is:
- Secondary School or its equivalent
- Bachelor's Degree or its equivalent
- Master's Degree
- Other, please specify

I am training to primarily teach in:
- Early Childhood
- Primary/Elementary
- Secondary
- Special Education
- Other, please specify

Indicate the amount of interaction you have had with individuals with disabilities. Check all that apply.

- Babysitting
- Family Member
- Friend
- Camp
- Church
- Peer Tutoring
- Other, please specify
- None

I have had significant/considerable interactions with a person with a disability.

- None
- Little
- Some
- Much

I have had formal training in working with and/or educating students with disabilities.

- No
- Yes

My level of experience teaching a student with a disability is

- None
- Little (1 week or less)
- Some (2-4 weeks)
- Much (5 weeks or more)

My level of confidence in teaching students with disabilities is

- Very Low
- Low
- Average
- High
- Very High

My knowledge of the legislation about children with disabilities is

- None
- Poor
- Average
- Good
- Very Good

Please indicate your level of agreement with the following statements.

	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree
All students deserve an appropriate education, even if this means teachers must spend extra time and resources to meet their needs.					
Students need different types and amounts of instructional support in order to succeed.					
Students with disabilities and/or who are English language learners deserve extra or different instructional assistance in order to be successful.					
Providing **instructional** accommodations (e.g., copies of notes, extended time, books on tape) for students with disabilities is fair to other students.					

Please indicate your level of agreement with the following statements.

	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree
Providing **assessment** accommodations (e.g., extended time, oral testing) for students with disabilities is fair to other students.					
The responsibility for educating students with mild/moderate disabilities in regular classrooms should be shared between the general and special education teachers.					
I would welcome the opportunity to team teach as a model for meeting the needs of students with mild/moderate disabilities in a regular classroom.					
I would welcome the opportunity to participate in a consultative teacher model (i.e., regular collaborative meetings between special and general education teachers to share ideas, methods, and materials) as a means of addressing the needs of students with mild/moderate disabilities in regular classrooms.					

Read the following scenario carefully.

As a general educator, you have been hired for a teaching position this fall. The administrator of your school calls you in for a conference to discuss changes in the upcoming year. Your administrator informs you that for the upcoming school year, he/she would like for you to collaborate with the special education teacher. The special education teacher is also in attendance at this conference and he/she is hearing this information for the first time. Collaboration efforts will include dialogue, shared planning time, shared and creative decision making and possibly co-teaching a class together. The goal of this collaborative effort is to provide appropriate services to students with disabilities, including students who have identified exceptionalities in the areas of hearing impairment, learning disabilities, intellectual disabilities (this used to be called mental retardation), behavioral disorders, and physical impairments requiring the use of a wheelchair.

You walk out of the meeting feeling...

Enthusiastic
Somewhat Enthusiastic
Neutral
Somewhat Unenthusiastic
Unenthusiastic

Scared
Somewhat Scared
Neutral
Somewhat Fearless
Fearless

You walk out of the meeting feeling...

Anxious
Somewhat Anxious
Neutral
Somewhat Relaxed
Relaxed

Comfortable
Somewhat Comfortable
Neutral
Somewhat Uncomfortable
Uncomfortable

You walk out of the meeting feeling...

Angry
Somewhat Angry
Neutral
Somewhat Not Angry
Not Angry

Unwilling
Somewhat Unwilling
Neutral
Somewhat Willing
Willing

You walk out of the meeting feeling...

Interested
Somewhat Interested
Neutral
Somewhat Disinterested
Disinterested

Confident
Somewhat Confident
Neutral
Somewhat Insecure
Insecure

You walk out of the meeting feeling...

Nervous
Somewhat Nervous
Neutral
Somewhat Calm
Calm

Pleased
Somewhat Pleased
Neutral
Somewhat Displeased
Displeased

You walk out of the meeting feeling...

Weak
Somewhat Weak
Neutral
Somewhat Powerful
Powerful

Annoyed
Somewhat Annoyed
Neutral
Somewhat Indifferent
Indifferent

You walk out of the meeting feeling...

Accepting
Somewhat Accepting
Neutral
Somewhat Opposing
Opposing

Prepared
Somewhat Prepared
Neutral
Somewhat Unprepared
Unprepared

You walk out of the meeting feeling...

Resistant
Somewhat Resistant
Neutral
Somewhat Cooperative
Cooperative

Happy
Somewhat Happy
Neutral
Somewhat Unhappy
Unhappy

You walk out of the meeting feeling...

Pessimistic
Somewhat Pessimistic
Neutral
Somewhat Optimistic
Optimistic

Answer each question according to 'How much you can do' or 'to what extent'?

	None		Very Little		Some Influence		Quite A Bit		A Great Deal
How much can you do to control disruptive behavior in the classroom?									
How much can you do to motivate students who show low interest in school work?									
How much can you do to get students to believe they can do well in school work?									
How much can you do to help you students value learning?									
To what extent can you craft good questions to assess your students' knowledge?									
How much can you do to get children to follow school rules?									

Answer each question according to 'How much you can do' or 'to what extent'?

	None		Very Little		Some Influence		Quite A Bit		A Great Deal
How much can you do to calm a student who is disruptive or noisy?									
How well can you establish a classroom management system with each group of students?									
How much can you use a variety of assessment strategies?									
To what extent can you provide an alternative explanation or example when students are confused?									
How much can you assist families in helping their children do well in school?									
How well can you implement alternative strategies in your classroom?									

Now you will answer 10 multiple-choice questions related to special education legal issues.

Diana v. State Board of Education, (1970) and Larry P. v. Riles (1977) influenced the drafting of the Individuals with Disabilities Education Act (IDEA) and addressed the issue of

Zero reject
Parental participation
Nondiscriminatory assessment
Least Restrictive Environment

Supporters of the continuum of services in special education argue all of the following EXCEPT

A continuum of service option is necessary to meet needs of students with a range of abilities and challenges

General education teachers are prepared and qualified to teach special needs students

Students in regular education classrooms may not be prepared to accept and work effectively with students with disabilities

General education classrooms may not have sufficient resources

All of the following are provisions of IDEA EXCEPT

Zero reject

Due process

Free, appropriate education

Exemption from disciplinary action for students with disabilities

The No Child Left Behind Act (NCLB) is a reauthorization of which of the following acts?

Individuals with Disabilities Education Act

Elementary and Secondary Education Act

Americans with Disabilities Act

Vocational Rehabilitation Act of 1973

The law passed in 1975 that first established rights of students with disabilities to a free, appropriate public education is called which of the following?

Section 504 of the Rehabilitation Act

The Education for All Handicapped Children Act (PL 94-142)

The Americans with Disabilities Act

The Regular Education Initiative

The Education for All Handicapped Children Act (PL 94-142) is now known as which of the following?

The Americans with Disabilities Act

The Regular Education Initiative

Individuals with Disabilities Education Act (IDEA)

Section 504 of the Rehabilitation Act

Least restrictive environment means which of the following?

Educating all students with disabilities in general education classrooms

Educating all students with disabilities in a school with students without disabilities

Educating all students with disabilities in inclusive settings

Educating all students with disabilities in the most appropriate setting to meet each individual's needs

Which of the following court cases determined that "separate-but-equal" education is illegal?

Honing v. Doe, (1988)

Diana v. State Board of Education, (1970)

Brown v. Board of Education, (1954)

Larry P. v. Riles, (1977)

In response to the passage of the 2004 amendments of IDEA federal funds were provided for early intervention services to students who were experiencing difficulty in school but who had not been referred for special education. These services are delivered in three tiers and are part of what procedures?

Due process

Transition planning

Individual education planning

Response-to-intervention (RTI)

When a student is found to be eligible for special education services he or she will have an individualized education plan. In contrast, if a child receives services under Section 504 what is the name of the plan he or she would receive?

Transition plan

Individualized education plan

Due process plan

Accommodation plan

Now you will answer 10 questions about disabilities.

All of the following are discrete disability categories under IDEA EXCEPT

Attention deficit hyperactivity disorder

Autism

Other health impairment

Traumatic brain injury

Which of the following is the most common higher-incidence disability?

Speech or language impairment

Learning disability

Intellectual disability

Emotional disturbance

Difficulty in language comprehension, phonology, syntax, and/or pragmatics are characteristic of

Speech disorders

Articulation disorders

Fluency disorders

Language disorders

The term specific learning disability is a general one referring to what?

A group of learning problems that are unexpected in relation to general ability level

Any student who needs accommodations

Any problem that keeps a student from performing well

Students who have intellectual disabilities

What percentage of students requiring special education services are classified as having learning disabilities?

29%

39%

49%

59%

Which of the following is the currently accepted term for what used to to be referred to as 'mental retardation'?

Mental deficiency

Mentally handicapped

Slow learner

Intellectual disability

Depression, social withdrawal, self-mutilation, and excessive fears are characteristics most closely associated with which of the following?

Mood Disorders

Emotional disturbance

Autism

Intellectual disability

Lower-incidence disabilities include which one of the following?

Visual Impairments

Speech Impairments

Emotional and Behavioral Disorders

Learning Disabilities

Difficulty with communication, self-stimulating behaviors, bizarre speech patterns, disruptive behavior, and stereotypic behavior are most closely associated with which of the following?

Learning disabilities

Cerebral palsy

Autism

Emotional/Behavior disorders

Self-help skills, communication skills, functional academics, daily living skills, and recreation and social skills are all areas of instruction for which of the following?

All elementary children

Students with severe and multiple disabilities

All students with disabilities

All students with learning disabilities

Now you will answer 10 questions about teaching strategies.

There are several different ways teachers who co-teach can present the lesson to their students. When the teachers divide the class into skill or ability groups and each of the teachers leads one of the groups they are using which of the following co-teaching models?

Parallel teaching

Alternative teaching

Station teaching

Interactive teaching

Working jointly with others and sharing in goal setting, problem solving, and goal achievement are all hallmarks of what process?

Teacher conferences

Collaboration

IEPs

Full inclusion

The co-teacher model, in which teachers take turns presenting and leading class activities and share responsibilities equally, is known as

Parallel teaching

Team teaching

Station teaching

Alternative teaching

Given the choices below which would NOT be a way for a general education teacher to adapt instructional materials for students with intellectual giftedness?

When the student shows mastery of content move the student ahead in the curriculum and design suitable enrichment activities.

Survey student interests to provide direction for instructional enhancements.

Provide the student with more homework assignments.

Seek assistance from teachers who work with students who are gifted/talented.

Additional practice after goals have been achieved to reinforce any knowledge previously presented is called which of the following?

Overlearning

Guided practice

Independent practice

Active engagement

Monitoring students' comprehension by asking questions, supervising guided practice, and providing independent practice are all examples of which of the following?

Overlearning

Evidence-based teaching strategies

Ongoing assessment strategies

Universal design for learning

One good strategy for determining the dynamics of classroom behavior is to use an A-B-C chart. A-B-C stands for which of the following?

Anger-Behavior-Child

Analyze-Brainstorm-Communicate

Antecedent-Behavior-Consequence

Always Be Careful

Post-it notes, erasable highlighters, and magnetic printer paper are examples of which of the following?

Low-tech assistive technology

High-tech assistive technology

Instructional Technology

Educational Technology

Self-regulation of behavior, problem solving, and self-evaluation are components of which of the following?

Self-advocacy

Self-esteem

Self-determination

Self-monitoring

Establishing a presence and attracting students' attention by moving around the classroom is known as which of the following?

Active engagement

Proximity control

With-it-ness

Use of cues

End of interview. Thank you for your participation.

VITA

Tamara "Tammy" Bowlin was born in Knoxville, Tennessee and raised in Jefferson City, Tennessee. Tennessee has been home all of her adult life. She is a graduate of Carson-Newman College where she earned her Bachelors of Science Degree in Education and her Master's Degree in Curriculum and Instruction. She is also a graduate of Lincoln Memorial University where she earned an Educational Specialist Degree in Administration and Supervision. While earning her Doctorate Degree in Education at the University of Tennessee, she presented at National and local conferences, has published research, has served as a guest speaker, has taught introductory undergraduate and graduate special education, has supervised practicum and intern students, and has served on the a number of graduate student committees. In October 2009, Tammy was awarded the ESPN Fellowship ($10,000). Particular areas of interest and research include students with high incidence disabilities and teacher preparation. Tammy is employed at Jefferson County High School, in Dandridge, Tennessee, where she has served as a teacher for students with high and low incidence disabilities, an inclusion Algebra I teacher and the Special Education Coordinator for the JCHS special education department. Tammy is married to Rick Bowlin.