EARLY CHILDHOOD PRESERVICE TRAINING AND PERCEIVED TEACHER

EFFICACY BELIEFS CONCERNING THE INCLUSION OF YOUNG

CHILDREN WITH DISABILITIES

Except where reference is made to the work of others, the work described in this dissertation is my own or was done in collaboration with my advisory committee. This dissertation does not contain any proprietary information.

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EARLY CHILDHOOD PRESERVICE TRAINING AND PERCEIVED TEACHER EFFICACY BELIEFS CONCERNING THE INCLUSION OF YOUNG CHILDREN WITH DISABILITIES

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EARLY CHILDHOOD PRESERVICE TRAINING AND PERCEIVED TEACHER EFFICACY BELIEFS CONCERNING THE INCLUSION OF YOUNG CHILDREN WITH DISABILITIES

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Shelley D. Walls, daughter of Roger and Priscilla Barkman, was born May 4, 1977, in Media, Pennsylvania. In 1999, Shelley earned a Bachelor of Education degree (summa cum laude) in Elementary Education with an emphasis in Special Education from Eastern University in St. Davids, Pennsylvania. Upon graduation she married her first love of seven years, James E. Walls II, and moved to Birmingham, Alabama to work as an elementary inclusion teacher. While teaching, Shelley completed her Master of Education degree (summa cum laude) in Early Childhood Special Education at the University of Alabama at Birmingham (2002). In 2003, she was accepted into the doctoral program in the department of Rehabilitation and Special Education at Auburn University. During her doctoral journey, James and Shelley were blessed with two children, Ella Grace Reni' Walls and James Edward Thatcher Walls III. Upon completion of her doctoral program at Auburn University, Shelley was extended an invitation for membership in The Honor Society of Phi Kappa Phi.

DISSERTATION ABSTRACT

EARLY CHILDHOOD PRESERVICE TRAINING AND PERCEIVED TEACHER EFFICACY BELIEFS CONCERNING THE INCLUSION OF YOUNG CHILDREN WITH DISABILITIES

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The purpose of the study was to identify relationships among type of early childhood teacher training programs and levels of perceived efficacy beliefs concerning the inclusion of young children with disabilities. Preservice teachers enrolled in general early childhood, early childhood special education, and unified teacher training programs completed the *Teacher Efficacy for the Inclusion of Young Children with Disabilities.* This scale contains four subscales pertaining to (a) knowledge of procedures related to special education, (b) knowledge of young children with disabilities, (c) teaching confidence with young children having a disability and who are included into the general education classroom, and (d) perceptions of their abilities to implement both effective

teaching strategies and modification to the general education curriculum to meet the needs of young children with disabilities.

Results indicated preservice teachers enrolled in general early childhood teacher training programs reported significantly lower levels of perceived efficacy beliefs concerning the inclusion of young children with disabilities on all four subscales of the dependent measure compared to their early childhood special education and unified counterparts. Preservice teachers enrolled in early childhood special education teacher training programs reported a higher degree of perceived teaching efficacy concerning special education procedures compared to those enrolled in a unified program. There were no significant differences among early childhood special education and unified teacher training programs on the three remaining subscales.

The findings of this study suggest preservice teachers participating in separate early childhood education teacher training programs lacked confidence in their beliefs regarding their skills and performances concerning including children with disabilities in their future general education classroom. The meanings of these efficacy doubts may be explained by minimal exposures to special education content and direct experiences with children having disabilities. Additionally, the results indicate a need for more instruction concerning special education evaluation and drafting individualized education and service plans in unified teacher training programs.

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I. INTRODUCTION

A movement away from segregating children who have disabilities in educational programs and towards inclusion has been a prevalent theme in our educational system for over twenty years. Changes in legislation, decisions by litigation, and the evolution of educational theory and research have supported educating children with disabilities in their least restrictive environment. Least restrictive environment describes the requirement that children with disabilities be educated in the general education classroom to the maximum extent appropriate.

Statement of the Problem

The process of providing each child with education in his or her least restrictive environment has caused a profusion of changes in the pre-service training of early childhood general education (ECE) and early childhood special education (ECSE) teachers. Some institutions of higher education are preparing preservice teachers for inclusive education by unifying ECE and ECSE into one program. Unfortunately, there is not an abundance of empirical evidence supporting the effectiveness of unified teacher training programs. Given the current research, it is difficult to ascertain which type of preservice training program, separate ECE and ECSE or unified ECE/ECSE, best prepares early childhood teachers to instruct children in inclusive classrooms.

Teacher perception of self-efficacy is a construct that can provide information on whether ECE, ECSE, and unified programs are producing teachers that believe they are effective in inclusive settings. In his theory, Bandura defined self-efficacy as individual perceptions regarding abilities to accomplish a specific task within a given situation (Bandura, 1993, 1997). When self-efficacy is applied to teaching it refers to one's perception of his or her own teaching capabilities (Ashton & Webb, 1986; Bandura, 1997). Not a single study could be found measuring preservice teachers participating in separate ECE, ECSE and unified programs sense of efficacy.

Importance of the Problem

Teachers' sense of efficacy is a powerful construct that is strongly correlated with educationally productive behaviors. Research findings demonstrated that teachers' sense of efficacy is related to the amount of effort teachers provide to struggling students (Gibson & Dembo, 1984), classroom management (Brownell & Pajares, 1999; Woolfolk & Hoy, 1990), instructional strategies (Allinder, 1994; Brownell & Pajares, 1999), and the likelihood that teachers view the general education classroom an appropriate setting for children with disabilities (Soodak & Podell, 1993). Furthermore, teachers' sense of efficacy has a direct effect on teachers' perceived success in instructing students with disabilities (Brownell & Pajares, 1999). Extending this research to encompass ECE and ECSE, teachers' sense of efficacy could predict that ECE and ECSE teachers with a strong sense of efficacy would confidently persist in their efforts and expectations to facilitate the inclusion of children with disabilities in the face of complications, obstacles, and delays (Lamorey & Wilcox, 2005).

Significance of the Study

Given the established importance of teachers' sense of efficacy, it would seem quite useful to gain an understanding of the preservice teachers' sense of efficacy of students participating in separate ECE, separate ECSE, and unified early childhood preservice training programs. These findings could contribute to the body of literature regarding the effectiveness of early childhood preservice teacher training programs. Once empirical data are available, institutions of higher education will have a broader foundation for restructuring early childhood teacher training programs.

Preservice Training

Historically, special education and general education have been independent systems in colleges and universities across the country (Heston, Raschke, Kliewer, Fitzgerald, & Edmiaston, 1998). Thousands of teachers have received their bachelor's degree in general education having never interacted with teachers who received their bachelor's degree in special education. For the purpose of this paper these programs will be referred to as separate programs. Separate programs describe the most traditional types of programs where general and special education are independent entities.

Recently, in order for general educators to be better equipped for having children with exceptionalities in their classroom, some preservice training programs are modifying their curriculum and standards. These revised programs are called unified programs and train both general and special education teachers. Miller and Stayton (1996) defined unified programs as those that combine both ECE and ECSE personnel standards into a newly conceptualized curriculum. It is important to note that there are many states that do

not offer a unified certificate. In these circumstances, students participating in a unified program earn a dual certificate in ECE and ECSE.

Separate Programs

In the early seventies the Federal Bureau of Education for Handicapped funded more than 260 grants, known as Deans' Grants, to institutions of higher education preparing prospective elementary teachers to serve students with disabilities in mainstream settings (Kleinhammer-Trammill, 2003; Welch & Sheridan, 1993). Fourteen competency clusters were identified as requirements for general education teachers to instruct children with disabilities effectively (Reynolds, Birch, Grohs, Howsam, & Morsink, 1980; Wong, 1989). These included curriculum, teaching basic skills, pupil and class management, professional consultation and communication, teacher-parent relationships, student-student relationships, exceptional conditions, referral, individualized teaching, professional values, diagnosing problems, teaching and managing atypical learners, setting academic and behavior performance standards, and motivating students. Unfortunately, the Deans' Grants initiative was unsuccessful in creating teacher-education programs that reflected instruction representative of these skills (Welch & Sheridan, 1993). As a result, many states are requiring general educators to earn credit in at least one special education course (Kleinhammer-Trammil, 2003; Reed & Monda-Amaya, 1995). Although, this requirement is advantageous, one special education course is not sufficient for preparing general educators to be teachers in inclusion classrooms (Stayton & McCollum, 2002). Teachers exit these introductory courses with few or no skills related to instructional strategies (Welch & Sheridan, 1993).

Separate programs preparing special educators for inclusion also have disadvantages. Special educators trained within separate programs often lack exposure to issues related to managing caseloads within the general education classroom. Specifically they may not receive training in scheduling services within the general education classroom, serving as a consultant rather than a direct service provider, or planning with general educators. These critical skills are needed for inclusion and are often not a high priority in separate special education programs. Additionally, novice special educators have been prepared to individualize instruction, often using methods and strategies that are difficult to embed into the general classroom settings (Welch & Sheridan, 1993).

Even though these disadvantages exist, separate teacher training programs are plentiful across the country. One driving force behind the existence of such programs is state certification. Philosophical and theoretical rationale also contributes to the continued existence of independent programs. Teachers in training need specialized instruction to teach children with disabilities and many department leaders at institutions of higher education believe that this cannot happen in unified programs (Dunne, 2002). There is a fear that the curriculum in unified programs might be "watered down" so much that students will not be prepared to effectively teach children with disabilities (Stayton & McCollum, 2002).

Unified Programs

The National Association of State Boards of Education (NASBE) drafted the following operating assumption to investigate the status of special education within the progressive inclusion movement: "To the extent that teachers are trained and socialized to expect that there are two types of students (and teachers) — normal and special —

general education teachers will perceive that they are incapable of teaching special students" (Roach, 1991, p.4). The NASBE assumption summarizes the rationale many institutions of higher education have adopted as they transform their separate programs into one unified program. The fear of current practices being counterproductive (Welch & Sheridan, 1993) is motivating teacher education programs into reconceptualizing how teachers are prepared. The unification process is being undertaken due to a belief that separation in higher education impedes the goals of integration in elementary and secondary students (Stainback & Stainback, 1987). Although unified programs are relatively new, various studies have investigated the effectiveness of these programs.

Unification Studies

Unification studies have investigated the following: (a) course content, (b) field experience, (c) attitudes, (d) program development, (e) benefits of unification, (f) barriers of unification, (g) competencies, and (h) perceptions from participants (Dunne, 2002; LaMontagne et al., 2002; Lombardi & Hunka, 2001; Miller & Losardo, 2002; Miller & Stayton, 1998; Raschke et al., 2001; Sexton et al., 2002). This small body of literature provides evidence to aid institutions of higher education in their development of teacher training programs. Although these studies are valuable, there is a critical component missing from the current investigations. Out of all the unified training literature no studies could be found investigating teachers' sense of efficacy. This missing component contributes to the gap between early childhood teacher preparation and preparedness for inclusion. A goal of educational research is to determine factors that contribute to a teacher's ability to meet the needs of children with disabilities in the general education

classroom. Since a teachers' sense of efficacy has been correlated with student achievement, it is critical to investigate whether unified programs contribute to a teachers' sense of efficacy (Armour et. al, 1976).

Teacher Efficacy

Teacher efficacy should not be confused with teacher effectiveness (Goddard, Hoy, & Woolfok-Hoy, 2004). Teachers' efficacy beliefs are "contextual judgments of their capability to succeed in particular instructional endeavors" (Brownell & Pajares, 1999, p. 154) and teacher effectiveness "focuses on the teaching performance of individual teachers in relation to student cognitive outcomes" (Kyriakides, Campbell, & Christofidou, 2002, p. 291).

Ashton and Webb (1986) defined teacher sense of efficacy as "teachers' situation-specific perceptions of their own teaching abilities" (p. 3). A teacher's sense of efficacy consists of two independent factors: sense of teaching efficacy and sense of personal teaching efficacy (Ashton & Webb, 1986). *Sense of general teaching efficacy* is the universal belief that educators can influence student learning (Ashton & Webb). *Personal teaching efficacy* refers to a teacher's confidence in his or her teaching ability or self-efficacy (Ashton & Webb).

The absence of studies examining teachers' sense of efficacy and preservice training of unified and separate teacher training programs is a critical gap due to the fact that teachers with a high sense of efficacy have been found to be better prepared to instruct children with disabilities (Allinder, 1994; Tschannen-Moran, Hoy, & Hoy, 1998).

A teacher's sense of efficacy is significantly related to teachers' perceptions of their skills to teach students with disabilities in inclusive classrooms (Brownell & Pajares, 1999).

With this evidence, it would be prudent of higher education to strive towards increasing their prospective teachers' sense of efficacy. Fortunately, Brownell and Pajares (1999) found that preservice training had a direct effect on teachers' sense of efficacy. Thus, institutions of higher education have the capability to enhance teachers' sense of efficacy through course work and practical experiences. Several authors suggest that strengthening teacher' sense of efficacy will have a direct impact on the education children with disabilities receive in the inclusion setting (Brownell & Pajares, 1999; Buell, Hallam, Gamel-McCormick, & Scheer, 1999).

Measurement of Teacher Efficacy

In the teacher efficacy literature the primary means for gaining a measurement of a teachers' sense of efficacy has been the use of Gibson and Dembo's (1984) Teacher Efficacy Scale (Ross, 1998). Recent literature has discouraged the use of Gibson and Dembo's scale for measuring teacher efficacy due to the specificity of the scale, the two factor structure, and the reliability and validity of the scores (Brouwers & Tomic, 2003; Henson, Kogan, & Vacha-Haase, 2001; Wheatley, 2005). In order for efficacy measurements to be useful and generalizable, teachers need to be assessed on their competence across a wide range of activities and tasks they are required to perform (Tschannen-Moran & Hoy, 2001).

The *Teacher Efficacy for the Inclusion of Students with Learning Disabilities Scale* (TEISLDS) (Eposito & Guarino, in press) is an alternative instrument for the

measurement of teachers' sense of efficacy. The TEISLDS (see Appendix A) was developed through a literature review and is based on Bandura's social cognitive theory that efficacy beliefs are task and content specific (Esposito, Guarino, & Caywood, in press). The instrument includes 17 items and uses a 5-point scale with anchors at 1 = no confidence and 5 = very confident. The questions assess teachers' sense of efficacy in the following four areas: (a) knowledge of procedures and laws related to special education, (b) perceptions about their knowledge of learning disabilities, (c) teaching confidence with students having learning disabilities that are included in general education classrooms, and (d) perceptions of abilities to implement both effective teaching strategies and modifications to the general education curriculum to meet the needs of students with learning disabilities (Esposito, Guarino, & Caywood, in press). The TEISLDS provides teacher efficacy researchers interested in measuring teachers sense of efficacy related to inclusion a reliable tool for investigation (Esposito, Guarino, & Caywood, in press).

Purpose of the Study and Research Questions

The purpose of the study was to determine whether students participating in separate ECE teacher training programs, separate ECSE teacher training programs, and unified early childhood teacher training programs differ in their perceived efficacy beliefs concerning the inclusion of children with disabilities as measured by the Teacher Efficacy for the Inclusion of Young Children with Disabilities (TEIYD). The TEIYD (see Appendix B) is an adaptation of the TEISLDS (Esposito, Guarino, & Caywood, in press). The primary investigator of this study and a panel of experts adapted the original survey

(TEISLDS) with permission so that it would be more appropriate for early childhood preservice teachers. This study investigated differences among type of preservice training programs, initial certification, age ranges covered by certification, length of time in teacher training program, and teaching experience on the dependent measure (TEIYD). The specific research questions were:

1. Are there differences among the type of teacher training programs and program participants' perceived level of teaching efficacy?

2. Are there differences among level of certification and preservice teachers' perceived level of teaching efficacy?

3. Are there differences among age ranges covered by certification and preservice teachers' perceived level of teaching efficacy?

4. Are there differences among length of time in teacher training program and preservice teachers' perceived level of teaching efficacy?

5. Are there differences among teaching experience and preservice teachers' perceived level of teaching efficacy?

II. LITERATURE REVIEW

In a time when children with disabilities are increasingly being included into the general education classroom, research regarding the preparedness of these teachers is imperative. The purpose of this chapter, therefore, is to review the research on the preservice training of early childhood inclusion teachers. The impact this training has on teacher sense of efficacy will be of particular interest throughout this review.

This literature review is divided into seven major sections. The first section provides a historical perspective of the legislation regarding inclusion and personnel preparation of children with disabilities. Section two summarizes the philosophical differences and similarities between ECE and ECSE. The third section provides a summary of the types of preservice training programs. Section four discusses the theory of self-efficacy. Section five presents information regarding preservice training and its impact on preparing teachers for inclusion by considering how preservice training is related to teachers' sense of efficacy. Section six provides an overview of measuring the construct of teachers' sense of efficacy. Lastly, the chapter concludes with a discussion of the responsibilities institutions of higher education have for the education of children with disabilities.

Historical Perspective

This section describes the historical process that led to the current educational rights of individuals with disabilities. First, a summary of legislation and litigation that evolved into the mandate of educating children with disabilities in the least restrictive environment will be provided, followed by a thorough description of how the least restrictive environment is defined. To conclude this section, an analysis of the federal government's role in preparing special and general education teachers to teach children with disabilities will be presented.

1960s Legislation Impacting the Education of Children with Disabilities

Although, not directly related to individuals with disabilities, Brown vs. Board of Education in 1954 began the battle against discrimination in schools. The Civil Rights Act of 1964 contributed to the fight against discrimination. This legislation established a precedent that minority groups deserve equal treatment. The following laws depict how Congress recognized the minority group of individuals with disabilities and their right for equal treatment. The Elementary and Secondary Education Act of 1965 authorized federal aid to states and localities for educating underprivileged children, including children with disabilities. The Elementary and Secondary Education Act was amended in1966 establishing the Bureau for the Education of the Handicapped under Title VI. The Bureau for the Education of the Handicapped was a special administrative unit that provided grants to states to initiate, expand, or improve programs for educating children with disabilities. The Office of Special Education Programs eventually replaced the Bureau for the Education of the Handicapped in 1980.

Head Start, a federally funded early childhood program that provides day care, education, health service, and family support to low-income preschoolers, was established by Congress in 1965. Services to preschool marked the government's acknowledgement that investing in early childhood programs was a worthwhile effort. The Economic Opportunity Act (P.L. 92-424) of 1972 required Head Start programs to reserve at least 10 percent of their enrollment for preschoolers with disabilities.

To further support the education for young children, particularly children with disabilities, Congress passed the Handicapped Children's Early Education Assistance Act in 1968, which provided federal funds to support the identification of effective procedures for young children with disabilities and their families. Funds were also granted to establish model demonstration programs, which provided data to contribute to the body of knowledge regarding services for young children with disabilities and their families. The model projects have had a significant impact on early intervention programs across the country (Davis, Kilgo, & Gamel-McCormick, 1998).

1970s Litigation Pertinent to the Inclusion Movement in Legislation

The 1970s encompassed two landmark cases establishing a standard for legislation to be drafted (Martin, Martin, & Terman, 1996). First in a 1971 case, Pennsylvania Association for Retarded Children (PARC) v. Commonwealth of Pennsylvania, PARC contested the law that allowed public schools to deny services to children with mental retardation. The state settled to provide full access to a free public education to children with mental retardation up to age 21.

The second case is Mills v. Board of Education (1972). Seven children with various mental and behavior disorders in the District of Columbia sued the public

schools. The prosecutions were enforced because the children were either refused school enrollment or were expelled from school because of their disability. The school district claimed there was limited funding to meet the special needs of the children. The ruling was established that the burden of insufficient funding should not fall greater on children with disabilities. These two court cases established "legal precedent" for the rights of children with disabilities (Kleinhammer-Trammill, 2003) and paved the way for the passage of the Education for All Handicapped Children Act of 1975 (P.L. 94-142).

Legislation that Mandates the Inclusion of Children with Disabilities

The first legislation that mandated equal access of children with disabilities was Section 504 of the Rehabilitation Act of 1973. Section 504 stated that recipients of federal financial assistance "…shall educate, or shall provide education of, each qualified handicapped person in its jurisdiction with persons who are not handicapped to the maximum extent appropriate…" (Section 84-34 a). Martin, Martin, and Terman (1996) explained that Section 504 was virtually ignored by local and state educational agencies for 20 years because Congress did not allocate funding or monitoring of the program.

The next monumental legislation for the inclusion of children with disabilities was The Education for All Handicapped Children Act of 1975 (The Education for All Handicapped Children Act, P.L. 94-142), which mandated that all students with disabilities from ages 3 to 21 received a free, appropriate public education. A funding system was established to help meet the costs of offering such services. States were excused from serving children with disabilities from ages 3 through 5 if typical children in these age ranges were not served by the public schools.

The History of IDEA on the educational government website (www.ed.gov) explains that P.L. 94-142 was a response to concern for two groups of children: children with disabilities who were excluded from the education system and the children who were being denied an appropriate education due to limited access. The four purposes of P.L. 94-142 were to:

> (a) establish that all children with disabilities have available to them a free appropriate public education which emphasizes special education and related services designed to meet their unique needs, (b) to assure that the rights of children with disabilities and their parents… are protected, (c) to assist States and localities to provide for the education of all children with disabilities, and (d) to assess and assure the effectiveness of effort to educate all children with disabilities (History of IDEA, Four Purposes ¶ 1).

P.L. 94-142 established that each child should have an Individualized Education Plan (IEP), that no eligible child will be excluded from receiving services, and that services will be provided in the child's least restrictive environment. Through this legislation the concept of mainstreaming and inclusion began to emerge.

The amendment to Education for All Handicapped Children Act in 1986 (P.L. 99-457) marked a major milestone in the history of ECSE by extending the legislation to preschoolers (ages 3 through 5). This portion of the law is referred to as section 619 of Part B or the Preschool Program. A second portion of this amendment, Part H or the Handicapped Infants and Toddlers Program, established a voluntary program for each state to serve infants and toddlers at risk for or with disabilities. Monetary incentives were used to encourage states to serve the 0-2 age group and provided the option to serve

children who were at-risk. Part H required that infants and toddlers and their families were served using an Individualized Family Service Plan with families, not just children, being the primary recipient of services.

In 1990 the Education for All Handicapped Children Act was renamed, Individuals with Disabilities Education Act (IDEA). Congress replaced the phrase "handicapped children" with "children with disabilities" through this legislation to recognize the importance of person first language. IDEA was reauthorized in 1997 with a continued emphasis on the rights of children with disabilities to have access to the general education curriculum. For instance, IDEA required that all children have the opportunity to participate in statewide and district wide assessments. Additionally, the 1997 amendments made certain that a child's individualized education plan included how a child will be involved in the general curriculum and the primary responsibility and accountability for students with disabilities was given to the general education teacher. The legislation described the special education teacher as a supportive role to the regular education system (Kleinhammer-Tramill, 2003).

In December 2004, IDEA was reauthorized and renamed the Individuals with Disabilities Education Improvement Act (IDEA). This reauthorization requires continued participation of at least one general education teacher when developing, reviewing, and revising children's individualized education plans (Office of Special Education and Rehabilitation Services, 2004). The general education teacher is to assist in determining the appropriate positive behavioral intervention/strategies, supplementary aids and services as well as, program modifications and supports for school personnel (Section 614, 3(C)). With regards to placement, IDEA (2004) continues to require the education of

children with disabilities to occur with children who are typically developing to the maximum extent appropriate. To improve results and functional outcomes for students with disabilities, IDEA (2004) made the provision of free appropriate public education in the least restrictive environment a national priority. Each state must use quantifiable indicators to adequately measure their performance in providing a free appropriate public education in the least restrictive environment (Section 616, a (3)).

Lastly, IDEA (2004) recognized the highly qualified teacher standards under the No Child Left Behind (NCLB; Office of Elementary and Secondary Education, 2002) Act of 2002. NCLB is a reform of the Elementary and Secondary Education Act of 1965. NCLB requires that every classroom across the country has a "highly qualified teacher" by the end of the 2005–2006 school year. It was based on four principles: (a) stronger accountability for results, (b) increased flexibility and local control, (c) expanded options for parents, and (d) an emphasis on teaching methods that have been proven to work (www.Ed.gov). To support NCLB (2002), IDEA (2004) requires that all special education teachers be fully certified with no waivers or temporary certifications.

In sum, since the early 1970s legislation has required that children with disabilities be included with their typical peers to the maximum extent appropriate. Through the years legislation has continued to recognize the importance of educating children in their least restrictive environment. State departments, professors, parents, and teachers have all examined the concept of least restrictive environment. Thus, research, theories, and debates regarding least restrictive environment have occupied the education arena. The next section will review this literature.

Least Restrictive Environment

The legislation that first gave authority to the concept of least restrictive environment was the Education for All Handicapped Children Act of 1975, P.L. 94-142. Taylor (1988) explained that although P.L. 94-142 was the first legislation to mandate the least restrictive environment, the concept was around well before 1975. The origins of least restrictive environment can be found in professional writings from the 1960s. For instance, Reynolds (1962) drafted a framework for issues in special education in which he described services that ranged from the least restrictive to the most restrictive for children with disabilities.

The notion of least restrictive environment serves as a guide for services for individuals with disabilities. *Least restrictive environment* has been defined as a continuum of services ranging from most to least restrictive (Taylor, 1988). The placements, which are most restrictive, offer the most intensive services; the least restrictive placements are the most normalized and offer the least intensive services (Taylor, 1988). Figure 1 illustrates the special education continuum described in P.L. 94-142.

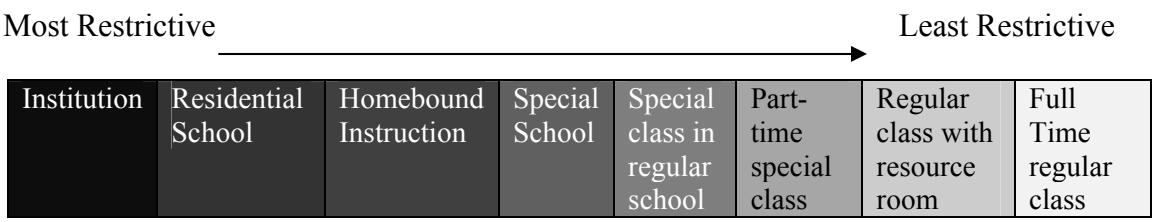

Figure 1. Continuum of Special Education Service Settings

From "Caught in the continuum: A critical analysis of the principle of least restrictive environment," by S. Taylor, 1988, *The Association for Persons with Severe Handicaps, 13*(1), p. 43. Adapted with permission.

Terminology

The term *inclusion* does not appear in the Individuals with Disabilities Education Act, but is commonly used by professionals to describe the least restrictive environment. Other terms such as *pull out*, *resource*, or *mainstreaming* are also used in reference to the least restrictive services. Due to the variety of terminology that exists, it is prudent to clarify the definitions.

McCarthy (1995) defined mainstreaming as integrating children with disabilities into the general education classroom during nonacademic periods of the school day. Inclusion refers to the movement of children who had previously been placed in special schools or classes into the general classes (Davern, 1999). More specifically, inclusion is teaching children with disabilities in the general education classroom for all nonacademic periods and some or all academic periods (Freytag, 2001). When students receive a portion of their academic instruction outside of the general education classroom, the method of service is referred to as resource or pull out. Douvanis and Husley (2002) explain that under IDEA mainstreaming and inclusion are to be pursued as long as this process is consistent with providing an appropriate education to children with disabilities.

Court Cases

Many of these concepts that were introduced in legislation have been refined by litigation. The courts have interpreted IDEA to discern the meaning that was intended and thus concepts such as mainstreaming and inclusion have evolved. Table 1 summarizes information obtained from Douvanis and Husley (2002) on litigation making a significant contribution to the concept of least restrictive environment.

Table 1

Case Law Interpreting Least Restrictive Environment

Date	Case Law	Issue	Finding
1991	Greer v. Rome, 950 F.2D 688, 11th Circuit	Placing a child in a self-contained kindergarten classroom without attempting the general education classroom	Before moving down the continuum of services to a more restrictive placement, the IEP team was instructed to contemplate, discuss, and justify not placing a student in the general education classroom.
1993	Oberti v. Clementon, 955 F.2D 1204, 3rd Circuit	Child with autism disturbing the general education classroom, moved to a more restrictive placement	Inclusion is a "right" not a privilege for a select few.
1994	Sacramento v. Rachel Holland, 14 F.3D 1398, 9th Circuit	Parents argued that with appropriate aids and services participation in the general classroom was possible	Three prong test to determine appropriate placement was developed: 1. Educational benefits of general education classroom must be compared to benefits of special classroom. 2. Social benefits of interaction with typical peers must be considered. 3. Effects of the student's presence on teacher must be considered.
1994	Light v. Parkway, 41 F.3rd 1223, 8th Circuit	Student was "violent, dangerous, and disruptive" in the general classroom	Inclusion is not a "right". A student who is violent, dangerous, and disruptive is not properly placed.

(table continues)

Table 1 (continued)

Date	Date	Date	Date
2003	White v. Ascension Parish School Board, 343 F.3d 373, 5th Circuit	Neighborhood school is not meeting educational needs and parental involvement in placement decisions	There is no presumption under IDEA that the neighborhood school is the least restrictive environment. Additionally, parents must be involved in placement decisions, but this does not mean the actual site selection.
2004	L.B. v. Nebo Schools, 379 F.3d 966, 10th Circuit	Reimbursement for private pre-school	If the least restrictive environment is a private preschool rather than the district's preschool the local education agency will pay for the private school.

Legislation Regarding Personnel Preparation

The purpose of this section is twofold. First, legislative influence on personnel preparation for special education teachers will be discussed. Next, a summary of the legislation that impacted the provision of special education training for general educators will be presented.

Special educators. Before the government mandated that children with disabilities receive a free, appropriate, public education in their least restrictive environment, personnel preparation for special education was addressed by legislation. Early legislation supported the improvement of education for children with disabilities through preservice training of teachers. First, in 1958 the National Defense Education Act (P.L. 85-926) was passed to support the development of professionals who could teach children

with disabilities (Burke, 1976). This act provided $575 million for education and low interest loans for college students. The intentions of P.L. 85-926 were to develop highly trained professionals that would eventually train the needed teachers, conduct research, and provide programming leadership in the field (Burke, 1976). Next, in 1959 the Training of Professional Personnel Act (P.L. 86-158) was passed to help train leaders to educate children with mental retardation (Burke, 1976). The Teachers of the Deaf Act of 1961 (P.L. 87-276) trained instructional personnel for children who were deaf or hard of hearing (Burke, 1976).

Congress passed The Mental Retardation Facility and Community Center Construction Act of 1963 (P.L. 88-164), which expanded the extent of training to include mental retardation, deafness and hearing impairment, visual impairment, emotional disturbance, and physical and mental health impairment (Burke, 1976). By 1968, training for more than 30,000 special education teachers and related specialists training was supported by the federal government (History of the IDEA, www.ed.gov). In 1968 Congress appropriated a total of $53,400,000 to improve education for students with disabilities, with $24,500,000 being used for training of personnel (Kleinhammer-Tramill & Fiore, 2003).

Until the 1970s, legislation related to personnel preparation was focused on increasing the quantity of special education personnel and was organized by categories of disabilities (Burke, 1976; Kleinhammer-Tramill & Fiore, 2003). Federal funding was allocated for personnel preparation on a categorical basis, which led state departments and training programs to organize their special education program into categories (Burke, 1976). In 1970, however, P.L. 91-230 consolidated the special education program and

federal funding was distributed through program assistance grants (Kleinhammer-Tramill & Fiore, 2003). Program assistance grants served as a catalyst to develop long term planning and to encourage the freedom to develop programs unique to individual communities for personnel preparation training and inservice training, which could include interrelated, noncategorical, or a completely categorical method. The grants reinforced the federal commitment to personnel preparedness by providing multiyear funding with a single proposal (Burke, 1976).

Although the number of personnel preparation programs increased, many regions continued to face shortages of personnel. In 1974, therefore, the Bureau of Education for the Handicapped within the Office of Education used its Division of Training Programs to ask grantees to work with their state agencies in order to develop planning projects for their region (Kleinhammer-Tramill & Fiore, 2003). This movement prompted a legislative requirement (P.L. 94-142) that states must implement a Comprehensive System of Personnel Development. Section 613 of P.L 94-142 required that each state plan to describe programs and procedures for the development and implementation of a comprehensive system of personnel development which shall include the inservice training of general and special education instructional and support personnel, detailed procedures to assure that personnel necessary to carry out the purposes of this Act are appropriately and adequately prepared and trained, and effective procedures for acquiring and disseminating to teachers and administrators of programs for handicapped children significant information derived from educational research demonstration, and similar projects (Saettler, 1976, p. 148). By 1977, funding would only be awarded to the

applicants who were addressing their states Comprehensive System of Personnel Development (Saettler, 1976).

During President Reagan's administration personnel preparation turned its focus towards the *quality* of personnel. In 1982, staff from the Division of Personnel Preparation under the Bureau of Education for the Handicapped and representatives from the field developed a document titled *Outline of a Plan to Improve the Quality of Personnel Preparation* (Smith-Davis, Morsink, & Wheatley, 1984). The components addressed by the initiative included, (a) the quality of preservice training for special education and related services, (b) a method to communicate research developed from grantees to the practitioners in the field, and (c) the need to increase the quantity of quality personnel (Smith-Davis, et. al). The Division of Personnel Preparation subsequently required grant applicants to address current research related to training needs and professionally recognized standards (Kleinhammer-Tramill & Fiore, 2003). The main purpose of the Division of Personnel Preparation was to assure the provision of properly trained personnel to enhance and expand education programs for the "handicapped" (Harvey, 1976).

Special education training for general educators. The focus of training general educators to serve children with disabilities has an unstable history, with the federal government responding to this need intermittently (Kleinhammer-Tramill, 2003). First, in 1967 through the Education Professions Development Act (P.L. 90-35) funds were used to enhance regular educators' awareness of and sensitivity to the needs of students with disabilities (Harvey & Siantz, 1979). In 1970, the Elementary and Secondary Education

Act (P.L. 91-23) allowed continued funding to provide inservice training for regular educators through 1973.

In 1974, general educators (preservice and inservice) became a focus for training through P.L. 93-380 with funding referred to as the Regular Education Preservice Grants, or Deans' Grants, and Regular Education Inservice Grants. Each of these initiatives was concerned with regular educators' preparedness to teach children with disabilities (Kleinhammer-Tramill, 2003). Congress recognized that proper training of teachers can have a positive impact on teacher attitudes towards inclusion by making one of the federal goals for these programs an improvement of regular educators' knowledge and attitudes about students with disabilities (Kleinhammer-Tramill, 2003).

The Dean's Grants program was an approach to ensure that general education graduates of colleges had the skills and knowledge to serve children with disabilities. In 1974 institutions of higher education were asked to submit proposals that contained the following three components: (a) the dean of the school or department of education had to lead the grant, (b) the program must be designed to meet the needs of local, state, and national education agencies, and (c) the participants must be from a variety of departments of the university (Kleinhammer-Tramill, 2003). Harvey and Siantz (1979) explained that the Dean's Grants proved to be an unsuccessful federal strategy as institutions of higher education realized that "incorporating the learning needs of the handicapped as an integral part of the teacher education program is a much more difficult and far-reaching undertaking than originally conceived by most of the projects" (p.7). The last year these projects were funded was 1987 and at many institutions of higher

education the implementation of an introductory special education course is all that remains (Kleinhammer-Tramill, 2003).

Kleinhammer-Tramill and Fiore (2003) explained that personnel preparation for regular educators stopped being an absolute priority in 1984 and was instead included as an invitational priority in special projects. Madeline Will, then Secretary of the U.S. Department of Education Office of Special Education and Rehabilitation Services, issued a statement in 1986 referred to as the "Regular Education Initiative." The Regular Education Initiative emphasized collective accountability between general and special education for students with mild disabilities (Will, 1986). A proposition was drafted in 1987 to award preservice training of general and special educators on a cooperative basis. Ten institutions of higher education were awarded funding for this priority in 1988 (Kleinhammer-Tramill & Fiore, 2003).

The reauthorization of the IDEA in 1990 included nineteen priorities for personnel preparation and by 1994 this number increased to twenty-one (Kleinhammer-Tramill & Fiore, 2003). Finally, in 1997 these were consolidated into the following four priorities: (a) preparation of special education, related services, and early intervention personnel to serve infants, toddlers, children, and youth with low-incidence disabilities, (b) preparation of leadership personnel, (c) preparation of personnel to serve infants, toddlers, children, and youth with high-incidence disabilities, and (d) preparation of personnel in minority institutions (Kleinhammer-Tramill & Fiore, 2003). To encourage quality personnel to enter and remain in the field of special education for which they were trained, the 1997 reauthorization of IDEA required participants who receive funds through a federal grant to fulfill a two-year service obligation for each academic year of

scholarship support, or repay the government for the assistance they received (Kleinhammer-Tramill & Fiore, 2003).

Although the federal support for the preparation of general education teachers was not without its weakness, the support was persistent through the years. Kleinhammer-Tramill (2003) explained that this sustained interest suggested the perception that preparation of regular educators was key to achieving the philosophical aims of inclusion since regular educators were the primary providers for many students with disabilities. To understand how general educators could be considered a primary provider, one can turn to the *26th Annual Report to Congress on Implementation of the Individuals with Disabilities Education Act* (U.S. Department of Education, 2006) which reported that 48.2% of students with disabilities spend at least 80% or more of the school day in general education classrooms.

For over two decades the importance of properly trained personnel has been supported in the literature. In 1976, Saettler wrote, "Many elements are fundamental to the realization of national goals in education of the handicapped, but none is more important than the availability of school personnel in sufficient numbers and with appropriate competencies" (p. 147). Having reviewed the literature and legislation delineating the importance of properly trained personnel in early childhood general education and special education the next section provides the history and philosophies of these two fields.

Early Childhood Teacher Education

For the purpose of this paper, Early Childhood Teacher Education is a broad phrase that encompasses two individual fields: general ECE and ECSE. This section will provide an overview of the theoretical, historical, and philosophical foundations of ECE and ECSE. Subsequently, the differences and commonalities of the two fields will be described.

Theoretical Foundations

Although general ECE and ECSE serve children of the same age ranges (birth through age eight) these fields have dissimilar approaches to teaching. The variance within teaching techniques can be traced back to the theoretical origins of each field: *constructivism* and *behaviorism*. In general early childhood education, teaching is accomplished by responding to children's interests and perceived developmental needs, allowing them to construct knowledge, and providing learning opportunities that may support their movement to the next developmental stage (Branscombe, Castle, Dorsey, Surbeck, & Taylor, 2003). "Constructivist teachers recognize that when children are engaged in authentic tasks in which they are spontaneously interested, they will construct the knowledge necessary to meet the teachers' objectives" (p. 109).

In contrast, teaching children with disabilities is driven by behaviorism. Individualized Family Service Plans (IFSP) and Individualized Education Plans are focused on observable, measurable, and repeatable aspects of human behavior. Behaviorism focuses on changes in behavior that result from stimulus-response associations made by the learner (Strandridge, 2002). Techniques used to teach desirable

behavior include the use of contracts, consequences, positive/negative reinforcement, and behavior modification. All of these techniques are derived from behaviorist theory (Standridge, 2002).

Historical and Philosophical Foundations

Early childhood education (ECE). The field of ECE is now well respected as a legitimate contributor to a child's education, but that has not always been the circumstance. For instance, the term *preschool* was adopted because many believed that school did not begin until first grade. Many believed that ECE was playtime and ECE teachers were simply babysitting (Davis, Kilgo & Gamel-McCormick, 1998). Fortunately, in the early 1960s the view of early childhood education began to change. Davis, Kilgo, and Gamel-McCormick (1998) explain that one key event that sparked this change was in the late 1950s when many perceived the Union of Soviet Socialist Republics (USSR) to have a better-quality education system as the result of Sputnik. Sputnik was the world's first satellite to orbit the Earth. This accomplishment by USSR shocked America and provoked the establishment of National Aeronautics and Space Act. Sputnik also prompted revisions to the quality of education in the United States by implementing curriculum revisions requiring children to do more advanced work at younger ages.

These curricular revisions spurred a movement that caused early childhood education to become more formal and academic, similar to education for older children. To address this problem the NAEYC released a document called *Developmentally Appropriate Practice in Childhood Programs Serving Children from Birth Through Age Eight, Extended Edition* (Bredekamp, 1987). Programs that were interested in seeking

accreditation by NAEYC's National Academy of Early Childhood Programs also used the principles of practice outlined in this document as a guide to assess their individual programs. The need for this document was evident as many practicing early education personnel held widely different views on what were appropriate activities for children (Bredekamp, 1993).

In 1993, Bredekamp explained that the principles underlying developmentally appropriate practice is that "learning environments, teaching practices, and other program components should be planned on what is generally to be expected of children of various ages and stages, but adaptations should be made for the wide range of differences between individual children" (p. 3). The definition of *developmentally appropriate* established by the NAEYC in 1987 consisted of two major components: *age appropriate* and *individual appropriate*. They are defined as follows (Bredekamp, 1987):

> *Age Appropriateness:* Knowledge of the typical development of children within the age span served by the program provides a framework from which teachers prepare the learning environment and plan appropriate experiences.
>
> *Individual Appropriateness*: Each child is a unique person with an individual pattern and timing of growth as well as an individual personality, learning style and family background. The program should be responsive to these individual differences. (p.2)

Developmentally appropriate practice provides teachers with a scaffold that helps them make knowledgeable decisions. Davis, Kilgo, and Gamel-McCormick (1998) explained that the "definition of developmentally appropriate programs are those that

reflect children's natural learning abilities and interests, and assist them in growing socially, emotionally, physically, and intellectually" (p. 24).

In 1997, Bredekamp and Copple added *culture sensitivity* as a third component to the description of developmentally appropriate practices. In this revised version, developmentally appropriate practice results from the process of professionals making informed decisions based on the following three components:

1. age appropriateness: what is known about child development and learning-knowledge of age related human characteristics that permits general predictions within an age range about what activities, materials, interactions, or experiences will be safe, healthy, interesting, achievable, and also challenging to children;
2. individual appropriateness: what is known about the strengths, interests, and needs of each individual child in the group to be able to adapt for and be responsive to inevitable individual variation; and
3. culture sensitivity: knowledge of the social and cultural contexts in which children live to ensure that learning experiences are meaningful, relevant, and respectful for the participating children and their families. (p. 9)

ECSE and early intervention. In the field of special education, early childhood intervention refers to services provided to children with disabilities that are under the age of eight (Bruder, 2002). In IDEA, the term *early intervention* refers to services provided to children with disabilities under age 3. The term ECSE refers to children ages birth through age 8. Thus for the purposes of this paper both ECSE and ECE refer to age ranges birth through age 8. ECSE has a shorter history compared to ECE. Early

childhood special education has its strongest origins with the Handicapped Children's Early Education Act of 1968, but it was not until 1986 with the passage of P.L. 99-457 that preschool services were mandated and funds were provided for services to infants and toddlers.

The Division for Early Childhood (DEC) of the Council for Exceptional Children is the primary professional organization related to ECSE. DEC was established in 1973 and continues to provide professional leadership in ECSE. In the early 1990s DEC began to identify evidenced-based practices that contributed to positive changes in (a) child development and learning and (b) family functioning. Research published in peer-reviewed professional journals from 1990 through 1998 was used to identify evidenced-based practices. The literature review as well as input from parents, practitioners, and administrators provided material for a synthesis of recommended practices. In 1993, *DEC Recommended Practices in Early Intervention/ECSE* was published followed by a revision seven years later (Sandall, McLean, & Smith, 2000). These handbooks offer the field of ECSE recommended practice for the areas of assessment, child-focused intervention, family-based practice, teaming, technology, policies, procedures, systems change, and personnel preparation.

Compatibility Between ECE and ECSE

There has been much discussion in the literature regarding the relationship between these two fields (e.g., Carta, Schwartz, Atwater, & McConnell, 1991; Davis, Kilgo, & Gamel-McCormick, 1998; Johnson & Johnson, 1992; McLean & Odom, 1993; Bredekamp, 1993). The consensus from the literature appears to be that there are many benefits to applying developmentally appropriate practice standards into ECSE and to

applying DEC's recommended practices into ECE, but that each field places an emphasis on different issues. Many authors (Bredekamp, 1993; Carta, Atwater, Schwartz, & McConnel, 1993; Johnson & Johnson, 1993) recognize the common ground that does exist between the two fields and the importance of working together towards providing high quality programs.

Although many professionals suggest collaboration there are special educators who believe the developmentally appropriate practice guidelines are necessary, but are not sufficient for ECSE programs (Carta, Atwater, Schwartz, & McConnell, 1991; Wolery, Strain, & Bailey, 1992). Carta and colleagues (1991) published an article titled *Developmentally Appropriate Practice: Appraising its Usefulness for Young Children with Disabilities*. This article sparked a discussion with Johnson and Johnson (1992) who responded with an article titled, *Clarifying the Developmental Perspective in Response to Carta, Schwartz, Atwater, and McConnell.* Carta and colleagues are from the ECSE field, whereas Johnson and Johnson work in the field of general ECE. These articles offer a rich illustration that depicts various components of conflict and harmony between the two fields. The following is a summary of these authors' discussion regarding the practice of developmentally appropriate practices in ECE and ECSE.

Carta and colleagues (1991) contend that the main difference between developmentally appropriate practice and ECSE is that the developmentally appropriate practice guidelines are careful not to falsely quicken the growth of children, whereas the specific goal of ECSE is to create results that would not occur without intervention. These authors discuss seven areas that differ between the two fields: (a) curriculum and adult intervention, (b) individualization, (c) assessment, (d) instructional methods, (e)

free choice of activities, (f) family involvement, and (g) accountability. The following section provides an overview of the authors' dialogue about each of these topics. Embedded in the presentation of these seven areas are Johnson and Johnson's (1992) response to Carta et al.'s contention, where appropriate.

Curriculum and adult intervention. Carta et al. (1991) noted that the developmentally appropriate guidelines call for a nondirective curriculum based on children's developmental level. These authors further suggested that children with disabilities may not have the skills to learn through this environment and adult intervention may be required for learning to occur. Johnson and Johnson (1992) responded to Carta et al. by clarifying that developmentally appropriate practices are neither teacher centered nor learner centered, rather child sensitive and interaction centered. Developmentally appropriate practices are grounded on the belief that knowledge is built during the process of children interacting among objects, peers, and teachers. Johnson and Johnson claimed that the adult role is much more active than Carta et al. acknowledge in their article.

Individualization. Carta et al. (1991) suggested that the practice of individualization through developmentally appropriate practice is not as meticulous as it is in ECSE. For instance, when developing teaching plans for a child with a disability in ECSE the intervention consists of goals and objectives that are based on a careful assessment of the child's present level of performance and on skills required for future environments. In response to this comment, Johnson and Johnson (1992) explained that developmentally appropriate practice is authentically individualized because there is a willingness to change the task to fit the specific situation as well as the learner's needs

and level of interest. Johnson and Johnson argued "…in the field of ECSE, individualized developmental assessment or developmental instruction is often not authentically individualized and thus becomes developmentally inappropriate" (Critique of Carta, ¶ 7). An example of inappropriate practice provided by Johnson and Johnson is whenever mastery to criterion is insisted.

Assessment. Both developmentally appropriate practice and ECSE have a standard that assessments must come from many sources, across agents and teachers. However, a difference that Carta and colleagues (1991) noted is that developmentally appropriate practice does not stress continuous monitoring of children within a curriculum. With this lack of monitoring it is difficult to measure whether the child is in the appropriate placement.

Instructional methods. Carta et al. (1991) described that instruction for children with special needs should be "effective, efficient, functional, and normalized" and these authors contend that the developmentally appropriate practice guidelines focus mainly on normalization. Carta et al. were concerned that the focus on normalization would place limitations on teaching children with disabilities. Johnson and Johnson (1992) argued that it is unfair to infer that the developmentally appropriate practice guidelines focus so much on normalization that the other criteria for instruction are ignored. A balanced approach is what is sought after and what is best. These authors continued to argue that ECSE focused too much on *vertical learning*, learning for the distant future, and not enough on *horizontal learning*, expansion and enrichment ensuing from the child's making connection and learning concepts from his or her experiences.

Free choice of activities. Both developmentally appropriate practice and ECSE support the importance of high levels of active engagement. The difference, however, is the developmentally appropriate practice guidelines imply that this high level of engagement will result from children having free choice in their activities (Carta et. al, 1991). Again, children with disabilities may not have the prerequisite skills (e.g., initiation) to participate in a high level of engagement. However, Johnson and Johnson (1992) described teachers who were using developmentally appropriate practices that involved themselves in guided self-discovery instruction and inquiry-based teaching. Johnson and Johnson stated that Carta et al. (1991) were mistaken when they claimed that developmentally appropriate practice guidelines emphasized exploratory play and examples of model preschool curriculum were provided that contained open-framework learning and academic instruction. Teachers following developmentally appropriate practice guidelines read cues from the child in a task and seek the optimal degree of structure and direction that is necessary, thus becoming as directive as needed under specific circumstances (Johnson & Johnson, 1992).

Family involvement. ECSE places more emphasis on family involvement than the developmentally appropriate practice guidelines suggest. Developmentally appropriate practice guidelines acknowledge the importance of consistent communication between home and school, but they do not acknowledge the family's needs as a focus of service as is done in ECSE programs.

Accountability. Carta et al. (1991) named the last issue, accountability, as the area of greatest discrepancy between ECSE and developmentally appropriate practice. Programs serving children with disabilities must demonstrate individual progress toward

stated goals and objectives, whereas the children who are developing normally do not need much more than a safe, carefully planned environment that encourages the types of interactions and responses that will prepare them for their future educational setting. These standards reflect two very different philosophical differences. The developmentally appropriate practice guidelines were developed from a Piagetian constructivist theory whereas ECSE practice more from a behaviorist theory where children need direct intervention. Johnson and Johnson (1992) explained that developmentally appropriate practice is based on constructivism which assumes that "…knowledge is built during the process of the person interacting with the object. Knowledge is not discovered by the child as it is transmitted from the teacher or the lesson as it unfolds" (Critique of Carta, ¶ 2). Johnson and Johnson contended that when programs are governed by behaviorism as opposed to constructivism horizontal learning is replaced by vertical learning.

Summary of discussion between the authors. Johnson and Johnson (1992) attempted to clarify the purpose and meaning of developmentally appropriate practices. They explained that developmentally appropriate practice is a major determinant of a quality program, but it is not the only indicator and that developmentally appropriate practice is a working, living document. The goal of the developmentally appropriate practice guidelines was to reflect scholarly knowledge of best practices passed on from one generation to another. The developmentally appropriate practice guidelines, therefore, are not a full-proof case, but rather a working hypothesis.

Carta, Atwater, Schwartz, and McConnell (1993) reacted to the response from Johnson and Johnson (1992) in a publication titled, *Developmentally appropriate practice: Appraising its usefulness for young children with disabilities*, by asserting that

they still believed the "developmentally appropriate practice guidelines are necessary, but are not sufficient" (p. 250). Carta and colleagues (1993) discussed the many similarities within the two fields: (a) importance of individualization, (b) de-emphasis of standardized assessment, (c) integration of curriculum and assessment, (d) importance of child-initiated activities, (e) importance of active engagement, (f) emphasis on social interaction, and (g) importance of cultural diversity. In sum, these authors contended that the time had come for professionals in both fields to work together. Johnson and Johnson (1993) offered a final rejoinder to Carta et al. (1993) and communicated that it is a difficult process to collaborate between the two fields, because neither side wants to abandon core features. Johnson and Johnson, however, stated the importance of transcending territory problems so that collaboration could be advanced. Johnson and Johnson communicated excitement when considering the mission of working together and learning from each other.

Bredekamp (1993), author of *Developmentally Appropriate Practice in Early Childhood Programs,* contributed to this discussion of the compatibility between ECE and ECSE. Bredekamp acknowledged that there are six elements of recommended practices in ECSE that could be better integrated into ECE, which would enhance the collaboration between the two fields. The six elements included (a) individually appropriate practice, (b) early intervention, (c) family-centered services, (d) advocacy, (e) transition, and (f) interdisciplinary approaches. Each is addressed briefly below.

The central focus of ECSE is *individualization* of services and programs for young children and their families and is in fact required by law to systematically plan for the individual needs of each child. Bredekamp (1993) explained that ECE also strongly

valued the individual child, but did not have a sophisticated method for insuring that the individual child's needs were achieved. In regards to *early intervention*, ECE rarely prepares teachers for infants and toddlers as ECSE does. In ECSE the term early begins at birth, whereas in ECE training typically begins at three even though teacher certification may extend down to birth. *Family-centered focus* is the third area that differs between the two fields. This is an area, however, that both ECE and ECSE agree upon in principal but differ in intensity of focus. In ECSE family input and participation in services are a part of a legal mandate, where in ECE family-centered services are a best practice.

Advocacy levels differ between the two fields where early childhood special educators are successful advocates in obtaining improved services for their clients and early childhood educators are often not as successful (Bredekamp, 1993). Advocacy is an area that ECE professionals could learn from ECSE. A fifth area that differs between the two fields is *transition*. In ECE the belief is that the transition should be smooth if the environment is developmentally appropriate and the child will adapt, whereas in ECSE the emphasis is on adapting the environment for the child. Bredekamp (1993) noted that *interdisciplinary approaches* are the final area that could be strengthened in ECE. This collaboration is a strength for ECSE based on necessity because children with disabilities often require intervention from multiple professionals, thus requiring coordination.

Both general and special early childhood educators play an important role in the quality of education for all children. The fields have been participating in a dialogue and in collaborative efforts in order to optimize the education experience for children. Table 2 is a summary of the commonalities and differences between general ECE and ECSE.

Table 2

Commonalities and Differences of ECE and ECSE

Topic	ECE	ECSE
Learning Theory	Constructivism	Behaviorism
Curriculum	Nondirective	Directive
Adult Intervention	Facilitator	Prominent, directive role
Individualization	Not specific	Meticulous
Assessment	Must come from many sources, across agents and teachers	Must come from many sources, across agents and teachers
Instructional Method	Balanced Approach	Effective, efficient, functional, normalized
Free Choice of Activities	Open-framework for learning with optimal degree of structure	Active engagement in child directed play with guiding adult intervention
Family Involvement	Important	Intense focus of service
Accountability	Children should be able to participate in next environment	Progress toward stated goals and objectives
Early Intervention	Begins at three	Begins at birth
Advocacy	Novice advocates for families	Experienced advocates for families
Transition	Child will adapt if the environment is developmentally appropriate	Adapting the environment to meet the needs of the child
Interdisciplinary Approaches	Recognize the need for professionals to be competent and skilled	Multiple disciplines involved in evaluation, planning interventions, monitoring progress, and adjusting program.

Methods for Pre-Service Inclusion Training

When reviewing the literature regarding preservice training for teachers instructing in an inclusion classroom, Strawderman and Lindsey (1995) identified three leading movements for addressing special education competencies in general education programs. Those trends included (a) including cross-disciplinary activities into existing programs, (b) restructuring the organizational system, and (c) restructuring course work and/or course requirements for certification. Discussed in this section is the literature pertaining to institutions of higher education implementing separate programs that include cross-disciplinary activities and institutions of higher education implementing unified programs that have restructured their organization system and course work.

Separate Programs

As mentioned previously, a prevalent method of training early childhood educators and early childhood special educators is to offer separate programs (Heston, Raschke, Kliewer, Fitzgerald, & Edmiaston, 1998). Recent research examined the reasons why program developers at colleges and universities believed that their ECE and ECSE programs should be separate (Dunne, 2002). The two most significant reasons for independent programs were separate state certification and philosophical and theoretical reasons. Dunne (2002) further analyzed the philosophical and theoretical reason and discovered that participants believed students need to obtain specialized training to teach children with special needs, and that this training cannot be taught effectively in a unified program.

Separate ECSE. The Center to Inform Personnel Preparation Policy and Practice in Early Intervention and Preschool Education provides detailed information to gain a

better understanding of separate ECSE teacher training programs (Bruder & Stayton, 2004). As a federally funded grant, the Center is based primarily out of the University of Connecticut and it purpose is to "collect, synthesize and analyze information related to: (a) certification and licensure requirements for personnel working with infants, toddlers, and preschoolers who have special needs and their families, (b) the quality of training programs that prepare these professionals, and (c) the supply and demand of professionals representing all disciplines who provide both ECSE and EI services" (Center's home page retrieved August, 2006).

To investigate how institutions prepare individuals to enter all disciplines required under IDEA the center used a survey titled The *Higher Education Survey for Early Intervention and Early Childhood Special Education Personnel Preparation.* This survey contained questions covering a large number of characteristics of higher education programs in disciplines required under IDEA. For the purpose of this paper, only data related to ECSE programs will be included.

One of the goals of this survey was to gain a better understanding of the relationship between licensure and higher education programming. Surveyed were department chairperson and program coordinators of higher education. Among the 1,082 participants that responded to the question inquiring whether their programs led to licensure or certification related specifically to EI/ECSE, 38.6% provided an affirmative response. A pattern that developed is that graduate programs (Masters: 54.5%, Doctorate: 46.2%) were more likely than undergraduate (27.5%) programs to offer an ECSE licenses or certificate (Bruder & Stayton, 2004).

Participants were asked how programs delivered instruction about the principles of IDEA and ECSE. Class lecture was the primary instructional strategy with child development being the most common topic addressed in lecture. The zero-rejection policy and assistive technology were the least addressed issues. Field experience was reported as the most frequent method for addressing content related to child-focused interventions, child development, and cultural sensitivity. The method of instruction used the least was independent research. Other types of instructions indicated by the participants included readings, summer institutes, television, videotaped interventions, and online courses.

Separate ECE. A national survey of early childhood teacher preparation programs in institutions of higher education identified almost one-third of all institutions of higher education as having an early childhood teacher preparation program (Early & Winton, 2001). Most of these ECE programs offer an associates degree and only 40% offer a bachelor's degree (Early & Winton, 2001). This finding is in sharp contrast to ECSE programs that mostly require a graduate program for certification (Bruder & Stayton, 2004). Among these ECE bachelor's degree programs, 80% include a mission statement addressing children with disabilities, but only 60% require a course on working with children with disabilities.

Most states are requiring separate general ECE programs to include at least one special education course. Shade and Stewart (2001) investigated the impact of a single special education course. Specifically, these authors analyzed the attitudes of general education (n = 122) and special education (n = 72) preservice teachers toward inclusion before and after they completed an introductory course in special education. The

participants were administered a 48-item inclusion inventory on the first day of class and upon completion of the course. Findings indicated that attitudes of both general and special education preservice teachers were positively changed. Of the eight subscales on the inventory, five showed significance (behavior, self-concept, other students, teacher, and parents).

Fender and Fieldler (1990) employed a national survey of teacher training programs (n = 172) to gather information regarding the content taught in introductory special education courses. At least one institution of higher education was identified from each of the 50 states and findings revealed that the greatest content emphasis was placed on the characteristics of disabilities. Survey results indicated minimal focus on skills needed to accommodate children with disabilities in the general classroom such as curricular and instructional modifications, behavior management, collaborative consultation, assessment, and data collection. These findings demonstrated that teacher preparation programs are not fully preparing preservice teachers to meet the needs of the children with disabilities in the general classroom.

Reed and Monda-Amaya (1995) also studied the characteristics that described the required special education courses in which the general education undergraduates were enrolled. Sixty-seven percent of these classes could be characterized as a survey-like course where an emphasis is placed on characteristics of students with disabilities instead of focusing on collaboration and methodology instruction for teaching students with exceptionalities. Also analyzed were the perceived importance of skills and competencies and to what extent the course addressed these important components. Instructors consistently ranked each skill higher in perceived importance than in actual

implementation, noting that time was the limiting factor. Of the professors surveyed, 84% agreed that more than one course should be required to address the topic of inclusion.

Unified Programs

The unification of ECSE and ECE programs at institutions of higher education are interchangeably referred to as blended programs, interdisciplinary programs, and unified programs (V. Stayton, personal communication, March, 2003). Data published by the National Early Childhood Technical Assistance Center (NECTAC) reports that a total of 20 states either offer a *single certificate* for ECE and ECSE or are planning to add such a certificate in the near future (Danaher, Kraus, Armijo, & Hipps, 2005). Project Forum, a division of the National Association of State Directors of Special Education, completed a follow-up study in collaboration with NECTAC by surveying the 20 states identifying themselves as having a single certificate or are considering adding a single certificate (Müller, 2006). These twenty states included AR, CT, FL, ID, IA, KS, KY, LA, MA, ME, ND, NE, NY, OK, PA, SC, SD, WA, WI, and WV (Danaher, et. al). For the purposes of Project Forum's study, the definition of single certificate is "Early childhood special education teachers and early childhood teachers must complete a single (common) certification preparing them to work with children both with and without disabilities. Preparation of this certification does include coursework specific to children with disabilities" (p. 2). Of the 17 states that responded to the survey, 13 states confirmed they did offer some type of single certificate. The single certificates across the states vary in the requirements and ages they cover. Table 3 describes the single certificates in these states (Müller, 2006).

Table 3

Description of Single Certificates

State	Single certificate is the only option for teachers of young children.	Requires coursework specific to children with disabilities	Age range covered by single certificate
Connecticut	Yes	Yes	Birth – 4 yrs. Or 3 yrs. – 8 yrs.
Florida	No	Yes	Birth – 4 yrs. Or 3 yrs. – 8 yrs.
Idaho	Yes	Yes	Birth – 8 yrs.
Kansas	Yes	Yes	Birth – 8 yrs.
Kentucky	Yes	Yes	Birth – 5 yrs.
Massachusetts	Yes	Yes	3 yrs. – 8 yrs.
Nebraska	No	Yes	Birth – 8 yrs.
Wisconsin	Yes	Yes	Not reported
Louisiana	No	Not necessarily	Not reported
Pennsylvania	No	Not necessarily	Not reported
West Virginia	No	Not necessarily	Not reported
New York	No	Yes	Not reported
Arizona	No	Yes	Not reported

Project Forum interviewed seven of the states (Idaho, Kansas, Nebraska, Connecticut, Florida, Kentucky, and Massachusetts) reporting that they offer a single "unified" certificate (Müller, 2006). When asked about personnel preparation, all seven of the states reported that there is at least one institution of higher education in their state designed to train students to meet the requirements of the unified certificate. Most states reported that the state education agency was responsible for approving and reviewing the personnel preparation programs to ensure that coursework is properly linked with the

competencies specified in the state's certification regulations (Müller, 2006). In regards to program components, the interviewee's reported that disability-specific coursework and early childhood development coursework is required. Coursework areas that were frequently mentioned by interviewee's included diagnosis, assessment and evaluation, curriculum development and implementation, and collaboration. All seven states require practicum experience with children having disabilities.

Miller and Stayton (2006) caution the field of early childhood regarding teacher licenses that combine ECE and ECSE because interdisciplinary teacher preparation for inclusion has been recommended, but not all teacher preparation programs are truly interdisciplinary (2006). The types of licensing patterns across states are typically categorized as (a) dual licenses in both ECE and ECSE, (b) one stand-alone license for all early childhood teachers that blends ECE and ECSE competencies, or (c) endorsements in which a license in either ECE or ECSE can be added to an existing certification (Miller & Stayton, 2006).

By referencing literature, telephone conversations with faculty members, and consulting with NECTAC staff members, Miller and Stayton (2006) identified 55 nominee programs that met their specific definition of interdisciplinary programs. Miller and Stayton (2006) define unified programs as one that is (a) designed distinctively for the degree program; (b) derived from professional unification of philosophy and knowledge from ECE and ECSE; (c) designed around a newly conceptualized curriculum; and (d) developed, implemented, and evaluated by an interdisciplinary team of faculty from related disciplines. This definition is consistent with the NAEYC and the Council for Exceptional Children (CEC) definition for accreditation (Miller & Stayton,

2006; Hyson, 2003). The National Association for the Accreditation of Teacher Education's approval of the new blended ECE and ECSE program requires personnel standards from three professional organizations to be included in the curriculum. These organizations are the Council for Exceptional Children Common Core standards, DEC personnel standards, and every NAEYC standard (Miller & Losardo, 2002; Hyson, 2003).

In an effort to identify a national sample of programs that met the specific definition of interdisciplinary programs, Miller and Stayton (2006) used three sources. These authors used their participant list from their 1998 survey, telephone contacts with faculty of teacher preparatory programs, and consultation with national technical assistance staff members to identify 55 nominee programs and faculty contacts. Miller and Stayton (2006) mailed a survey and demographic form delineating their definition of unified programs to a faculty member at the 55 programs. Each recipient was asked to first complete items on the demographic page and if their program met the definition of unified programs provided, they were to complete the full survey. After two mailings, 33 teacher preparation programs returned the survey. Of the 33 surveys, 9 were removed because the respondent reported the program did not meet all aspects of the definition provided. The 24 programs participating in Miller and Stayton's study are from the following 12 states: Alabama, Connecticut, Florida, Idaho, Iowa, Kentucky, Massachusetts, Nebraska, North Carolina, Ohio, Virginia, and Wisconsin.

When describing the rationale for developing a unified program, through a national study of interdisciplinary teacher preparation programs that blended personnel standards, Miller and Stayton (1998, 2006) discovered three themes that describe the

rationale for developing such programs: beliefs and values or philosophical reasons, state licensure requirements, and research and best practice. A philosophical issue motivating unification is the belief that institutions of higher education should model collaboration and be representative of what inclusion will be like when students enter their teaching career (Miller & Stayton, 1998). According to the philosophical rationale, inclusion practices should start in the institutes of higher education (Coombs-Richardson & Mead, 2001; Miller, 1992). Research supports the belief that for general and special educators to work collaboratively, professional training programs must be merged (Stayton & McCollum, 2002). Another motivation for the unification of ECSE and ECE is the basic theory of supply and demand. Unified training programs are becoming crucial as demands for services in the general education classroom grow more rapidly than prepared personnel (Burton & Hains, 1992). Without unified preservice training programs, the preparation of teachers to serve children with disabilities in the general education classroom has been described as sporadic and haphazard (Heston, Raschke, Kliewer, Fitzgerald, & Edmiaston, 1998). Heston and colleagues (1998) also listed factors influencing institutions of higher education towards unification: (a) legal mandates regarding the continuum of services for children with disabilities, (b) best practices regarding inclusion, (c) facilitation of child development, (d) recommendations for personnel preparation from professional organizations, and (e) the need for trained personnel.

Stayton, Whittaker, Jones, and Kersting (2001) provided specific recommendations for institutions of higher education interested in developing an interdisciplinary or unified program. These recommendations included:

1. Develop a program philosophy statement that serves as the foundation for both students and faculty.
2. Base program content and processes on recommended practices in the field, the needs of the immediate community, and the needs of students.
3. Ensure that faculty across the disciplines represented are actively involved in planning, implementation, and evaluation of the program.
4. Develop a flexible, comprehensive program evaluation plan to ensure that program competencies are being met and that students are prepared for the roles needed in community programs.
5. Integrate content and processes throughout the program that model and allow for practice in family-centered, collaborative services. (p. 400)

Supporters of unification recognize that there are sets of special skills required to work with children having special needs, however, it is recognized that the fields of ECE and ECSE encompass more commonality than differences (Stayton & Miller, 1993). Sexton, Snyder, Lobman, and Daly (2002) supported this claim of commonality through their study that examined the beliefs of 74 general early childhood and 39 special early childhood service providers to inquire if there were noteworthy developmentally appropriate practice belief differences between personnel using the Teacher Beliefs Scale (TBS).

The TBS is a 36-item survey based on developmentally appropriate practice and designed to assess practitioners' beliefs about the importance of developmentally appropriate practice indicators. The results of this study revealed no statistically significant differences between general educators and special educators. Every participant

rated all developmentally appropriate practice statements between fairly and extremely important. Although this study was not able to assess whether reported developmentally appropriate practice beliefs are related to practice, these data do support the finding of commonalities between the two fields. In discussing their findings about the perceived importance of developmentally appropriate practice beliefs across both fields, Sexton et al. stated that careful consideration should be given towards moving collective thinking away from dichotomist thinking. Professional progress towards unification has the capability to enhance the delivery of services to all young children by joining "forces" to create solutions to the dilemmas that both ECE and ECSE experience (Burton & Hains, 1992).

Barriers of unified personnel preparation programs. This literature review suggests that there are a number of barriers experienced by universities who combine ECE and ECSE standards (Heston, et. al, 1998; Miller & Stayton, 1998, 2006; Raschke, Maude, Brotherson, & Milburn, 2001; Stayton & Miller, 1993). Stayton and Miller (1993) explained that barriers are encountered within the administration, curriculum, students, and faculty of the institutions. Barriers to unification within administration are territory issues, such as, where the program will be housed. An issue in curriculum is making sure that course-specific competencies are being adequately addressed. The barrier of unification that portrays itself in students is that program graduates need to be realistic about their own levels of expertise. Most unified programs will train teachers who are prepared to teach children with mild and moderate disabilities and children without disabilities (Stayton & Miller, 1993). Graduates, therefore, must be able to recognize when assistance from other professionals is needed and have knowledge about

how to access these related service professionals and work with them effectively. In regards to faculty, some institutions do not have enough qualified instructors for the unification process to be successful (Stayton & Miller, 1993).

Raschke, Maude, Brotherson, and Milburn (2001) conducted a faculty (n = 49) survey of 25 institutions of higher education to assess their knowledge and perceptions of skills to teach the mandated competencies for a newly created unified preservice training program. The survey contained 26 mandated state competencies with a Likert rating scale ranging from "No Knowledge or Experience" to "Master Level". Results indicated that most faculty members rated themselves low to moderate level of ability on 62% of the standards and 39% of the standards were rated at a moderate to high level of ability (Raschke, et al., 2001). These results support Stayton and Miller's (1993) identification of the faculty's level of knowledge being a barrier to the success of unification.

Heston and colleagues (1998) experienced similar barriers to unification as they transformed their ECE major and the ECSE major into a single unified major. These authors reported barriers related to collaboration and faculty perception. The barrier related to interdisciplinary collaboration was that the program was viewed as extraordinary and was considered a threat to departmental integrity. Regarding faculty perception of inclusion, Heston et al. (1998) explained that in order to accomplish unification an abundance of time and energy was placed into educating the faculty about inclusion through a literature review and visits to model inclusion classrooms. The authors described the importance of creating an atmosphere of open discussion and the development of a shared knowledge base in order to obtain effective communication.

A third barrier noted by Heston et al. (1998) was the abundance of courses taught by adjunct instructors. Efforts to prepare all teacher educators to work effectively within the unified program needed to be initiated. Adequate field experience sites served as an additional barrier to unification. To address this dilemma, these authors noted the importance of developing strategies for enhancing the knowledge and skills of practicing teachers to employ best practices within their general education inclusion classroom in order to have an effective model for their preservice teachers. Lastly, Heston and colleagues addressed the barrier of combining general educators who come from a constructivist orientation with special educators who come from a behaviorist orientation. A compromise amongst the faculty was reached by agreeing that what is appropriate for the individual child will be what is developmentally appropriate for that child. This compromise addresses the importance of both developmentally appropriate practice *and* individually appropriate practice.

Benefits of unified personnel preparation programs. Stayton and Miller (1993) explained that benefits of unified programs are found within the administration, curriculum, faculty, society, and students of the institutions. The major benefit for administration is the maximal use of resources across departments. Faculty being able to model interdisciplinary practices can find curricular benefits. Faculties participating in unified programs have improved communication, increased collaboration and scholarly activities. Stayton and Miller explained that society benefits from unified preservice training programs through the reduction of referrals to special education because teachers are more prepared to individualize services in the general education curriculum. Finally,

students benefit from unified programs by being able to foster attitudes and assumptions regarding expectations for full inclusion.

A closer look at unified programs. Blanton, Griffin, Winn, and Pugach (1997) identified ten newly developed collaborative programs to prepare general and special educators in their book titled, *Teacher Education in Transition*. Using these case studies, the authors identified common elements of unified special and general education programs. These common elements included collaboration, communication, supportive leadership, partnerships with public schools, responsiveness to the surrounding community, evaluation of program development, and confronting new ideas about teaching and learning. The programs featured are located at Syracuse University, University of Connecticut, Providence College, University of Florida, University of Alabama, University of Cincinnati, California State University at San Marcos, University of Wisconsin-Milwaukee, Utah State University, and Saginaw Valley State University.

Lombardi and Hunka (2001) offered a rich illustration of a major college (West Virginia University) merging general and special education programs into one unit. West Virginia University developed 10 special education outcomes and 28 competencies that are incorporated into all core courses. Having these outcomes embedded into the core courses ensured that every teacher candidate at West Virginia University would be taught these special education competencies. The 10 special education outcomes are:

1. Acquire knowledge and expertise in the foundation of education of pupils with special education needs.
2. Demonstrate knowledge of how pupils with diverse cognitive, motor, and/or social/behavior needs learn.

3. Demonstrate the ability to use appropriate assessment data to plan and implement instruction to students with special education needs.
4. Demonstrate the ability to plan safe, positive, and supportive environment for students with special education needs.
5. Demonstrate knowledge of principles of instructional effectiveness and the ability to apply these within a variety of models of teaching.
6. Demonstrate the ability to implement individual and group behavior management procedures.
7. Acquire knowledge of the principles related to development of collaborative relationships with colleagues and parents.
8. Acquire knowledge of general management, the roles and utilization of paraprofessionals and volunteers in an instructional program.
9. Cooperatively develop, implement, and evaluate an individualized education program plan, school based assistance plan, and an individualized transition plan.
10. Participate in the development and monitoring of the school's strategic plan for inclusion of gifted and exceptional students into the general classroom.

To measure the effectiveness of their program, the confidence and competencies of students (n = 72) and faculty (n = 11) participating in the first program cycle were surveyed. Findings of the questionnaire revealed that as students advance through the five-year program, they progressively increase their amount of acquired special education learning outcomes and competencies. An important finding revealed that 25 % of the students approaching the fourth year of the program reported a lack of confidence in

teaching students in inclusive settings. The program directors were hopeful that confidence levels would increase once students transitioned from acquiring knowledge to using the knowledge in their fifth year during practicum and internship.

Interdisciplinary faculty teaming is identified as the core element of blended teacher preparation (Mellin & Winton, 2003; Miller & Stayton, 1998, 2006). To identify interdisciplinary teaming practices in teacher training programs Miller and Stayton (2006) developed a questionnaire to investigate 24 unified programs. Twenty of the programs reported being fully coordinated by interdisciplinary teams. The most frequently reported disciplines involved on the teams were ECE (n = 16), ECSE (n = 15), special education (n = 12), and child development (n = 14). The questionnaire asked respondents to rate their team effectiveness by selecting a provided definition. Six of the 20 teams rated themselves as "highly effective and collaborative, with all members genuinely involved" and eight teams rated themselves as "generally effective, with most members engaged…" Results identified a relationship between the frequency of meetings and reported rates of effectiveness. Eight of the 11 programs that reported they met at least once or twice a month also rated themselves as effective or highly effective. The primary functions of the teams included curriculum development and implementation, collaborative planning and program management, and program evaluation.

Comparison of unified and separate programs. Dunne (2002) examined the characteristics of courses, field experiences, and program administration at unified programs (n = 14) and separate programs (n = 13). These data offer a closer look at the difference between these two types of preservice training programs. Data were collected from students (n = 61) and faculty (n = 28) from 27 institutions of higher education

across the country. The survey used was developed to interpret the emphasis programs placed on ECE and/or ECSE. Questions related to ECE were adapted from NAEYC standards and content for ECSE questions were adapted from ECSE courses. After a pilot study of the survey, one form was developed for faculty and another for students.

Regarding course content of separate and unified programs, results indicated that students in unified and ECSE separate programs were taking more courses in child development than students in ECE programs (Dunne, 2002). ECSE curriculum focused more on families compared to ECE separate programs (Dunne, 2002). Students in unified programs were required to take more courses related to collaboration and teaming than students in separate ECE and ECSE programs (Dunne, 2002). The ECSE content within separate ECE training programs was slightly lower than the amount of ECE content. Equal amounts of ECE and ECSE content were provided at ECSE separate and unified programs (Dunne, 2002).

In addition to course content, field experiences were also compared within separate and unified programs. ECSE and unified programs were more likely to require experiences within inclusive settings and the entire ECE faculty reported no requirement for a placement with children having disabilities (Dunne, 2002).

Graduate perspectives. Miller and Losardo (2002) surveyed ninety-one graduates from seven states and the National Association for the Accreditation of Teacher Education's approved blended teacher preparation programs during their first year of employment. The comprehensive survey was developed by members of the state Higher Education Consortium and was based on state licensure competencies. Of the twenty-five items on the competency survey, twelve were rated as above average or better by more

than 85% of the respondents. Some of those competencies included (1) child development, (2) designing and modifying learning environments, (3) experiences with mild disabilities, (4) evaluating children's progress, (5) experiences in inclusive settings, (6) using a variety of teaching methods, (7) working with culturally diverse children and families, and (8) in-depth experiences with young typically developing children. Behavior analysis and classroom management were the areas most respondents marked as weaknesses. In addition to these weaknesses, the participants perceived their preparation for working with families of children with disabilities to be less than adequate and their preparation focused more on working with children who exhibit mild disabilities and with children between the ages of three and five. These graduates did not feel prepared to work with infants and toddlers or with children who have moderate to severe disabilities. This finding is in contrast to the state licensure competencies, which specify that these teachers should be prepared to work with children who have a wide range of abilities in the age range from birth through five.

LaMontagne, Johnson, Kilgo, Stayton, Carr, Bauer, and Carpenter (2002) also conducted a study analyzing graduate perspectives. These authors surveyed 42 graduates from either a unified program, a dual certified program, or separate programs to gather data regarding their perceptions about the knowledge base gained from their program of study. The outcome measure used was a 69-item questionnaire developed from ECE standards and ECSE standards. Included were 7 ECE standards, 34 ECSE standards, and 28 shared standards. ECE graduates scored higher on ECE standards except on creating and modifying environments. In regards to the ECSE standards, ECSE and dual certified graduates scored highest. On the shared standards in general, graduates from unified

programs scored higher. Findings suggested that unified program graduates may have more benefits than other program graduates. For instance, unified graduates had more extensive knowledge related to teaming and collaboration. When measuring competence to work with families, unified graduates felt more competent in comparison to their cohorts. This is in contradiction with the finding from Miller and Losardo (2002) who found working with families to be a weakness of the unification programs. A finding of concern noted by LaMontagne et al. (2002) was that graduates from separate ECE programs might not be receiving the knowledge base to be active participants in the development of individualized programming for children with disabilities. The works of Dunne (2002) support this finding.

Implications for Preservice Training

The method for educating children with disabilities has evolved from segregating these students to including these students into the general education classroom. Since the educational system had communicated for 20 years that separate education was better and special educators were the best equipped to teach children with special needs, general educators have been reluctant to take ownership of this responsibility (Shade & Stewart, 2001). Preservice training needs to address this reluctance by restructuring the training programs (Monahan & Marino, 1996). Monahan and Marino (1996) argued that the practice of inclusion encourages the merger of special education and regular education and that this merger needs to go beyond the reliance on one course in the area of special education. The restructuring needs to occur across the total curriculum in order to address the entire scope of information for future teachers (Monahan & Marino, 1996).

Since the teacher represents the key to quality education for children (Miller, 1992) all teacher candidates should have the opportunity to work in inclusive settings that provide positive learning opportunities to different populations of students (Reed & Monda-Amaya, 1995). Miller (1992) claims that segregation of training programs for adults will not achieve integrated programs for children. Miller further argues that segregation of preservice training programs is "immoral and inefficient" based on philosophical, legal, economic, and empirical evidence.

According to Burton and Hains (1992), if ECE and ECSE were unified there would exist a great potential to improve the delivery of services to young children. A national survey of 438 early childhood preservice training programs revealed that although most program faculty members believed in the importance of including components of special education, the amount of special education coursework and experience included in the programs varied significantly across the country (Chang, Early, & Winton, 2005).

Negative Aspects of Unification

While a body of literature suggests unification of general education and special education to address the training needs of teachers in inclusion classrooms there is also literature reporting the negative attributes of unification. Miller and Losardo (2002) examined the findings of the few existing studies analyzing the content of unified programs. They reported these programs reveal a greater emphasis on general ECE knowledge compared to ECSE knowledge and skills. Additionally, graduates do not receive adequate preparation for working with infants and toddlers or with children having moderate to severe disabilities (Miller & Losardo, 2002). When courses are united

specific skill attainment such as implementation of evaluation instruments and procedures for specific disabilities may be neglected for other content and skills (LaMontagne, et al., 2002). The curriculum of unified programs must be "watered down" and thus unified programs are preparing generalist and not specialist (Stayton & McCollum, 2002). Stayton and McCollum (2002) question whether unified programs primarily prepare generalists who are strong general education teachers capable of including students with disabilities. If this is the case, Stayton and McCollum (2002) suggested that unified programs may need to provide specific training for high incidence disabilities.

Summary of Evidence

This subsection will summarize the studies related to the topic of the unification of ECE and ECSE. When searching for relevant studies a computer-assisted bibliographic search was conducted using Educational Resources Information Center (ERIC), Expanded Academic ASAP (INFOTRAC), OneFile, Academic Search Premier (EBSCO), and Ingenta. Identification of studies was accomplished by using the key words *preservice training, unification, interdisciplinary, special education,* and *inclusion*. Additionally, the reference lists of all sources were examined in order to locate additional sources that may have been missing from the bibliographic search findings. To be included in the synthesis studies must be related to the unification of ECE and ECSE preservice training programs. A total of ten studies were identified and are summarized on Table 4. It is important to note that one publication by LaMontagne et al. (2002) included two studies and these studies are listed individually in the table.

Table 4

Studies Related to the Unification of ECE and ECSE

Author(s) Date	Purpose	Participants N	Outcome Measure(s)	Findings
Dunne (2002)	To examine the characteristics of course content, field experiences, and program administration of unified and separate ECE and ECSE programs	27 undergraduate programs at universities and colleges from 14 states 14 unified programs 13 separate programs At each site data were collected from faculty (n = 28) and students (n = 61)	Surveys and follow-up interviews with 4 of the programs. Different survey forms were developed for each group of participants. Questions were based on a review of literature and related to course content, field experiences, and program administration and organization.	Surveys: *Course content*- Students in unified programs and ECSE students were taking more courses in normal and atypical development. ECSE curriculum related to families more than ECE. Unified programs had more collaboration and teaming courses. *Field Experience*- ECE students were not required to have experience with disabilities. Interviews: *Knowledge related to development*- ECE students were not prepared to work with children having disabilities. ECSE students were required to take an ECE course. Unified individuals report a balance between ECE and ECSE, but reported lacking information related to severe disabilities. *Field Experience*- ECE students lack experience with children having disabilities and ECSE. Unified individuals report adequate experience with typically developing children and children with disabilities. *Preparing for Inclusion*- Participants believed that students could increase their feelings of competence to work with children having disabilities through more exposure to ECSE content and direct field experience.

(table continues)

Table 4 (continued)

Author(s) Date	Purpose	Participants N	Outcome Measure(s)	Findings
LaMontagne et. al (2002) (Study 1)	To gain an understanding of the development and characteristics of unified ECE and ECSE programs	28 university faculty members who were key faculty administrators of unified programs	Semi-structured interviews	The development of a unified program is a process. The primary vision for unified programs was preparing students to work with all children and their families. Collaboration among disciplines and team teaching were key aspects to the success of unified programs. Barriers encountered while developing unified programs include attitudes toward the unified vision, philosophical differences, and time constraints.
LaMontagne et. al (2002) (Study 2)	To gather graduates' perception of unified, dual, or separate early childhood and ECSE preparation programs	42 graduates: 14 from unified programs 9 from dual certificate programs 11 from ECSE programs 8 from ECE programs	69-item questionnaire developed from ECE standards and ECSE standards. Included were 7 ECE standards, 34 ECSE standards, and 28 shared standards.	ECE standards: ECE graduates scored higher except on creating and modifying environments (ECSE and Dual scored higher). ECSE standards: ECSE and Dual graduates received the highest ratings. Shared standards: In general graduates from unified programs scored higher. Unified program graduates had more knowledge related to teaming and collaboration and working with families. ECE program graduates did not receive the competencies necessary to be active participants in the IFSP and IEP process. ECSE and Dual program graduates reported having stronger assessment competencies.

(table continues)

Table 4 (continued)

Author(s) Date	Purpose	Participants N	Outcome Measure(s)	Findings
Lombardi & Hunka (2001)	To monitor the effectiveness of West Virginia University's five-year preservice teacher education program where a series of special education learning outcomes and competencies have been incorporated into the core courses required of all education majors	72 West Virginia University students majoring in elementary or secondary education and 11 faculty members	Six-item student and faculty version of a questionnaire consisting of both closed and open-ended questions	Forty-eight percent of second year students and 25% of students nearing completion of the fourth year report feeling neither competent nor confident to teach children with disabilities in inclusive settings. As students advance into the later years of the program, they progressively increase their amount of acquired learning outcomes. The fifth and final year of program shifts from acquiring competencies to using competencies and became fundamental in providing the level of preparedness. No data on fifth year students were available.
Miller & Losardo (2002)	To gather graduates' perceptions of their preparation in a statewide system of ECE/ECSE interdisciplinary teacher preparation programs	91 graduates of 7 interdisciplinary ECE and ECSE teacher preparation programs	7 page survey with 13 items about current employment, 25 on state competency with regard to strength of program, and 8 essay questions about most/least valuable aspects of program and recommendations for change	Eighty-five percent of graduates reported being well prepared in the areas of child development, designing and modifying curriculum, experiences with mild disabilities and typically developing children, evaluation of child's progress, inclusive settings, variety of teaching methods, and culture diversity. Forty percent of graduates reported being average to poorly prepared in the areas of working with families, developing IFSPs, strategies in applied behavior analysis, and classroom management. Thirty-five percent of graduates reported practicum and internship experiences with children who have moderate to severe disabilities as average to poor.

(table continues)

Table 4 (continued)

Author(s) Date	Purpose	Participants N	Outcome Measure(s)	Findings
				Thirty-two percent of graduates rated having in-depth experiences with young typically developing children from birth to 3 as average to poor and 30% rated designing and implementing intervention strategies and activities for infants and toddlers with disabilities as average to poor.
Miller & Stayton (1998)	To describe characteristics, benefits, barriers, and concerns of blended ECSE and ECE programs	49 faculty members from institutions of higher education with blended programs	Interviews and questionnaire included 10 demographic items, 32 questions regarding program characteristics, and 11 open-ended questions regarding perceptions of benefits, barriers, and issues	Programs were developed due to philosophical reasons, state requirements, and best practices. Characteristics of blended programs include systematic teaming processes and the involvement of separate disciplines. Curriculum was developed using DEC, NAEYC, and state standards. Issues and concerns were related to interpersonal and/or administrative practices.
Miller & Stayton (2006)	To assess the status and development of interdisciplinary teaming practices of unified teacher training programs and compare with findings identified in their 1998 study	24 teacher education programs in 12 states that met a specific definition for the blended approach to teacher preparation	An 11-page questionnaire containing open and closed items with five sections related to: interdisciplinary teaming, curriculum, field experiences, benefits and barriers, and decision making	There are few blended, interdisciplinary teacher preparation programs that meet the definition used for accreditation by NAEYC and CEC. Benefits and barriers to unified programs remain constant from previous research. Teams that meet frequently report being more effective teams. Reported benefits and barriers to interdisciplinary teaming are not related to size or age of program.

(table continues)

Table 4 (continued)

Author(s) Date	Purpose	Participants N	Outcome Measure(s)	Findings
				Administrative structure of higher education is the greatest obstacle to interdisciplinary teaming. Institutional and departmental structure promote a multi-disciplinary approach rather than an interdisciplinary approach. There is a lack of congruence between state licensure patterns for interdisciplinary teacher preparation programs and the reality of the program.
Raschke et al. (2001)	To determine faculty perceptions of their skills and abilities in differing content areas to teach the mandated state competencies for a newly designed unified early childhood preservice training program	25 institutions of higher education in Iowa. 49 deans and/or chair of the education departments participated in the study	Survey containing 26 state mandated competencies from ECE and ECSE standards Four point Likert rating scale with anchors of "No knowledge or experience" and "Master Level"	The current faculty members were rating themselves on 62% of the standards at a low to moderate level of ability while 39% were rated at a moderate to high level of ability. The three standards that were rated the lowest include CPR, emergency procedures, and first aid; appraisal and management of health concerns; and adaptation of materials and equipment for children with diversity (p. 177). The two standards that were rated the highest were engages in reflective inquiry and adheres to professional and ethical codes (p. 177).
Sexton et al. (2002)	To compare the developmentally appropriate practice beliefs of practitioners in general and special early childhood service settings	74 general early childhood service providers 39 special early childhood service providers	Teacher Beliefs Scale: 36 items based on developmentally appropriate practice practices, designed to assess practitioner's beliefs about the importance of developmentally appropriate practice indicators	There was not a statistically significant difference between the two groups. All practitioners rated all developmentally appropriate practice statements between fairly important and extremely important. Minor discrepancies were found in beliefs about employing behavioral approaches, pedagogy, curriculum area integration, and standardized testing.

Analysis of Evidence

Included in this final subsection is an examination of findings that either agree or contrast with other findings. Dunne (2002) and LaMontagne et al. (2002) employed surveys at unified and separate programs and found similar findings regarding the preparedness of general educators. Both studies report evidence suggesting students participating in separate ECE programs are not prepared to teach children with disabilities.

Findings of Miller and Losardo (2002) agreed with Dunne (2002) in regards to students in unified programs being more prepared to work with mild disabilities and lacking exposure to severe disabilities. Of the 91 respondents in Miller and Losardo's (2002) survey, 35 % rated the following competency area "having practicum and internship experiences with children who have moderate to severe disabilities" as average to poor (p. 314). Through interviews with individuals at unified programs, Dunne (2002) gathered statements of concern related to the lack of knowledge specifically related to children with severe disabilities.

Of particular interest is the contrast reported by Miller and Losardo (2002) and Dunne (2002) regarding preparing students to work with families. Miller and Losardo (2002) reported students in unified programs were poorly prepared to work with families, whereas Dunne reported that students in unified programs receive more curriculum related to families than students participating in ECE students. This contrast may be a result of Miller and Losardo only surveying students in unified programs, whereas Dunne surveyed students in both unified and separate programs. These two findings suggested

that although students in unified programs receive more instruction about families compared to general early childhood majors, the amount may not be sufficient.

Miller and Stayton (1998) and LaMontagne, et al. (2002) each used semi-structured interviews to gather information about characteristics, benefits, and barriers of unified programs. Miller and Stayton used a survey in addition to the interviews. Findings from each study report programs were developed through the involvement of separate disciplines. The inclusion of these separate disciplines contributed to the barriers in the development of the program. All studies report philosophical issues and time constraints as a barrier to the development of unified programs.

Miller and Stayton (1998) reported the curriculum for unified programs were developed using DEC, NAEYC, and state standards. Sexton et al. (2002) supported this approach by surveying both general and special education teachers using developmentally appropriate practice standards. Sexton's findings reported no statistically significant difference between the two groups. This finding demonstrated that supporters of NAEYC and DEC were not extremely different in their perspective on developmentally appropriate practice standards and thus using DEC and NAEYC standards for unified programs could be very effective.

Stayton and Miller (1993) reported faculty's lack of knowledge as a barrier to unification. When Raschke et al. (2001) surveyed forty-nine faculty members of unified programs, similar results were identified. These faculty members believed they had low to moderate ability levels on well over half of the state mandated competencies.

Discussion

An interpretation of this literature review leads to the following three conclusions: (a) general educators trained at separate ECE programs are typically not prepared to teach children with disabilities in inclusive settings; (b) special educators trained at separate ECSE programs may lack essential collaboration skills and an understanding of the general education curriculum to teach children with disabilities in inclusive settings; and (c) teachers trained at unified programs are considered more generalist, not specialist. Often these teachers are not prepared to teach children with severe or multiple disabilities. Additionally, it is probable that teachers trained at unified programs will not be prepared to teach children birth through age 3.

Although several states are mandating their institutions of higher education to implement a unified early childhood teacher preparation program, there is not an abundance of empirical evidence supporting such a mandate. Perhaps rather than abandoning separate ECE and ECSE programs, institutions of higher education need to revise their standards to ensure each teacher receives the specific training they need.

No matter what states mandate or how philosophical logic influences the transformation of training programs, the most important question to ponder is: Are ECE, ECSE, and/or unified programs producing teachers that can be effective in inclusive settings? Thus far no study regarding the preservice training of early childhood teachers could be found which has solely focused on this question. Perhaps this is the case because the preparedness for inclusion is a multifaceted and intricate concept that is a challenge to measure. A variable does exist, however, that can provide a measurement of preparedness for inclusion and has been associated with individual performance. The construct that can

provide information related to whether ECE, ECSE, and unified programs are producing teachers who feel they can be effective in inclusive settings is self-efficacy. Self-efficacy is defined as individual perceptions regarding abilities to accomplish a specific task within a given situation (Bandura, 1993, 1997). The remaining sections of this chapter will review Bandura's theory of self-efficacy and how it can be linked to the preservice training of early childhood teachers.

Theory of Self-Efficacy

Albert Bandura (1977) investigated developments of behavioral change. His theory of self-efficacy postulates that "cognitive processes mediate change, but that cognitive events are induced and altered most readily by experience of mastery arising from effective performance" (p. 191). Thus, according to Bandura in order to successfully complete a task, an individual needs certain knowledge and skills in addition to a sense of confidence that one's efforts will be successful. In short, self-efficacy is the expectation a person has about his or her own abilities to successfully execute a specific task at a desired level of performance (Bandura, 1997).

Bandura (1977, 1997) described four sources of origins for self-efficacy: (a) performance accomplishments in which past performance leads to expectations of future success, (b) vicarious experiences in which an individual observes others perform threatening activities without adverse consequences, (c) verbal persuasion in which individuals are led into believing they can be successful within a situation that has overwhelmed them in the past, and (d) physiological states or emotional arousal which can heighten feelings of competence or failure.

Bandura's theory of self-efficacy can be applied to teachers. For instance, self-efficacy is related to the amount of effort that teachers put into their performance and their perseverance in challenging tasks (Pajares, 1996). Teachers with a sense of low teaching efficacy may put little effort into their work because they do not think they have the skills or resources to make a difference in the lives of their students and teachers. Furthermore teachers with a sense of high teaching efficacy would put forth an extensive amount of effort in the classroom and would portray persistent efforts (Lamorey & Wilcox, 2005).

Teacher Sense of Efficacy

Teacher sense of efficacy has been recognized as a contributing factor to the variance found in teacher effectiveness (Gibson & Dembo, 1984). Teacher effectiveness refers to the teaching performance and its impact on student outcomes (Kyriakides, et al., 2002). Research on teacher sense of efficacy indicates that teachers vary in their perception of their own efficacy and these differences are reflected in teachers' behaviors and student performance (Ashton & Webb, 1986). Ashton and Webb (1986) explained that a teachers' sense of efficacy is important because it influences teachers' understanding of their position in the classroom, their attitudes toward their work, and their exchanges with their students. Presented in the next section is the definition of teacher sense of efficacy, the development of the construct, the impact teacher sense of efficacy has on inclusion, and the influence preservice training has on teacher sense of efficacy.

Teacher Sense of Efficacy Defined

Teachers' efficacy beliefs are "contextual judgments of their capability to succeed in particular instructional endeavors" (Brownell & Pajares, 1999, p.154). Ashton and Webb (1986) defined teacher sense of efficacy as "teachers' situation-specific perceptions of their own teaching abilities" (p. 3).

Evolution of Teacher Sense of Efficacy

Woolfolk and Hoy (1990) explained that teacher sense of efficacy was first introduced in the mid-seventies by projects funded through Title III of the Elementary and Secondary Education Act. In these studies (Armour et. al, 1976; Berman, McLaughlin, Bass, Pauly, & Zellman, 1977) teacher sense of efficacy was measured by using two RAND items with a 5-point Likert scale. RAND is a nonprofit corporation that provides objective analysis to challenges faced by the public. The name RAND is derived from a combination of the terms research and development. The RAND items used were (a) "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment" and (b) "If I try really hard, I can get through to even the most difficult or unmotivated student" (p. 82). The results of these studies indicated that teachers' sense of efficacy had a strong positive relationship with student performance (Tschannen-Moran, Hoy, & Hoy, 1998). Armour et al. evaluated a reading program used in Los Angeles using the two RAND items and reported that teachers' sense of efficacy was "strongly and significantly related to increases in reading achievement" (p. 24).

Berman et al. (1977) analyzed the relationship between teacher sense of efficacy and the percent of project goals achieved, improved student performance, and teachers'

maintenance of innovations. The findings suggested that "teachers' attitudes about their own professional competence, in short, appear to have major effects on what happens to projects and how effective they are" (p. 137). These two RAND studies provided a significant advancement in educational research because they suggested that teachers' sense of efficacy is an element of teacher motivation associated with student achievement (Ashton & Webb, 1986). On the basis of this RAND research, subsequent studies have broadened and enhanced the construct of teacher sense of efficacy and its applications.

To expand efficacy research, Ashton and Webb (1986) used Bandura's social cognitive theory in addition to the RAND items. In this theory, the construct of self-efficacy is described as the belief that an action will lead to an outcome and that an individual is able to perform the action that will lead to an outcome (Bandura, 1977). The social cognitive theory proposes that individuals engage in activities and situations where they feel the most competent and avoid situations in which they question their ability to be successful (Brownell & Pajares, 1999).

Bandura (1977) advocated that motivation is affected by both *outcome expectations* and *efficacy expectations*. An outcome expectancy is defined as "a person's estimate that a given behavior will lead to certain outcomes" (p. 193). An efficacy expectation is "the conviction that one can successfully execute the behavior required to produce the outcomes" (p. 193). Individuals can believe that a particular plan of action will produce certain outcomes, but if doubt exists about whether they can perform the necessary actions the information does not influence their behavior (Bandura, 1977). In sum, "perceived self-efficacy influences choice of behavioral settings" (p. 194).

Using Bandura's theory as a foundation, Ashton and Webb (1986) contended that a teacher's sense of efficacy consisted of two independent factors: sense of general teaching efficacy and sense of personal teaching efficacy (Ashton & Webb, 1986). *General Teacher Sense of Efficacy* is the universal belief that educators can influence student learning. *Personal Teacher Sense of Efficacy* refers to a teacher's confidence in his/her teaching ability. Ashton and Webb (1986) found teachers' scores on the two RAND items were not significantly correlated, which suggested the conceptual dissimilarity between general teacher sense of efficacy and personal teacher sense of efficacy. These authors associate the first RAND item with the efficacy of general teaching and the second item to personal teaching efficacy. The majority of teacher sense of efficacy studies used the procedures developed by Ashton and Webb with the RAND items or the procedures developed by Gibson and Dembo (1984) procedures (Woolfolk & Hoy, 1990).

Gibson and Dembo (1984) moved beyond using the RAND items by developing an instrument to measure teacher sense of efficacy. In a three-phase study, these authors developed the Teacher Efficacy Scale, provided construct validation for the variable, and investigated the relationship between teacher sense of efficacy and classroom behavior. The 53 items for the pilot study of the Teacher Efficacy Scale were developed from teacher interviews and an analysis of the literature. These sample items were given to 90 teachers to provide initial data analysis. Subsequently, the revised Teacher Efficacy Scale was made up of 30 items with a 6-point Likert Scale (Gibson & Dembo, 1984).

Following the pilot study, phase one of the endeavor to create a valid and reliable measure for teacher sense of efficacy involved 208 elementary school teachers from 13

schools (Gibson & Dembo, 1984). These participants were administered the previously piloted Teacher Efficacy Scale. Data from this phase revealed a two-factor model consistent with Bandura's model of self-efficacy. Gibson and Dembo (1984) called Factor 1, Personal Teaching Efficacy (or self-efficacy). Factor 2 was Teaching Efficacy. The Teacher Efficacy Scale measured reliably these constructs with internal consistency.

The next phase of the study investigated whether teacher sense of efficacy can be differentiated from other constructs and if evidence of teacher sense of efficacy collected from different sources converge (Gibson & Dembo, 1984). To address these questions Gibson and Dembo assessed 55 teachers on three traits: teacher sense of efficacy, verbal ability, and flexibility. Verbal ability and flexibility were selected as comparison constructs because these are identified traits of effective teachers (Gibson & Dembo, 1984). The measures for teacher sense of efficacy were the Teacher Efficacy Scale and an open-ended instrument requiring participants to select 10 of 20 variables contributing to a student's success in school. Findings revealed strong evidence for the convergence of teacher sense of efficacy when measured by these two methods. Additionally, multi-trait multi-method data analysis indicated strong evidence for discriminant validity verifying that teacher sense of efficacy is distinctly different from verbal ability and flexibility.

The final phase of Gibson and Dembo's study investigated whether teachers reporting high and low perceptions of self efficacy exhibited different patterns of teacher behaviors in the classroom. Four high efficacy teachers were selected to participate in the final phase. High efficacy teachers were defined as teachers whose Factor 1 Personal Teaching Efficacy scores fell within the top 6% of the frequency distribution and whose Factor 2 Teaching Efficacy scores fell within the bottom 22% of the distribution from the

first phase of the study were selected to participate. Additionally, 4 low-efficacy teachers were selected to participate in the final phase. Low efficacy teachers were defined as teachers whose Factor 1 scores fell in the bottom 45% and whose Factor 2 scores fell within the top 27% of the frequency distribution. To collect data on classroom behavior a teacher-use-time measure and a question-answer-feedback sequence measure were employed. These instruments allowed one to measure the proportion of time a teacher spent on activities related to teaching and academic learning and the quality of a student's response and the nature of the teacher's feedback. Each of the teachers was observed for around seven hours by three different trained observers. Interrater reliability ranged from .73 to .91.

Findings reveal low-efficacy teachers spent 48% of their time in small group instruction. Anecdotal records indicated that many of the students in the remainder of the class spent much time off task without redirection. In contrast, high-efficacy teachers spent 28% of their time in small group instruction and were observed redirecting students who were working independently. High-efficacy teachers spent most of their academic time using whole class instruction and demonstrated an expectation that each student be engaged. Additionally, there was a significant difference in the lack of persistence between low-efficacy and high-efficacy teachers. When presented with a student failure, low-efficacy teachers were more likely to provide the correct answer, ask another student, or permit the answer to be called out. High-efficacy teachers were more successful in probing students to the correct answer by using effective questioning.

Efficacy of Teachers Instructing within Inclusion Classrooms

Research has indicated that as teachers' sense of personal efficacy increases, they become more comfortable about including students with disabilities in their classrooms (Allinder, 1994). Brownell and Pajares (1999) found that a teachers' sense of efficacy relates to teachers' behaviors such as classroom management and instructional strategies. Woolfolk and Hoy (1990) provided additional evidence regarding the relationship between teachers' sense of efficacy and teacher behavior. Woolfolk and Hoy identified teachers with low efficacy beliefs having a pessimistic perception of students' motivation and these teachers also stressed strict control in classroom behavior. These studies and others will be presented in this upcoming section to demonstrate how teacher sense of efficacy is related to teacher behavior.

Buell, Hallam, Gamel-McCormick, and Scheer (1999) reported findings from a statewide needs assessment directed by one state's Department of Education. The purpose of the needs assessment was to strengthen the states Comprehensive System of Personnel Development. Among the variables examined were general education (n = 202) and special education (n = 87) teachers' feelings of efficacy regarding educating students with disabilities. The 25-item survey was developed by the state's Department of Education and endorsed by the Secretary of Education's appointed Inclusion Committee. Three major sections of the survey included (a) "teachers' confidence regarding student success in inclusive settings", (b) "teachers' inservice needs regarding inclusive education", and (c) "teachers' perceptions of necessary programmatic supports for successful inclusionary practices" (p. 147).

Data analysis revealed a significant difference between general educators and special educators in regards to teacher's feelings of efficacy concerning educating students with special needs. Special educators rated their "understanding of inclusion" and "the ability to get through to difficult or unmotivated students" (p. 148) as significantly higher than general educators.

When these data were examined to test for differences in training needs, a significant difference between special and general education teachers was present. Program modification, assessing academic progress, adapting curriculum, managing behavior, developing IEPs, and using assistive technology were identified as the greatest training needs for general educators. Buell et al. (1999) completed a final data analysis to test for differences between the two groups in confidence to adapt the classroom to meet the needs of exceptional students. A statistically significant difference was identified with the special educators reporting more confidence in all aspects of inclusive classrooms, except for working with parents and using assistive technology.

Soodak and Podell (1993) sought to investigate the following three hypotheses: (a) general classroom teachers with greater perceptions of efficacy will be more likely to maintain general education placement of students with behavior and/or learning problems, (b) students with both learning and behavior problems will be referred to special education more often than students have a single delay, and (c) personal and general sense of teaching efficacy will impact placement and referral decisions. General educators (n = 96) and special educators (n = 96) were randomly assigned a case study describing a second grade male student with either a learning problem, behavior problem or both and were asked to indicate the degree to which they agreed with general

education placement and whether they would refer this student to special education. These teachers' level of efficacy perception was measured using Gibson and Dembo's (1984) scale.

Findings were supportive of Soodak and Podell's (1993) first hypothesis that general education teachers' who perceive themselves to be effective were more likely to believe the general education placement is appropriate. However, the degree of teacher sense of efficacy was not related to special education teachers' judgment of appropriate placement. Next, results were supportive of the second hypothesis in that teachers were more likely to report the general education setting as appropriate if the student displayed either a learning problem or behavior problem, but not both. In regards to the third hypothesis, data indicated that teachers must feel both confident in their own teaching (personal teaching efficacy) and confident in the effects of teaching in general to agree with general education placement.

Freytag (2001) used the *Teacher Efficacy Scale* (Gibson & Dembo, 1984) to survey general educators (n = 36) and special educators (n = 12) with four or less years of teaching experience to investigate their level of perceived efficacy and the impact of preservice inclusion courses. These data revealed that the number of inclusion courses taken during preservice training was not related to the level of efficacy perception; although, findings revealed a significant difference in personal sense of efficacy scores between general educators and special educators. Special education teachers had a significantly higher personal sense of efficacy for teaching children with disabilities in the inclusive setting. For future research the author questioned whether preservice training was related to this confidence.

Brownell and Pajares (1999) used a survey titled, *Working with Diverse Students: The General Educator's Perspective* to investigate whether seven variables had either a direct or indirect impact on teachers' sense of efficacy which in turn would have a direct impact on general educators' (n = 128) success in instructing students with disabilities. The seven variables were (a) inservice training, (b) special education support, (c) preservice preparation, (d) general support, (e) social economic status of students, (f) collegiality with special education, and (g) collegiality with regular education. Path analysis results indicated that teacher sense of efficacy beliefs had a direct effect on their perceived success in instructing students with disabilities. Preservice education and collegial interactions with special education and regular education colleagues had a direct effect on teacher perception of efficacy.

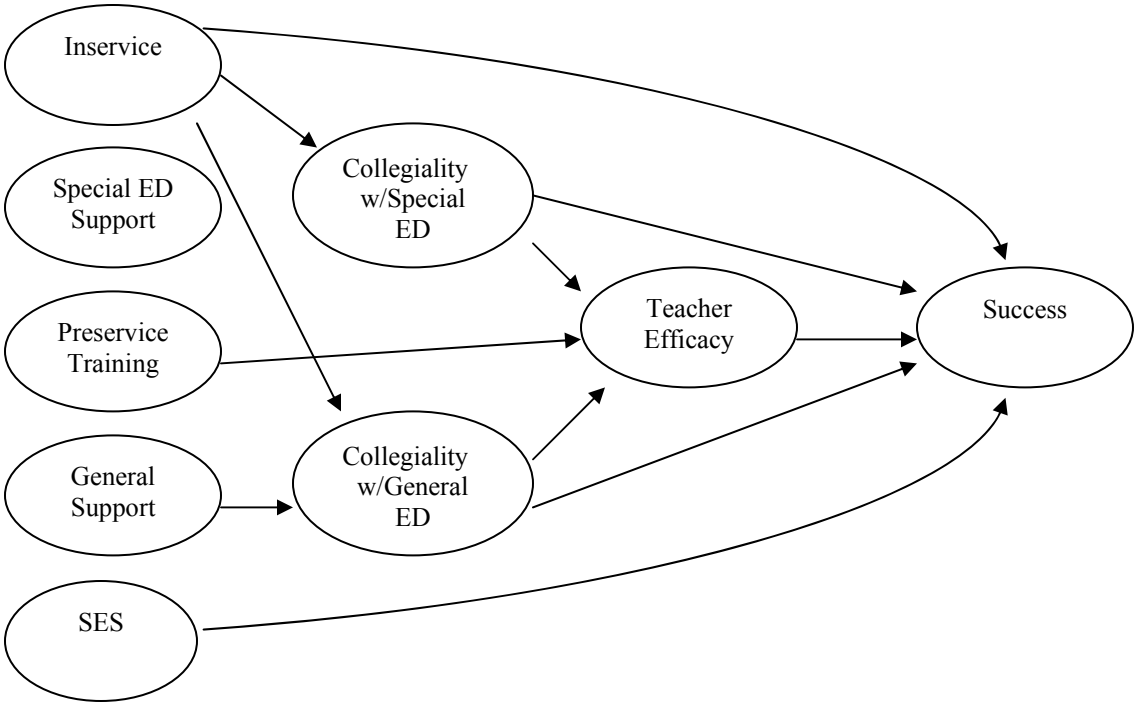

Figure 2. Factors Affecting Reported Success (Adapted with permission from Brownell & Pajares, 1999)

Tschannen-Moran, Hoy, and Hoy (1998) reviewed literature published between 1974 and 1997 and found that general education teachers with higher personal sense of teaching efficacy were more likely to consider the general education classroom as the appropriate place for students with learning problems. Tschannen-Moran and Hoy also found that a teachers' sense of efficacy predicted their willingness to teach students experiencing learning difficulties.

Allinder (1994) explored the relationship between personal sense of efficacy and teacher sense of general efficacy and the following three instructional variables: instructional experimentation, business-like approach, and assuredness of 437 special education teachers. Efficacy was measured using The Teacher Efficacy Scale (Gibson & Dembo, 1984) and the instructional variables were measured using the Teacher Characteristics Scale (Fuchs, Fuchs, & Bishop, 1992). Instructional experimentation referred to the readiness to implement a plethora of materials and approaches to teaching, eagerness to identify better ways of teaching, and implementation of progressive and innovative techniques. Business-like approach addressed the teacher's degree of organization, preparedness, and fairness. Assuredness referred to effective instructional components including enthusiasm and clarity while presenting a lesson.

Multiple regression analysis indicated that personal sense of efficacy was significantly related to all three instructional variables and teaching was significantly related to assuredness (Allinder, 1994). Thus, teachers who had a greater confidence in their abilities to teach students, reportedly were more likely to implement effective teaching techniques, more business-like in their classroom organization, and more

assured during instruction. Although these findings are correlational, this study provides evidence that an association between efficacy and instructional components exists (Allinder, 1994).

Efficacy of Preservice Teachers

Included in this subsection are three studies measuring the sense of efficacy of preservice teachers (Campbell, 1996; Onafowora, 2004; Woolfolk & Hoy, 1990). The purposes of Woolfolk and Hoy's study were to clarify the concept of efficacy by determining whether the structure of the construct for preservice teachers was the same as experienced teachers and secondly to analyze whether prospective teachers' sense of efficacy was related to their orientation toward discipline, order, control, and motivation in schools. Using the two RAND items and a modified version of the Teaching Efficacy Scale (Gibson & Dembo, 1984) these authors identified the same two factors of Personal Sense of Teaching Efficacy and General Sense of Teaching Efficacy that has been identified with previous research (Gibson & Dembo, 1984).

Woolfolk and Hoy (1990) recognized that beginning teachers are concerned with developing effective classroom management strategies in order to establish order and gain student cooperation. These concerns prompted Woolfolk and Hoy to measure whether teacher sense of efficacy was related to "pupil control ideology" and "motivational orientation". A third aspect examined was individuals' commitment to demonstrating loyalty to an administration and organization through attitudes, values and behaviors. The authors referred to this final aspect as "bureaucratic orientation".

Pupil control ideology (PCI) was assessed using a Likert scale with 20 items called the PCI. The higher the score, the more strict and rigid, referred to as custodial. On

the other end of the continuum is humanistic where students are encouraged to demonstrate self-discipline and teachers stress the importance of individuality. Motivation orientation was evaluated using an instrument called Problems in School Inventory containing eight vignettes describing typical school problems with four solutions. Finally, the Work Environment Preference Schedule, a 24-item instrument with 5-point Likert response scale, measured bureaucratic orientation.

Findings revealed that both general sense of teaching efficacy and the interaction between general sense of teaching efficacy and personal sense of efficacy contributed uniquely and significantly to the variance found in pupil control. Teachers with low sense of efficacy stressed strict control in classroom behavior and teachers with high sense of efficacy were more humanistic in their student control and more willing to be loyal to their school and administration. Motivational orientation was not significantly correlated with either personal or teacher sense of efficacy.

The purpose of Campbell's (1996) study was to determine if there were differences between teachers' sense of efficacy of pre-service and in-service teachers. Additionally, this study analyzed the variables of Scottish and American teachers as well as demographic variables of age, degree status, and years of teaching experience. Using a modified version of the Teacher Efficacy Scale (Gibson & Dembo, 1984) and a questionnaire by Naring (1990) Campbell assessed the teacher sense of efficacy of four groups to investigate differences. The groups were Scottish preservice teachers (n = 34), Scottish inservice teachers (n = 39), American preservice teachers (n = 32), and American inservice teachers (n = 35). Results demonstrated no differences in teacher sense of efficacy between the two countries and a significant difference between pre-

service and inservice teachers of both countries. Another valuable finding identified by Campbell was a significant relationship between teacher sense of efficacy and age, level of degree, and years of experience. Campbell concluded that inservice teachers have a higher level of teacher sense of efficacy, signifying that teacher sense of efficacy increases with experience.

Although not directly involving preservice teachers, Onafowora's (2004) study is appropriate for this section of the paper as the participants were twenty-five novice teachers. Using a mix method design including qualitative data from open-ended questions and transcripts from focus group discussions in addition to quantitative data using the two RAND items, Onafowara sought to answer the following research question: "Do novice teachers perceive themselves to be self-empowered to create learning environments that allow them to motivate and promote student learning?" (p. 35).

In regards to the first RAND item, "when it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment", eighty percent of the novices disagreed, indicating they believe to be self-empowered and confident to reach even difficult students. On the second RAND item, "if I try really hard, I can get through to even the most difficult or unmotivated student", seventy-six percent were in agreement, indicating feeling confident in their teaching abilities.

Interestingly, data from qualitative findings are in direct contradiction with quantitative findings. Feelings of not being good teachers and not being able to understand the reasons why their students were not learning were prevalent throughout

the qualitative data. The author called for more research with a larger number of novice teachers to learn more about these inconsistent findings.

Implications for Preservice Training

General educators are critical to the success of inclusion, but research suggests they do not feel confident in their ability to employ best practices for inclusion education (Brownell & Pajares, 1999). Research indicates that preservice training has a direct impact on teachers' sense of efficacy, and an indirect effect on the perceived success of instructing children with disabilities in an inclusive setting (Brownell & Pajares, 1999). Tschannen-Moran, Hoy, and Hoy (1998) stressed the importance of developing strong efficacy beliefs early in teaching careers because efficacy levels are difficult to adjust. Preservice training, therefore, seems to play a vital role in the development of teacher sense of efficacy.

Brownell and Pajares (1999) declared the need for researchers to identify differences in special education preservice programs for general educators and the impact of program components on their teachers' efficacy beliefs. These authors were hopeful that the institutions employing unified preparation programs for general and special educators would produce graduates that were more confident in their capabilities to teach students with disabilities.

Buell, Hallam, Gamel-McCormick, and Scheer (1999) agreed with Brownell and Pajares (1999) as they asserted the need for general education courses to include more information on teaching students with disabilities. Buell and colleagues found that the reported teaching needs of general educators are typical preservice topics needed in preparatory programs for special education teachers. The training topics included

program modification, assessing academic progress, adapting curriculum, managing students' behavior, developing IEPs, and using assistive technology. Buell and colleagues declared that it is critical for general educators to feel confident in doing these tasks for inclusion to be successful.

Summary of Evidence

This subsection summarizes the studies related to the topic of teacher sense of efficacy and inclusion. When searching for relevant studies a computer-assisted bibliographic search was conducted using Educational Resources Information Center (ERIC), Expanded Academic ASAP (INFOTRAC), OneFile, Academic Search Premier (EBSCO), and Ingenta. Identification of studies were accomplished by using combinations of the following words/phrases, *teacher sense of efficacy, inclusion, special education, preservice training* and *children with disabilities*. Additionally, the reference lists of all sources were examined in order to locate additional sources that may have been missing from the bibliographic search findings. To be included in the synthesis, studies must have been related to teacher sense of efficacy, preservice training and/or inclusion of children with disabilities in the general education classroom. However, one study (Gibson & Dembo, 1984) that did not meet the selection criteria was included in this review. Gibson and Dembo (1984) described the creation of the Teacher Efficacy Scale and this scale was used in many of the studies on teacher sense of efficacy. For this reason, the article was included in this review. A total of eleven studies were selected and are summarized on Table 4. It is important to note that in one publication, Gibson and Dembo (1984) included three phases of a study and these phases are listed individually in Table 4.

Analysis of Evidence

Within these eleven studies, six studies investigated the effects of a teachers' sense of efficacy, two studies investigated the development of a teachers' sense of efficacy, and three studies investigated how to effectively measure a teachers' sense of efficacy. Of the six studies investigating the effects of a teachers' sense of efficacy, two studies (Woolfolk & Hoy, 1990; Allinder, 1994) reported evidence suggesting that a teachers' sense of efficacy influenced classroom management. Gibson and Dembo (1984) and Allinder (1994) both reported evidence suggesting that a teachers' sense of efficacy influenced instructional design and their ability to teach students when they experienced a failure. Brownell and Pajares (1999) and Buell, et al. (1999) both found that a teachers' sense of efficacy was positively correlated with confidence in their abilities to teach children with disabilities. The final study (Soodak & Podell, 1993) investigating the effects of a teachers' sense of efficacy found that a teachers' sense of efficacy influenced teachers' judgment on whether students with learning or behavior problems should be placed in general education or in special education.

Campbell (1996) and Freytag (2001) both investigated the development of teachers' sense of efficacy. Campbell found that experience, age, and degree status is related to the increase in a teachers' sense of efficacy. Freytag (2001) found that number of inclusion courses did not impact the perception of efficacy, however special education teachers had a higher degree of a teachers' sense of efficacy compared to general education teachers. Thus, both Freytag and Campbell identified degree status (general education or special education) as a factor related to the development of a teachers' sense of efficacy.

Gibson and Dembo (1984) and Onafowora (2004) both conducted studies related to the measurement of a teachers' sense of efficacy. Gibson and Dembo reported convincing evidence supporting the use of the Teacher Efficacy Scale to measure a teachers' sense of efficacy. Onafowora reported evidence suggesting that data collected from the RAND items may not be reliable. In this study, novice teachers reported a high degree of a teachers' sense of efficacy using the RAND items, but qualitative evidence did not demonstrate the same level of confidence.

Table 5

Summary of Efficacy Studies

Author(s) Date	Purpose	Participants N	Outcome Measure(s)	Findings
Allinder (1994)	To examine the relationship between personal and teaching efficacy and behaviors representative of teacher effectiveness	437 special education teachers of elementary students with mild disabilities	Teacher Efficacy Scale (Gibson & Dembo, 1984) and Teacher Characteristics Scale (Fuchs, Fuchs, & Bishop, 1992)	Personal sense of efficacy was significantly related to instructional experimentation, business-like approach, and assuredness. Sense of teacher efficacy was significantly related to assuredness, or confidence and enthusiasm about teaching.
Brownell & Pajares (1999)	To investigate the relationships among general educators teachers' sense of efficacy beliefs, SES of students, support, collegial inter-actions, preservice and inservice training, and their success in instruction with children having disabilities in general education	128 second grade teachers from a large southeastern county school districts	Working with Diverse Students: The General Educator's Perspectives	Five variables had a significant direct effect on teachers' perceptions of their success in teaching students with dis-abilities: teacher sense of efficacy, collegiality with special education teachers, quality of special education inservice, SES of students, and collegiality with general educators. Teacher sense of efficacy mediated the influence of perceived collegiality and preservice preparation.

Table 5 (continued)

Author(s) Date	Purpose	Participants N	Outcome Measure(s)	Findings
Buell, et al. (1999)	To explore the relationship between teachers' feelings of efficacy concerning educating students with special needs, to identify training needs for inclusive education, and to identify perceptions of programmatic supports for inclusionary practices.	202 general educators 87 special educators	25-item survey developed by a State Department of Education	Special education teachers expressed more confidence than general educators in regards to teachers' feelings of efficacy concerning inclusion. In the analysis for training needs, general educators reported a greater need across each topic. Lastly, special educators were more confident in programmatic supports for all aspects of integrated classroom except for working with parents and using assistive technology.
Campbell (1996)	To determine if there were differences between preservice teachers and inservice teachers level of teacher sense of efficacy in Scotland and America	34 Scottish pre-service teachers 39 Scottish in-service teachers 32 American pre-service teachers 35 American in-service teachers	Modified version of Teacher Efficacy Scale (Gibson & Dembo, 1984) and a questionnaire by Naring (1990)	Experienced teachers in both countries reported higher levels of teacher sense of efficacy than pre-service teachers in both countries. Experience and factors related to experience (age and degree status) seemed to contribute to the development of teacher sense of efficacy.

(table continues)

Table 5 (continued)

Author(s) Date	Purpose	Participants N	Outcome Measure(s)	Findings
Freytag (2001)	To investigate if there is a relationship among teachers' sense of efficacy scores and the number of preservice courses taken that addressed inclusion and if there is difference in teacher sense of efficacy between general education or exceptional education fields	48 beginning teachers (0-4 years experience) 36 general education teachers 12 exceptional education teachers	Teacher Efficacy Scale (Gibson & Dembo, 1984)	There was no statistically significant difference between mean personal efficacy scores or teacher sense of efficacy scores and number of courses taken that addressed inclusion. Identified was a statistically significant difference in personal efficacy scores and teaching efficacy scores between teaching fields. Exceptional education teachers have higher personal efficacy and teacher sense of efficacy scores than the general education participants.
Gibson & Dembo (1984)	To describe the dimensions of teacher sense of efficacy and how they relate to Bandura's theory of self-efficacy and to determine the internal consistency of the Teacher Efficacy Scale	208 elementary school teachers	Teacher Efficacy Scale	Factor 1 (Personal Teaching Efficacy) accounted for 18.2% of variance in teacher perception of efficacy, Factor 2 (Teaching Efficacy) accounts for 10.6% of the variance. 16 of 30 items were found to have acceptable reliability coefficients (.78 for Personal Teaching, .75 for Teaching Efficacy, and .79 for total 16 items).

(table continues)

Table 5 (continued)

Author(s) Date	Author(s) Date	Author(s) Date	Author(s) Date	Author(s) Date
Gibson & Dembo (1984)	To determine whether evidence gathered from various teacher sense of efficacy instruments converge and to determine whether teacher sense of efficacy can be differentiated from verbal ability and flexibility	55 teachers enrolled in graduate education courses at a state university in California	Teacher Efficacy Teacher Efficacy Scale with 16 items and an open-ended measure of teacher sense of efficacy Verbal Ability Verbal Facility Test, Controlled Associations Test Flexibility Finding Useful Parts Test, The Planning Test	Data support the convergence of teacher sense of efficacy when measured by two different approaches and results verify the distinction between teacher sense of efficacy and verbal ability and flexibility.
Gibson & Dembo (1984)	To examine whether teachers with high and low sense of efficacy levels differ in their classroom behaviors related to academic focus, feedback, and persistence	4 high-efficacy teachers from phase one of study 4 low-efficacy teachers from phase one of study	Teacher-use-of-time measure and question-answer-feedback sequence measure	Teachers who had high levels of perceived efficacy used more whole class instruction and had more persistence than teachers who had low levels of perceived efficacy. Teachers who had low levels of efficacy spent almost half of their time in small group instruction and were less persistence when approached with a student failure.
Onafowora (2004)	To examine whether novice teachers perceive themselves to be self-empowered to create learning environments that allow them to motivate and promote student learning	25 novice teachers participating in a professional development program that provided opportunities to observe a master teacher	RAND items, qualitative data including open-ended questions and transcripts from focus groups.	Quantitative: Novice teachers have a high degree of teacher sense of efficacy on the RAND items. Qualitative: Oral and written expression reveal little to no confidence in their teaching abilities.

(table continues)

Table 5 (continued)

Author(s) Date	Purpose	Participants N	Outcome Measure(s)	Findings
Soodak & Podell (1993)	To determine the relation between teacher sense of efficacy, student problem type, and professional and referral judgments	96 general educators 96 special educators	Three case studies described a 2nd grader having a learning problem, a behavior problem or both. Teacher Efficacy Scale (Gibson & Dembo, 1984)	Teachers' sense of efficacy was found to have a significant bearing on the participants' judgments regarding the appropriateness of general education placement for students with learning and/or behavior problems. General educators who did not perceive themselves as being able to influence student outcomes were more likely to perceive that students with special problems should not be placed in the general classroom. Special educators' judgments of the appropriateness of general class placement were not related to their sense of efficacy.
Woolfolk & Hoy (1990)	To examine the relationships between prospective teachers' beliefs about efficacy and discipline, order, control, and motivation in school	182 liberal arts majors enrolled in the teacher preparation program at a state university on the East coast	Predictor variable: RAND items and Modified Teacher Efficacy Scale (Gibson & Dembo, 1984) Criterion variables: Pupil control ideology, Problems in School Inventory, Work Environment Preference Schedule	Correlations: The more the subjects believed in the power of the school to overcome home and background factors (teaching efficacy), the more humanistic their pupil control was, and the less willing they were to subscribe to bureaucratic control. Teachers with low efficacy beliefs stressed strict control in classroom behavior. Teachers who had more confidence in their teaching ability (personal efficacy) were more willing to subscribe to bureaucratic control and were more humanistic in their beliefs about controlling students. Motivational orientation was not significantly correlated with either dimension of teacher sense of efficacy. Regression: Both teaching efficacy and the interaction of teaching and personal efficacy made unique contribution to pupil control.

Measurement of Teacher Efficacy

In the teacher efficacy literature the primary means for measuring a teachers' sense of efficacy has been the use of Gibson and Dembo's (1984) Teacher Efficacy Scale (Ross, 1998). Gibson and Dembo (1984) built on the RAND studies and applied Bandura's theory to the construct of teacher efficacy when developing their Teacher Efficacy Scale (TES). When their 30-item measure yielded two factors, Gibson and Dembo assumed these factors represented the two expectancies (self-efficacy and outcome expectancy) of Bandura's social cognitive theory (Tschannen-Moran & Hoy, 2001). Gibson and Dembo labeled the first factor *personal teaching efficacy*, representing Bandura's self efficacy. It was assumed that this factor would measure teachers' evaluation of their abilities to bring about positive student change (Gibson & Dembo, 1984). The second factor was labeled *teaching* efficacy, representing Bandura's outcome expectancy. It was assumed that this factor would measure the degree to which teachers believed students can be taught given such factors as family background, IQ, and school conditions (Gibson & Dembo, 1984). Recent literature has discouraged the use of Gibson and Dembo's scale for measuring teacher efficacy due to the specificity of the scale, the two factor structure, and the reliability and validity of the scores (Henson, et al., 2001; Brouwers & Tomic, 2003; Wheatley, 2005). The following sections describe these concerns.

Construct Validity and Reliability

After investigating the reliability of the Teacher Efficacy Scale and other efficacy measures, Henson, et al. (2001) concluded that the teaching efficacy subscale of Gibson and Dembo's (1984) measurement was questionable and should be abandoned. These

authors encouraged efforts to develop a scale that more reliably measures the outcome expectancy dimension of Bandura's theory. Tschannen-Moran, et al. (1998) and Woolfolk and Hoy (1990) explained that the items used to measure the second factor cannot be considered outcome expectancy.

Brouwers and Tomic (2003) studied several factor models from the Teacher Efficacy Scale that were proposed in the literature including Gibson and Dembo's (1984) 2 factor model, Woolfolk and Hoy's (1990) 3 factor model, and Soodak and Podell (1996) 3 factor model. Findings revealed that all authors studying the factorial validity of the Teacher Efficacy Scale used only a principal component analysis, which provides no information regarding the overall fit of the factorial models. When a confirmatory and exploratory factor analysis were employed these authors identified a 4 factor model that was significantly better than the proposed models, yet the 4 factor model did not achieve the recommended criterion of adequately fitted models and therefore was rejected.

Level of Specificity

There is concern regarding the lack of specificity of Gibson and Dembo's (1984) scale (Brouwers & Tomic, 2003). Teacher efficacy is both context and subject-matter specific (Tschannen-Moran, et al., 1998). For instance, a teacher may feel confident in one subject matter or when working with one type of student, but feel less able in teaching other subjects or with different students (Tschannen-Moran, et al., 1998). Thus, when developing measurements of teacher efficacy it is difficult to determine the appropriate level of specificity. Teacher efficacy measures should not be too broad or too narrow. When measures have limited the scope of efficacy beliefs, significant results have been identified (Tschannen-Moran, Hoy, & Hoy, 1998). The disadvantage of

narrowing the scope of efficacy measures is the difficulty of determining the predictive value and generalizability of these measures (Tschannen-Moran, Hoy, & Hoy, 1998). For instance, researchers have modified the Gibson and Dembo instrument to investigate teachers' sense of efficacy in the following areas: science teaching (Riggs & Enocs, 1990); classroom management (Emmer, 1990); and special education (Meijer and Foster, 1988) and early intervention (Lamorey & Wilcox, 2005). Brouwers and Tomic (2003) argue that teacher-efficacy measurements should assess belief in the ability to perform domain-specific behaviors because with global teacher efficacy scales it is difficult to identify teaching tasks for which teachers feel more or less efficacious (Wheatley, 2005). In order for efficacy measurements to be useful and generalizable, teachers need to be assessed on their competence across a wide range of activities and tasks they are required to perform (Tschannen-Moran & Hoy, 2001).

Alternative Measures

The *Ohio State Teacher Efficacy Scale (OSTES)* was based on an unpublished teacher efficacy scale written by Bandura and offers teacher efficacy researchers a unified and stable factor structure (Tschannen-Moran & Hoy, 2001). The OSTES measures a large range of capabilities without being too specific (Tschannen-Moran & Hoy, 2001).

OSTES uses a 9-point scale with anchors at 1= nothing, 3 = very little, 5 = some influences, 7 = quite a bit, and 9 = a great deal and contains a long form with 24 items and a short form with 12 items. This final format was developed after three studies testing the validity and reliability of the instrument. Using the 24 items, principal-axis factoring with varimax rotation yields three factors with loading ranging from .50 to .78 (Tschannen-Moran & Hoy, 2001). The three factors are labeled *instructional strategies* (8

items), *efficacy for classroom management* (8 items), and *efficacy for student engagement* (8 items). Reliabilities for the OSTES subscales were 0.91 for *instruction*, 0.90 for *management*, and 0.87 for *engagement* (Tschannen-Moran & Hoy, 2001).

As indicated in Chapter I, the *Teacher Efficacy for the Inclusion of Students with Learning Disabilities Scale (TEISLDS)* was developed by Esposito, Guarino, and Caywood (in press) through a literature review and is based on Bandura's social cognitive theory that efficacy beliefs are task and content specific. The instrument includes 17 items and uses a 5-point scale with anchors at 1 = no confidence and 5 = very confident. The questions assess teachers' sense of efficacy in the following four areas: (a) knowledge of procedures and laws related to special education, (b) perceptions about their knowledge of learning disabilities, (c) teaching confidence with students having learning disabilities that are included into general education classrooms, and (d) perceptions of their abilities to implement both effective teaching strategies and modifications to the general education curriculum to meet the needs of students with learning disabilities (Esposito, Guarino, & Caywood, in press).

The reliability and validity of the scale was assessed using 263 general education teachers enrolled in a graduate level course (Esposito, Guarino, & Caywood, in press.) Item analyses of the TEISLDS revealed a correlation within each scale that all exceeded .30. Each scale demonstrated discriminant validity and Cronbach's coefficient alpha estimated internal consistency which exceeded .85.

The TEISLDS provides teacher efficacy researchers interested in inclusion a reliable tool for investigation (Esposito, Guarino & Caywood, in press). Following Bandura's theory, global measures of efficacy would be less valid because the TEISLDS

addresses specific tasks and specific contexts. An example of specific task is curriculum modification and an example of a specific context is inclusion classrooms (Esposito, Guarino, & Caywood, in press).

Summary and Discussion

> Most authorities agree that the major responsibilities for change rests with our higher education teacher preparation programs. (Lombardi & Hunka, 2001, p. 184)

Institutions of higher education cannot ignore the challenges teachers face in providing appropriate instruction for students who are performing at very different levels in the general education classroom. The preceding literature review captured the essence of the current struggle experienced by teacher education programs as they are evolving to meet the needs of teacher candidates and the children to be taught by these professionals. The review began with a synopsis of the legislation that eventually mandated a free appropriate public education for children with disabilities in their least restrictive environment. Next this literature review described the historical, theoretical, and philosophical commonalities and differences between general ECE and ECSE. The literature acknowledges differences between the two fields, but recognizes that there are more commonalities than differences. Often these differences rest in the degree of intensity, rather than discrepancies.

Next the review specifically addressed the preservice training of general ECE and ECSE teachers. Studies suggested that general education teachers prepared by separate ECE programs are not equipped to teach children with disabilities in the general

education classroom. To address this issue, many institutions of higher education have combined ECE and ECSE into one unified program. The limited research of these unified programs reveal that ECSE content is less intense in unified programs. Graduates of unified programs lack training to (a) teach children in the birth through three age range and (b) teach children with severe or multiple disabilities. Studies also demonstrate, however, that students who participated in unified programs feel more prepared to teach children with disabilities in the general education classroom than students who participated in separate ECE programs.

The final sections of the literature review depict studies regarding teachers' sense of efficacy. Studies suggest that preservice training can have a positive influence on teachers' sense of efficacy. Additionally, data were presented that supported the notion of teacher efficacy having a direct relationship on preparedness for teaching children with disabilities in the general education classroom.

In summary, evidence suggests that independent ECE teacher training programs are not adequately preparing general education teachers for inclusion and unified programs remain a viable option for institutions of higher education. Studies suggest, however, that unified programs are preparing generalists, not specialists. This is a concern as many children with disabilities have unique needs requiring special skills. The literature calls for more empirical evidence to guide institutions of higher education along the most effective and efficient path for preparing teacher candidates for inclusive education.

III. METHOD

To assess preservice teachers' sense of efficacy concerning the inclusion of children with disabilities in the general education classroom the *Teacher Efficacy for the Inclusion of Young Children with Disabilities* (TEIYD) (Appendix B) was used. This chapter details the following research issues important to this study: (a) participants, (b) instrumentation, (c) procedures, and (d) research question and analysis.

Participants

Preservice teachers enrolled in a teacher training program offering a baccalaureate degree in either ECE, ECSE, or both ECE/ECSE (unified), were included in the study. The participants were working on requirements defined by their major, beyond the university core curriculum. When selecting teacher training programs to represent all three groups (ECE, ECSE, and unified) geography was not a factor since prior research established that geography does not impact results (Bruder & Stayton, 2004). For each group (ECE, ECSE, and unified) the primary investigator recruited from three data collection sites, totaling nine teacher training programs.

To identify teacher training programs for the unified category the primary investigator used survey recipients identified in the study completed by Miller and Stayton (2006). This decision was made because Miller and Stayton identified institutions

of higher education whose unified program met the following definition: (a) the program is designed specifically for the degree, (b) the program is derived from professional unification and intentional blending of philosophy and content from ECE and ECSE, (c) the program produced a newly conceptualized curriculum, and, (d) above all else, the program is developed, implemented, and evaluated by an interdisciplinary team of faculty from essential disciplines (p. 57). This definition is consistent with the definition offered by NAEYC. NAEYC defines a unified early childhood teacher training program as one that combines all the elements identified in NAEYC's early childhood standards and those in CEC's early childhood special education standards in a curriculum that is planned, implemented, and evaluated by an interdisciplinary group of faculty and other individuals (Hyson, 2003).

To identify institutions of higher education representing ECSE, the primary investigator used the national clearinghouse for professions in special education found on the CEC website (www.cec.sped.org/). The CEC website contains a university program listing with a search engine that accommodates a search for CEC accredited programs offering an ECSE bachelor's degree. Before qualifying as a data collection site for the ECSE category the primary investigator contacted the program coordinator to inquire whether the program had transitioned into a unified program. If the teacher training program did not meet the criteria for unified programs as defined by Miller and Stayton (2006) it was considered a separate ECSE program.

To identify institutions of higher education representing ECE, the primary investigator used the *National Directory of Early Childhood Teacher Preparation Institutions* developed by the Council for Professional Recognition. The Council for

Professional Recognition, a nonprofit organization, was founded in 1985 to improve the professional status of early childhood care providers. The national directory was created by combining information from the U.S. Department of Education, American Associate Degree Childhood Educators, the National Association of Early Childhood Teacher Educators and surveys administered by the Council. Before qualifying as a data collection site for the ECE category, the primary investigator contacted the program coordinator to inquire whether the program had transitioned into a unified program. If the teacher training program did not meet the criteria for unified programs as defined by Miller and Stayton (2006) it was considered a separate ECE program.

The primary investigator created a list of potential IHE's for each group using the aforementioned procedures. The list included 10 separate ECE, 5 separate ECSE, and 6 unified IHE. Procedures to identify the IHE's to participate in the study included contacting each IRB office and a representative from the respective departments by an email. Pursuit of data collection sites stopped once the primary investigator obtained permission from the IRB and the department in 3 data collection sites for each group (ECE, ECSE, and unified) totaling 9 teacher training programs. The number of participates in each teacher training program is summarized in Table 6.

Table 6

Number of Participants in Each Teacher Training Program

	ECE			ECSE			Unified		
	1	*2*	*3*	*1*	*2*	*3*	*1*	*2*	*3*
n	38	16	31	9	21	13	29	30	70

Instrumentation

Two types of data collection instruments were used. The first is a demographic questionnaire containing questions regarding critical characteristics of the participants. The second is a scale to measure the participants' perception of their teaching efficacy and is titled *Teacher Efficacy for the Inclusion of Young Children with Disabilities* (TEIYD).

Demographic Questionnaire

The demographic questionnaire (Appendix C) was developed by the primary investigator to address variables that could potentially impact participants' perception of their teacher efficacy. These variables include (a) initial certification, (b) ages covered by certification, (c) time in training program, and (d) teaching experience.

Initial certification. Although the primary investigator surveyed students participating in teacher training programs that offer a baccalaureate degree, it was highly probable that there were participants who were not receiving their initial certification. For instance, (a) some students may already have an associates degree and certification in ECE and are working on a bachelor's degree, (b) some students may be participating in a masters' or alternative program, or (c) some students may be working towards a crossover certification to meet state guidelines that require a unified certification (Müller, 2006). The primary investigator used question one on the demographic questionnaire to identify those unique students who already had a certification in the field of early childhood. It was important to identify such students, as this may influence their sense of teaching efficacy.

Ages covered by certification. Although NAEYC and DEC both define early childhood as birth through age eight, not all states offer certifications covering the entire age range. In these instances the states may offer certifications that are narrower in scope (i.e., birth to three years, three to eight years). The primary investigator used question two on the demographic questionnaire for participants to identify the age range covered by their certification by selecting (a) birth to eight, (b) birth to three, (c) three to five, (d) three to eight, (e) five to eight, or (f) other. The primary investigator used these data to determine if age ranges covered by certification was related to teachers' sense of efficacy.

Time in program. Question three on the demographic questionnaire asked participants to identify their time spent in the teacher training program by selecting (a) beginning of the teacher training program (introduction courses); (b) middle of the teacher training program (content courses); or (c) end of the teacher training program (internship). The primary investigator used these data to determine if time spent in program related to teachers' sense of efficacy.

Teaching experience. Question four on the demographic questionnaire asked participants to identify their teaching experience by selecting (a) No teaching experience (0-1 hours); (b) Little teaching experience (1-100 hours); (c) Moderate amount of teaching experience (100-300 hours); (d) A lot of teaching experience (300-1,000 hours); or (e) A great deal of teaching experience (more than 1,000 hours). Teaching experience may include practicum, internship, serving as a paraprofessional, or serving as a lead teacher. The primary investigator used these data to determine if the level of teaching experience was related to teachers' sense of efficacy.

Teacher Efficacy for the Inclusion of Young Children with Disabilities (TEITD)

TEIYD is an adaptation of a survey titled the Teacher Efficacy for the Inclusion of Students with Learning Disabilities Scale (TEISLDS) (Esposito, Guarino, & Caywood, in press; Appendix A). To establish construct validity of the TEISLDS, Esposito, Guarino, & Caywood performed an extensive review of the literature concerning teacher efficacy. These authors were careful to address task specificity which has been a problematic area related to measuring teacher efficacy. In earlier research the TEISLDS demonstrated acceptable psychometric properties with item analysis correlations exceeding .30 for both pre and post test results and Cronbach's coefficient alphas exceeded .85 (Esposito, Guarino, & Caywood, in press).

When developing TEIYD, the primary investigator consulted with an expert panel consisting of, three professionals with expertise in early childhood special education, one professional with an expertise in both early childhood and unified preservice teacher training programs, and one professional with an expertise in statistics and teacher efficacy. First the principal investigator and the panel adapted the visual presentation of the questions and method of answer selection. When adapting the content of TEISLDS to better reflect early childhood the phrase "children with learning disabilities" was removed and replaced with "young children with disabilities." A motivating factor for this decision was young children are typically not diagnosed with a learning disability.

Next the primary investigator and the panel focused on the four subscales of TEISLDS: (a) knowledge of procedures and laws related to special education, (b) perceptions about their knowledge of learning disabilities, (c) teaching confidence with students having learning disabilities that are included into general education classrooms,

and (d) perceptions of their abilities to implement both effective teaching strategies and modifications to the general education curriculum to meet the needs of students with learning disabilities (Esposito, Guarino, & Caywood, in press). The primary investigator and the panel modified the wording of each question to reflect early childhood and young children with disabilities. Once a draft of TEIYD was written the primary investigator asked four college students studying special education to complete the scale. These students provided the primary investigator with feedback regarding the time it took to complete the scale, the format of the scale, and the wording of three items.

The version of TEIYD used in this study contains 22 items designed to assess efficacy beliefs in four areas: (a) knowledge of procedures related to special education (6 items), (b) knowledge of young children with disabilities (5 items), (c) teaching confidence with young children having a disability and who are included into the general education classroom (7 items), and (d) perceptions of their abilities to implement both effective teaching strategies and modifications to the general education curriculum to meet the needs of young children with disabilities (4 items). Cronbach's alpha for these four subscales of the TEIYD were .927, .965, .949, and .934, respectively. These alpha coefficients exceed the minimal limit of .70 (Nunnally, 1978). A five point Likert-type scale was used to measure participants' confidence rating with anchors 1= no confidence, 2 = little confidence, 3 = moderate confidence, 4 = confident, and 5 = very confident.

Procedures

The institutional review board (IRB) of potential institutions of higher education was called to inquire what, in addition to the permission from Auburn University's IRB,

would be necessary to get clearance for the primary investigator to complete research on their campus. The primary investigator asked each institution whether Auburn University's IRB approval could be used in lieu of their IRB protocol. If permission was granted, the primary investigator obtained written documentation from the offices of the IRB for each data collection site (Appendix H). Next, the primary investigator contacted a professor(s) at each IHE to introduce the study and ask permission to recruit participants from their early childhood teacher training program. If permission was granted, the primary investigator obtained written documentation on the IHE's letterhead. Pursuit of data collection sites stopped once the primary investigator obtained permission from the IRB and the department in 3 data collection sites for each group (ECE, ECSE, and unified), totaling 9 teacher training programs. This next section details the preparation of data collection material, recruitment of participants, and procedures for data collection.

Data Collection Materials

To prepare the data collection materials the primary investigator copied the demographic questionnaire on yellow paper and TEIYD on green paper. The data collection material will be referred to as "research packets." The primary investigator used a coding system on the research packets to identify the three groups (ECE, ECSE, and unified). Numbers 1–199 represented the ECE training programs, 200–399 represented ECSE training programs, and 400–699 represented unified training programs. Each research packet was accompanied by an information sheet and was placed into a large envelope.

Recruitment of Participants

In order to recruit participants there were two phases. Two phases were necessary in order to obtain enough participants, in a timely manner, for each of the three groups. In phase 1, the primary investigator used a liaison at participating IHEs and in phase 2 the primary investigator traveled to the remaining IHEs.

In phase 1 the liaisons assisted the primary investigator in disseminating the research packets to the participants at their IHE and returned the completed packets to the primary investigator. Liaisons were used at two unified data collection sites, one ECSE data collection site, and one ECE data collection site. The liaison followed the data collection procedures detailed in the next subsection. In phase 2 the primary investigator traveled to the remaining data collection sites (one unified, two ECSE, and two ECE). After receiving permission from Auburn University's IRB, the primary investigator made an appointment with an appropriate professor/instructor at each data collection site. The primary investigator then followed the data collection procedures explained in the next subsection.

Data Collection Procedures

The data collection procedures are similar for both phase 1 and phase 2 of the study. The only difference is that a liaison followed the procedure in lieu of the primary investigator. One week (or more) before recruitment of participants, advanced notice to students was given by an announcement or email from the professor about the upcoming appointment (Appendix E). At the beginning of one class session the primary investigator/liaison read a script (Appendix F) explaining the purpose of the study and asked the preservice teachers to stay after class to complete the questionnaire and survey.

The IRB of Auburn University would not allow the primary investigator to disseminate the survey during class time. Thus, the primary investigator asked participants to remain after class to complete the questionnaire and survey.

After the class session, the primary investigator/liaison thanked participants for staying after class and gave directions to the group by reading a script (Appendix G) that explained the contents of the research packets and the procedures. The primary investigator/liaison left the room while participants were completing the paperwork. Leaving the room allowed participation to remain anonymous. If students decided not to participate they could return a blank research packet. Participation in this study typically took approximately ten minutes, but no time limit was established.

Variables

Independent Variables

There were five independent variables in this study: (a) type of program, (b) initial certification, (c) age ranges covered by certification, (d) length of time in teacher training program, and (e) clinical experience. The primary investigator was initially interested in the types of teacher training programs and their relationship with the dependent variable. The primary investigator recognized that the remaining variables may also be related to teachers' sense of efficacy.

Type of program. The first independent variable is the type of teacher training program: separate ECE, separate ECSE, or unified programs. Separate ECE programs are defined as teacher training programs preparing early childhood general education teachers by requiring coursework and field experiences that are directly related to ECE

competencies. The ECE programs were listed in the *National Directory of Early Childhood Teacher Preparation Institutions.* Separate ECSE programs are defined as teacher training programs preparing early childhood special education teachers by requiring coursework and field experiences that are directly related to ECSE competencies. The ECSE programs were listed on the CEC website. Unified programs are defined as programs that are designed for the degree with a newly conceptualized curriculum derived from both ECE and ECSE and are implemented and evaluated by an interdisciplinary team. The unified programs were identified by prior research (Miller & Stayton, 2006) as meeting this definition. The group assignments identified by the primary investigator measured the variable of types of teacher training programs.

Remaining variables. The four remaining independent variables (initial certification, age ranges covered by certification, length of time in teacher training program, and clinical experience) were measured by the demographic questionnaire and are described in the instrument section.

Dependent Variables

The dependent variables in this study were the four subscales of the TEIYD: (a) knowledge of procedures related to special education, (b) knowledge of young children with disabilities, (c) teaching confidence with young children having a disability and who are included into the general education classroom, and (d) perceptions of abilities to implement both effective teaching strategies and modification to the general education curriculum to meet the needs of young children with disabilities.

Research Questions

This study investigated any differences among the type of preservice teacher training programs, initial certification, age ranges covered by certification, length of time in teacher training program, and teaching experience on the dependent measure (TEIYD). The specific research questions were:

1. Are there differences among the type of teacher training programs and program participants' perceived level of teaching efficacy?
2. Are there differences among level of certification and preservice teachers' perceived level of teaching efficacy?
3. Are there differences among age ranges covered by certification and preservice teachers' perceived level of teaching efficacy?
4. Are there differences among length of time in teacher training program and preservice teachers' perceived level of teaching efficacy?
5. Are there differences among teaching experience and preservice teachers' perceived level of teaching efficacy?

Data Analysis

A series of four multivariate analyses of variance (MANOVA) were conducted on the four dependent variables (four subscales of TEIYD). The four subscales were (a) knowledge of procedures related to special education, (b) knowledge of young children with disabilities, (c) teaching confidence with young children having a disability and who are included into the general education classroom, and (d) perceptions of abilities to implement both effective teaching strategies and modification to the general education

curriculum to meet the needs of young children with disabilities. The sum of scores for each subscale was used for analysis.

The independent variable for the first MANOVA was type of teacher training program (separate ECE, separate ECSE, or unified programs). For the second MANOVA, age ranges covered by certification (birth to eight, three to eight, other) was used for the independent variable. The independent variable used for the third MANOVA was length of time in teacher training program (beginning of program, middle of program, end of program). For the final MANOVA, teaching experience (none, little, moderate, a lot, a great deal) was used for the independent variable.

IV. RESULTS

The *Teacher Efficacy for the Inclusion of Young Children with Disabilities* (TEIYD) scale was used to measure perceived efficacy beliefs for the inclusion of young children with disabilities. Participants included preservice teachers participating in an ECE teacher training program, an ECSE teacher training program, and an ECE/ECSE (unified) teacher training program. The survey subscales were (a) knowledge of procedures related to special education, (b) knowledge of young children with disabilities, (c) teaching confidence with young children having a disability and who are included into the general education classroom, and (d) perceptions of abilities to implement both effective teaching strategies and modification to the general education curriculum to meet the needs of young children with disabilities. This chapter presents the results of the statistical analyses used to address the research questions posed in this study. First, a brief description of the participants is presented, followed by results organized by research questions.

Participants

A total of two hundred fifty-seven preservice teachers participated in this study. About half of the participants (n = 129) were enrolled in a unified teacher training

program, while 33% of participants were enrolled in an ECE (n = 85) teacher training program and 17% were enrolled in an ECSE (n = 43) teacher training program.

Research Questions and Results

Reported in this section are the results of the data analysis for the five research questions. A MANOVA was used for the data analysis treatments and data were analyzed using the Statistical Package for Social Sciences 12.0. The dependent variables used for each analysis were the four subscales of the TEIYD: (a) knowledge of procedures related to special education, (b) knowledge of young children with disabilities, (c) teaching confidence with young children having a disability and who are included into the general education classroom, and (d) perceptions of their abilities to implement both effective teaching strategies and modification to the general education curriculum to meet the needs of young children with disabilities. An alpha level of .05 was used for all statistical tests. Each section reports the results of the multivariate test for the entire variate (TEIYD). If a statistically significant multivariate effect was established, an examination of the variate was included by reporting the results of the assessment on each of the four subscales of the TEIYD (Meyers, Gams, & Guarino, 2006).

Research Question 1

Research question 1 stated: Are there differences among the type of teacher training programs and program participants' perceived level of teaching efficacy? The independent variable used for this MANOVA was type of teacher training program (ECE, ECSE, and unified). Using Wilks' Lambda, the dependent variate was

significantly affected by type of teacher training program, Wilks' Lambda = .818, F (8, 492) = 6.49, $p < .001$, partial $\eta^2 = .095$.

Special education procedures. The follow-up univariate tests reported statistically significant difference among the three groups, F (2,252) = 25.86, $p < .001$, partial $\eta^2 = .17$. The LSD Post-Hoc (see Table 7) indicator suggested that ECSE participants (M = 22.80, SD = 4.18) reported significantly higher levels of perceived confidence for special education procedures than did their ECE (M = 16.33, SD = 5.14) and unified (M = 20.33, SD = 5.40) counterparts. Additionally, unified participants reported statistically significant higher levels of perceived confidence for special education procedures than ECE participants.

Knowledge of young children with disabilities. The follow-up univariate tests reported statistically significant difference among the three groups, F (2,252) = 8.68, $p < .001$, partial $\eta^2 = .065$. The LSD Post-Hoc (see Table 7) suggested that ECSE participants (M = 21.85, SD = 3.47) and unified participants (M = 21.02, SD = 3.54) both reported significantly higher levels of perceived confidence for knowledge of young children with disabilities than did ECE participants (M = 19.17, SD = 4.42). No significant finding was identified when ECSE and unified participants were compared on this subscale.

Table 7

Mean Scores, Standard Deviations, and Level of Perceived Confidence for Measures of the Four Subscales of TEIYD and Type of Teacher Training Program

	Special Education Procedures			Knowledge of Young Children with Disabilities			Teaching Confidence			Teaching Strategies and Modifications		
Group	*M*	*SD*	*C*	*M*	*SD*	*C*	*M*	*SD*	*C*	*M*	*SD*	*C*
ECE	16.33	5.14	little	19.17	4.42	moderate	18.73	6.47	little	12.51	3.48	moderate
ECSE	22.80	4.18	moderate	21.85	3.47	confident	24.60	5.49	moderate	15.40	3.10	moderate
Unified	20.33	5.40	moderate	21.02	3.54	confident	23.01	5.62	moderate	14.60	3.62	moderate

**C = level of perceived confidence*

Teaching confidence. The follow-up univariate tests reported statistically significant difference among the three groups, F (2,252) = 18.60, $p < .001$, partial η^2 = .130. The LSD Post-Hoc (see Table 7) suggested that ECSE participants (M = 26.60, SD = 5.49) and unified participants (M = 23.01, SD = 5.62) both reported significantly higher levels of perceived confidence for teaching confidence than did ECE participants (M = 18.73, SD = 6.47). No significant finding was identified when ECSE and unified participants were compared on teaching confidence.

Teaching strategies and modifications. The follow-up univariate tests reported a statistically significant difference among the three groups, F (2,252) = 12.71, $p < .001$,

partial $\eta^2 = .093$. The LSD Post-Hoc (see Table 7) suggests that ECSE participants (M = 15.40, SD = 3.10) and unified participants (M = 14.60, SD = 3.62) both reported significantly higher levels of perceived confidence for teaching strategies and modifications than did ECE participants (M = 12.51, SD = 3.48). No significant finding was identified when ECSE and unified participants were compared on teaching strategies and modifications.

Research Question 2

Research question 2 stated: Are there differences among level of certification and preservice teachers' perceived level of teaching efficacy? The majority of participants (96%) reported earning an initial certification in early childhood education. Due to this high percentage there is not adequate variance for results to be determined for the second research question.

Research Question 3

Research question 3 stated: Are there differences among age ranges covered by certification and preservice teachers' perceived level of teaching efficacy? The independent variable used for this MANOVA was age range of certification (birth to eight, three to five, other). Data related to age ranges birth to three, three to five, and five to eight were not analyzed because there was not enough information. Using Wilks' Lambda no significant differences were identified among the three remaining groups on the dependent variate, Wilks' Lambda = .938, F (8, 474)=1.92, $p > .05$, partial $\eta^2 = .031$.

Research Question 4

Research question 4 stated: Are there differences among length of time in teacher training program and preservice teachers' perceived level of teaching efficacy? The independent variable used for this MANOVA was time in teacher training program (beginning, middle, and end). Using Wilks' Lambda, the dependent variate was significantly affected by how long participants were enrolled in their teacher training program, Wilks' Lambda = .912, F (8, 488)=2.87, p < .01, partial η^2 = .045.

Special education procedures. The follow-up univariate tests reported a statistically significant difference among the three groups, F (2,250) = 6.18, p < .01, partial η^2 = .048. The LSD Post-Hoc (see Table 8) suggested that preservice teachers who are in the middle (M = 19.43, SD = 5.05) and end (M = 20.61, SD = 5.86) of their teacher training program reported significantly higher levels of perceived confidence for special education procedures than did the participants in the beginning (M = 17.12, SD = 6.00) of their teacher training programs. No significant finding was identified when middle and end participants were compared on special education procedures.

Table 8

Mean Scores, Standard Deviations, and Level of Perceived Confidence for Measures of the Four Subscales of TEIYD and Time in Teacher Training Program

	Special Education Procedures			Knowledge of Young Children with Disabilities			Teaching Confidence			Teaching Strategies and Modifications		
Group	*M*	*SD*	*C*	*M*	*SD*	*C*	*M*	*SD*	*C*	*M*	*SD*	*C*
Beg.	17.12	6.00	little	19.71	4.22	moderate	18.87	6.92	little	12.35	3.98	moderate
Middle	19.43	5.05	moderate	20.18	3.81	confident	21.82	5.45	moderate	14.05	3.41	moderate
End	20.61	5.86	moderate	21.59	3.72	confident	23.54	6.39	moderate	14.99	3.42	moderate

** C = level of perceived confidence*

Knowledge of young children with disabilities. The follow-up univariate tests reported a statistically significant difference among the three groups, F (2,250) = 4.70, $p < .05$, partial $\eta^2 = .037$. The LSD Post-Hoc (see Table 8) suggested that preservice teachers who are in the middle (M = 20.18, SD = 3.81) and end (M = 21.60, SD = 3.72) of their teacher training program reported significantly higher levels of perceived confidence for special education procedures than did the participants in the beginning (M = 19.71, SD = 4.22) of their teacher training programs. No significant finding was identified when middle and end participants were compared on knowledge of young children with disabilities.

Teaching confidence. The follow-up univariate tests reported a statistically significant difference among the three groups, F (2,250) = 9.09, $p < .001$, partial η^2 = .069. The LSD Post-Hoc (see Table 8) suggested that preservice teachers who are in the end (M = 23.54, SD = 6.39) of their teacher training program reported significantly higher levels of perceived confidence for teaching than did the students and the beginning (M =18.88, SD = 6.92) and the middle (M =21.82, SD = 5.44). Additionally, students in the middle of their teacher training program reported significantly higher levels of perceived confidence than the students in the beginning of their program.

Teaching strategies and modifications. The follow-up univariate tests reported a statistically significant difference among the three groups, F (2,250) = 8.63, $p < .001$, partial η^2 = .065. The LSD Post-Hoc (see Table 8) suggested that preservice teachers who are in the middle (M = 14.05, SD = 3.41) and end (M = 14.99, SD = 3.42) of their teacher training program reported significantly higher levels of perceived confidence for special education procedures than did the participants in the beginning (M = 12.35, SD = 3.98) of their teacher training programs. No significant finding was identified when middle and end participants were compared on special education procedures.

Research Question 5

Research question 5 stated: Are there differences among teaching experience and preservice teachers' perceived level of teaching efficacy? The independent variable used for this MANOVA was amount of teaching experience: none (0-1 hours); little (1-100 hours); moderate (100-300 hours); a lot (300-1,000 hours); and a great deal (more than 1,000 hours). Using Wilks' Lambda (see Table 9) the dependent variate was significantly

affected by the amount of teaching experience, Wilks' Lambda= .879, F (16, 746)=2.01, $p < .01$, partial $\eta^2 = .032$.

Special education procedures. The follow-up univariate tests reported a statistically significant difference among the five groups, F (4,252) = 6.88, $p < .000$, partial $\eta^2 = .100$. The LSD Post-Hoc (see Table 9) suggested that preservice teachers who have a lot of teaching experience (M = 21.93, SD = 5.23) reported significantly higher levels of perceived confidence for special education procedures than students with no teaching experience (M = 15.60, SD = 6.11), a little teaching experience (M = 17.91, SD = 5.00), and a moderate amount of teaching experience (M = 19.63, SD = 5.46). No significant finding was identified when participants with a lot and a great deal (M = 20.15, SD = 5.82) of teaching experience were compared on special education procedures.

Table 9

Mean Scores, Standard Deviations, and Level of Perceived Confidence for Measures of the Four Subscales of TEIYD and Teaching Experience

	Special Education Procedures			Knowledge of Young Children with Disabilities			Teaching Confidence			Teaching Strategies and Modifications		
Group	*M*	*SD*	*C*	*M*	*SD*	*C*	*M*	*SD*	*C*	*M*	*SD*	*C*
None	15.60	6.11	little	19.40	4.65	moderate	18.90	6.78	little	12.30	4.65	moderate
Little	17.91	4.99	little	19.62	4.08	moderate	20.21	5.83	little	13.17	3.32	moderate
Moderate	19.63	5.46	moderate	20.28	3.71	confident	22.04	5.97	moderate	14.14	3.54	moderate
A lot	21.93	5.23	moderate	22.15	3.51	confident	24.31	6.27	moderate	15.44	3.24	moderate
Great	20.15	5.81	moderate	21.50	3.95	confident	22.45	6.68	moderate	14.30	4.01	moderate

** C= level of perceived confidence*

Knowledge of young children with disabilities. The follow-up univariate tests reported a statistically significant difference among the five groups, F (4,252) = 4.11, p < .01, partial η^2 = .062. The LSD Post-Hoc (see Table 9) suggested that preservice teachers who have a lot of teaching experience (M = 22.15, SD = 3.51) reported significantly higher levels of perceived confidence on knowledge of young children with disabilities than students with no teaching experience (M = 19.40, SD = 4.65), a little teaching experience (M = 19.62, SD = 4.08), and a moderate amount of teaching experience (M = 20.30, SD = 3.71). No significant finding was identified when participants with a lot and

a great deal (M = 21.50, SD = 3.95) of teaching experience were compared on knowledge of young children with disabilities.

Teaching confidence. The follow-up univariate tests reported a statistically significant difference among the five groups, F (4,252) = 4.60, $p < .01$, partial $\eta^2 = .069$. The LSD Post-Hoc (see Table 9) suggested that preservice teachers who have a lot of teaching experience (M = 24.31, SD = 6.27) reported significantly higher perceived level of teaching confidence than students with no teaching experience (M = 18.90, SD = 6.78), a little teaching experience (M = 20.21, SD = 5.83), and a moderate amount of teaching experience (M = 22.04, SD = 5.97). No significant finding was identified when participants with a lot and a great deal (M = 21.83, SD = 6.30) of teaching experience were compared on teaching confidence.

Teaching strategies and modifications. The follow-up univariate tests reported statistically significant difference among the five groups, F (4,252) = 4.33, $p < .01$, partial $\eta^2 = .066$. The LSD Post-Hoc (see Table 9) suggested that preservice teachers who have a lot of teaching experience (M = 15.44, SD = 3.24) reported significantly higher levels of perceived confidence on teaching strategies and modifications than students with no teaching experience (M = 12.30, SD = 4.65), a little teaching experience (M = 13.17, SD = 3.32), and a moderate amount of teaching experience (M = 14.14, SD = 3.54). No significant finding was identified when participants with a lot and a great deal (M = 14.30, SD = 4.01) of teaching experience were compared on teaching strategies and modifications.

V. DISCUSSION

The preservice training literature provides limited studies that bring into comparison unified teacher training programs and those that are separate ECE or separate ECSE (Dunne, 2002; LaMontagne, et al., 2002). A valuable contribution to this limited body of knowledge is this investigation of perceived teaching efficacy of preservice teachers in separate ECE, separate ECSE, or unified teacher training programs. When reading the teacher efficacy literature, findings regarding the strong correlation between teachers' sense of efficacy and educationally productive behaviors are prevalent. Teachers' sense of efficacy has also been identified as having a prominent influence concerning teaching children with disabilities (Allinder, 1994; Brownell & Pajares, 1999; Soodak & Podell, 1993).

Given the established importance of teachers' sense of efficacy, the purpose of this study was to investigate three types of teacher training programs: separate ECE, separate ECSE, and unified by comparing teachers' sense of efficacy concerning the inclusion of young children with disabilities. In this final chapter, interpretations of statistical analysis results will be addressed as they pertain to the research questions. Consideration of the limitations and implications of the findings will follow. Finally, recommendations for future research are suggested.

Results and Interpretation

Differences of Perceived Teaching Efficacy Among the Three Training Programs

There were 257 preservice teachers surveyed. Fifty percent of them were enrolled in a unified teacher training program, 33% were enrolled in a separate ECE teacher training program, and 17% were enrolled in a separate ECSE teacher training program. Based on the results of this study, there are reliable differences among type of teacher training programs and the perceived teaching efficacy concerning the inclusion of young children with disabilities. Preservice teachers participating in ECE teacher training programs reported significantly lower levels of perceived teaching efficacy on all four subscales of the TEIYD than did their ECSE and unified counterparts. These findings confirm earlier evidence reporting that students participating in separate ECE teacher training programs are not spending enough time learning how to teach children with disabilities (Brownell & Pajares, 1999; Bruder & Stayton, 2004; Buell, et al., 1999.)

The subscale showing the largest difference among the groups was *special education procedures* followed by, *teaching confidence concerning including young children with disabilities into the general education classroom*. This finding among preservice teachers supports LaMontagne, et al.'s (2002) finding reporting ECE teacher training program graduates are not receiving competencies necessary to be active participants in the IFSP and IEP process.

Although ECE preservice teachers still reported significantly lower levels of perceived teaching efficacy concerning *knowledge of young children with disabilities,* this subscale showed the smallest difference among the three groups. Most states require

at least one special education course for ECE preservice teachers and this course typically emphasizes the characteristics of students with disabilities (Reed & Monda-Amaya, 1995). This trend in ECE teacher training programs may have contributed to this subscale (*knowledge of young children with disabilities*) showing the least amount of difference among the three groups.

Among the four subscales of the TEIYD there was only one (*special education procedures*) leading to a significant difference between preservice teachers enrolled in a unified teacher training program and those enrolled in an ECSE teacher training program. Teachers enrolled in an ECSE teacher training program reported higher levels of perceived confidence regarding special education procedures.

One plausible interpretation of this finding is that preservice teachers participating in unified programs are receiving comparable training concerning the inclusion of children with disabilities in the general education classroom. In regards to *special education procedures*, however, preservice teachers enrolled in ECSE programs may be receiving a more intense training on special education laws and regulations, the process of qualifying students for special education, and on IFSPs and IEPs. The small sample size of ECSE teacher training participants may have contributed to the inability to identify additional differences between ECSE teacher training programs and unified teacher training programs.

Relationship between Level of Certification and Perceived Efficacy

Adequate variance among the sample does not exist to determine whether the level of certification (initial or advanced degree) is related to teachers' perceived level of

teaching efficacy. The design of the study contributed to the end result of having the majority of participants (96%) earning their initial certification. Recruiting from graduate programs may have provided enough variance to answer this research question.

Relationships among Certification Age Ranges and Perceived Efficacy

Among the three types of certification (*birth to eight*, *three to five*, and *other*) analyzed, there were no differences among the groups. The variable *other* is difficult to interpret. The two remaining variables, however, *birth to eight* and *three to five*, can be interpreted to mean that a more narrowed scope for certification (three to five) does not contribute a significant difference to perceived teaching efficacy concerning teaching young children with disabilities in an inclusive setting.

Relationships among Length of Time in Training Programs and Perceived Efficacy

It seems logical that the length of time in a teacher training program would be positively correlated with the level of perceived teaching efficacy. This study suggests that preservice teachers further along in their teacher training program do, in fact, have higher levels of perceived teaching efficacy concerning the inclusion of young children with disabilities. Preservice teachers in the *middle* and *end* of their teaching training programs reported higher levels of perceived teaching efficacy than preservice teachers in the *beginning* of their teacher training program on all four subscales of the TEIYD. *Teaching confidence concerning including young children with disabilities in the general education classroom* was the subscale that showed the largest difference among the three groups. This was the only subscale where there was a significant difference between students in the *middle* and students in the *end* of their teacher training program. Since

students at the *end* of their training program are student teaching, it is reasonable that they would report more confidence on this subscale than students in the *middle* of their teacher training program.

Relationships among Teaching Experience and Perceived Efficacy

Teachers' sense of efficacy did increase with amount of teaching experience; however, a threshold was reached as greater experience was attained. There was no significant difference on any of the four subscales between students with *a lot* of teaching experience (300–1,000 hours) and *a great deal* of teaching experience (more than 1,000 hours). Typically, teachers' sense of efficacy increases with experience (Campbell, 1996), therefore, it would seem logical that students with more than 1,000 hours of teaching experience would have a greater level of perceived teaching efficacy than students with more than 300 hours of teaching experience, but this finding was not identified.

A possible explanation for no identifiable difference between the two groups is the small sample size of participants with *a great deal* (7.8%) of teaching experience. Another possibility is related to the actual wording of the item for *a lot* of teaching experience. The large span of hours (300–1,000) may misguide the findings. For instance, it cannot be determined whether these preservice teachers have 400 hours or 950 hours of teaching experience. If these students have closer to 950 hours of teaching experience, then this makes their amount of teaching experience very similar to those reporting a *great deal* (more than 1,000 hours). This similarity may have contributed to the demarcation. Lastly, the ceiling effect in these preservice teachers' perceived teaching

efficacy when compared to the amount of teaching experience may be a result of the demands and structure of the teacher training program. Possibly these preservice teachers may be more conservative in their level of confidence because they are relying heavily on their professors, supervisors, and/or cooperating teachers for guidance in their teaching decisions.

Limitations

This study measured perceived teaching efficacy concerning the inclusion of children with disabilities into the general education classroom. Perceived teaching efficacy should not be confused with actual teaching effectiveness. Perceived teaching efficacy may underestimate, overestimate, or accurately reflect actual teaching effectiveness (Wheatley, 2005). To measure the perceived teaching efficacy the primary investigator relied on a self reporting instrument. The limitations of studies that rely on self reporting instruments include the accuracy of participant recall and the participants' willingness to be forthright with their answers. Additionally, quantitative responses are opened to various interpretations (Wheatley, 2005). This study, therefore, would have been strengthened if participants were asked to explain teaching strategies or modifications in open ended questions to add qualitative data to the quantitative findings. An additional technique to strengthen the study would be an objective observation measure of preservice teachers during their student teaching placement. The scale used in this study covers a range of behaviors associated with inclusive practices. This vast range may limit the opportunity to improve specific facets of a teacher training program.

Lastly, an increase in the ECSE sample size may have revealed more differences among the groups.

Implications

The purpose of this study was to investigate three types of early childhood teacher training programs: separate ECE, separate ECSE, and unified by comparing teachers' sense of efficacy concerning the inclusion of young children with disabilities. Teachers participating in separate ECE teacher training programs scored significantly lower on all four subscales of the TEIYD compared to their ECSE and unified counterparts. This evidence implies that preservice teachers participating in separate ECE teacher training programs do not feel as confident to successfully teach children with disabilities as their ECSE and unified counterparts. The meanings of separate ECE teacher efficacy doubts may be explained by their lack of exposure to ECSE content and direct experiences with children having disabilities (Dunne, 2002; Reed and Monda-Amaya, 1995). Curriculum content typically missing from ECE teacher training programs include (a) interdisciplinary teaming, (b) modifying and accommodating the general education curriculum, and (c) organizing the classroom to decrease behavior disruptions. Graduates from ECE teacher training program may not have any practical experiences with an inclusion classroom or even with children having disabilities.

The reality is that these teachers who do not feel confident in their beliefs about including children with disabilities in their classroom, will most likely have a child with a disability enrolled in their classroom. Unfortunately, these teachers will rely on inservice

training to fill the void that was missed during preservice training. Although inservice training may be very effective, in some cases it may be too late or the training may not be enough to meet the pressing needs of the students that are currently enrolled in their class. These data regarding ECE teacher training programs confirms what has already been established in previous research. The present state of ECE teacher training is one of the motivating factors for states to develop a blended, or unified, early childhood teacher training program.

According to the findings in this particular study both unified and ECSE preservice teachers are reporting similar confidence levels regarding their perceived efficacy beliefs concerning the actual instruction of young children with disabilities in a general education setting. The only significant difference between ECSE and unified training fell under special education procedures. This finding reveals a critical difference between ECSE and unified teacher training programs that needs to be addressed. If more states continue to unify ECSE and ECE programs, are we going to lose specific ECSE training regarding special education procedures? If this is the case, the early childhood field would potentially have teachers with only a general idea of how children qualify for special education services or how to draft an IFSP or an IEP.

A probable reason for this significant difference is that unified programs may not have the time to devote to the special education evaluation process or the IFSP and IEP process. Unified programs may focus more on the actual teaching of young children with disabilities, not on the IFSP/IEP, or how these children qualify for services. Nevertheless, someone needs to be trained on how to qualify children and develop a quality

individualized education plan. Typically this responsibility rests on the special educator. If this special educator graduated from a unified program, however, he or she may not have received specific training regarding the evaluation and assessment process, or how to write measurable and observable goals for an IFSP/IEP.

Future Research

The need for future research as it pertains to refining early childhood teacher training programs is vast. A continued comparison of the three types of teacher training programs will be beneficial as personnel preparation leaders develop the most effective program to training early childhood teachers to teach all children. Future investigations should be related to:

1. Analyzing ECSE and unified teacher training programs to identify additional areas of significant differences that may jeopardize the quality of teaching children with disabilities would receive.
2. Comparing the curriculum content in ECSE and unified teacher training programs specifically related to qualifying students for special education services, writing individualized education and service plans, teaching children with severe disabilities, and teaching children in the 0-3 age range.
3. Tracking graduates from all three types of programs to investigate what type of jobs they have obtained and whether they are confident in their positions.

4. Implementing objective observation measures of graduates from all three types of programs during various teaching related duties. Interviews with teachers and with administrators should also be included.
5. An analysis of policies regarding whether graduates from unified programs in one state will meet the qualifications to be a special educator in neighboring states.

Conclusion

An interpretation of the literature review regarding ECE, ECSE, and unified teacher training programs produced the following three conclusions: (a) general educators trained at separate ECE programs are typically not prepared to teach children with disabilities in inclusive settings; (b) special educators trained at separate ECSE programs may lack essential collaboration skills and an understanding of the general education curriculum to teach children with disabilities in inclusive settings; and (c) teachers trained at unified programs are not prepared to teach children with severe or multiple disabilities. Additionally, it is probable that teachers trained at unified programs will not be prepared to teach children birth through age 3.

This present study can contribute to the aforementioned conclusions by confirming that ECE teacher training programs are in deed falling short in preparing future teachers to instruct children in an inclusive setting. This study, however, does not support the conclusion that ECSE programs may lack essential collaboration skills and an understanding of the general education curriculum to teach children with disabilities in

inclusive settings. According to the results of this study, preservice teachers participating in separate ECSE teacher training programs reported higher levels of perceived teaching efficacy on teaching strategies and modifications than their ECE counterparts.

This study identified that participants in unified teacher training programs and ECSE teacher training programs reported similar confidence levels regarding the knowledge of children with disabilities and the ability to differentiate instruction to meet the needs of a variety of students in a general education setting. Unfortunately, this study did not specifically measure whether preservice teachers participating in unified programs feel confident in teaching children with severe disabilities or in the 0-3 age range. Therefore, these shortcomings of unified programs still need to be explored. According to this present study, the shortcomings identified in unified programs were related to qualifying students for special education and writing and implementing individualized education and service plans.

Personnel preparation programs need to begin addressing the shortcomings of unified teacher training programs before making this method of training a precedent across the country. The leaders of personnel preparation programming need to ensure that we have quality educators serving the role of special education teachers. Potentially, unified programs may need to offer an area of concentration where preservice teachers can focus on attaining skills specifically related to evaluating and assessing children with disabilities, writing and implementing individualized education and service plans, working with children having severe disabilities, and working with the 0-3 age range. If this is not addressed, we may see graduates of unified programs not being qualified to fill

the role of special education positions, unless they earn a Masters degree in special education.

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APPENDICES

APPENDIX A

THE TEACHER EFFICACY FOR THE INCLUSION OF STUDENTS WITH LEARNING DISABILITIES SCALE

The Teacher Efficacy for the Inclusion of Students with Learning Disabilities Scale
(TEISLDS; Esposito, Guarino, & Caywood, in press)

Using the 5-point scale below, indicate your confidence level for each of the following questions (1 = no confidence, 5 = very confident)

I am confident that I

1. understand the Laws and Regulations related to Special Education.	1	2	3	4	5
2. understand the process of qualifying students for Special Education Services	1	2	3	4	5
3. understand the information contained in an IEP	1	2	3	4	5
4. understand my role in serving students with an active IEP	1	2	3	4	5

I am confident that I

5. can define what a learning disability is	1	2	3	4	5
6. understand what the manifestations of a Learning Disability are	1	2	3	4	5
7. understand the difficulties a SWLD encounters in school	1	2	3	4	5
8. understand the exceptional needs of a SWLD	1	2	3	4	5

I am confident that I

9. know the most effective teaching strategies for SWLD	1	2	3	4	5
10. can modify instructional practices to meet the needs of SWLD	1	2	3	4	5
11. understand how to break learning tasks down into sub components	1	2	3	4	5
12. understand what appropriate learning tasks for SWLD are	1	2	3	4	5
13. can develop learning tasks based on IEP goals and objectives	1	2	3	4	5

I am confident that I

14. can make appropriate curriculum modification to meet SWLD needs	1	2	3	4	5
15. select curriculum that SWLD can read and understand	1	2	3	4	5
16. modify homework a SWLD can independently complete	1	2	3	4	5
17. assign grades to accurately reflect a SWLD performance	1	2	3	4	5

APPENDIX B

TEACHER EFFICACY FOR THE INCLUSION OF YOUNG CHILDREN WITH DISABILITIES (TEIYD) SCALE

The Teacher Efficacy for the Inclusion of Young Children with Disabilities

Using the 5- point scale below, indicate your confidence level for each of the following questions.

1	2	3	4	5
No Confidence	Little Confidence	Moderate Confidence	Confident	Very Confident

I am confident that I

1. understand the Laws and Regulations related to early childhood special education.

1 2 3 4 5

2. understand the process of qualifying students for early childhood special education services.

1 2 3 4 5

3. understand the information contained in an Individualized Family Service Plan (IFSP).

1 2 3 4 5

4. understand the information contained in an Individualized Education Plan (IEP).

1 2 3 4 5

5. understand my role in serving students with an active IFSP.

1 2 3 4 5

6. understand my role in serving students with an active IEP.

1 2 3 4 5

I am confident that I

7. know how disabilities can impact a young child's social relationships.

1 2 3 4 5

8. know how disabilities can impact a young child's language development.

1 2 3 4 5

9. know how disabilities can impact a young child's cognitive skills.

1 2 3 4 5

The Teacher Efficacy for the Inclusion of Young Children with Disabilities

Using the 5- point scale below, indicate your confidence level for each of the following questions.

1	2	3	4	5
No Confidence	Little Confidence	Moderate Confidence	Confident	Very Confident

I am confident that I

10. know how disabilities can impact a young child's motor skills.

1 2 3 4 5

11. know how disabilities can impact a young child's self-help skills.

1 2 3 4 5

I am confident that I

12. know the most effective teaching strategies for young children with disabilities.

1 2 3 4 5

13. know the most effective strategies for working with families of young children with disabilities.

1 2 3 4 5

14. can modify instructional practices to meet the needs of young children with disabilities in an inclusive setting.

1 2 3 4 5

15. understand how to break learning tasks down into sub components.

1 2 3 4 5

16. understand what appropriate learning tasks are for young children with disabilities.

1 2 3 4 5

17. can develop learning tasks for the inclusive setting based on IFSP goals and objectives.

1 2 3 4 5

18. can develop learning tasks for the inclusive setting based on IEP goals and objectives.

1 2 3 4 5

The Teacher Efficacy for the Inclusion of Young Children with Disabilities

Using the 5- point scale below, indicate your confidence level for each of the following questions.

1	2	3	4	5
No Confidence	Little Confidence	Moderate Confidence	Confident	Very Confident

I am confident that I

19. can make appropriate classroom environment modifications to meet the needs of young children with disabilities in inclusive settings.

1 2 3 4 5

20. can select curriculum appropriate for young children with disabilities in inclusive settings.

1 2 3 4 5

21. can modify classroom assignments for young children with disabilities in inclusive settings.

1 2 3 4 5

22. can collect data to accurately reflect the performance of young children with disabilities.

1 2 3 4 5

APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

1. Is this your initial certification in the field of early childhood?
    a. Yes
    b. No

2. What age range will be covered by your teaching certification? (Circle all that apply.)
    a. Birth to Eight
    b. Birth to Three
    c. Three to Five
    d. Three to Eight
    e. Five to Eight
    f. Other _____

3. How far along are you in the teacher training program (not including university core curriculum)?
    a. I am in the beginning of the teacher training program (*i.e., 1st semester of teacher program, introduction courses*).
    b. I am in the middle of the teacher training program (*i.e., 2nd or 3rd semester of teacher program, content courses*).
    c. I am in the end of the teacher training program (*i.e., final semester of teacher program, internship*).

4. How much clinical teaching experience do you have?
    a. No teaching experience (0–1 hours)
    b. Little teaching experience (1–100 hours)
    c. Moderate amount of teaching experience (100–300 hours)
    d. A lot of teaching experience (300–1,000 hours)
    e. A great deal of teaching experience (more than 1,000 hours)

APPENDIX D

INSTITUTION OF HIGHER EDUCATION (IHE) IDENTIFICATION FORM

Institution of Higher Education (IHE) Identification Form

Name of IHE: _____ Code: _____

Name of Contact: _____

Contact Information: _____

Type of IHE: _____

1. What type of bachelor's degree does your teacher training program offer?

2. Is your program designed specifically for the degree?

3. Is the program derived from professional unification and intentional blending of philosophy and content from ECE and ECSE?

4. Has the program produced a newly conceptualized curriculum?

5. Is the program developed, implemented, and evaluated by an interdisciplinary team of faculty from essential disciplines?

APPENDIX E

E-MAIL SCRIPT

Email or Announcement before Recruitment
(Primary Investigator)

I am assisting Shelley Walls, a doctoral candidate in the Rehabilitation and Special Education Department at Auburn University by helping collect data for her dissertation. Shelley will be coming to class next week to tell you about her study and invite you to participate. If you are interested in helping she will ask you to stay after class and complete a short survey and demographic questionnaire. These forms typically take approximately five minutes to complete. She will be coming to class on _____.

Email or Announcement before Recruitment
(Liaison)

I am assisting Shelley Walls, a doctoral candidate in the Rehabilitation and Special Education Department at Auburn University by helping collect data for her dissertation. If you are interested in helping I will ask you to stay after class and complete a short survey and demographic questionnaire. These forms typically take approximately five minutes to complete. I will tell you more about her study and invite you to participate on _____.

APPENDIX F

PARTICIPANT RECRUITMENT SCRIPT

Script to Recruit Participants
(Primary Investigator)

Hello, my name is Shelley Walls. I am a doctoral candidate in the Rehabilitation and Special Education Department at Auburn University. The reason I am here is to collect data for my dissertation. For my dissertation I am investigating three types of teacher training programs including early childhood special education, early childhood general education, and teacher training programs that have unified early childhood special education and general education into one program. Specifically, I am interested in how these programs are preparing new teachers to teach young children with disabilities in the general education classroom. To achieve this goal I am asking participants to stay after class and complete a short survey and a demographic questionnaire. Participation in this study typically takes approximately ten minutes. Your participation will remain anonymous and will no way impact your grade or status in this class.

Script to Recruit Participants
(Liaison)

I am assisting a doctoral candidate in the Rehabilitation and Special Education Department at Auburn University by helping collect data for her dissertation. For her dissertation she is investigating three types of teacher training programs including early childhood special education, early childhood general education, and teacher training programs that have unified early childhood special education and general education into one program. Specifically, she is interested in how these programs are preparing new teachers to teach young children with disabilities in the general education classroom. If you are interested in helping I am inviting you to stay after class and complete a short survey and a demographic questionnaire. Participation in this study typically takes approximately ten minutes. Your participation will remain anonymous and will no way impact your grade or status in this class.

APPENDIX G

DATA COLLECTION SCRIPT

Script for Data Collection

Thank you for being willing to stay after class. You will be receiving an envelope containing a white form to read and a yellow and green form to complete. You may read and keep the white information sheet. This letter tells you more about the study and provides you with contact information. To protect your anonymity, please do not write any identifying information on the yellow or green forms. First, you will complete the yellow form, which is the demographic questionnaire. Next you will complete the green form, which is *The Teacher Efficacy for the Inclusion of Young Children with Disabilities Scale*. Once you complete both forms, please return them to the envelope and drop them into the box labeled "SURVEYS". Again, thank you for your time and your willingness to participate.

APPENDIX H

INSTITUTIONAL REVIEW LETTERS

Auburn University

Auburn University, Alabama 36849

Office of Human Subjects Research
307 Samford Hall

Telephone: 334-844-5966
Fax: 334-844-4391
hsubjec@auburn.edu

November 30, 2006

MEMORANDUM TO: Ms. Shelley Walls
RSED

PROTOCOL TITLE: "Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities"

IRB FILE NO.: #06-208 EX 0611

APPROVAL DATE: November 3, 2006
EXPIRATION DATE: November 2, 2007

The referenced protocol was approved "Exempt" from further review under 45 CFR 46.101 (b)(2) by IRB procedure on November 3, 2006. You should retain this letter in your files, along with a copy of the revised protocol and other pertinent information concerning your study. If you should anticipate a change in any of the procedures authorized in this protocol, you must request and receive IRB approval prior to implementation of any revision. Please reference the above IRB file number in any correspondence regarding this project.

If you will be unable to file a Final Report on your project before November 2, 2007, you must submit a request for an extension of approval to the IRB no later than October 15, 2007. If your IRB authorization expires and/or you have not received written notice that a request for an extension has been approved prior to November 2, 2007, you must suspend the project immediately and contact the Office of Human Subjects Research for assistance.

A Final Report will be required to close your IRB project file. Please use the approved, stamped version of your information sheet in recruiting participants.

If you have any questions concerning this Board action, please contact the Office of Human Subjects Research at 844-5966.

Sincerely,

Niki L. Johnson, JD, MBA, Director
Office of Human Subjects Research
Research Compliance Auburn University

cc: Dr. Phil Browning
Dr. Samara Baird

From: Shelley Walls
To: worden@udel.edu
Date: Thursday - March 1, 2007 12:06 PM
Subject: Re: IRB approval

Yeah! Thanks for the good news. Will I be receiving any letter from your IRB? I need an official letter giving me permission.

For my sample I am looking for students that are in the beginning, middle, and end of their teacher training program. If memory serves me correctly you have one last cohort in the ECE program and the other students are in the unified program. If possible, I would like to have access to the students that are in the General ECE option in addition to students in the unified option.

I will wait to make travel plans until I hear what days and dates are going to work. You and Cynthia both have a class on a Tuesday. Are there any Tuesdays that will not work? When is your Spring Break? How many students does Cynthia have in her classes and where are they in their program?

I am thrilled to have your teacher training program as a part of my sample!

Yeah!

Shelley

>>> "Lynn Worden" <worden@udel.edu> 03/01/07 11:30 AM >>>
Shelley,
Good news. Your study was granted IRB approval. I am contacting faculty regarding getting you access to students. You can definitely meet with my student teachers (21 students, Tuesday evenings) and my colleague, Cynthia Pans (teaches two classes T/Th during the day). I have cc'd her because she does similar work to what you are doing and is very interested in your instrument. I'll let you know if any other faculty are willing to have you come to class to explain the study.

Congratulations!
Lynn

Lynn Worden, Ph.D.
Assistant Professor
Undergraduate Coordinator
Department of Individual and Family Studies
107 Alison West

University of Delaware
Newark, DE 19716
Phone: 302-831-1922
Fax: 302-831-8776

1856 2006
AUBURN UNIVERSITY
Sesquicentennial

CURRICULUM
AND TEACHING

COLLEGE OF
EDUCATION

October 10, 2006

Shelley Walls
Rehabilitation and Special Education
1228 Haley Center
Auburn University
Auburn, AL 36849

Dear Shelley Walls,

I received your request to recruit participants from our early childhood department for the purposes of your research study. I recognize that you, Shelley Walls, will serve as the primary investigator of the study titled, *Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities.* I understand that this study will investigate differences between types of preservice teacher training programs and the moderating effects of student characteristics on the dependent measure, *Teacher Efficacy for the Inclusion of Young Children with Disabilities.*

I am writing to inform you that I agree to provide on-site location(s) in order for you to recruit participants from our early childhood teacher training program. I look forward to hearing from you to schedule your appointments so that you can make a short announcement at the beginning of class to invite students to stay after class to complete the research packets. I realize that it is your desire to recruit participants that are in the beginning, middle, and end of the teacher training program and who are earning a baccalaureate degree.

Sincerely,

Professor & Program Coordinator
Early Childhood Education

UNIVERSITY OF DELAWARE

COLLEGE OF HUMAN SERVICES, EDUCATION & PUBLIC POLICY

DEPARTMENT OF INDIVIDUAL AND FAMILY STUDIES

111 Alison West
University of Delaware
Newark, DE 19716-3301
Ph: 302/831-2969
Fax: 302/831-8776

September 19, 2006

Shelley Walls
Rehabilitation and Special Education
1228 Haley Center
Auburn University
Auburn, AL 36849

Dear Shelley Walls,

I received your request to recruit participants from our early childhood education program for the purposes of your research study. I recognize that you, Shelley Walls, will serve as the primary investigator of the study titled, *Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities.* I understand that this study will investigate differences between types of preservice teacher training programs and the moderating effects of student characteristics on the dependent measure, *Teacher Efficacy for the Inclusion of young Children with Disabilities.*

I am writing to inform you that, once IRB approval is granted by the University of Delaware, I agree to provide on-site location(s) in order for you to recruit participants from our early childhood teacher training program. I look forward to hearing from you to schedule your appointments so that you can make a short announcement at the beginning of class to invite students to stay after class to complete the research packets. I realize that it is your desire to recruit participants who are in the beginning, middle, and end of the teacher training program and who are earning a baccalaureate degree.

Sincerely,

Lynn J. Worden
Assistant Professor
Early Childhood Education Coordinator

Reply Read Later
Mail Properties

From: "Arrington, Tamara" <tarri2@email.uky.edu> Wednesday - August 23, 2006 12:47 PM
To: <wallssd@auburn.edu>
Subject: FW: Auburn University's IRB
Attachments: Mime.822 (6367 bytes)

Hi Shelley - Below you will find the responses of two of my colleagues here at UK - both agreeing that per UK policy, you do not need to go through UK's IRB.

Cordially,
Tamara

Tamara Arrington, MA
Research Education Specialist
Office of Research Integrity
University of Kentucky
403 Kinkead Hall
Lexington, KY 40506-0057
Ph: (859) 257-1639
e-mail: tarri2@email.uky.edu
www.rgs.uky.edu/ori

-----Original Message-----
From: Ryan, John
Sent: Wednesday, August 23, 2006 1:41 PM
To: Arrington, Tamara
Cc: Kolasa, Amy
Subject: RE: Auburn University's IRB

I concur . . . strange as it may seem, without UK study personnel involved , the only "OK" needed here appears to be one from the UK Early Childhood program representatives. John

-----Original Message-----
From: Kolasa, Amy
Sent: Tuesday, August 22, 2006 3:46 PM
To: Arrington, Tamara; Ryan, John
Subject: RE: Auburn University's IRB

If no one from UK (faculty/staff/student) is involved as study personnel, and the only thing she's really doing here is recruiting subjects, then all she needs to do from our end is get a letter of support from the appropriate individual in the Early Childhood program to conduct her research here. (I'm assuming from her e-mail that the proposed participants are UK faculty/staff/students...?)

I don't see any other concerns based on the information she has provided.

Amy Kolasa, MS, CIP
University of Kentucky
Office of Research Integrity
312 Kinkead Hall
Lexington, KY 40506-0057
tel: (859) 257-9425
fax: (859) 257-8995
akolasa@uky.edu

-----Original Message-----
From: Arrington, Tamara
Sent: Tuesday, August 22, 2006 2:49 PM
To: Ryan, John; Kolasa, Amy
Subject: FW: Auburn University's IRB

Would each of you please advise me as to how to best respond to this individual? I want to be sure not to miss represent any issues or requirements.
Thanks, Tamara

Tamara Arrington, MA
Research Education Specialist
Office of Research Integrity
University of Kentucky
403 Kinkead Hall

Lexington, KY 40506-0057
Ph: (859) 257-1639
e-mail: tarri2@email.uky.edu
www.rgs.uky.edu/ori

CONFIDENTIALITY STATEMENT

-----Original Message-----
From: Shelley Walls [mailto:wallssd@auburn.edu]
Sent: Tuesday, August 22, 2006 11:02 AM
To: Arrington, Tamara
Subject: Auburn University's IRB

Tamara Arrington,

My name is Shelley Walls and I am a doctoral candidate in the special education department at Auburn University. For my dissertation I would like to recruit participants from University of Kentucky's Early Childhood Program. I will be getting approval through Auburn University's IRB, which has federal wide assurance, but I wanted to see if I needed any additional approval through your IRB office. I am wondering if I need to submit a protocol to the IRB at University of Kentucky for approval, or can I submit Auburn University's IRB approval in lieu of yours?

Thank you,

Shelley D. Walls, M.Ed.
Doctoral Candidate
Department of Rehabilitation and Special Education Auburn University, AL 36849
706-615-9011
wallssd@auburn.edu

UNIVERSITY OF KENTUCKY

College of Education
Department of Special Education and Rehabilitation Counseling
229 Taylor Education Building
Lexington, KY 40506-0001
(859) 257-4713
Fax: (859) 257-1325
www.uky.edu

September 19, 2006

Shelley Walls
Rehabilitation and Special Education
1228 Haley Center
Auburn University
Auburn, AL 36849

Dear Shelley Walls,

I received your request to recruit participants from our early childhood department for the purposes of your research study. I recognize that you, Shelley Walls, will serve as the primary investigator of the study titled, *Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities.* I understand that this study will investigate differences between types of preservice teacher training programs and the moderating effects of student characteristics on the dependent measure, *Teacher Efficacy for the Inclusion of young Children with Disabilities.*

I am writing to inform you that I agree to serve as a liaison for your research study. I understand that my responsibilities include recruiting participants by reading a script at the beginning of class, remaining after class to disseminate the research packets to preservice teachers of my teacher training program who are the age of 19 and over, and returning the completed research packets to you in the stamped envelope that will be provided. I understand that it is your desire for me to recruit participants that are in the beginning, middle, and end of the teacher training program and who are earning a baccalaureate degree.

I agree to complete these responsibilities before December 2006. I look forward to our meeting or phone conference to review the scripts and research packets so that I feel prepared before I begin recruitment.

Sincerely,

Katherine M. McCormick, Ph.D.
Associate Professor
Interdisciplinary Early Childhood Education

Human Subjects Review Board
Office of Sponsored Programs
270-745-4652
FAX: 270-745-4211
[illegible]

Western Kentucky University
1906 College Heights Blvd. #11026
Bowling Green, KY 42101-1026

The Spirit Makes the Master

In future correspondence please refer to HS07-126, February 7, 2007

Shelley Walls
1228 Haley Center
Auburn University
Auburn, AL 36849

Dear Shelley:

Your revision to your research project, "Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities," was reviewed by the HSRB and it has been determined that risks to subjects are: (1) minimized and reasonable; and that (2) research procedures are consistent with a sound research design and do not expose the subjects to unnecessary risk. Reviewers determined that: (1) benefits to subjects are considered along with the importance of the topic and that outcomes are reasonable; (2) selection of subjects is equitable; and (3) the purposes of the research and the research setting is amenable to subjects' welfare and producing desired outcomes; that indications of coercion or prejudice are absent, and that participation is clearly voluntary.

1. In addition, the IRB found that you need to orient participants as follows: (1) signed informed consent is not required as participation will imply consent; (2) Provision is made for collecting, using and storing data in a manner that protects the safety and privacy of the subjects and the confidentiality of the data. (3) Appropriate safeguards are included to protect the rights and welfare of the subjects.

   This project is therefore approved at the Exempt Review Level until October 15, 2007

2. Please note that the institution is not responsible for any actions regarding this protocol before approval. If you expand the project at a later date to use other instruments please re-apply. Copies of your request for human subjects review, your application, and this approval, are maintained in the Office of Sponsored Programs at the above address. Please report any changes to this approved protocol to this office. Also, please use the stamped Informed Consent documents that are included with this letter.

Sincerely,

Sean Rubino, M.P.A.
Compliance Manager
Office of Sponsored Programs
Western Kentucky University

cc: HS file number Walls HS07-126

Auburn University

Auburn University, Alabama 36849-5226

Department of Rehabilitation & Special Education

1228 Haley Center

Telephone: (334) 844-5943

INFORMATION SHEET
for Research Study Entitled

Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities

You are invited to participate in a research study that is investigating the relationship between preservice training and perceived confidence for teaching young children with disabilities in the general classroom. This study is being conducted by Shelley Walls, MEd. under the supervision of Samera Baird, PhD at Auburn University. You were selected as a possible participant because you are a current student of an early childhood preservice teacher training program.

If you decide to participate, enclosed in the envelope is a demographic questionnaire and a survey for you to complete. These tasks will take you approximately ten minutes. Upon completion please return the completed forms to the envelope and place the envelope in the box labeled SURVEYS.

Any information obtained in connection with this study will remain anonymous. Information collected through your participation may be used to fulfill research requirements for a dissertation, published in a professional journal, and/or presented at a professional meeting. You may withdraw from participation at any time, without penalty, however, after you have provided anonymous information we will be unable to withdraw your data since there will be no way to identify individual information. The numbers on top of the survey represent the institution of higher education you are attending. These numbers can not be used to trace back individual participants.

Your decision whether or not to participate will not jeopardize your future relations with Auburn University. If you have any questions please contact Shelley Walls and/or Samera Baird at 334-844-5943 and we will be happy to answer them. For more information regarding your rights as a research participant you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu .

Thank you for taking the time to read about this study. If you decide to participate you will be providing valuable information regarding preservice training of early childhood teachers. This information will be used to improve future preservice programs and ultimately the education of young children across the country.

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

Shelley D. Walls 11/21/06 Samera M Baird 12/12/06

Investigator's signature Date Co-investigator's signature Date

HSRB APPLICATION # 1507-126

APPROVED 2/7/07 to 10/5/07

EXEMPT EXPEDITED FULL BOARD

DATE APPROVED 2/7/07

A LAND-GRANT UNIVERSITY

HUMAN SUBJECTS
OFFICE OF RESEARCH
PROJECT # 06-208 EX 0611
APPROVED 11-3-06 TO 11-2-07

Special Instructional Programs
College of Education
and Behavioral Sciences
270-745-4607
FAX: 270-745-6428

WESTERN KENTUCKY UNIVERSITY

The Spirit Makes the Master

Western Kentucky University
1906 College Heights Blvd. #71030
Bowling Green, KY 42101-1030

September 19, 2006

Shelley Walls
Rehabilitation and Special Education
1228 Haley Center
Auburn University
Auburn, AL 36849

Dear Shelley Walls,

I received your request to recruit participants from our early childhood department for the purposes of your research study. I recognize that you, Shelley Walls, will serve as the primary investigator of the study titled, *Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities*. I understand that this study will investigate differences between types of preservice teacher training programs and the moderating effects of student characteristics on the dependent measure, *Teacher Efficacy for the Inclusion of young Children with Disabilities*.

I am writing to inform you that I agree to serve as a liaison for your research study. I understand that my responsibilities include recruiting participants by reading a script at the beginning of class, remaining after class to disseminate the research packets to preservice teachers of my teacher training program who are the age of 19 and over, and returning the completed research packets to you in the stamped envelope that will be provided. I understand that it is your desire for me to recruit participants that are in the beginning, middle, and end of the teacher training program and who are earning a baccalaureate degree.

I agree to complete these responsibilities before December 2006. I look forward to our meeting or phone conference to review the scripts and research packets so that I feel prepared before I begin recruitment.

Sincerely,

Vicki D. Stayton

Vicki D. Stayton, Ph.D.
Professor

UAB SCHOOL OF EDUCATION

Department of Curriculum and Instruction

September 19, 2006

Shelley Walls
Rehabilitation and Special Education
1228 Haley Center
Auburn University
Auburn, AL 36849

Dear Shelley Walls,

I received your request to recruit participants from our early childhood department for the purposes of your research study. I recognize that you, Shelley Walls, will serve as the primary investigator of the study titled, *Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities.* I understand that this study will investigate differences between types of preservice teacher training programs and the moderating effects of student characteristics on the dependent measure, *Teacher Efficacy for the Inclusion of young Children with Disabilities.*

I am writing to inform you that I agree to provide on-site location(s) in order for you to recruit participants from our early childhood teacher training program. I look forward to hearing from you to schedule your appointments so that you can make a short announcement at the beginning of class to invite students to stay after class to complete the research packets. I realize that it is your desire to recruit participants that are in the beginning, middle, and end of the teacher training program and who are earning a baccalaureate degree.

Sincerely,

Deborah N. Strevy
School of Education
UAB

119 Education Building
901 13th Street South
205.934.5371
Fax 205.934.4792

The University of
Alabama at Birmingham
Mailing Address:
EB 119
1530 3RD AVE S
BIRMINGHAM AL 35294-1250

From: "Sheila Deters Moore" <smoore@uab.edu>
To: "Shelley Walls" <wallssd@auburn.edu>
Date: Tuesday - August 29, 2006 12:46 PM
Subject: RE: Auburn University's IRB

If that is the only involvement - then you would not need IRB approval from UAB. If anything changes - then you would need to check back with this office.
Sheila Moore, CIP

-----Original Message-----
From: Shelley Walls [mailto:wallssd@auburn.edu]
Sent: Tuesday, August 29, 2006 12:41 PM
To: Sheila Deters Moore
Subject: RE: Auburn University's IRB

Thank you for your timely response.

In order to recruit participants from the UAB early childhood program I would like to attend a class session and make a short announcement to the students at the beginning of class inviting students to stay after class to complete a survey. After class I would disseminate the survey to those students who were willing to stay.

I have contacted Dr. Strevy to ask her if she would be willing to assist me with this task. If she agrees, I will obtain a letter from her written on UAB letter head.

Thank you,
Shelley

>>> "Sheila Deters Moore" <smoore@uab.edu> 08/29/06 11:26 AM >>>
The answer will depend on what you are planning to do in terms of recruitment. If you will be posting flyers to recruit, then probably not, however, I need a much more detailed description of what you are planning to give you a better answer. In some cases, you would also need UAB IRB approval.

Sheila Moore, CIP
Director, Office of the IRB

-----Original Message-----

From: Shelley Walls [mailto:wallssd@auburn.edu]
Sent: Tuesday, August 29, 2006 9:56 AM
To: Sheila Deters Moore
Subject: Auburn University's IRB

Sheila Moore,

My name is Shelley Walls and I am a doctoral candidate in the special education department at Auburn University. For my dissertation I would like to recruit participants from UAB's Early Childhood Program. I will be getting approval through Auburn University's IRB, which has federal wide assurance, but I wanted to see if I needed any additional approval through your IRB office. Will I need to submit a protocol to you for approval, or can I submit Auburn University's IRB approval in lieu of yours?

Thank you,

Shelley D. Walls, M.Ed.
Doctoral Candidate
Department of Rehabilitation and Special Education
Auburn University, AL 36849
706-615-9011
wallssd@auburn.edu

Office for Research

Office of the Chair,
Institutional Review Board for the
Protection of Human Subjects

THE UNIVERSITY OF
ALABAMA
RESEARCH

March 2, 2007

Shelly Walls
1228 Haley Center
Auburn University
Auburn, AL 36849

Re: UA IRB # EX-07-CM-015 "Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities"

Dear Ms. Walls:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your protocol has been given exempt approval according to 45 CFR part 46.101(b)(2) as outlined below:

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and
(ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Please use reproductions of the IRB approved informed consent form to obtain consent from your participants.

Good luck with your research.

Sincerely,

Carpantato T. Myles, MSM
Research Compliance Officer
The University of Alabama

152 Rose Administration Building
Box 870104
Tuscaloosa, Alabama 35487-0104
(205) 348-5152
Fax (205) 348-8882

EX-07-CM-015

UNIVERSITY OF ALABAMA INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS
REQUEST FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS

I. Identifying information

	Principal Investigator	Second Investigator	Third Investigator
Name:	Shelley Walls		
Department:	Rehabilitation and Special Education		
College:	Education		
University:	Auburn University		
Address:	1228 Haley Center, Auburn University, Auburn, AL 36849		
Telephone:	706-615-9011		
FAX:	334-844-2080		
E-mail:	wallssd@auburn.edu		

Title of Research Project: Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities

Date Printed: February 20, 2007 Funding Source: Not Applicable

Type of Proposal: __New | ___Revision ___Renewal ___Completed | __X_Exempt

Attach a renewal application

Attach a continuing review of studies form

Please enter the original IRB # at the top of the page

UA faculty or staff member signature: Blanche Wall Kennedy

II. NOTIFICATION OF IRB ACTION (to be completed by IRB):

Type of Review: _____ Full board _____ Expedited

IRB Action:

___Rejected Date:_____

___Tabled Pending Revisions Date:_____

___Approved Pending Revisions Date:_____

__✓Approved—this proposal complies with University and federal regulations for the protection of human subjec

Approval is effective until the following date: 3-6-08 e.s.

Items approved:

___ Research protocol: dated
___ Informed consent: dated
___ Recruitment materials: dated
___ Other: dated

Approval signature _____ Date 3-6-07 e.s.

College of Education

Special Education and Multiple Abilities

THE UNIVERSITY OF
ALABAMA
EDUCATION

October 27, 2006

Shelley Walls
Rehabilitation and Special Education
1228 Haley Center
Auburn University
Auburn, AL 36849

Dear Shelley Walls,

I received your request to recruit participants from our early childhood department for the purposes of your research study. I recognize that you, Shelley Walls, will serve as the primary investigator of the study titled, *Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities*. I understand that this study will investigate differences between types of preservice teacher training programs and the moderating effects of student characteristics on the dependent measure, *Teacher Efficacy for the Inclusion of Young Children with Disabilities*.

I am writing to inform you that I agree to provide on-site location(s) in order for you to recruit participants from our early childhood teacher training program. I look forward to hearing from you to schedule your appointments so that you can make a short announcement at the beginning of class to invite students to stay after class to complete the research packets. I realize that it is your desire to recruit participants that are in the beginning, middle, and end of the teacher training program and who are earning a baccalaureate degree.

Sincerely,

Dr. Cecil Fore
Assistant Professor, Early Childhood Special Education
Special Education
and Multiple Abilities

Box 870231
Tuscaloosa, Alabama 35487-0232
[illegible]
[illegible]

From: Donna Silver <donna.silver@uvm.edu>
To: <wallssd@auburn.edu>
Date: Thursday - October 26, 2006 8:51 AM
Subject: University of Vermont's Decision Regarding Dr. Walls' Research Project

The Committees on Human Research have determined that the University of Vermont is not engaged in research with respect to Dr. Walls' project. Local IRB review of the project is not necessary. Thank you for contacting us.

--
Donna Silver, Assistant Program Director
Research Protections Office
Office of Sponsored Programs
245 South Park, Suite 900
Colchester, VT 05446
Phone: (802) 656-5040
Fax: (802) 656-5041
Web: http://www.uvm.edu/rpo/
Email: donna.silver@uvm.edu

The UNIVERSITY of VERMONT
EARLY CHILDHOOD PREK-3 PROGRAM
EARLY CHILDHOOD SPECIAL EDUCATION PROGRAM

October 24, 2006

Shelley Walls
Rehabilitation and Special Education
1228 Haley Center
Auburn University
Auburn, AL 36849

Dear Shelley Walls,

I received your request to recruit participants from our early childhood department for the purposes of your research study. I recognize that you, Shelley Walls, will serve as the primary investigator of the study titled, *Early Childhood Preservice Training and Perceived Teacher Efficacy Beliefs for the Inclusion of Young Children with Disabilities.* I understand that this study will investigate differences between types of preservice teacher training programs and the moderating effects of student characteristics on the dependent measure, *Teacher Efficacy for the Inclusion of young Children with Disabilities.*

I am writing to inform you that I agree to serve as a liaison for your research study. I understand that my responsibilities include recruiting participants by reading a script at the beginning of class, remaining after class to disseminate the research packets to preservice teachers of my teacher training program who are the age of 19 and over, and returning the completed research packets to you in the stamped envelope that will be provided. I understand that it is your desire for me to recruit participants that are in the beginning, middle, and end of the teacher training program and who are earning a baccalaureate degree.

I agree to complete these responsibilities before December 2006. I look forward to our meeting or phone conference to review the scripts and research packets so that I feel prepared before I begin recruitment.

Sincerely,

Department of Integrated Professional Studies, College of Education and Social Services
C-150 Living and Learning Center, 633 Main Street, Burlington, VT 05405-0384
Telephone: (802) 656-4050 • Fax: (802) 656-2687