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A longitudinal investigation of developmentally appropriate practice and inclusion perspectives held by prospective educators of young children.

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A LONGITUDINAL INVESTIGATION OF DEVELOPMENTALLY APPROPRIATE PRACTICE AND INCLUSION PERSPECTIVES HELD BY PROSPECTIVE EDUCATORS OF YOUNG CHILDREN

by

ISABEL MARY GOODSTADT-KILLORAN

A DISSERTATION

Submitted to the graduate faculty of The University of Alabama at Birmingham,
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

BIRMINGHAM, ALABAMA

2000

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ABSTRACT OF DISSERTATION
GRADUATE SCHOOL, UNIVERSITY OF ALABAMA AT BIRMINGHAM

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Name of Candidate Isabel Mary Goodstadt-Killoran

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Title A Longitudinal Investigation of Developmentally Appropriate Practice and Inclusion Perspectives Held by Prospective Educators of Young Children

Preservice early childhood and elementary educators from 2 different universities and types of program were followed for 15 months during their preparation programs (N = 83). The participants were asked to complete the Teacher Beliefs Scale, Preschool (TBS; Charlesworth, Hart, Burts, & Hernandez, 1991; Charlesworth, Hart, Burts, Thomasson, Mosley, & Fleege, 1993; Hart, Burts, Durland, Charlesworth, DeWolf, & Fleege, 1998) and the Opinions Relative to Mainstreaming-Adapted (ORM-A; Antonak & Larrivee, 1995; Larrivee & Cook, 1979;) at 3 different points. Degree program, university, and type of program (traditional or nontraditional) were used to investigate the change in scores over time. With the subsample who completed the instruments at all 3 collections (n = 18), statistical significance was found for the ORM-A in relation to degree program and type of program (p = .026, p = .021). The participants in the traditional program and the early childhood program had the greater positive change in mean score on the ORM-A. Although not statistically significant, the early childhood participants also had greater positive change in the mean score that reflected developmentally appropriate beliefs (TBS). The changes in scores on the TBS and the ORM-A, correlated with type of program, were approaching statistical significance for those who completed Times 1 and 3 (n = 30; p = .088, p = .067).

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CHAPTER 1

INTRODUCTION

Institutes of higher education are increasingly being held responsible for preparing teachers who are competent in meeting the needs of a diverse population of students. To ensure success for all students, there is growing concern that IHEs should focus on preparing teachers to address a myriad of student differences based on individual learning rates and styles and the priorities and preferences of families and communities. Concerns have been raised regarding educators' preparedness to deal effectively with their changing roles, particularly when working with a diverse student population (Pugach, 1996; Rosenberg, 1996; Sexton et al., 1996; Spodek & Saracho, 1990).

The level and type of preparation provided to individuals who plan to assume teaching and caregiving roles with young children and their families have recently undergone close scrutiny (Goffin, Wilson, Hill, & McAninch, 1997; Katz & Raths, 1992; Knight & Wadsworth, 1998; Lubeck, 1996; Shanker, 1996; Spodek & Saracho, 1990; Stott & Bowman, 1996). This intense examination has resulted in many serious questions about the extent to which institutions of higher education actually prepare prospective teachers to deal effectively with an increasingly heterogeneous classroom (Diamond, Hestenes, & O'Connor, 1994; Gettinger, Stoiber, Goetz, & Caspe, 1999; Kirk, 1998; Pugach, 1996; Rosenberg, 1996; Sexton et al., 1996; Shanker, 1996; Wise, 1996).

Determining how best to meet the needs of preservice teachers has proven to be a complex issue.

Early childhood education has undergone, and will continue to undergo, many significant changes which will affect the educational needs of prospective educators. Some reasons for these changes are (a) a higher demand for out-of-home childcare, (b) an increase in diverse cultural and linguistic backgrounds, (c) legal mandates such as Americans with Disabilities Act (ADA) and Individuals with Disabilities Education Act (IDEA), (d) younger children being enrolled and hours being extended, and (e) the change of program sponsorship to include corporations and public school systems (Bredekamp & Copple, 1997). In response to many of these changes, developmentally appropriate practice (DAP) and inclusion have emerged as two primary arenas of debate (Sexton, Kelley, & Aldridge, 1998). Although there has been much discourse in the field on these two topics, no consensus has yet to be reached on the efficacy of either practice. Currently, differing perspectives on DAP, and on inclusion, separate the general education and special education fields (Bricker, 1995; Carta, Schwartz, & McConnell, 1991; Carta, 1994; Charlesworth, 1998a, 1998b; Isenberg & Brown, 1997; Kostelnik, 1992; Lubeck, 1998a, 1998b; Raines, 1997; Turnbull & Turbiville, 1995; Wolery & Bredekamp, 1994).

Developmentally Appropriate Practice Guidelines

The developmentally appropriate practice guidelines, published by the National Association for the Education of Young Children (NAEYC, 1987, 1997), are being used to define quality early childhood education and care. From October 1994 until April 1998, 254,332 copies of the guidelines were distributed to the public. Records before then

are inconclusive, although NAEYC estimates that 2,000 copies a month were sent out. With close to 500,000 copies of the DAP guidelines in circulation, and with 87,000 members receiving the Position Statement (NAEYC, 1986), the DAP guidelines have been adopted by most early childhood education IHEs and professionals. Their influence cannot be overlooked.

Developmentally appropriate practice's "primary position (is) that programs designed *for* young children be based on what is known *about* young children" (Bredekamp & Copple, 1997, p. v). Developmentally appropriate practices, as defined by NAEYC, promote facilitating the learning process (Bredekamp, 1987; Bredekamp & Copple, 1997). The practices are based on individual needs, interests, and learning abilities. Principles of child development and the way children learn provide the foundations that support these practices.

Criticism of Developmentally Appropriate Practice Guidelines

The DAP guidelines have had such a profound influence that they serve as the primary basis for preparation standards of early childhood educators (NAEYC, 1996). Although the guidelines are widely accepted, major criticism has been leveled at whether DAP is appropriate for all children and families (Carta et al., 1991; Carta, 1994; Lubeck, 1994, 1998a, 1998b).

Concern has also been raised as to whether DAP further marginalizes students, especially those from minority groups (Kessler & Swadener, 1992). Lubeck (1996) believes that DAP "assists children in learning dominant cultural practices," and questions whether this is appropriate in a multicultural setting (p. 161). Lubeck (1996) also argues that child development theory is a social construct and, therefore, cannot be universal to

all children. By predicating DAP on developmental theory, practitioners may be neglecting the population of young children and families who do not conform to the implied developmental universals.

Developmentally Appropriate Practice and Special Education

Special education is motivated by recent research on brain development and the efficacy of early intervention (Puckett, Marshall, & Davis, 1999; Shore, 1997). Research clearly shows that children with special needs benefit most from intervention when services are provided well before the traditional school age (Ramey & Ramey, 1992). As more professionals and families recognize the importance of early intervention, the education field is seeing a surge in the number of programs and educators needed for young children.

Developmentally appropriate practice has not been embraced by all of the special education professionals as meeting the needs of young children with disabilities. The DAP guidelines do not address the legal mandates of IDEA, and as a result the special education field has needed to turn elsewhere. The Division for Early Childhood (DEC) of the Council for Exceptional Children (CEC) developed its own guidelines for recommended practices (Odom & McLean, 1996). The need for this was due in part to the legal mandates pertaining to inclusion and family involvement. Although the DAP guidelines' fundamental Principles 4 and 5, "significant role of families in early childhood education" and "applicability of the principles to children with disabilities and other special learning and developmental needs," address the role of the family and the application of the principles to children with disabilities, neither of these concerns is addressed sufficiently (Bredekamp & Copple, 1997, p. vi). The debate as to what is appropriate for

children with disabilities complicates matters for the general education teacher as more and more of these children are included in the general education classroom.

The political arena has promoted early intervention and has required procedures and practices that were not adequately addressed in the original DAP guidelines (Bredekamp, 1987). Developmentally appropriate practice as defined in the 1987 version focused on two dimensions: age appropriateness and individual appropriateness. The guidelines were issued primarily in response to the push to conform to an academic model for young children (Bredekamp & Copple, 1997; Elkind, 1986; New & Mallory, 1994). In the revised edition, Bredekamp and Copple (1997) included three components in the definition of developmentally appropriate practice from NAEYC's 1996 Position Statement:

> *Developmentally appropriate practices* result from the process of professionals making decisions about the well-being and education of children based on at least three important kinds of information or knowledge: 1. *What is known about child development and learning* . . . 2. *What is known about the strengths, interests, and needs of each individual child in the group* . . . and 3. *Knowledge of the social and cultural contexts in which children live.* (pp. 8-9)

The statement goes on to describe what is required of teachers incorporating developmentally appropriate practices:

> Developmentally appropriate practice requires that teachers integrate the many dimensions of their knowledge base. They must know about child development and the implications of this knowledge for how to teach, the content of the curriculum--what to teach and when--how to assess what children have learned, and how to adapt curriculum and instruction to children's individual strengths, needs, and interests. Further they must know the particular children they teach and their families and be knowledgeable as well about the social and cultural context. (p. 16)

These requirements should be interpreted to include a teacher's ability to adapt and modify material for students with special needs (Bredekamp & Rosegrant, 1992).

Carta et al. (1991) expressed valid concerns regarding the appropriateness of the current DAP guidelines for use with young children with disabilities. The lack of research regarding the efficacy of using DAP with children who have disabilities is one of the major concerns cited. Special educators may also argue that the DAP guidelines limit intervention strategies and do not address Individual Family Service Plan (IFSP) or Individual Education Plan (IEP) processes required by law. The special education field must collaborate with general education if all teachers are to be prepared for, and made to feel positive about, working with children with diverse abilities. This is especially important now, because the 1997 Amendments to IDEA require the general educator's participation in the IEP process.

Several researchers have argued quite convincingly that the two fields are not dichotomous (Aldridge, Sexton, Booker, & Holley, 1996; Bergen, 1997; Kilgo & Bruder, 1997; McLean & Odom, 1993; Pugach, 1996; Welch, 1996). Even though many special educators did not embrace all tenets of the DAP guidelines published by NAEYC (Bredekamp, 1987; Bredekamp & Copple, 1997), there appear to be some areas of convergence with recommended practices published by DEC (Bergen, 1997; McLean & Odom, 1993; Odom & McLean, 1996).

McLean and Odom (1993) identified several areas of agreement across the two fields related to curricular strategies. The most obvious of these are (a) accommodating a broad range of individual difference, (b) supporting positive relationships with families, (c) recognizing cultural diversity, (d) actively engaging children in learning, (e) supporting the physical needs of children, and (f) making sure strategies are relevant and functional. These apparent points of agreement should be viewed as a springboard to developing common, comprehensive guidelines for all special and general educators.

Developmentally Appropriate Practice and Inclusion

Renewed interest in early childhood as the most important period for learning and development has been instrumental in bringing the needs of children with disabilities to the forefront. As legal mandates, civil rights, and current research push for normalized educational experiences for students with disabilities, an emphasis on diversity in academic ability, learning styles, and behavioral needs will become more common within the general education classroom. The DAP guidelines do not "actively promote inclusion"; however, Bredekamp (1993) argues that the individual appropriateness component of DAP and the requirement of meeting the needs of children as stated in the guidelines create an environment in which inclusion should succeed (p. 263).

Current legal mandates (IDEA) protect all students' rights to be educated in the least restrictive environment. The least restrictive environment differs from the philosophy of inclusion and does not automatically mean a fully inclusive environment. The individual needs of each child determine the most appropriate setting. In the majority of cases, appropriate or not, the least restrictive environment is being interpreted as the general education classroom. As the special educators' role changes, general educators and their attitudes towards inclusion become the pivotal piece in the success of children with special needs (Kirk, 1998).

Most IHEs do not offer blended programs; consequently, general education students may not get the instruction that is required to work with students who have special needs. Without such knowledge, they are unprepared to meet the demands of inclusion. If the guidelines for DAP are to be part of the core curriculum of preservice programs for educators working with children from birth through age 8 years, then IHEs must address all the components of being a competent, effective educator in order to test the true effi-

cacy of the guidelines. This cannot be done without examining inclusion and the challenges it presents to the general educator (Heston, Raschke, Kliewer, Fitzgerald, & Edmiaston, 1998).

Inclusion provides a heterogeneous mix within the general education classroom which benefits students, parents, and the community. It helps eliminate ignorance of differences and helps foster tolerance and acceptance of others. It demonstrates a true belief in the value of people, helping to eliminate the prejudice that permeates our society (Stainback, Stainback, & Stefanich, 1996). NAEYC's position statement on DAP identifies fostering a "positive self-identity and a tolerance for others whose perspective and experience may be different" as a goal of early childhood education (p. 8).

History of Inclusion

The definition and requirements of inclusion have undergone much change in the last three decades. Most of this change has been brought about by legal action initiated by families and advocacy groups (Yell, 1998). Early childhood and elementary policies reflect the social and economic environments. The interest in the rights of all children has also been a contributing factor (Goffin et al., 1997).

How and where to educate children with disabilities has undergone much debate. Policies created to clarify the issues have often led to more confusion. Inclusion as a philosophy, and how it has impacted services for young children with disabilities, is reflected in the legislation. Over time, laws have promoted the inclusion of young children.

In 1964, the federal government funded early childhood education programs for the first time through the Head Start legislation. While still in place, this program has undergone some significant changes since its implementation. Since the early 1970's, 10%

of the children served by Head Start must have disabilities. This could be considered the first nationwide inclusion program for preschool children. Although this was a step forward, it only really addressed the inclusion needs of children who had identifiable disabilities. The first piece of legislation to deal exclusively with the education of children with disabilities that was not attached to another bill did not come into play until 1968. At this time, funds were authorized for the development, evaluation, and dissemination of programs for infants and children with disabilities.

This was followed, in 1973, by the Vocational Rehabilitation Act, P.L. 93-112. Although this Act was not specifically education legislation, Title V's impact on the education of students with disabilities is still felt today. Title V of the Rehabilitation Act mandated civil rights for all persons with disabilities. Any program receiving funds from the government, directly or indirectly, could not discriminate against people with disabilities. Section 503 states:

> No otherwise qualified handicapped individual . . . shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance. (29 U.S.C. 794)

Section 504 also applies to all ages. It requires equal and accessible transportation, architecture, educational programs, and nonacademic services. Section 504 guarantees a free appropriate public education in the least restrictive environment.

Under Section 504, the definition of disability is broad and serves as a safety net for the students who fall between the cracks with the more specific education legislation. Any person who (i) has a physical or mental impairment which substantially limits one or more major life activities, (ii) has a record of such an impairment, or (iii) is regarded as

having such an impairment is identified as handicapped. This definition was incorporated into the 1990 Americans with Disabilities Act.

The Education for All Handicapped Children Act (EAHCA), P.L. 94-142, in 1975, clearly defined the rights of children with disabilities and their parents. This was a national policy for children with disabilities from ages 3-21 years. It endorsed early education programs for children under 5 years, and provided incentive funds to encourage states and local education agencies to serve children ages 3-5 years. It formalized the use of the IEP, which only recently underwent major changes (1997 IDEA Amendments). Any child with a disability, between the ages of 5 and 21 years, regardless of the nature and severity of the disability, was entitled to a free appropriate education in the least restrictive environment. As it impacted young children with disabilities, many people considered it to be a flawed mandate because it allowed states not to service preschool students. Although this Act began to address the specific educational needs of children with disabilities, it did not guarantee services to children younger than school age. Not until 1983 did the government provide state planning grants to develop and implement comprehensive plans for the development of early intervention services for children with disabilities from birth to 5 years.

There have been several amendments to EAHCA to clarify and improve the original Act. In 1986, an amendment to the original Act, provided reimbursement of legal costs to parents who prevailed in their fight to ensure a free appropriate special education for their child. In addition, in 1986, P.L. 99-457 extended the original Act to include children ages 3 to 5 years who were disabled or at risk. Policies regarding this age group were under Part B. Incentives were offered to states to begin serving infants and toddlers with disabilities, under Part H (now Part C). An IFSP was required when a young child

received services under Part H. Finally, legislation was recognizing the ecology of children and the importance of the family. It was the expectation that all states would have established services for all eligible 3 to 5 year olds by the 1990-91 school year.

The Americans with Disabilities Act of 1990, P.L. 101-336, adopted the Vocational Rehabilitation Act's Title V definition of an individual with disabilities. This maintained the trend of a generic definition of disability rather than a focus on characteristics associated with a disability. Unfortunately, this was not the definition used in 1990 when EAHCA was retooled into IDEA, P.L. 101-476. Although there were some positive changes, such as terminology that is more sensitive and a focus on cultural and ethnic diversity, IDEA still required the labeling of students in order for services to be available. In order to receive services, a student must be categorized according to 13 federal disability categories (or state law equivalents) and be determined by the school system to require special services. The narrow definition used by IDEA eliminates accessibility to services for those students who are guaranteed under Section 504. This "system has created two sets of students with disabilities: the 'haves' who receive special education under IDEA and the 'have-nots' who must rely solely on state support" (Hardman, McDonnell, & Welch, 1997, p. 63). Hardman et al. (1997) also argue that IDEA was developed at a time when the potential for persons with disabilities was unknown, and should no longer be considered "best practice."

In 1997 IDEA was amended (P.L. 105-17). There were several significant improvements in this legislation:

1. "Developmental delay" can be used as a disability category through age 9. This eliminates the requirement to label children early in their academic career.

2. Children with disabilities in private schools must also be served.

3. The IEP process and contents are much more detailed. The general educator is now required to be part of the process.

4. The process involved with, and the needs of children with behavior/emotional disabilities, are significantly addressed.

Although there has been much progress in including children with disabilities in the general education classroom, much of the change has been brought about by litigation. The courts are continually fine tuning the legislation by interpreting the acts and amendments. At first glance, this may appear beneficial, but the larger issue is a philosophical one. The law requires that schools provide a free appropriate public education for all children, based on their individual needs (Council for Exceptional Children, 1993). How and where this takes place should be dictated by the needs of the child and documented in the IEP or IFSP. The courts have clearly shown that children cannot be placed in either the general education classroom or the special education classroom without the appropriate supports and services.

Teacher Preparation

Education in the least restrictive environment is the right of every child. Many child advocates believe that inclusion is the only alternative (Paul & Ward, 1996). Educators are legally, and some would argue ethically, required to consider this option for all children regardless of their disabilities. Legislation recognizes the importance of preparing educators to fill the roles that are mandated and requires each state to have a Comprehensive Service Plan for Development (CSPD) to prepare personnel to meet the requirements of these roles. Collaboration between general and special education programs is an

essential element of successfully serving children with special needs in the general education classroom (Voltz & Elliott, 1997).

The early childhood field is beginning to recognize the importance of preparing general educators to work with a diverse student body. The emergence of the blended program has been one of the responses to this need (Miller & Stayton, 1998). Early childhood general educators, the majority of whom have been exposed to DAP, find themselves ill prepared and confused about what is required and what should be done with the new population of students (Brown, Gable, Hendrickson, & Algozzine, 1991; Fender & Fielder, 1990; Goodlad & Field, 1993; Kirk, 1998; Scruggs & Mastropieri, 1996; Williams, 1990).

Agreement has not been reached as to whether the DAP guidelines alone are enough to educate special education students. Some researchers argue that DAP is not sufficient enough (Wolery & Bredekamp, 1994). With the dualistic format of DAP and developmentally inappropriate practice (DIP) outlined in the guidelines, few options are available to address the continuum of possible services that a child with disabilities may need. If children with special needs are to be successfully included in the early childhood setting, more research must be done on how DAP may promote or hinder their success.

Operational Definitions

For the purpose of this study, the following operational definitions were used:

Developmentally appropriate beliefs were the scores on the Teacher Beliefs Scale (TBS).

Course hours were the self-reported total semester hours each student had completed.

Education course hours were the self-reported hours in education each student had completed.

Practicum course hours were the self-reported hours that each student had completed. These may include student teaching hours and practicum hours because no clarification was made.

Race or ethnicity was self-identified by the students from the survey list (1 = African American/Black, 2 = Caucasian/White, 3 = Asian, 4 = Hispanic, 5 = Native American or 6 = specified other).

Teacher Beliefs Scale, Preschool Version (TBS) is a later version of the subscale of the Teacher Questionnaire, Kindergarten Version (Charlesworth, Hart, Burts, & Hernandez, 1991; Charlesworth et al., 1993) used to examine developmentally appropriate beliefs of early childhood teachers.

Opinions Relative to Mainstreaming (Larrivee & Cook, 1979) is a scale developed to measure teachers' attitudes towards integration. It was revised and renamed the Opinions Relative to Integration of Students with Disabilities (ORI; Antonak & Larrivee, 1995). For the current study, it was adapted and renamed the Opinions Relative to Mainstreaming-Adapted (ORM-A).

Construct Definitions

For the purpose of this study, the following construct definitions were used:

Inclusion is defined as providing a child with a disability the opportunity for a quality educational experience within the general education classroom. This definition assumes that all necessary modifications, adaptations, and supplementary aids will be

provided for the child based on his or her individual needs. No distinction is made between partial and full inclusion.

Developmentally appropriate practices refer to those described in the NAEYC guidelines (Bredekamp, 1987; Bredekamp & Copple, 1997).

Least restrictive environment is defined as the terminology used in education law to refer to the most appropriate placement for children with disabilities that ensures the maximum education with peers without disabilities.

Special need/disability is defined as any category of special education identified by the state of Alabama guidelines.

Mainstreaming and integration are used interchangeably with inclusion. Although today philosophically there is a difference between inclusion and these terms, at the time of the scale development this was the common terminology used.

Attitude, as defined by *The Merriam Webster Dictionary* (1997), is a "mental position or feeling with regard to a fact or state" (p. 63).

Purpose of the Study

As general educators prepare to work with more students with disabilities, concern is raised regarding their preparation. As the trend of inclusion continues, many of these children are going to be educated in the general education classroom thereby necessitating the study of attitudes and beliefs towards inclusion. With the current movement of including most children with special needs in the general education classroom, this study will examine the attitudes and beliefs of general education preservice students. Many general and special educators disagree about the appropriateness of DAP and its use with children with special needs; therefore it seems critical to also look at attitudes

and beliefs towards DAP. Early childhood and elementary education overlap in the ages that are taught, so students in either major were eligible to participate in this study.

The following research questions will guide the study:

1. What are the psychometric properties of the TBS and the ORM-A when used with prospective early childhood and elementary educators?

2. Do attitudes towards DAP and inclusion change differentially over time in relation to university, degree program, or type of program?

Significance of Study

No studies were found that investigated both DAP and inclusion. Arguments for the appropriateness and lack of appropriateness of DAP with students with special needs have been published, as have the benefits of and concerns with inclusion (Atwater, Carta, Schwartz, & McConnell, 1994; Bennett, Deluca, & Bruns, 1997; Bergen, 1997; Bricker, 1995; Carta et al., 1991; Carta, 1994; Cole, Mills, Dale, & Jenkins, 1991; Diamond et al., 1994; Kostelnik, 1992; McLean & Odom, 1993; Raines, 1997; Turnbull & Turbiville, 1996; Wolery & Bredekamp, 1994; Wolery, Strain & Bailey, 1992). Few studies have examined what is needed in teacher preparation especially in relation to making inclusion work (Kilgo & Bruder, 1997; Miller & Stayton, 1996; Pugach, 1996; Rosenberg, 1996; Spodek & Saracho, 1990; Voltz & Elliott, 1997). Most of these authors promote an interdependent, or collaborative, blended early childhood or elementary program. Almost nothing is written on the effect of preservice programs on attitudes towards DAP, and very little is written on the effect on attitudes towards inclusion.

Welch (1996) challenges educators to include all children in our plans. If this is to be done successfully, we must look towards the general educator and his or her attitudes

towards including all students. Because the DAP guidelines are intended to define quality education for young children, prospective educators' attitudes towards DAP are also significant. Information gathered from prospective educators will help institutes of higher education evaluate their programs and revamp them where necessary, in order to prepare teachers to meet their professional responsibilities. Hopefully, as Villa, Thousand, and Chapple (1996) propose, this will encourage educators to collaborate in the creation of a "common conceptual framework, language and set of technical skills with which to communicate" (p. 42).

Assumptions and Limitations of the Study

The following assumptions were made in the design and implementation of the study:

1. Preservice educators would respond to the questions on the instruments in a manner that reflected their true beliefs.

2. The TBS would represent beliefs about developmentally appropriate practices (Charlesworth et al., 1991; Charlesworth et al., 1993; Hart et al., 1998).

3. The ORM-A would represent beliefs about inclusion (Antonak & Larrivee, 1995; Larrivee & Cook, 1979).

The following limitations are also acknowledged:

1. Each preservice student came from a varied background and may have been influenced by experiences outside of the IHE.

2. The students have not had the same number or kind of education courses.

3. The size of faculty at each university is quite small; therefore, most students at the universities will have been presented with the same professors' attitudes towards DAP and inclusion.

4. The population was not randomly selected; therefore, the study is only generalizable to the sample used.

5. Cooperating teachers' attitudes may influence the students during their practicums.

6. Some students may have experience with children or may have family members who have a disability.

7. The information is self-reported and is not necessarily what would be observed in practice.

8. The definition of inclusion varies greatly and may have impacted responses to ORM-A.

9. Levels of disabilities were treated equally on the instruments. Answers may have been different if a distinction was made between mild and severe disabilities.

Theoretical Framework of the Study

The theoretical frameworks for this study are developmental contextualism, ecological systems theory, and the DAP guidelines. Developmental contextualism has the potential to encompass both DAP and inclusion. The contextual paradigm views the child and the environment as having an interactive, multidirectional relationship (Lerner, 1986). Theorists operating from a contextual paradigm believe that the context gives meaning and can explain the behavior (Miller, 1993). Although the current DAP guidelines support other theorists besides Bronfenbrenner, an ecological model is clearly part

of its foundation. Principle 6, "development and learning occur in and are influenced by multiple social and cultural contexts," directly addresses Bronfenbrenner's theory (Bredekamp & Copple, 1997).

Bronfenbrenner "explains that children's development is best understood within the sociocultural context of the family, educational setting, community, and broader society. These various contexts are interrelated and all have an impact on the developing child" (cited in Bredekamp & Copple, 1997, p. 12). These same influences will impact preservice teachers and their attitudes towards DAP and inclusion.

Developmentally appropriate practice focuses on the cultural component of systems theory and sensitizes teachers to its diversity. Unfortunately, DAP does not give the same relevance to family and peers. This is where special education and general education may differ. Most special educators are taught to consider the whole child when determining what is best. Legal mandates require the family to have the opportunity to be active participants in the educational process through IFSPs and IEPs. The child is seen as an integral member of the family, reciprocally interacting with and affecting the members' development. As general educators become more involved in and responsible for students with disabilities, their approach to the child must include all of his or her systems if inclusion is to be successful.

Developmentally appropriate practice and inclusion are not mutually exclusive from a metatheoretical standpoint. In order for both to be effectively implemented, DAP needs to broaden its guidelines to address in detail all of the systems in a child's life. The best approach to this would involve a collaborative effort between general and special educators to develop a common set of appropriate guidelines.

Organization of the Study

This dissertation is divided into five chapters. This first chapter introduces the study, discusses the historical and social context of DAP and inclusion, defines the terminology used in the study, identifies the research questions, and addresses assumptions and limitations. The theoretical framework is also discussed. Chapter 2 provides a review of the relevant literature pertaining to teachers' attitudes and beliefs towards inclusion and DAP. Chapter 3 outlines the methodology used to examine the research questions. Chapter 4 presents the findings of the study, while Chapter 5 outlines conclusions and possible further research questions.

CHAPTER 2

LITERATURE REVIEW

Although research has been conducted on the attitudes and beliefs of teachers regarding inclusion and DAP, no studies were found that examined both simultaneously. Consequently, Chapter 2 examines three areas of research which have been organized into three sections. The first section reports on studies which have incorporated the TBS, Preschool, Kindergarten, or Primary Version to examine attitudes and beliefs towards DAP. With the exception of Cassidy, Buell, Pugh-Hoese, & Russell (1995), no studies were found that studied change over time in attitudes towards DAP. The second section outlines research on attitudes towards inclusion, using the ORM and the ORI. Due to the changes in terminology since the creation of the ORM, studies may refer to mainstreaming, integration, or inclusion. Section 3 addresses current research on teacher preparation and how it affects attitudes towards DAP and inclusion (see Appendix A).

Teacher Beliefs Scale

There are many studies that have utilized various versions of the TBS. The TBS is a subscale of the Teacher Questionnaire (Charlesworth et al., 1991). This subscale, along with the other subscale, the Instructional Activities Scale (IAS), was originally administered to kindergarten teachers in four southern states to determine the psychometric properties of the scale ($N = 113$). The analysis indicated that there was a positive correlation between developmentally appropriate beliefs and activities, as well as between develop-

mentally inappropriate beliefs and activities. These findings emphasize the importance of looking at attitudes towards DAP as a potential predictor for the developmental appropriateness level of classrooms. By studying preservice teachers' attitudes, one may be able to predict the developmental appropriateness of their classrooms upon graduation. Institutes of higher education (IHE) can take this information and evaluate and modify their teacher preparation programs to ensure that graduates develop a positive belief structure about the importance of DAP prior to leaving the program.

The TBS and IAS were reevaluated with 204 kindergarten teachers through observations and completion of the Checklist for Rating Developmentally Appropriate Practice in Kindergarten Classrooms (Charlesworth et al., 1993). The TBS was found to be reliable in identifying teachers, based on their beliefs, who used more DAPs than DIPs and those who used more DIPs than DAPs. A later study showed a similar correlation between teachers' DAP beliefs and practices (Bartkowiak, 1996). Hyson, Hirsh-Pasek, and Rescorla (1990) also found a positive relationship between DAP beliefs and observed classroom practices.

The TBS has been used in several studies that have investigated stress behaviors of children in developmentally appropriate and inappropriate classrooms. The TBS was reported by Charlesworth et al. (1991) to be a potential predictor of the DAPs of teachers; consequently, this instrument, along with the IAS and observations to complete the Checklist for Rating Developmentally Appropriate Practice in Kindergarten Classrooms, has served as the main tool for identifying classrooms that were developmentally appropriate and developmentally inappropriate. The findings in the studies described below are important because they clearly show that developmentally inappropriate classrooms have a negative effect on children's stress levels. If educators are to reduce stress behaviors,

they must be able to create a developmentally appropriate environment. This can only be done effectively if they have a positive attitude towards DAP.

Burts, Hart, Charlesworth, and Kirk (1990) studied children in two kindergarten classrooms ($N = 37$). The classrooms were chosen from a sample of 113 kindergarten teachers who had completed the TBS and IAS for another study (Charlesworth et al., 1991). The inappropriate teacher's scores were more than 1 *SD* below the mean on appropriate factors and 1 *SD* above the mean on inappropriate factors. The appropriate teacher's scores were 1 *SD* above the mean on appropriate factors and 1 *SD* below the mean on inappropriate factors.

Children in the developmentally inappropriate classroom ($n = 17$) exhibited significantly more stress behaviors than those in the developmentally appropriate classroom ($n = 20$). There were some marginal gender differences, with males exhibiting more overall stress behaviors. Stress behaviors were also studied during specific activities. The findings showed that the children's stress behaviors increased during whole group and workbook/worksheet activities. These activities were more common in the developmentally inappropriate classroom. The developmentally appropriate classroom spent more time on transition activities, group story, and centers (Burts et al., 1990).

The TBS, IAS, and previously mentioned checklist were also used in a larger study which investigated the stress behaviors of 204 kindergarten children and the effects of the developmental appropriateness of their classrooms (Burts et al., 1992). The variables of race, gender, and socioeconomic status (SES) were used to explore the findings. As in the earlier study, males in the developmentally inappropriate classrooms exhibited more stress behaviors. Overall, more stress was exhibited by all children in the developmentally inappropriate classrooms. Transition times, waiting, and workbook/worksheet

activities seemed to generate the most stressful behaviors. Low SES children tended to be less involved in appropriate activities.

The sample in the above study was followed up to determine the relationship between the developmental appropriateness of their kindergarten classrooms and their first-grade report card overall averages and averages in reading, language, spelling, math, science, and social studies ($N = 166$). Gender and SES were also examined. Students who had come from the developmentally appropriate classrooms had higher reading averages than those from the inappropriate classrooms. Females had higher overall and subject averages than males. There were no significant differences found between high and low SES children in developmentally appropriate classrooms; however, high SES children from developmentally inappropriate classrooms had higher overall averages as well as higher subject averages, except in reading, than low SES children from developmentally inappropriate classrooms. Low SES children from developmentally appropriate classrooms had higher overall and subject averages, except reading, than low SES children from developmentally inappropriate classrooms (Burt et al., 1992).

Two other studies also looked at achievement of first- and second-grade children from developmentally appropriate and inappropriate classrooms (Ray, 1992; Verma, 1992). Ray found that, overall, the children from the developmentally appropriate kindergarten classroom achieved better grades in first grade. Although in Verma the children from appropriate kindergarten classrooms scored no differently on standardized tests in kindergarten and first and second grades than those from inappropriate kindergarten classrooms, she did find that low SES males from developmentally appropriate kindergarten classrooms scored better in some subject areas than those from developmentally inappropriate classrooms.

A slightly modified version of the TBS, Kindergarten version, was developed for preschool educators (Hart et al., 1998). This is the version that was used in the current study. The investigators were concerned that preschool educators' beliefs towards DAP and their effects on stress behaviors may be different because many settings for preschool education are different than those of kindergarten students. Using the preschool version they studied the effect of DAP and DIP classrooms on stress behaviors. As in earlier studies, these were mediated by SES and gender. Confirming earlier research, it was found that there was twice the level of overall stress behaviors in children from the developmentally inappropriate classroom. In the DIP classroom, children who were low SES, or were males completing small motor and paper and pencil tasks, exhibited the most stress behaviors.

Buchanan, Burts, Bidner, White, and Charlesworth (1998) slightly modified the kindergarten version of the TBS to use with primary teachers. They studied predictors of developmental appropriateness in primary classrooms. They found that when they controlled for classroom variables, such as class size, grade level, number of children with disabilities, and children on free or reduced lunches, teacher characteristics added significantly to the prediction of developmentally inappropriate activities. As in the current study, they examined the importance of certification level and the inclusion of children with disabilities. They found that educators with early childhood certification were less likely to have DIPs. They also found that those who had more children with disabilities in their classrooms were more likely to be congruent with the DAP guidelines.

All of the studies described have clearly shown the importance of educators' being able to provide a developmentally appropriate classroom. Because Charlesworth et al. (1991) and Buchanan et al. (1998) reported on the potential predictive significance of the

TBS, one may assume that the attitudes towards DAP of preservice educators will also be positively correlated to their practices.

Cassidy et al.'s (1995) study supports the significant effect of formal training on beliefs and practices of early childhood personnel. The TBS, along with other instruments, was used to measure change in attitudes following formal instruction. Although the researchers did not follow the participants for a long period of time, the participants completed 12 to 20 credit hours of community college coursework prior to the posttest. Those who had attended the training program had a significant increase in the developmental appropriateness of their attitudes and practices.

Vartuli (1999) looked at the differences in attitudes and practices of early childhood educators across each grade level. She found that, as the grade level increased, developmentally appropriate beliefs and practices decreased. Teachers who had fewer years of experience teaching and those with certification in early childhood rather than elementary education were more likely to believe in and use DAPs.

Sexton, Daly, Lobman, and Snyder (2000) expanded the use of the TBS to examine the attitudes and beliefs of general education and special education early childhood teachers towards DAP. The findings support the two areas of focus of the current study, DAP and inclusion. Although the current study incorporates only general educators, the attitudes of special educators are especially important as their role changes with the push for inclusion and the call for blended programs. Sexton et al. (2000) discovered that there was consensus within and between the groups regarding DAP. This was also found by other researchers (Kilgo et al., 1999; LaParo, Sexton, & Snyder, 1998). The only real difference in the Sexton et al. (2000) study related to behavioral pedagogy. Although the groups were much closer together than originally thought, the authors suggested that a

continuum of appropriate services related to individual appropriateness may be necessary to bridge the philosophical differences of the programs. This suggestion is supported by other professionals who argue that DAP views teaching on a continuum (Bredekamp, 1993; Minzenberg, Laughlin, & Kaczmarek, 1998).

Opinions Relative to Mainstreaming

Larrivee and Cook (1979) examined the effect of institutional variables on attitudes towards mainstreaming using the ORM. They found that teachers' perceptions of success had the greatest influence on their attitudes towards mainstreaming. Administrative support and access to supportive services also played a significant role. Class size, school size, and type of school did not impact their attitudes. Much like Vartuli's (1999) findings with DAP, the positiveness of their responses declined as their grade level increased. The least positive educators were from the junior high school level. It was suggested that junior high school teachers be targeted for inservice to increase their responsiveness to mainstreaming. As the other levels already agreed with mainstreaming philosophically, they needed only specific skill awareness to implement inclusion successfully.

Larrivee (1982) outlined the factors found in the aforementioned study. Five factors, which had eigenvalues of greater than or equal to 1, were retained. Twenty-six items met the criteria of loading at 0.37 or higher. The five factors that seemed to underlie the teachers' attitudes towards mainstreaming were (a) general philosophy of mainstreaming, (b) classroom behavior of special needs children, (c) perceived ability to teach the special needs child, (d) classroom management with special needs children, and (e) academic and social growth of the special needs child. These factors accounted for 52.4% of the variance. The first factor, general philosophy of mainstreaming, included the affective devel-

opment and emotional adjustment of the child with special needs and the regular classroom child. This factor accounted for 32% of the variance. Larrivee argued that this attitudinal dimension may be far more important than the factors that covered traditional concerns, such as behavior, classroom management, and academic development.

Green, Rock, and Weisenstein (1983) studied the validity and the reliability of the ORM with College of Education students (N = 168). Unlike the current study, Green et al. included a fairly balanced split between undergraduate and graduate students (43% and 57%, respectively). The study had a lower return rate of 30%. They found the scale to be reliable with an alpha of 0.89.

Antonak and Larrivee (1995) updated the ORM and renamed it ORI. They compared it to the responses of 376 undergraduate students on another instrument that measured attitudes towards people with disabilities. They concluded that attitude towards people with disabilities was the greatest predictor of attitude towards integration.

Although no studies were found that used the ORM to measure change in attitudes over time, it has been used with preservice teachers and found to be reliable. The Cronbach's alphas when used with this population were 0.88 (Antonak & Larrivee, 1995) and 0.89 (Green et al., 1983).

Teacher Preparation

Institutes of higher education have just begun to consider attitudes towards DAP and inclusion in their teacher preparation programs. Much research has been conducted on educational roles in inclusive settings. While there is a plethora of literature regarding the inclusion of children with special needs into the general education classroom and the need to prepare teachers to work with these students, there is not a great deal written on

the effect of teacher preparation programs on teacher attitudes towards inclusion. There is even less research on the relationship between teacher preparation programs and teacher attitudes towards DAP. The following studies represent the limited knowledge available concerning general education teacher perception as related to preparedness to teach in full inclusion classes and the effects of teacher preparation on teacher attitudes towards DAP and inclusion.

Scruggs and Mastropieri (1996) completed a synthesis of the research on teachers' perceptions of mainstreaming/inclusion for the years 1958 to 1995. Their findings indicate that the majority of general education classroom teachers support the idea of inclusion as related to students with special needs. However, it was discovered that the percentage of teachers supporting full inclusion dropped significantly as the degree of severity of the exceptionality increased. In some of the research as many as 86.9% of teachers supported mainstreaming for students with mild physical, sensory, and medical disabilities, requiring little or no teacher assistance. The support decreased to 31.2% for children with serious behavior, intellectual, or physical disabilities. This finding relates significantly to the practicality of the ORM-A. Without a definition of inclusion or a reference to the type or severity of disability, it is not possible to ascertain exactly what is being measured. Each participant interpreted inclusion independently, based on his or her own experiences. There is no common concept of inclusion; thus, extreme caution should be taken when interpreting the results of the ORM-A.

Scruggs and Mastropieri (1996) looked at 10 surveys, between 1975-1994, which specifically addressed whether general educators had sufficient expertise for including students with disabilities or whether they had adequate training for inclusion. Overall, 70.8% did not feel that general education teachers had sufficient expertise or training for

inclusion. In one study cited, 68% of the teachers "agreed that preservice and inservice training would 'aid' them in teaching exceptional children in their own classrooms" (Scruggs & Mastropieri, 1996, p. 69). Scruggs and Mastropieri found in another study that only 17% of school personnel reported being aware of specific techniques of mainstreaming prior to taking a graduate course on mainstreaming. One investigation with preservice undergraduates found that "[teacher] attitudes became more positive after extended training, and these gains transferred to higher percentages of time on task for students with disabilities in their classes" (Scruggs & Mastropieri, 1996, p. 69).

Thus, it can be concluded that the level of perceived preparedness on the part of the teachers to teach in full inclusion settings servicing children with mild to severe exceptionalities is directly related to their attitudes towards full inclusion. Scruggs and Mastropieri (1996) found that only "one fourth to one third of teachers surveyed agreed that they had sufficient time, training or material/personnel resources to implement mainstreaming/inclusion successfully" (p. 71). Of particular interest was the finding that over the years there has been a lack of improvement in perceptions of teacher preparedness for inclusion. This suggests that "teacher education programs may be no more effective in preparing teachers for mainstreaming/inclusion now than they were more than two decades ago" (Scruggs & Mastropieri, 1996, p. 71).

Research done by Johnson and Cartwright (1979) supports Scruggs and Mastropieri's (1996) conclusion that not much has improved in the last two decades. The authors posit that "many regular teachers are still concerned with having handicapped children in their classrooms" (Johnson & Cartwright, 1979, p. 453). This may be due to their feelings that they lack the skills necessary to teach these students. "Educators generally agree that in order for mainstreaming to succeed, the training and retraining of regu-

lar class teachers should be given top priority" (Johnson & Cartwright, 1979, p. 454). They argue that it is important to determine what factors underlie the development of a positive attitude because "teachers' attitudes are important to the educational and psychological adjustment of the mainstreamed child" (p. 454). The authors conclude that general education teachers are often ill-prepared, both in knowledge and attitude, to teach children with exceptionalities and recommend further research. Aldridge and Clayton (1987) found similar results.

Monahan, Marino and Miller (1996) surveyed 342 general education classroom teachers to ascertain their attitudes towards inclusion of students with special needs into their classrooms. "According to 72% of the respondents, inclusion of students with special needs will not succeed because of too much resistance from regular educators" (Monahan et al., 1996, p. 317). This may be due to the fact that 75% of the teachers felt that regular education teachers did not have the "instructional skills and educational backgrounds to teach students with special needs" (p. 317).

The respondents to Monahan et al. (1996) believed that teacher education programs should include the integration of appropriate curriculum for all children and that clinical experiences should include opportunities to work with students with a wide range of ability levels. In conclusion, they argued that preservice and inservice programs should focus on fostering attitudes that would enable teachers to work with students with special needs.

Williams (1990) investigated 114 general educators' perspectives of the appropriateness of the content in an undergraduate course taken to prepare them for the needs of children with exceptionalities. This course, offered at 12 different universities, was described by 45% of the respondents as being "very general in nature" (Williams, 1990, p.

151). The remaining group reported that the class did include "methods and materials for working with handicapped students in the regular classroom" (Williams, 1990, p. 151). This may explain why 51% felt that they were fairly adequately prepared. Not surprising, however, was that only 6% felt extremely well prepared.

The respondents were given the opportunity to make comments on the question, "Are there any additional areas of study or experiences which you feel would be beneficial if they were included in the teacher training program to better prepare teachers to work with mainstreamed students?" The most frequent responses were to provide experiences that were more direct with children with special needs and to offer more than one special education course for general educators. Williams (1990) concluded that these responses confirmed what was found in the literature regarding what was important for successful inclusion.

Dinnebeil, McInerney, Fox, and Juchartz-Pendry (1998) surveyed 400 early childhood personnel and examined the characteristics associated with an interest in or motivation to work with young children with exceptionalities in community-based programs. They identified two main issues related to the growing need for childcare and early education for young children with exceptionalities. These were (a) increasing the number and range of programs available, and (b) improving the quality of childcare for these children. They argued that addressing staff expertise would help alleviate problems in finding appropriate, high quality programs in the community. "Most of the respondents (70%) identified a lack of knowledge as a barrier to caring for a young child with a disability" (Dinnebeil et al., 1998, p. 124). Dinnebeil et al. concluded that future research and training is warranted and should be directed at the continuing education of community-based early childhood staff who care for young children with exceptionalities. They

also agreed with Bricker (1995) that issues must be addressed at the concrete levels of training, resources, attitude change, and curriculum development, if inclusion is to be successful.

Cassidy et al. (1995) was the only study found that looked specifically at changes in teachers' attitudes towards DAP as mediated by instruction. They found that those who had attended an inservice program had a significant increase in the developmental appropriateness of their attitudes and practices. This lack of evidence on the efficacy of teacher preparation as it relates to DAP clearly suggests the need for further research.

McMullen (1997) compared the beliefs about DAP and teaching efficacy of four groups of preservice and inservice early childhood professionals. She found that there was a significant difference in beliefs about DAP across the four groups. The more experience the professional had, the higher the mean score. Her study supports the positive effect that instruction and experience can have on DAP beliefs.

This literature review has reported research on the TBS, the ORM, and attitudes towards DAP and inclusion in the context of teacher preparation programs. While the TBS has been used in several studies the ORM has had limited utilization in previous studies. There have been no studies that have examined both instruments simultaneously. Further, several studies have shown the influence of teacher preparation programs on attitudes towards DAP and inclusion; very few have considered change in attitude over time.

CHAPTER 3

METHODOLOGY

This study was designed to investigate the psychometric properties of the TBS (Charlesworth et al., 1991; Charlesworth et al., 1993; Hart et al., 1998) and the ORM-A (Antonak & Larrivee, 1995; Larrivee & Cook, 1979). Quantitative methods were used to identify preservice teachers' beliefs towards inclusion and DAP. Personal characteristics related to these beliefs were also identified. Information describing research questions, participants, data collection, and analysis is presented in this chapter

Research Design

The questions, which guided this research, were as follows:

1. What are the psychometric properties of the TBS and the ORM-A when used with preservice early childhood and elementary educators?

2. (a) Do attitudes towards DAP change differentially over time in relation to university, degree program, or type of program? (b) Do attitudes towards inclusion change differentially over time in relation to university, degree program, or type of program

Sample

Preservice early childhood/elementary general education students from two southeastern universities, who were at or near the beginning of their programs, were

asked to participate. The beginning of the program generally coincides with the junior year or with the fifth year nontraditional Master's program. Seventy-seven females and 6 males responded to the original request ($N = 83$). The universities and participants were selected from a convenience sample. Thirty-six participants attended a traditional early childhood program at a small state university. Fifteen participants were enrolled in traditional early childhood and elementary programs at a large state university. Thirty-two participants were enrolled in a nontraditional cohort based at a local school through the larger university. A large portion of these preservice teachers' time was spent in classrooms.

The histories of the two universities are vastly different. The small state university, in existence for over 100 years, is located in a rural area. It is a traditional teachers' college with a focus on practice. In 1997, 6,477 undergraduate students were enrolled at the university; 17% of the total population was African American; 77% was White; the remainder were identified as Hispanic, Asian/Pacific Islander, American Indian/Alaskan, and other. The education programs of both universities are accredited by the National College Association for Teacher Education (NCATE).

The larger university is a research institution located in the heart of a large metropolitan city. In Fall 1999, 10,420 undergraduate students were registered; 27.4% of the student body were African American; 31.1% of the total student body represented minorities.

Instruments

A demographic questionnaire was developed to collect information on the backgrounds of the participants. This was completed at each of the collection points (see Ap-

pendix B). The information collected included age, gender, marital status, yearly income, self-identified race or ethnicity, relationships with people with disabilities, number of children with and without disabilities, university attended, degree program, reason for choosing that program, completed course hours, completed education hours, completed practicum hours, primary resource for inclusion, and primary resource for DAP. The TBS, Preschool Version and the ORM-A were the two instruments used in this study. These instruments are described as follows and can be found in Appendix C.

The Teacher Beliefs Scale

The TBS was developed as a subscale of the Teacher Questionnaire, Kindergarten Version (Charlesworth et al., 1991; Charlesworth et al., 1993). This instrument was originally designed to measure developmentally appropriate beliefs of kindergarten teachers. The scale was based on the guidelines published by the NAEYC (1986) and a later expansion (Bredekamp, 1987). The original TBS contained 30 items regarding teacher beliefs. Each item was a statement that described either a developmentally appropriate or a developmentally inappropriate belief (e.g., "As an evaluation technique in the preschool program standardized tests are ____."). The participants were asked to complete the statements with a response from a 5-point Likert scale as described below. Thus, their responses ranged from 1 (*not important at all*) to 5 (*extremely important*).

Factor analysis produced four reliable components with eigenvalues greater than 1. These accounted for 64% of the variance (Charlesworth et al., 1991). Two of the components were developmentally appropriate beliefs; two were developmentally inappropriate beliefs: (a) developmentally appropriate materials and management, (b) developmentally inappropriate materials and management, (c) appropriate positive teacher/child rela-

tionship, and (d) inappropriate literacy activities. When a varimax rotation was conducted, item loadings were moderate to high (0.40 to 0.80). There were no substantial cross loadings. Using Cronbach's alpha, the levels of internal consistency obtained for the factors were 0.85, 0.80, 0.68, and 0.74 (Charlesworth et al., 1991).

The instrument was revised in 1993 by Charlesworth and her colleagues. The revised instrument differed from the original instrument in that a few items, which had not loaded on any factor, were dropped. Other modifications were made, based on the DAP guidelines for 5-8 year olds (Bredekamp, 1987) that had become available. The format of the TBS was revised to contain 36 items, presented as statements. The 5-point Likert scale was maintained with anchors ranging from 1 (*not important at all*) to 5 (*extremely important*). Twenty-two of the responses indicated a positive attitude towards DAP; 14 represented a negative attitude.

In Charlesworth et al. (1993), a principal components analysis produced six factors with eigenvalues greater than 1. These accounted for 52.3% of the variance. When the varimax rotation was applied, moderate to high item loadings (.35 to .82) were established. There were no substantial cross loadings. Two of the factors were inappropriate beliefs, four were appropriate: (a) inappropriate activities and materials, (b) appropriate social, (c) appropriate individualization, (d) appropriate literacy activities, (e) appropriate integrated curriculum beliefs, and (f) inappropriate structure. Cronbach's alpha was used to assess subscale reliability. Moderate to low levels of internal consistency were obtained for the six factors (0.84, 0.77, 0.70, 0.60, 0.66, and 0.58) (Charlesworth et al., 1993).

Hart et al. (1998) modified the TBS to use with preschool educators. The changes were minor and involved replacing the word *kindergarten* with *preschool*. They also al-

tered the wording of two items so that they were more specific to preschoolers. Both items retained their original focus. For example, Item 16 (15 in the current study), "The basal reader is ___ to the kindergarten reading program" was changed to read "A structured reading or pre-reading program is ___ to the preschool program." No validity or reliability testing was conducted with the modified instrument.

The TBS was modified again to use with primary teachers (Buchanan et al., 1998). Item 1 from the kindergarten and preschool versions was extended so that the participants rated the influence of seven factors on planning and implementing instruction. The only change to the other items from the kindergarten version was the replacement of *preschool* with *primary*. A factor analysis was conducted forcing four components (DAP beliefs, DIP beliefs, DAP activities, and DIP activities). Items that loaded at .30 or greater were retained. Cronbach's alphas for the subscales ranged from 0.55 to 0.87. A pilot study had been conducted which resulted in a Cronbach's alpha of 0.79 for the total scale.

The original intention of this study was to measure early childhood educators' beliefs; therefore, the preschool version was selected. It quickly became apparent, however, that the sample would be too small. Due to the overlap in certification levels, it was decided that elementary preservice educators could also participate. In hindsight it may have been better to use the primary version, because that version better reflects the overlap in certification. There are several points, however, that support the use of the preschool version: (a) the study that utilized the primary version was not published until more than half of the current study's data had been collected; (b) the original kindergarten version, from which all others stem, was based on the primary grade section of the initial publication of the guidelines (Buchanan et al., 1998); (c) the differences in the ver-

sions are minute and do not involve any changes in focus; (d) a test-retest was completed using the preschool version with elementary and early childhood preschool educators; (e) just as the primary version was found to be reliable with educators certified in elementary or early childhood education, or both (Buchanan et al., 1998), the preschool version was also found to be reliable with both certifications; and (f) the results, as discussed in Chapter 5, are similar to the findings with the primary version (Buchanan et al., 1998).

In the current study, the 14 responses that represented DIP beliefs were reverse scored so that higher scores represented a more positive attitude towards DAP. Possible total scores ranged from 36 to 180. For use in this study, the instrument was modified to exclude Question 1. This question, involving ranking influences on planning and implementing instruction, was not relevant to the participants. Consequently, the item numbers do not match the item numbers in previous studies.

Opinions Relative to Mainstreaming-Adapted

The ORM was developed by Larrivee and Cook (1979) to investigate the effect of selected variables on the attitudes of regular classroom teachers towards mainstreaming students with disabilities. A 5-point Likert scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*) was used. Eighteen of the items represented a negative attitude towards mainstreaming; 12 reflected a positive attitude. The original scale, the ORM, consisted of 30 items. Items whose correlations with the total score were below 0.30 were discarded. The split-half reliability of the scale, determined by the Spearman-Brown reliability coefficient, was found to be .92.

Psychometric properties of the ORM were examined using the 941 regular kindergarten through 12th grade classroom teachers who participated in the original study.

The sample was weighted 2:1 in favor of elementary teachers. Factor analysis was completed on the responses to the 30 items. Five factors had eigenvalues of greater than 1 and were used to define the underlying dimensions of the scale. Prior to interpretation, a normalized varimax rotation was performed (Larrivee, 1982). Only items with factor loadings of 0.37 or greater were retained. Four items did not meet this criterion and were discarded. The five dimensions were interpreted as (a) general philosophy of mainstreaming, (b) classroom behavior of special needs children, (c) perceived ability to teach the special needs child, (d) classroom management with special needs children, and (e) academic and social growth of the special needs child. These five factors accounted for 52.4% of the total variance of the scale (Larrivee, 1982).

Antonak and Larrivee (1995) revised the ORM and renamed it the ORI. The 30 items were maintained; however, they were rewritten to use more inclusive and contemporary terminology. Wordings were also changed to create 15 positive and 15 negative responses. A 6-point continuum with anchors ranging from 1 (*disagree very much*) to 6 (*agree very much*) was added to prevent midpoint responses.

The original 30 items (Larrivee & Cook, 1979) were used in this study; however, the 6-point continuum created for the ORI (Antonak & Larrivee, 1995) was chosen to eliminate midpoint responses. Eighteen items represented negative attitudes towards inclusion and were reverse scored so that higher scores represented more positive attitudes towards inclusion. Possible total scores ranged from 30 to 180. The language of the items was also further updated to include current terminology. Due to the differences in the instrument used in this study compared to the original ORM, the instrument used in this study has been identified as ORM-A for clarification. Below is an example of the differences in terminology in the ORM, ORI and ORM-A.

1. In the ORM, "Mainstreaming is likely to have a negative effect on the emotional development of the special needs child."

2. In the ORI, "Integration will likely have a negative effect on the emotional development of the student with a disability."

3. In the ORM-A, "Inclusion is likely to have a negative effect on the emotional development of the student with a disability."

Test-Retest of Instruments

A group of 22 preservice early childhood and elementary educators, who were not part of the study, were selected for a test-retest of the two instruments. The instruments were initially administered during a class period. Three weeks later a retest was done with the same group during another class period. The item mean score at the first administration for the TBS was 134.79 with a standard deviation of 12.31; the item mean score for the ORM-A was 113.72, with a standard deviation of 17.07. At the retest, the item mean score for the TBS was 136.25, with a standard deviation of 11.69; for the ORM-A it was 117.23, with a standard deviation of 18.65. A Pearson's correlation was conducted for each instrument. The correlation for the TBS test/retest was .81. The correlation for the ORM-A test-retest was .87.

Data Collection Procedures

Data were collected from the two universities on three separate occasions, Fall 1998, Spring 1999, and Fall 1999. Collection procedures, which are outlined below, were slightly different at each collection in order to maximize the return of the completed instruments.

Time 1

Prior to collection, permission was requested and received from the Institutional Review Board for Human Use. This permission was extended to encompass the third collection date (see Appendix D). The two instruments and demographic questionnaire were distributed during class periods at each of the sites. Completion was voluntary and anonymous. The participants were given as much time as needed to complete the instruments. Upon completion, the instruments were collected and assigned identification numbers.

Time 2

Seven months after the completion of the first set, a second administration of the instruments was conducted. The instruments were mailed to all of the original participants from Time 1. Addresses provided by the respondents were used. A self-addressed, stamped envelope was included for return. Four percent (n = 3) were returned with invalid addresses. Two weeks after the mailing, a postcard requesting the completion of the set was mailed to those who had not yet responded. Thirty-six of the original sample responded at Time 2, yielding a return rate of 43%. The completed instruments were matched and labeled with the identification numbers from Time 1.

Time 3

Six months after the second collection, the third set was mailed to the respondents from Time 1 at the smaller university and those from the traditional program at the larger university (n = 51). It was hoped that some of those who had not returned the second set would do so at this time. The presentation of the instruments and questionnaire were redesigned to appear briefer. After 2 weeks, a follow-up letter, including another

copy of the instruments and a self-addressed, stamped envelope, was sent to those who had not yet responded. A telephone number was provided so that the option of completing the surveys and questionnaire on the telephone could be offered. Three were returned with invalid addresses.

The third set was distributed in class to the cohort from Time 1 in order to guarantee a maximum number of completed surveys (n = 32). Unfortunately, only 14 members of the cohort were present to complete the instruments. One participant refused to do so. The remaining 18 cohort members had the instruments mailed to them. The same follow-up procedures as at Times 1 and 2 were followed. The total return rate for Time 3 was 36%.

Data Analysis

Research Question 1

What are the psychometric properties of the TBS and the ORM-A when used with prospective early childhood and elementary educators? Construct validity of both scales was investigated using a principal components analysis followed by varimax rotation at Time 1. Only components with eigenvalues of 1 or greater, and with three or more substantial loadings of 0.40 or higher, were retained. To determine internal consistency, Cronbach's alpha was conducted on the scales and their components.

Research Question 2

Do attitudes towards DAP or inclusion change differentially over time in relation to university, degree program, or type of program? Descriptive statistics were computed for all of the demographic information and item responses. Variables were summarized with frequencies and percentages, using Statistical Package for the Social Sciences,

Graduate Pack 9.0 for Windows (SPSS, 1998). Repeated measures methods were conducted for both the TBS and ORM-A using type of program (traditional or nontraditional) as the between-subject variable.

A Mann-Whitney U test was conducted with the data from the participants who completed Times 1 and 3 (n = 30) and for those who completed the instruments at Times 1, 2, and 3 (n = 18). The change in scores on each instrument was the dependent variable. The participants were grouped in three ways: (a) traditional versus nontraditional programs, (b) large urban university versus small rural university, and (c) early childhood versus elementary degree programs. The decision was made to associate the combination majors with one of the two programs. Anyone who had an early childhood combination major was placed in the early childhood program; those with an elementary combination without early childhood were placed with the elementary group.

Summary

This chapter has reported the methodology used to answer the research questions in this study. To investigate the psychometric properties of the TBS and the ORM-A the construct validity was analyzed. Changes in early childhood and elementary preservice teachers' beliefs towards DAP and inclusion throughout their preparation programs were identified through quantitative methods. Chapter 4 will present the results of this study.

CHAPTER 4

RESULTS

As stated in Chapter 1, the purpose of this study was (a) to describe the psychometric properties of the TBS and the ORM-A when used with prospective early childhood and elementary educators, and (b) to describe the change in attitudes towards DAP and inclusion over time of preservice early childhood and elementary educators in relation to university, degree program, and type of program. Information was gathered over 15 months from three groups of preservice educators ($N = 83$).

Demographic information and scores from the TBS, Preschool Version (Charlesworth et al., 1991; Charlesworth et al., 1993; Hart et al., 1998) and the ORM-A (Antonak & Larrivee, 1995; Larrivee & Cook, 1979) were subjected to statistical analysis procedures to obtain quantitative data (SPSS, 1998). The descriptive analysis of the demographic data is found in Appendix E due to the quantity of information.

The results of the study are reported in five sections. The first section reports on the reliability and validity of the two instruments. The second section reports data gathering procedures and descriptive characteristics of the TBS and the ORM-A at Time 1. The third and fourth sections report on the descriptive characteristics of the instruments at Time 2 and Time 3. The fifth section reports on the relationships between demographic variables and the change in scores on the TBS and the ORM-A.

Research Question 1

Reliability and Validity of Instruments

Construct validity of Teacher Beliefs Scale. At Time 1, the initial principal component analysis resulted in an 11-component solution. Each of these components had eigenvalues greater than or equal to 1. When varimax rotation was attempted no solution was presented. Based on this and the fact that many of the components did not have three or more substantial loadings (0.400 or greater), this solution was rejected. The initial scree plot indicated a possible 5-component solution.

A second principal components analysis was conducted requesting only five components. Three criteria were used to determine the number of components to retain: visual interpretation of the scree plot, three or more loadings greater than or equal to 0.400, and eigenvalues greater than or equal to 1. Two items, Numbers 20 and 36, did not load substantially in any of the components; therefore, they were discarded and another principal components analysis was run requesting five components. The final 5-component solution accounted for 52.01% of the variance. The Kaiser-Meyer-Olin index was 0.718. The final 5-component solution is displayed in Appendix F.

The eigenvalue decreased gradually between components. Component I had an eigenvalue of 5.275, accounting for 15.515% of the variance. Component II had an eigenvalue of 3.696, accounting for 10.872% of the variance. Component III had an eigenvalue of 3.102, accounting for 9.123% of the variance. Component IV had an eigenvalue of 2.950, accounting for 8.677% of the variance. Component V had an eigenvalue of 2.660, accounting for 7.824% of the variance (Table 1).

The definitions of the 5-component solution are as follows. Component I, Inappropriate Materials and Activities includes activities such as worksheets, ditto

Table 1

Eigenvalues and Variance of Final 5-Component Solution of TBS at Time 1

	Component	Eigenvalue	% of variance	Cumulative %
I.	Inappropriate materials and activities	5.275	15.515%	15.515%
II.	Appropriate materials and activities	3.696	10.872%	26.386%
III.	Appropriate literacy activities	3.102	9.123%	35.509%
IV.	Appropriate curriculum beliefs	2.950	8.677%	44.186%
V.	Beliefs about structure	2.660	7.824%	52.010%

Note. Eigenvalues and percentages are postvarimax rotation values. TBS = Teacher Beliefs Scale, Preschool Version.

sheets, printing on the line, learning to read, and standardized testing. Component II, Appropriate Materials and Activities, includes such items as child-directed activities, reading to the children, and observation as a tool for evaluation. Component III, Appropriate Literacy Activities, includes functional print, dictated stories, dramatic play, informal conversation with adults, and inventive spelling. Component IV, Curriculum Beliefs, contains both appropriate and inappropriate items. These include items such as separate times for separate subjects; providing opportunities for social skills; integrating math; teaching health and safety throughout the yea; and exposing students to nonsexist, multicultural activities. Component V, Beliefs About Structure, contains appropriate and inappropriate items, such as addressing individual differences and using treats and punishment (Table 2).

Table 2

Final 5-Component Solution of Items From Teacher Beliefs Scale for Time 1

Component I: Inappropriate materials and activities

1. As an evaluation technique in the preschool program, standardized group tests are ___.
3. As an evaluation technique in the preschool program, performance on worksheets and workbooks is ___.
10. It is ___ for preschoolers to learn to work silently and alone on seatwork.
13. Workbooks and/or ditto sheets are ___ to the preschool program.
14. Routine group practice on shapes, numbers, letters, months and/or words, etc. using materials such as flashcards and charts is ___ to the preschool program for instructional purposes.
15. A structured reading program is ___ to the preschool program.
16. In terms of effectiveness, it is ___ for the teacher to talk to the whole group and make sure everyone participates in the same activity.
21. It is ___ for children to be instructed in recognizing single letters of the alphabet, isolated form words.
22. It is ___ for children to color within predefined lines.
23. It is ___ for children in preschool to form letters correctly on a printed line.
31. It is ___ for preschoolers to learn to read.

Component II: Appropriate materials and activities

2. As an evaluation technique in the preschool program, teacher observation is ___.
7. It is ___ for teacher-pupil interactions in preschool to help develop children's self-esteem and positive feelings towards learning.
8. It is ___ for children to be allowed to select many of their own activities from a variety of learning areas that the teacher has prepared (blocks, centers, art, housekeeping, etc.).
9. It is ___ for children to be allowed to cut out their own shapes, perform their own steps in an experiment, and plan their own creative drama, art, and writing or scribbling activities.
11. It is ___ for preschoolers to learn through active exploration.
12. It is ___ for preschoolers to learn through interaction with other children.
17. In terms of effectiveness, it is ___ for the teacher to move among groups and individuals, offering suggestions, asking questions, and facilitating children's involvement with materials and activities.
24. It is ___ for children to have stories read to them individually and/or on a group basis.

Table 2 (Continued)

Component III: Appropriate literacy activities

25. It is ___ for children to dictate stories to the teacher.
26. It is ___ for children to see and use functional print (telephone book, magazines, etc.) and environmental print (cereal boxes, potato chip bags, etc.) in the preschool classroom.
27. It is ___ for children to participate in dramatic play.
28. It is ___ for children to talk informally with adults.
29. It is ___ for children to experiment with writing by inventing their own spelling.

Component IV: Curriculum beliefs

6. It is ___ that each curriculum area be taught as separate subjects at separate times.
30. It is ___ to provide many opportunities to develop social skills with peers in the classroom.
32. In the preschool program, it is ___ that math be integrated with all other curriculum areas.
33. In teaching health and safety, it is ___ to include a variety of activities throughout the year.
34. In the classroom setting, it ___ for the child to be exposed to multicultural and nonsexist activities.

Component V: Beliefs about structure

4. It is ___ for preschool activities to be responsive to individual differences in interest.
5. It is ___ for preschool activities to be responsive to individual differences in development.
18. It is ___ for teachers to use their authority through treats, stickers, and/or stars to encourage appropriate behavior.
19. It is ___ for teachers to use their authority through punishments and/or reprimands to encourage appropriate behavior.
35. It is ___ that outdoor time have planned activities. (Negative relationship)

Items that cross-loaded

6. It is ___ that each curriculum area be taught as separate subjects at separate times (I & IV).
9. It is ___ for children to be allowed to cut out their own shapes, perform their own steps in an experiment, and plan their own creative drama, art, and writing or scribbling activities (II & III).
21. It is ___ for children to be instructed in recognizing single letters of the alphabet, isolated from words (I & V).

Internal reliability of Teacher Beliefs Scale. Estimates of internal consistency of the responses at Time 1 were determined by calculating Cronbach's alpha. The alpha coefficient for the final 34-item scale was 0.84. Cronbach's alpha was also calculated for the five subscales. The Component I alpha was 0.86 (11 items), Component II alpha was 0.78 (8 items), Component III alpha was 0.74 (5 items), Component IV alpha was 0.71 (5 items), and Component V alpha was 0.70 (4 items; negative item not included).

Construct validity of Opinions Relative to Mainstreaming-Adapted. The initial principal components analysis with varimax rotation resulted in a 9-component solution. Each of these components had eigenvalues greater than or equal to 1. Five of the components did not have three or more substantial loadings (greater than or equal to 0.400); therefore, they were discarded. Four components remained that met the criteria of having an eigenvalue equal to or greater than 1 and three or more loadings with a value of 0.400 or greater. Based on this and the visual interpretation of the scree plot, a 5-component principal components analysis was extracted. One component did not have three or more substantial loadings; therefore, the principal components analysis was run requesting a 4-component extraction. Three items, Numbers 12, 16, and 26, did not load and were discarded. The principal components analysis was rerun without these items. One component did not have three or more loadings equal to or greater than 0.400; therefore, the analysis was rerun requesting a 3-component extraction. Item 8 did not load; therefore, it was discarded. After the rerun, Item 14 did not load; therefore, it was also discarded. The final 3-component solution accounted for 50.137% of the variance. The Kaiser-Meyer-Olin index was 0.804. The final 3-component solution is displayed in Appendix F.

Components I and II accounted for 37.361% of the variance. Component I had an eigenvalue of 5.142, accounting for 20.567% of the variance; Component II had an eigenvalue of 4.199, accounting for 16.794% of the variance; and Component III had an eigenvalue of 3.194, accounting for 12.776% of the variance (Table 3).

Table 3

Eigenvalues and Variance of Final 3-Component Solution for ORM-A at Time 1

	Component	Eigenvalue	% of variance	Cumulative %
I.	Positive beliefs about inclusion	7.381	20.567%	20.567%
II.	Negative beliefs about inclusion	4.199	16.794%	37.361%
III.	Beliefs about the requirements for including a student with special needs	3.194	12.776%	50.137%

Note. Eigenvalues and percentages are postvarimax rotation values. ORM-A = Opinions Relative to Mainstreaming-Adapted

The definitions of the 3-component solution are as follows. Component I, Positive Beliefs About Inclusion, includes such items as academic growth, social independence, and acceptance of differences. Component II, Negative Beliefs About Inclusion, includes items such as harmful contact, confusion, and social isolation. Component III, Beliefs About the Requirements for Including a Student With Special Needs, includes items such as setting a bad example, monopolizing teacher's time, and exhibiting behavior problems (Table 4).

Internal reliability of the Opinions Relative to Mainstreaming-Adapted. Estimates of the internal consistency of the responses at Time 1 were determined by calculating Cronbach's alpha. The alpha coefficient for the final 25-item scale was 0.87. Cronbach's

alpha was also conducted for each component. The Component I alpha was 0.81 (9 items), Component II alpha was 0.81 (9 items), and Component III alpha was 0.77 (6 items; Item 7 had a negative correlation and was not included in the alpha calculation).

Table 4

Final 3-Component Solution of Items from Opinions Relative to Mainstreaming-Adapted for Time 1

Component I: Positive beliefs about inclusion

1. Many of the things teachers do with regular students in a classroom are appropriate for students with special needs.
4. The challenge of being in a general education classroom will promote the academic growth of the student with special needs.
6. Inclusion offers mixed group interaction, which will foster understanding and acceptance of differences.
10. Isolation in a special education class has a negative effect on the social and emotional development of a student with a disability.
11. The student with a disability will probably develop academic skills more rapidly in a special education class than in a general education class (cross-loaded with Component III; fits better in III).
18. Including a student with a disability will promote his/her social independence.
21. Inclusion of students with disabilities can be beneficial for students without disabilities.
28. Students with disabilities should be given every opportunity to function in the general education classroom, where possible.
30. The presence of students with disabilities will promote acceptance of differences on the part of students without disabilities.

*Compon*ent II: Negative beliefs about inclusion

15. The contact students without a disability have with students with a disability in an inclusive setting may be harmful.
17. Students with disabilities will monopolize the teacher's time.
19. It is likely that a student with a disability will exhibit behavior problems in a general education classroom setting.
20. Diagnostic-prescriptive teaching is better done by special education teachers than by general education teachers.
22. Students with disabilities need to be told exactly what to do and how to do it.
23. Inclusion is likely to have a negative effect on the emotional development of the student with a disability.
24. Increased freedom in the classroom creates too much confusion.

Table 4 (Continued)

25. The student with a disability will be socially isolated by the students without disabilities.
29. Students with disabilities are likely to create confusion in the general education classroom.

Component III: Beliefs about the requirements for including a student with special needs

2. The needs of a student with a disability can best be served through special, separate classes.
3. The classroom behavior of students with special needs generally requires more patience from the teacher than does the behavior of a child without special needs.
5. The extra attention a student with a disability requires will be to the detriment of other students.
7. It is difficult to maintain order in a general education classroom that contains a student with a disability (negative relationship).
9. The behavior of students with disabilities will set a bad example for the other students.
13. Inclusion of students with disabilities will require significant changes in the general education classroom procedures.
27. Inclusion of students with disabilities will necessitate extensive retraining of general education teachers.

Items that cross-loaded

11. The student with a disability will probably develop academic skills more rapidly in a special education class than in a general education class (I & III).
13. Inclusion of students with disabilities will require significant changes in the general education classroom procedures (evenly between II & III).
15. The contact students without a disability have with students with a disability in an inclusive setting may be harmful (I & II).
17. Students with disabilities will monopolize the teacher's time (II & III).

Pearson correlation of instruments over time. A Pearson correlation was conducted with the two instruments over all three times. There was statistical significance in the scores between each time on both instruments (Table 5). The most significant correlation was between Time 2 and Time 3 on the ORM-A. The Pearson correlation was 0.819, $p < .0001$. The scores at Time 2 and Time 3 for the TBS also had a probability of less than .0001. The Pearson correlation was 0.793.

Table 5

Pearson Correlations

	ORM-A 1	ORM-A 2	ORM-A 3	TBS 1	TBS 2	TBS 3
ORM-A 1						
Pearson	1.000	0.682	0.554			
Sig. (1 tail)	1.000	0.001	0.009			
ORM-A 2						
Pearson	0.682	1.000	0.819			
Sig. (1 tail)	0.001	1.000	0.000			
ORM-A 3						
Pearson	0.554	0.819	1.000			
Sig. (1 tail)	0.009	0.000	1.000			
TBS 1						
Pearson				1.000	0.631	0.600
Sig. (1 tail)				1.000	0.003	0.004
TBS 2						
Pearson				0.631	1.000	0.793
Sig. (1 tail)				0.003	1.000	0.000
TBS 3						
Pearson				0.600	0.793	1.000
Sig. (1 tail)				0.004	0.000	1.000

Note. TBS = Teacher Beliefs Scale, Preschool Version; ORM-A = Opinions Relative to Mainstreaming-Adapted.

Research Question 2

Time 1

Descriptive characteristics of sample. In Fall 1998, preservice early childhood and elementary educators from two southeastern universities were selected based on a convenience sample to participate in this study ($N = 83$). The two instruments and demographic questionnaire were distributed during class periods at each of the sites. Upon completion, the instruments were collected and assigned identification numbers. The two universities represented three separate groupings of students. Hereafter, the sample from the larger university's traditional program will be referred to as Group A; the sample

from the smaller university will be Group B; and the cohort from the larger university will be identified as Group C. Appendix E contains the descriptive summaries of the sample at each of the three times.

Descriptive characteristics of the Teacher Beliefs Scale. The total mean score for the TBS at Time 1 was 138.14 (*SD* = 12.85). The item mean scores ranged from 2.296 to 4.841. The total mean score for Group A was 140.33 (*SD* = 17.16); for Group B it was 138.35 (*SD* = 11.99); and for Group C it was 136.87 (*SD* = 11.71) (Table 6). The total group means on Items 7, 11, 24, 30, and 36 were 4.5 or above, indicating beliefs approaching "extremely important." Items 2, 4, 5, 8, 9, 20, 27, 28, 33, and 34 had a mean of 4.0 or higher, indicating that the participants believed that these were "very important" (see Appendix G).

Table 6

Item Mean Scores of Teacher Beliefs Scale

	Whole group		Group A		Group B		Group C	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Time 1 (*N* = 83)	138.14	12.85	140.33	17.16	138.35	11.99	136.87	11.71

Note. Total possible score = 180.00.

Descriptive characteristics of the Opinions Relative to Mainstreaming-Adapted. The total mean score for the ORM-A was 119.42 (*SD* = 16.76). The item mean scores ranged from 2.277 to 5.096. The total item mean score for Group A was 114.78 (*SD* =

12.79). The total item mean score for Group B was 116.05 (*SD* = 16.26); the total item mean score for Group C was 125.19 (*SD* = 17.68) (Table 7).

Table 7

Item Mean Scores of Opinions Relative to Mainstreaming-Adapted

	Whole group		Group A		Group B		Group C	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Time 1 (*N* = 83)	119.42	16.76	114.78	12.79	116.05	16.26	125.19	17.68

Note. Total possible score = 180.00.

The total group means for Items 4, 6, 8, 9, 10, 12, 15, 18, 19, 21, 23, 25, 28, 29, and 30 were 4.0 or higher, indicating that the participants agreed "pretty much" or "very much" with these beliefs about inclusion (see Appendix G).

Time 2

Descriptive characteristics of sample. In Spring 1999, a second administration of the instruments was conducted. The instruments were mailed to all of the original participants from Time 1 (*N* = 83). A self-addressed stamped envelope was included for return. Four percent (*n* = 3) were returned with invalid addresses. Two weeks after the mailing a reminder postcard was sent to those who had not responded. Thirty-six responded, yielding a total return rate of 43%. Ten of the 15 participants (66.67%) from Group A responded. Nine of the 36 (25%) from Group B responded. Seventeen of the 31 participants (54.8%) from Group C responded.

Descriptive characteristics of the Teacher Beliefs Scale. The total mean score for the TBS at Time 2 was 147.64 (*SD* = 11.37) (Table 8). The item mean scores ranged from 2.402 to 4.886 (Table 8). The total mean score for Group A was 153.17 (*SD* = 12.54); for Group B it was 142.67 (*SD* = 12.64); and for Group C it was 147.02 (*SD* = 8.9). Items 2, 7, 9, 11, 12, 17, 20, 24, 30, and 34 had means of greater than 4.5. Items 1, 4, 5, 6, 8, 13, 22, 23, 26, 28, 29, 33, and 36 had item means between 4.0 and 4.49 (see Appendix G).

Table 8

Comparative Item Mean Scores of Teacher Beliefs Scale

	Whole group		Group A		Group B		Group C	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Time 1 (*N* = 83)	138.14	12.85	140.33	17.16	138.35	11.99	136.87	11.71
Time 2 (*n* = 36)	147.64	11.37	153.17	12.54	142.67	12.64	147.02	8.90

Note. Total possible score = 180.00.

Descriptive characteristics of the Opinions Relative to Mainstreaming-Adapted. The total mean score on the ORM-A was 122.41 (*SD* = 18.30). The item mean scores ranged from 1.943 to 5.139. The item mean score for Group A was 122.70 (*SD* = 18.80); for Group B it was 119.49 (*SD* = 17.88); and for Group C it was 123.79 (*SD* = 19.16) (Table 9). At Time 2, attitudes towards inclusion improved slightly, with Items 1, 4, 6, 7, 9, 10, 12, 15, 18, 21, 22, 23, 24, 25, 28, 29, and 30 having mean scores of 4.00 or higher (see Appendix G).

Table 9

Comparative Item Mean Scores of Opinions Relative to Mainstreaming-Adapted

	Whole group		Group A		Group B		Group C	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Time 1 ($N = 83$)	119.42	16.76	114.78	12.79	116.05	16.26	125.19	17.68
Time 2 ($n = 36$)	122.41	18.30	122.70	18.80	119.49	17.88	123.79	19.16

Note. Total possible score = 180.00.

Time 3

Descriptive characteristics of sample. In Fall 1999, a third administration was mailed to the participants from Group B ($n = 36$) and Group A ($n = 15$). A self-addressed, stamped envelope was included for return. Two weeks later a follow-up letter was mailed with another copy of the instruments and a self-addressed, stamped envelope. In order to ensure the return of as many completed instruments as possible, the instruments were distributed in class to Group C ($n = 32$). Only 14 of Group C's participants were present; consequently, the remaining 18 members had the instruments mailed to them. The same procedure as for Groups A and B was followed. Six of the 15 participants (40%) from Group A responded. Eight of the 36 participants (22.2%) from Group B responded. Sixteen of the possible 32 (50%) responded from Group C. One participant who was given the instruments in person refused to complete them. Three were returned with invalid addresses (4%). The total return rate was 36%.

Descriptive characteristics of the Teacher Beliefs Scale. The total mean score at Time 3 was 137.41 (*SD* = 16.98). The item mean scores ranged from 2.464 to 4.759. The total mean score for Group A was 153.25 (*SD* = 9.037). The total mean score for Group B was 135.70 (*SD* = 13.62). The total mean score for Group C was 132.32 (*SD* = 17.72) (Table 10).

Table 10

Comparative Item Mean Scores of Teacher Beliefs Scale

	Whole group		Group A		Group B		Group C	
	Score	*SD*	Score	*SD*	Score	*SD*	Score	*SD*
Time 1 (*N* = 83)	138.14	12.85	140.33	17.16	138.35	11.99	136.87	11.71
Time 2 (*n* = 36)	147.64	11.37	153.17	12.54	142.67	12.64	147.02	8.90
Time 3 (n = 30)	137.41	16.98	153.25	9.04	135.70	13.62	132.30	17.72

Note. Total possible score = 180.00.

The total group means on Items 2, 7, 11, and 12 were 4.50 or above, indicating beliefs approaching "extremely important." Items 8, 17, 20, 24, 26, 30, 34, and 36 were between 4.0 and 4.49, indicating that the participants believed that these were "very important" (see Appendix G).

Descriptive characteristics of the Opinions Relative to Mainstreaming-Adapted. The total mean score for the ORM-A was 119.70 (*SD* = 18.19), and the item mean scores ranged from 2.233 to 5.000. The total mean score for Group A was 128.33 (*SD* = 15.29).

The total mean score for Group B was 111.96 (*SD* = 19.28) at Time 3. The total mean score for Group C was 120.33 (*SD* = 18.07) (Table 11).

At Time 3, the total group means for Items 1, 2, 4, 6, 7, 9, 10, 12, 15, 18, 21, 23, 25, 28, 29, and 30 had means of 4.00 or higher, indicating that they agreed "pretty much" or "very much" with these beliefs about inclusion (see Appendix G).

Table 11

Comparative Item Mean Scores on Opinions Relative to Mainstreaming-Adapted

	Whole group		Group A		Group B		Group C	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Time 1 (*N* = 83)	119.42	16.76	114.78	12.79	116.05	16.26	125.19	17.68
Time 2 (*n* = 36)	122.41	18.30	122.70	18.80	119.49	17.88	123.79	19.16
Time 3 (*n* = 30)	119.70	18.19	128.33	15.29	111.96	19.28	120.33	18.07

Note. Total possible score = 180.00.

Descriptive characteristics of subsample who responded at all three collection points. Out of the original sample of 83, only 18 participants responded at all three collection points. The purpose of this study was to investigate change over time; therefore, this group, along with the group who completed the instruments at Times 1 and 3, was the focus of the statistical analysis. The group of 30 includes the group of 18. Their descriptive characteristics are displayed in the table below (Table 12).

The group who responded all three times had a mean age of 27 years and 4 months. The subsample was overwhelmingly White and female (94.4% and 88.9%, re-

spectively). The degree programs represented by those who responded three times were as follows: 66.7% were elementary; 16.7% were early childhood; 11.1% were early childhood and elementary; and 5.6% were elementary and middle school. The majority of the participants were from the larger university, with 61% coming from Group C (n = 11).

Table 12

Comparison of Descriptive Characteristics of Subsamples Who Responded at Times 1 and 3 (n = 30) and at Times 1, 2, and 3 (n = 18)

Variable	Descriptives/frequency for subsample who responded at Times 1 and 3 (n = 30)	Descriptives/frequency for subsample who responded at Times 1, 2, and 3 (n = 18)
Age	26 years 9 months	27 years 4 months
Gender	93.3% female 6.7% male	88.9% female 11.1% male
Race	10.0% African American/Black 90.0% Caucasian/White	5.6% African American/Black 94.4% Caucasian/White
University	73.3% large university 26.7% small university	83.3% large university 16.7% small university
Group	Group A n = 6 Group B n = 8 Group C n = 16	Group A n = 4 Group B n = 3 Group C n = 11
Degree program	20.0% early childhood 70.0% elementary 6.7% ECE and elementary 3.3% elementary and middle school	16.7% early childhood 66.7% elementary 11.1% ECE and elementary 5.6% elementary and middle school
Student Status	100.0% fulltime	100.0% fulltime

Table 12 (Continued)

Variable	Descriptives/frequency for subsample who responded at Times 1 and 3 (n = 30)	Descriptives/frequency for subsample who responded at Times 1, 2, and 3 (n = 18)
Reason for choosing major	6.7 % personal experience 66.7% wants to work with children 3.3 % beliefs 3.3 % required prerequisite 13.3% career goal 3.3% family influence 3.3% improve the system	11.1% personal experience 55.6% wants to work with children 5.6% beliefs 5.6% required prerequisite 11.1% career goal 5.6% family influence 5.6% improve the system
Number of children	73.3% no children 6.7% 1 child 16.7% 2 children 3.3% 3 children	72.2% no children 5.6% 1 child 22.2% 2 children
Children with disabilities	0.0% had a child with a disability	0.0% had a child with a disability
Relationship with person with disability	13.3% do not know anyone with a disability 30.0% know an acquaintance 26.7% know someone casually 20.0% know someone close 3.3% know someone intimately 6.7% know multiple people	16.7% do not know anyone with a disability 38.9% know an acquaintance 16.7% know someone casually 11.1% know someone close 5.6% know someone intimately 11.1% know multiple people
Completed education hours	6.6% 0-12 hr 40.0% 13-24 hr 33.3% 25-36 hr 3.3% 37-48 hr 6.6% 49+ hr 10.0% missing	0.0% 0-12 hr 50.0% 13-24 hr 43.8% 25-36 hr 5.6% 37-48 hr 11.1% missing
Completed practicum hours	86.7% 0-12 hr 6.6% 13-24 hr 6.7% missing	88.8% 0-12 hr 5.6% 13-24 hr 5.6% missing
Primary resource for inclusion	36.7% courses 13.3% practicum 6.7% independent reading 43.3% personal experience	44.4% courses 11.1% practicum 0.0% independent reading 44.4% personal experience

Table 12 (Continued)

Variable	Descriptives/frequency for subsample who responded at Times 1 and 3 (n = 30)	Descriptives/frequency for subsample who responded at Times 1, 2, and 3 (n = 18)
Primary resource for DAP	66.7% courses 16.7% practicum 3.3% independent reading 13.3% personal experience	77.8% courses 11.1% practicum 0.0% independent reading 11.1% personal experience

Note. Based on Time 1 responses; ECE = early childhood education; DAP = developmentally appropriate practice.

A variety of answers was given from the subsample who responded at all three times to the question of why they chose teaching. Wanting to work with children was the majority response. All of the participants had completed more than 12 semester hr of education courses at Time 1; 88% had completed less than 12 hr of practicum.

Of those who responded all three times, only 16.7% did not have a relationship with someone with a disability. Courses and personal experience were viewed equally as the primary resource for inclusion (44.4% each). This subgroup believed, by an overwhelming majority (77.8%), that courses were their primary resource for DAP.

Descriptive characteristics of subsample who did not respond at Time 2. The descriptive characteristics of the sample who did not respond at Time 2 are shown in Table 13. These are based on their responses from Time 1. The mean age of the group who did not respond was 25 years and 5 months. The majority of this group self-identified as White (87.2%). Of the participants who did not respond, 72.3% were in the elementary program, and 14.9% were in early childhood. Of those who did not respond at Time 2, 74.5% chose teaching because they "wanted to work with children." Only 2.1% chose teaching because of their beliefs.

Participants from the smaller university (Group B) were more likely not to respond at Time 2; 57.4% of those who did not respond were from Group B. The only person who reported having a child with a disability at Time 1 did not respond at Time 2. Almost a quarter of this sample, 23.4%, reported knowing no one with a disability. The primary resources for inclusion for the group who did not respond included 36.2% courses, 23.4% practicum, 6.4% independent reading, and 34% personal experience. The primary resources for DAP were as follows: 29.8% practicum, 48.9% courses, 6.4% independent reading, and 12.8% personal experience, and the remainder did not answer.

Table 13

Descriptive Characteristics of the Subsample Who Did Not Respond at Time 2 (n = 47)

Variable	Response
Age	25 years and 5 months
Gender	93.6% female 6.4% male (*n* = 44, 3)
Race	12.8% Black 87.2% White (*n* = 6, 41)
Degree program	14.9% ECE 72.3% elementary 6.4% ECE and elementary 2.1% physical education 2.1% 5th year special education 2.1% 5th year ECE
Reason for choosing major	6.4% experience 74.5% want to work with children 2.1% beliefs 12.8% career goal 4.3% improve the system

Table 13 (Continued)

Variable	Response
Student status	91.5% fulltime 8.5% parttime
Completed education course hours	17.5% 0-12 hr 32.5% 13-24 hr 25.0% 25-36 hr 10.0% 37-48 hr 5% 49-60 hr 7.5% 61-72 hr 2.5% 73+ hr
Completed practicum course hours	88.6% 0-12 hr 13.4% 13-24 hr
University	42.6% large state university (A & C) 57.4% smaller state university (B)
Children	74.5% no children 10.6% 1 child 2.1% 2 children 6.4% 3 children 4.3% 4 children 2.1% missing
Children with disability	2.1% had a child with a disability
Relationship with people with disabilities	23.4% do not know anyone with a disability 17.0% know an acquaintance 27.7% know someone casually 19.1% know someone close 2.1% know someone intimately 10.6% know multiple people
Resources for inclusion	36.2% courses 23.4% practicum 6.4% independent reading 34.0% personal experience

Table 13 (Continued)

Variable	Response
Resources for DAP	48.9% courses 29.8% practicum 6.4% independent reading 12.8% personal experience 2.1% missing

Note. Based on Time 1 responses; ECE = early childhood education; DAP = developmentally appropriate practice.

Analysis of Subsample Who Completed Time 1 and Time 3

Teacher Beliefs Scale. A repeated measures analysis could not be conducted on the subsample who responded at Times 1 and 3 using degree program or university as between-subject variables because of the low numbers. A repeated measures was attempted for type of program. The two traditional programs, Group A and Group B, were combined. The assumptions were violated; therefore, no results were valid.

The total mean score for the traditional group (Groups A and B) was 140.09 at Time 1 and 143.22 at Time 3. The total mean score for the nontraditional group (Group C) was 137.42 at Time 1 and 132.32 at Time 3 (Table 14). Broken down by universities, the larger university's mean scores were 140.58 and 138.03; the smaller university's mean scores were 133.41 and 135.70. The traditional group had the more positive change with an overall increase in mean score of +3.13 The nontraditional group had the lesser positive change with an overall decrease in mean score of –5.11 (Table 14).

Based on degree programs, the total mean scores were as follows: early childhood's mean scores were 148.30 at Time 1 and 155.62 at Time 3, elementary's mean scores were 134.58 at Time 1 and 131.04 at Time 3, early childhood and elementary dual major's mean score was 150.50 at Time 1 and 148.91 at Time 3, elementary and middle

Table 14

TBS Score Means for Subsample Who Responded at Times 1 and 3 (n = 30)

	Time 1	*SD* Time 1	Time 3	*SD* Time 3	*N*
Type of program					
Traditional	140.09	14.42	143.22	14.58	14
Nontraditional	137.42	13.03	132.32	17.72	16
University					
Large	140.58	13.61	138.03	18.29	22
Small	133.41	12.60	135.70	13.62	8

Note. Total possible score = 180.00. TBS = Teacher Beliefs Scale, Preschool Version.

school's mean scores were 143.00 at Time 1 and 139.00 at Time 3. The degree program with the most positive change was the early childhood education program with an overall mean score increase of +7.28. Elementary and middle school had the least positive change with a decrease of –4.0; however, there was only one person who responded. The elementary program, with a much larger sample, decreased by –3.54 (Table 15).

Table 15

TBS Score Means for Subsample Based on Degree Programs (n = 30)

	Degree Program	*M*	*SD*	*N*
TBS Score Time 1	Early childhood education	148.33	12.03	6
	Elementary education	134.58	12.90	21
	Early childhood and elementary	150.50	6.36	2
	Elementary and middle school	143.00		1
TBS Score Time 3	Early childhood education	155.62	7.10	6
	Elementary education	131.04	15.65	21
	Early childhood and elementary	148.91	10.03	2
	Elementary and middle school	139.00		1

Note. Total possible score = 180.00. TBS = Teacher Beliefs Scale, Preschool Version.

A Mann-Whitney U test was calculated. As described in Chapter 3, the participants were combined so that there were two types of programs and two degree programs. The traditional versus nontraditional grouping was approaching significance with a probability value of .088. No statistical significance was found for degree programs or universities (Table 16).

Opinions Relative to Mainstreaming-Adapted. A repeated measures analysis was attempted on the subsample using type of program as the between-subject variable and test scores as the factor. Groups A and B were combined to formulate the traditional grouping. When the test was run the assumptions were violated, resulting in an invalid

Table 16

Mann-Whitney U Test Results for Change in TBS Score (n = 30)

	Mann-Whitney *U*	Significance (two-tailed)
Degree program	55.00	0.122
Type of program	71.00	0.088
University	63.00	0.241

Note. TBS = Teacher Beliefs Scale, Preschool Version.

result. Consequently, descriptive statistics were used to analyze the type of program, the degree program, and the university. The results are displayed in Tables 17 and 18.

The total mean scores for the traditional program were 112.14 at Time 1 and 118.97 at Time 3. The total mean scores for the nontraditional program were 124.50 at Time 1 and 120.33 at Time 3. Broken down by university, the larger university's mean

scores were 121.50 and 122.51; the smaller university's mean scores were 111.13 and 119.56. The traditional group had the more positive change with an increase of +6.83

Table 17

ORM-A Score Means for Subsample (n = 30)

	Time 1	*SD* Time 1	Time 3	*SD* Time 3	*N*
Type of program					
Traditional	112.14	13.98	118.97	18.99	14
Nontraditional	124.50	18.99	120.33	18.07	16
University					
Large	121.50	12.51	122.51	17.38	22
Small	111.13	17.13	111.96	19.28	8

Note. Total possible score = 180.00. ORM-A = Opinions Relative to Mainstreaming – Adapted. SD = standard deviation.

points in the mean score. The nontraditional group had the lesser positive change with a decrease of -4.17 in the mean score.

Table 18

ORM-A Score Means for Subsample Based on Degree Programs (n = 30)

	Degree program	*M*	*SD*	*N*
TBS Score Time 1	Early childhood education	111.33	12.85	6
	Elementary education	119.48	18.22	21
	Early childhood and elementary	136.00	8.49	2
	Elementary and middle school	113.00		1
TBS Score Time 3	Early childhood education	120.50	18.58	6
	Elementary education	116.92	18.21	21
	Early childhood and elementary	141.99	0.02	2
	Elementary and middle school	128.68		1

Note. Total possible score = 180.00. ORM-A = Opinions Relative to Mainstreaming – Adapted.

Based on degree programs, the total mean scores for the ORM-A were as follows: early childhood's mean scores were 111.33 at Time 1 and 120.50 at Time 3, elementary's mean scores were 119.48 at Time 1 and 116.92 at Time 3, early childhood and elementary dual major's mean scores were 136.00 at Time 1 and 141.99 at Time 3; elementary and middle school's mean score was 113.00 at Time 1 and 128.68 at Time 3. As a group, the early childhood education participants had the most positive change with an increase of +9.17 points in their overall mean score. Elementary/middle actually increased more, but there was only one participant from that degree program.

A Mann-Whitney U test was conducted using the change in ORM-A scores as the dependent variable and the combined groupings discussed earlier. The type of program was found to be approaching significance with a probability of value of 0.067. No statistical significance was found for university or degree program groupings (Table 19).

Table 19

Mann-Whitney U Test Results for Change in ORM-A Score (n = 30)

	Mann-Whitney *U*	Significance (2-tailed)
Degree Program	61.00	0.205
Type of Program	68.00	0.067
University	78.00	0.639

Note. ORM-A = Opinions Relative to Mainstreaming – Adapted.

Analysis of Subsample Who Completed Times 1, 2, and 3

Teacher Beliefs Scale. A repeated measures analysis could not be conducted on the subsample who responded at Times 1, 2, and 3 using degree program or university as

between-subject variables because of the low numbers. A repeated measures was attempted for type of program. The two traditional programs were combined as described earlier. The assumptions were violated; therefore, no results were valid. The descriptive results are displayed in Tables 20 and 21. A Mann-Whitney U test was conducted using the same variables as described earlier.

Table 20

TBS Score Means for Subsample (n = 18)

	Time 1	*SD*	Time 2	*SD*	Time 3	*SD*	*N*
Type of program							
Traditional	145.57	13.81	150.86	17.47	148.13	14.75	7
Nontraditional	141.26	14.20	147.36	9.90	136.26	19.38	11
University							
Large	143.92	14.38	150.33	10.67	141.19	19.11	15
Small	138.00	11.36	140.67	22.75	139.33	16.50	3

Note. Total possible score = 180.00. TBS = Teacher Beliefs Scale, Preschool Version.

The total mean scores for the traditional group (Groups A and B) were 145.57 at Time 1, 150.86 at Time 2, and 143.22 at Time 3. The total mean scores for the nontraditional group (Group C) were 141.26 at Time 1, 147.36 at Time 2, and 136.26 at Time 3. Broken down by universities, the larger university's mean scores were 143.92, 150.33, and 141.19; the smaller university's mean scores were 138.00, 140.67, and 139.33. The traditional group had the more positive change from Time 1 to Time 3, with an overall increase in mean score of +2.55. The nontraditional group had the lesser positive change with an overall decrease in mean score of –6.99. No statistical significance was found for type of program or university with the Mann-Whitney U test (Table 22).

Table 21

TBS Score Means for Subsample Based on Degree Programs (n = 18)

	Degree program	*M*	*SD*	*N*
TBS Score Time 1	Early childhood education	150.00	16.82	3
	Elementary education	139.90	14.32	12
	Early childhood and elementary	150.50	6.36	2
	Elementary and middle school	143.00		1
TBS Score Time 2	Early childhood education	160.00	12.03	3
	Elementary education	145.25	12.90	12
	Early childhood and elementary	160.00	6.36	2
	Elementary and middle school	134.00		1
TBS Score Time 3	Early childhood education	159.02	8.16	3
	Elementary education	135.16	18.87	12
	Early childhood and elementary	148.91	10.03	2
	Elementary and middle school	139.00		1

Note. Total possible score = 180.00. TBS = Teacher Beliefs Scale, Preschool Version.

Table 22

Mann-Whitney U Test Results for Change in TBS Score (n = 18)

	Mann-Whitney *U*	Significance (2-tailed)
Degree program	24.00	0.402
Type of program	30.00	0.441
University	17.00	0.515

Note. TBS = Teacher Beliefs Scale, Preschool Version.

Based on degree programs, the total mean scores were as follows: early childhood's mean scores were 150.00 at Time 1, 160.00 at Time 2, and 159.02 at Time 3; elementary's mean scores were 139.90 at Time 1, 145.25 at Time 2, and 135.16 at Time 3; early childhood and elementary dual major's mean scores were 150.50 at Time 1, 150.50 at Time 2, and 148.91 at Time 3; elementary and middle school's mean score was 143.00

at Time 1, 134.00 at Time 2, and 139.00 at Time 3. The degree program with the most positive change from Time 1 to Time 3 was the early childhood education program with an overall mean score increase of +9.00. The degree program with the least positive change was the elementary program. Their overall mean decreased –4.74 points. No statistical significance was found with the Mann-Whitney U test when the degree programs were grouped into early childhood and elementary (Table 22).

Opinions Relative to Mainstreaming-Adapted. A repeated measures analysis was attempted on the subsample using type of program as the between-subject variable and change in scores as the factor. Groups A and B were combined to formulate the traditional grouping. When the test was run the assumptions were violated. As a result, descriptive statistics were used to first analyze the type of program, the degree program, and the university. The results are displayed in Tables 23 and 24.

Table 23

ORM-A Score Means for Subsample (n = 18)

	Time 1	*SD*	Time 2	*SD*	Time 3	*SD*	*N*
Type of program							
Traditional	115.43	16.54	118.43	25.49	126.08	21.54	7
Nontraditional	129.27	18.05	122.09	20.37	119.70	21.63	11
University							
Large	125.47	19.22	122.87	21.66	123.04	20.81	15
Small	116.00	12.77	109.67	23.01	119.56	28.13	3

Note. Total possible score = 180.00. ORM-A = Opinions Relative to Mainstreaming – Adapted.

The total mean scores for the traditional program were 115.43 at Time 1, 118.43 at Time 2, and 126.08 at Time 3. The total mean scores for the nontraditional program

were 129.27 at Time 1, 122.09 at Time 2, and 119.70 at Time 3. Broken down by universities, the larger university's mean scores were 125.47, 122.87, and 123.04; the smaller university's mean scores were 116.00, 109.67, and 119.56. The traditional group had the more positive change with an increase of +11.38 points in the mean score. The nontraditional group had the lesser positive change with a decrease of –6.99 in the mean score.

Table 24

ORM-A Score Means for Subsample Based on Degree Programs (n = 18)

	Degree program	*M*	*SD*	*N*
ORM-A	Early childhood education	106.00	13.08	3
Score	Elementary education	127.25	18.58	12
Time 1	Early childhood and elementary	136.00	8.49	2
	Elementary and middle school	113.00		1
ORM-A	Early childhood education	114.33	23.16	3
Score	Elementary education	119.17	21.82	12
Time 2	Early childhood and elementary	145.00	16.97	2
	Elementary and middle school	109.00		1
ORM-A	Early childhood education	129.00	19.98	3
Score	Elementary education	117.06	22.56	12
Time 3	Early childhood and elementary	141.99	0.02	2
	Elementary and middle school	128.68		1

Note. Total possible score = 180.00. ORM-A = Opinions Relative to Mainstreaming – Adapted.

Based on degree programs, the total mean scores for the ORM-A were as follows: early childhood's mean scores were 106.00 at Time 1, 114.33 at Time 2, and 129.00 at Time 3; elementary's mean scores were 127.25 at Time 1, 119.17 at Time 2, and 117.06 *at* Time 3; early childhood and elementary dual major's mean scores were 136.00 at Time 1, 145.00 at Time 2, and 141.99 at Time 3; elementary and middle school's mean scores were 113.00 at Time 1, 109.00 at Time 2, and 128.68 at Time 3. As a group, the

early childhood education participants had the most positive change from Time 1 to Time 3 with an increase of +23.00 points in their overall mean score. The elementary participants had the least positive change with a decrease of −10.2 points in their overall mean score.

A Mann-Whitney U test was conducted using groupings as the between-subject variables and the change in scores as the dependent variable. Statistical significance was found for type of program (p = .021) and degree program (p = .026). No statistical significance was found for university (Table 25). Practical significance can be investigated through descriptives, confidence intervals, and measures of association (Popham, 1975). The use of the confidence intervals was complicated by the low return rate for those who completed all three collections (n = 18). Examining the descriptives for change in mean scores showed an increase of 5.9% for the traditional participants, while the nontraditional participants had a 5.3% decrease in their attitude scores. There was only a 3.5% difference in the Time 3 scores of the program types. Using the variable of degree program, the early childhood participants had a 12.8% increase in their scores, while the elementary participants scores decreased 5.7%. There was a 6.7% difference in their final scores.

Table 25

Mann-Whitney U Test Results for Change in ORM-A Score (n = 18)

	Mann-Whitney *U*	Significance (2-tailed)
Degree program	10.00	0.026*
Type of program	13.00	0.021*
University	14.00	0.312

Note. *p < .05. ORM-A = Opinions Relative to Mainstreaming – Adapted.

This chapter reported the results. Reliability and validity of the TBS and the ORM-A were investigated. Data gathering procedures and descriptive characteristics of two subsamples were described. The final section showed the relationship between demographic variables and the change in scores on the TBS and the ORM-A. Chapter 5 is concerned with the summary, findings, conclusions, and implications of this research.

CHAPTER 5

SUMMARY, FINDINGS, CONCLUSIONS, AND IMPLICATIONS

Chapter 5 provides an overall summary of the findings. The findings related to each research question will be discussed, as will the relevant additional findings. Implications and recommendations for further research will be provided.

Research Question 1

Construct Validity and Reliability of Teacher Beliefs Scale

The final principal components solution was similar to earlier studies, which had resulted in solutions containing four and six components (Burts et al., 1990; Charlesworth et al., 1991; Charlesworth et al., 1993; Sexton et al., 2000; Werner, 1997). For discussion purposes, the current study will be compared with Charlesworth et al. (1993), which utilized the kindergarten version. Charlesworth et al.'s study (1993) identified a 6-component solution. Component I, Inappropriate Activities and Materials, and Component IV, Appropriate Integrated Curriculum Beliefs, are almost identical to Component I, Inappropriate Materials and Activities, and Component IV, Curriculum Beliefs, found in this study. Charlesworth et al. (1993) also had a component for Appropriate Literacy Activities. The items that loaded in this study under Component III, Appropriate Literacy Activities, included literacy items as well as items that were identified by Charlesworth et al. (1993) as Appropriate Social Activities. The two items that did not substantially load

in the current study were also not included in the earlier study's component structure. Table 26 outlines the components in the current study and the Charlesworth et al. (1993) study.

The reliability levels of the components, 0.70 to 0.86, corresponded with earlier studies. Using the kindergarten version, Charlesworth et al. (1991) had four components with alphas ranging from 0.68 to 0.85. Charlesworth et al. (1993) had six components with alphas ranging from 0.58 to 0.84. Using the preschool version, Werner (1997) had six components with alphas ranging from 0.47 to .87; Sexton et al. (2000) had three components with alphas ranging from 0.65 to 0.91.

Table 26

Comparison of the Principal Component Solution of the Current Study (TBS at Time 1) With the Charlesworth, Hart, Burts, Thomasson, Mosley, and Fleege study (1993).

Item	Component in current study	Component in Charlesworth et al. study (1993)
1	I, Inappropriate materials and activities	VI, Inappropriate structure
2	II, Appropriate materials and activities	Not included in component structure
3	I, Inappropriate materials and activities	I, Inappropriate activities and materials
4	V, Beliefs about structure	III, Appropriate individualism
5	V, Beliefs about structure	III, Appropriate individualism
6	IV, Curriculum beliefs	VI, Inappropriate structure
7	II, Appropriate materials and activities	Not included in component structure
8	II, Appropriate materials and activities	Inappropriate activities and materials (negative loading)
9	II, Appropriate materials and activities	Not included in component structure
10	I, Inappropriate materials and activities	I, Inappropriate activities and materials
11	II, Appropriate materials and activities	III, Appropriate individualism
12	II, Appropriate materials and activities	Not included in component structure

Table 26 (Continued)

Item	Component in current study	Component in Charlesworth et al. study (1993)
13	I, Inappropriate materials and activities	I, Inappropriate activities and materials
14[a]	I, Inappropriate materials and activities	I, Inappropriate activities and materials
15[a]	I, Inappropriate materials and activities	I, Inappropriate activities and materials
16	I, Inappropriate materials and activities	I, Inappropriate activities and materials
17	II, Appropriate materials and activities	V, Appropriate integrated curriculum beliefs
18	V, Beliefs about structure	Not included in component structure
19	V, Beliefs about structure	Not included in component structure
20	Not included in component structure	Not included in component structure
21	I, Inappropriate materials and activities	I, Inappropriate activities and materials
22	I, Inappropriate materials and activities	I, Inappropriate activities and materials
23	I, Inappropriate materials and activities	I, Inappropriate activities and materials
24	II, Appropriate materials and activities	Not included in component structure
25	III, Appropriate literacy activities	II, Appropriate social
26	III, Appropriate literacy activities	IV, Appropriate literacy activities
27	III, Appropriate literacy activities	II, Appropriate social
28	III, Appropriate literacy activities	II, Appropriate social
29	III, Appropriate literacy activities	IV, Appropriate literacy activities
30	IV, Curriculum beliefs	II, Appropriate social
31	I, Inappropriate materials and activities	I, Inappropriate activities and materials
32	IV, Curriculum beliefs	V, Appropriate integrated curriculum beliefs
33	IV, Curriculum beliefs	V, Appropriate integrated curriculum beliefs
34	IV, Curriculum beliefs	V, Appropriate integrated curriculum beliefs
35	V, Beliefs about structure (negative loading)	Not included in component structure
36	Not included in component structure	Not included in component structure

Note: Item numbers in Charlesworth et al. study (1993) were changed to correspond with the current study.
[a] Items were worded differently, but addressed the same issue. TBS = Teacher Beliefs Scale, Preschool Version.

Construct Validity and Reliability of Opinions Relative to Mainstreaming-Adapted

Larrivee (1982) described the results of the principal components analysis from the original study conducted by herself and Cook in 1979. They found a 5-component final solution. The definitions of the components were not split between negative and positive beliefs as found in the current study. However, their first component, General Philosophy of Mainstreaming, corresponds to this study's Component I, Positive Beliefs About Inclusion. Table 27 compares the findings of the two studies.

Table 27

Comparison of the Principal Component Solution of the Current Study (ORM-A at Time 1) with Larrivee (1982)

Item	Component in current study	Component in Larrivee (1982)
1	I, Positive beliefs about inclusion	Not included in component structure
2	III, Beliefs about the requirements for including a student with special needs	V, Academic and social growth of special needs child
3	III, Beliefs about the requirements for including a student with special needs	II, Classroom behavior of special needs child
4	I, Positive beliefs about inclusion	V, Academic and social growth of special needs child
5	III, Beliefs about the requirements for including a student with special needs	III, Perceived ability to teach the special needs child
6	I, Positive beliefs about inclusion	I, General philosophy of inclusion
7	III, Beliefs about the requirements for including a student with special needs (negative relationship)	III, Perceived ability to teach the special needs child
8	Not included in component structure	III, Perceived ability to teach the special needs child
9	III, Beliefs about the requirements for including a student with special needs (negative relationship)	II, Classroom behavior of special needs child

Table 27 (Continued)

Item	Component in current study	Component in Larrivee (1982)
10	I, Positive beliefs about inclusion	V, Academic and social growth of the special needs child
11	I, Positive beliefs about inclusion	V, Academic and social growth of the special needs child
12	Not included in component structure	Not included in component structure
13	III, Beliefs about the requirements for including a student with special needs	III, Perceived ability to teach the special needs child
14	Not included in component structure	II, Classroom behavior of special needs child
15	II, Negative beliefs about inclusion	I, General philosophy of mainstreaming
16	Not included in component structure	III, Perceived ability to teach special needs child
17	II, Negative beliefs about inclusion	IV, Classroom management with special needs child
18	I, Positive beliefs about inclusion	I, General philosophy of mainstreaming
19	II, Negative beliefs about inclusion	II, Classroom behavior of special needs child
20	II, Negative beliefs about inclusion	Not included in component structure
21	I, Positive beliefs about inclusion	I, General philosophy of inclusion
22	II, Negative beliefs about inclusion	IV, Classroom management with special needs children
23	II, Negative beliefs about inclusion	I, General philosophy of mainstreaming
24	II, Negative beliefs about inclusion	IV, Classroom management with special needs children
25	II, Negative beliefs about inclusion	I, General philosophy of mainstreaming
26	Not included in component structure	Not included in component structure
27	III, Beliefs about the requirements for including a student with special needs	III, Perceived ability to teach the special needs child
28	I, Positive beliefs about inclusion	I, General philosophy of mainstreaming
29	II, Negative beliefs about inclusion	II, Classroom behavior of special needs children
30	I, Positive beliefs about inclusion	I, General philosophy of mainstreaming

Estimates of the internal consistency of the responses were determined by calculating Cronbach's alpha. The alpha coefficient for the final 25-item scale was .87. This corresponded to the Cronbach's alphas of .88 and .89 from previous studies (Antonak & Larrivee, 1995; Green et al., 1983).

Research Question 2

Summary of Subsample Who Responded at All Three Collection Points

It is important to look at the subsample that responded at all three times because this was the only sample in which statistical significance was found. Although the sample who responded at Times 1 and 3 was approaching significance in relation to type of program, this may have been due to the significance found in the subsample of 18. Out of the original sample of 83, only 18 participants responded at all three collection points. This subsample was slightly older than the groups who did not respond at Time 2 and Time 3 (27 years, 4 months versus 25 years, 2 months and 25 years 5 months). The gender and self-identified race ratios were similar amongst the three subsamples. There were fewer degree programs represented within those who responded three times: 66.7% were elementary, 16.7% were early childhood, 11.1% were early childhood and elementary, and 5.6% were elementary and middle school. The split between elementary and early childhood programs is consistent with the two subsamples who did not respond at Time 2 and Time 3. The majority of the participants were from the larger university, with 61% coming from Group C ($n = 11$). This is partly due to the collection procedures. At Time 3, 13 members of Group C were given the instruments in person. All of Groups A and B had the instruments mailed to them, resulting in a lower return rate.

The subsample who responded at all three times to the question of why they chose teaching gave a wider variety of responses than the subsample who responded only at Times 1 and 3. Wanting to work with children was the majority response for this group as well as for those who did not respond. All of the participants who responded at all three times had completed more than 12 semester hours of education courses at Time 1. Among those who did not respond at Time 2 and Time 3, 17.5% and 20.9% had not completed more than 12 semester hours of education courses at Time 1. There was no difference with completed practicum hour responses.

Fewer people who responded at all three times knew no one with a disability (16.7% versus 28.3% and 23.4%). This may have contributed to their interest in participating in a study that incorporated inclusion issues. The fact that at Time 1 44.4% of the participants believed that their personal experience was their primary resource for inclusion supports the conclusion that they had a greater personal interest in this area. This percentage was higher than for those who did not respond at Time 2 and Time 3.

This sub-sample believed, with an overwhelming majority of 77.8%, that courses were their primary resource for DAP. This could be related to the fact that the majority of the participants were elementary or elementary combination majors (88.3%) and did not have practicum or personal experiences with DAP at the grade levels they had studied.

Discussion

Due to the high attrition rate, a repeated measures analysis could not be conducted with the variables of university and degree program. There are several possible reasons for the loss of participants. Because the study was longitudinal, some of the students may not have been at the addresses provided at the first collection. Although only 4% were

returned with incorrect addresses (n = 3), it is still possible that others did not find their way to the participants. Another possibility is the required time involvement. The two instruments, combined with the demographic questionnaire, resulted in a commitment of at least 30 min for completion at each time. When the survey was given in person, several participants complained about the length of the instruments. Although they did complete them, they may not have been so inclined without the pressure of the researcher or professor waiting to collect them. At the third collection, some of the cohort were given the instruments personally. As this was being done, some commented that they had already completed them. Because the third set had not been mailed to them, they could only have been referring to the second set. Although a letter was included with the instruments mailed out explaining which time it was, it is possible that others did not complete the instruments because they thought they had already done so.

Research Question 2 was specifically charged with investigating change over time as it related to degree program, university, and program type. To address this question, the whole group was divided into two subsamples: those who responded at Time 1 and Time 3 (n = 30); and, as a subgroup of that sample, those who responded at Times 1, 2, and 3 (n = 18). Due to the small numbers, no repeated measures could be conducted using university or degree program. A repeated measures was attempted using type of program as the between-subject variable; however, the assumptions were violated and no statistical significance could be calculated. Consequently, descriptive analysis and Mann-Whitney U test were used to investigate the relationship of university, type of program, and degree program with the change in mean scores of the TBS and the ORM-A.

The types of programs were divided into traditional and nontraditional. The traditional model involved the typical course of study found at most universities. The smaller

university (Group B) had only three participants who completed the instruments at Time 3 and, as a result, they were combined with the larger university's participants in the traditional program (Group A) to give a more balanced analysis. The nontraditional program was referred to as Group C throughout the study. These students, all elementary, participated in a cohort structure spending at least 2 full days a week at a school (not including their practicum). With the sample of 30 who completed Times 1 and 3, the split between traditional and nontraditional programs was approaching significance for both instruments (p = .088 TBS, .067 ORM). With the subsample of 18 who completed the instruments at Times 1, 2, and 3, statistical significance was found for the ORM-A relating to degree program and type of program (p = .026 and p = .021, respectively). These two areas of focus bear further investigation. No statistical significance was found with the universities. However, an interesting pattern emerged; the larger university went down slightly overall on each of the instruments and the smaller university went up slightly.

What is the Effect of Type of Program?

The programs were divided into two types, traditional and nontraditional, as described above. Examining the change in score means on the TBS and the ORM-A by type of program showed a definite pattern. This pattern was repeated in both subsamples (n = 30, n = 18). Although overall, the mean scores went down on the TBS and the ORM-A for the two programs combined, the participants from the traditional program actually increased their attitude scores on both instruments. Those from the nontraditional program decreased on both instruments. Statistical significance or numbers approaching significance were found with both instruments.

There are at least three factors that may have contributed to the effect of the type of program: (a) less direct instruction, (b) the cooperating teacher, and (c) the degree program of participants. The group from the nontraditional program spent much more time in schools. On average, they had 2 full days in a classroom from the beginning of their program. Once they began their practica, they were in the classroom fulltime. The traditional program did not have the 2 days a week in a classroom.

Due to the increased time on-site, the participants from the nontraditional program had significantly fewer hours of direct instruction from university professors. As a result, they had more contact with cooperating teachers. The teachers (n = 20) who served in these positions were more traditional in their instructional style, did not teach in inclusive classrooms, and were less likely to be developmentally appropriate. The cooperating teachers who had been certified for more than 10 years were unlikely to have had much, if any, preparation in DAP because the guidelines were published after they had completed their programs.

The division by program type is complicated by the fact that all of the nontraditional participants were also elementary majors. The traditional participants were early childhood, elementary, or combination majors. When the change in score means on the two instruments was analyzed by degree program, the same trend was seen for both subsamples as with type of program. The early childhood majors' scores increased on both instruments; the elementary majors' scores decreased. A more detailed discussion is provided below. Although statistical significance was found with degree programs and the ORM-A, it is not possible to determine which, if any, of the two factors played the more important role in the change in scores (n = 18). However, it is possible to discuss the differences and hypothesize about potential effectors.

What Is the Effect of Degree Program?

Although the findings related to type of program are complicated by the degree programs of the participants, it is important to look at the differences in the elementary and early childhood programs to help identify any potential contributing factors. Two of these possible factors are (a) focus of program and (b) placement options.

Early childhood majors' score means increased on both the TBS and the ORM-A from Time 1 to Time 3. Elementary majors' score means decreased on both instruments for the same time span. These findings are consistent with the study by Vartuli (1999) in which she found a decrease in the positive attitudes towards DAP as the grade level increased. Although not statistically significant in the current study, the positive change in the early childhood majors' scores on the TBS is noteworthy. Developmentally appropriate practices are an important component of the early childhood program course work. Consequently, it is understandable that this would be the program with the more positive change; in fact, these students are required to complete a question on DAP on their comprehensive exams prior to graduation. Elementary programs do not put an emphasis on DAP nor are the students required to demonstrate competence in this area before graduating.

The fact that elementary majors are not being prepared in the recommended best practices, as identified by the appropriate professional organizations, is concerning. Currently, there is an overlap in certification for first through third grade. Beginning in Fall 2000, elementary major certification will include kindergarten. At the larger university, from where both early childhood and elementary majors took part, the two programs are completely separate except for one course, Developmental Reading. Although the programs cover much of the same content, all of the curriculum and methods courses are

separate and are taught by different professors. A blending of these programs may be the best solution, so that elementary majors get the theory and best practices that are proposed for working with young children (Vartuli, 1999).

The large increase (23 points) in mean score on the ORM-A by the early childhood participants may be partly due to the fact that the coordinator of the early childhood program has his doctorate in special education and attempts to integrate inclusive methods throughout the program. This is not a focus of the elementary program.

The larger university in this study has already attempted to address the differences in these programs by creating a blended early childhood/elementary program. Although blending may enable the students who would have been elementary majors to develop the knowledge and skill base to work with young children, it also runs the risk of diluting the early childhood program and its focus on DAP. To address inclusion the blended program will include coteaching by a special education professor. The change in program and certification needs to be closely monitored, so that what was beneficial is maintained, and a decrease in positive attitudes towards DAP and inclusion is avoided.

As mentioned earlier, cooperating teachers may have an effect on the preservice teachers' attitudes. It is for this reason that IHEs need to be careful with their choice of placement and the quality of the experience. In the early childhood program teachers are chosen based on their apparent developmental appropriateness. A teacher who has DIPs would not serve as a cooperating teacher for these preservice teachers. As a result, the early childhood preservice teachers have developmentally appropriate models for their placement. In the elementary program, the cooperating teachers are chosen by principals. They do not necessarily reflect developmentally appropriate beliefs or practices.

Neither program focused on inclusive placements for their students. However, some professionals argue that, through DAP and the focus on individual appropriateness, one also addresses what is developmentally appropriate, thereby meeting the needs of the special education student (Bredekamp, 1993; Buchanan et al., 1998; Heston et al., 1998).

This study did not examine the correlation between DAP attitudes and inclusion attitudes; however, based on the data, that when early childhood and elementary majors' scores went up on the TBS they also went up on the ORM-A and when they went down they went down on both, there may be something intrinsic within developmentally appropriate beliefs that carries over to attitudes towards children with special needs. Buchanan et al. (1998) found that having more children with disabilities in a classroom could be used as a predictor of more developmentally appropriate beliefs and fewer developmentally inappropriate activities. The similar belief patterns towards DAP that have been found amongst general educators and special educators support the hypothesis that these two fields may be more closely related than originally thought (Kilgo et al., 1999; Sexton et al., 2000). Future studies should address the possibility of a correlation between attitudes towards DAP and inclusion.

Additional Findings

What Happened Between Time 1 and Time 2 and Time 2 and Time 3?

The data from the subsample who completed all three collections were further analyzed through descriptive statistics to look for any patterns; university, type of program, and degree program were used as variables. The more significant pattern involved the time span from Time 2 to Time 3.

The early childhood and elementary mean scores on the TBS increased from Time 1 to Time 2. From Time 2 until Time 3 they both dropped. The early childhood participants only dropped slightly so they showed an overall gain; however, the elementary majors dropped to such a degree that their final score at Time 3 was lower than their baseline score at Time 1. There are several hypothetical factors that may have contributed to these drops in attitude scores on the TBS. Probably the most obvious difference in programs between these two times would be the completion of the practicum somewhere between Time 2 and Time 3. This supports the hypothesis that the placement and cooperating teacher may have an effect on attitudes, thereby stressing the importance of quality of placement.

A second possibility concerns type of courses. By Time 2, the participants had completed all of their child development courses and curriculum courses and a survey of exceptional learners. Between Time 2 and Time 3 they completed their methods courses and practicum. It is possible that the information they received in the first series of courses was not carried over to the methods courses and practical application of their practica.

Overall, the ORM-A scores continued the trend from Time 2 to Time 3 that was started from Time 1 to Time 2. The only exception to this was with the smaller university. At Time 2 the scores on the ORM-A had increased, but by Time 3 they had dropped below the starting mean. Although the ORM-A scores generally maintained the trend that was started, it is interesting to note the large gain that occurred with the early childhood preservice teachers from Time 2 to Time 3 (+15.33 points). As mentioned earlier, the director of this program attempts to integrate inclusive methods throughout the courses, which may have contributed to the large increase in scores. Also, the early childhood pre-

service teachers were more likely to be placed in developmentally appropriate classes, which, as discussed earlier, may have a correlation with attitudes towards inclusion.

Primary Resources for DAP and Inclusion

In keeping with the importance of the quality of the practicum, the participants who responded at all three times changed their choice of primary resource for DAP and inclusion over the course of their program (n = 18). At Time 1 an overwhelming majority (77.8%) viewed course work as their primary resource for DAP; only 11.1% thought practicum was the primary resource. By Time 3, 44.4% viewed practicum as the main resource for inclusion; 27.8% still believed courses were the main resource. The same pattern was seen with resources for inclusion. From Time 1 to Time 3 the percentage who believed that practicum was their main resource increased from 11.1% to 55.6% (n = 18). If the preservice educators viewed their practicum experiences as their main resource, they were probably influenced by them. This supports the earlier discussion on the importance of quality placement.

Recommendations for Further Research

There appear to be differences between the early childhood and elementary programs that may have contributed to the preservice teachers' attitudes towards DAP and inclusion. There are several different areas related to these programs that need to be addressed. The overlap in certification grades and how best to prepare educators to work with young children need to be investigated. It would be wise to look at adding DAP as part of the competencies for the elementary program. A blending of early childhood and elementary education programs may be the best solution, so that elementary majors get the theory and best practices that are proposed for working with young children (Vartuli,

1999). Blending must be done with care, so that the factor or factors that contributed to the positive change in attitudes of the early childhood preservice teachers towards DAP and inclusion is not lost.

The question of how best to blend programs so that preservice teachers are prepared to meet the needs of all students is an ongoing one. Besides the blending of early childhood and elementary education, researchers are beginning to look at blended early childhood and early childhood special education programs and their efficacy in preparing effective educators of young children (Miller & Stayton, 1998; Stayton & Miller, 1993). Some argue that this is how programs should be blended especially with the push for inclusion (Cavallaro, Haney, & Cabello, 1993). A comparative study of blended preservice early childhood/early childhood special education programs and traditional early childhood preservice programs should be conducted to see if the instruction in early childhood special education has more of a positive influence on attitudes towards inclusion and developmentally appropriate practice.

Much research has been conducted on educational roles in inclusion and on the need for collaboration between general and special educators (Gallagher, 1997; Wood, 1998). This is a fairly new focus within teacher preparation programs (Miller & Stayton, 1998), and, consequently, the majority of practicing general educators do not have the preparation or experience collaborating with special educators that is necessary for the success of inclusion. As found in the literature, the majority of general educators do not feel prepared to work with children with disabilities within their classrooms (Scruggs & Mastropieri, 1996). Concern has been raised regarding the preparedness of the general educators to deal with the modifications and accommodations needed for children with special needs. Garvar-Pinhas and Schmelkin (cited in Scruggs and Mastropieri, 1996)

have concluded that "in order for mainstreaming/inclusion to be effective, it is generally agreed that the school personnel who will be most responsible for its success--general classroom teachers--be receptive to the principles and demands of mainstreaming/inclusion" (p. 59).

Bredekamp (1993) believes that early childhood special education has a lot to offer early childhood education, especially with their interdisciplinary approach. As discussed in the previous section, a study on the correlation between DAP beliefs and inclusion beliefs would be beneficial. Ideally, there should be a way to blend early childhood/elementary with special education so that all educators of young children are also effective at working in inclusive classrooms. Institutes of higher education are advised to proceed with caution, however, due to the danger of blending so much that the quantity of information increases to such a level that depth and practicality are lost.

Before blending early childhood and early childhood special education personnel preparation, research needs to continue on the efficacy of using DAP with students with special needs. Developmentally appropriate practice is a focus of the early childhood classroom; therefore, it is reasonable to assume that it would continue to be so in a blended program. Of particular interest would be studies that examine stress levels and future grade outcomes of children with disabilities from DAP and DIP classrooms to compare with those that have been conducted on children without disabilities (Burts et al., 1990, 1992, 1993; Hart et al., 1998; Ray, 1992; Verma, 1992). The efficacy of DAP with students with disabilities is an ongoing debate. Major proponents of DAP believe that there are areas where general and special education can be merged (Bredekamp, 1993). Cavallaro et al. (1993) provide strategies for intervention that balance special education and DAP principles.

Munby and Hutchinson (1998) recommend that preservice preparation for special education be experience based. The findings in this study support the importance of experience in affecting attitudes; however, this change was not always positive. A red flag should be raised by the finding that, during the time span that included practica and methods courses, positive beliefs decreased towards DAP and inclusion. Institutes of higher education need to look closely at how they can reinforce DAP and inclusion practices throughout the program and internship. This is strongly linked to the importance of studying in depth how practicum placement is determined and the impact of the cooperating teacher's influence. Practical experience is not enough. The quality of each placement needs to be stressed.

The variables studied were intricately interwoven. A qualitative look at what the preservice teachers experienced and what they believed influenced their attitudes would help clarify some of the findings. "Teachers' thoughts and beliefs are integral aspects of successful teaching" (Isenberg, 1990, p. 332) and worthy of research. Without this information, discussion on what made a difference is only speculation. Interviewing the participants in this study was not possible due to their anonymity.

There was other demographic information collected that could not be utilized. For example, it would have been interesting to study the correlation between practicum hours or education hours and attitudes towards DAP and inclusion. Although this information was collected from the participants, it did not result in valid data. The participants were asked for the information in semester hours; it appears, however, that some reported contact hours.

This study should be replicated with the following changes: (a) a much larger sample size should be used to help determine statistical significance; (b) a way of verify-

ing course and practicum hours should be built into the collection procedures; (c) additional demographic information should be collected, such as experience working with young children; (d) the ORM-A should be revised so that it expressly measures attitudes towards full inclusion of young children with all types and severity of disabilities; and (e) the primary version of the TBS may be used to determine if this results in a different response from the preservice elementary educators. One may suppose that if there were a change it would be in a negative direction because the elementary participants would be more likely to accept some of the DAPs from preschoolers than from primary students. For example, they may have believed that it was not important for preschoolers to print on predefined lines; however, it is more likely that they would not have accepted this as developmentally appropriate for primary students.

This study had two purposes: (a) to describe the psychometric properties of the TBS and the ORM-A when used with prospective early childhood and elementary educators; and (b) to describe the changes in attitudes towards DAP and inclusion over time of preservice early childhood and elementary educators in relation to university, degree program, and type of program. Chapter 5 provided an overall summary of the findings, a discussion related to the findings, and recommendations for further research.

Although the findings from this study cannot be generalized, they raise some salient issues regarding the need for further research on effectively preparing preservice teachers to work with young children. As the two main arenas of debate, DAP and inclusion should be the foci. Institutes of higher education need to evaluate their programs for the content and quality that are needed to ensure that all children receive the best education possible. It is hoped that the participating universities will use the results of this

study to reconstruct their teacher preparation programs in early childhood and elementary education.

LIST OF REFERENCES

Aldridge, J., & Clayton, G. A. (1987). Elementary teachers' cognitive and affective perceptions of exceptional children. *Psychological Reports, 61*, 91-94.

Aldridge, J., Sexton, D., Booker, B., & Holley, C. (1996). Expanding the theoretical and pedagogical foundations of early childhood education and early intervention. *College Student Journal, 30*, 345-348.

Amendments to the Education for All Handicapped Children Act of 1975, 20 U.S.C. § 1400 *et seq.* (1983, 1986).

Amendments to the Individuals with Disabilities Education Act of 1990, 20 U.S.C. § 1400 *et seq.* (1997).

Americans with Disabilities Act (ADA) of 1990, 42 U.S.C. § 12101 *et seq.*

Antonak, R. F., & Larrivee, B. (1995). Psychometric analysis and revision of the Opinions Relative to Mainstreaming Scale. *Exceptional Children, 62*(2), 139-149.

Atwater, J., Carta, J., Schwartz, I., & McConnell, S. (1994). Blending developmentally appropriate practice and early childhood special education: Redefining best practice to meet the needs of all children. In B. Mallory & R. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp.185-201). New York: Teachers College Press.

Bartkowiak, E. T. (1996). *The teacher evaluation process in preschools: Its nature and its relationship to teachers' beliefs, practices and stress.* Unpublished doctoral dissertation, State University of New York at Buffalo.

Bennett, T., Deluca, D., & Bruns, D. (1997). Putting inclusion into practice: Perspectives of teachers and parents. *Exceptional Children, 64*(1), 115-131.

Bergen, D. (1997). Perspectives on inclusion in early childhood education. In J. P. Isenberg & M. Jalongo (Eds.), *Major trends and issues in early childhood education: Challenges, controversies, and insights* (pp. 151-171). New York: Teachers College Press.

Bredekamp, S. (Ed.). (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8.* Washington, DC: National Association for the Education of Young Children.

Bredekamp, S. (1993). The relationship between early childhood education and early childhood special education: Healthy marriage or family feud? *Topics in Early Childhood Special Education, 13*(3), 258-273.

Bredekamp, S., & Copple, C. (Eds.). (1997). *Developmentally appropriate practice in early childhood programs* (Rev. ed.). Washington, DC: National Association for the Education of Young Children.

Bredekamp, S., & Rosegrant, T. (1992). Reaching potentials through appropriate curriculum: Conceptual frameworks for applying the guidelines. In S. Bredekamp & T. Rosegrant (Eds.), *Reaching potentials: Appropriate curriculum and assessment for young children* (Vol.1, pp. 28-42). Washington, DC: National Association for the Education of Young Children.

Bricker, D. (1995). The challenge of inclusion. *Journal of Early Intervention, 19*(3), 179-194.

Brown, J., Gable, R., Hendrickson, J., & Algozzine, B. (1991). Prereferral intervention practices of regular classroom teachers: Implications for regular and special education preparation. *Teacher Education and Special Education, 14*(3), 192-197.

Buchanan, T., Burts, D., Bidner, J., White, V. F., & Charlesworth, R. (1998). Predictors of the developmental appropriateness of the beliefs and practices of first, second, and third grade teachers. *Early Childhood Research Quarterly, 13*(3), 459-484.

Burts, D., Hart, C., Charlesworth, R., DeWolf, D. M., Ray, J., Manuel, K., & Fleege, P. (1993). Developmental appropriateness of kindergarten programs and academic outcomes in first grade. *Journal of Research in Childhood Education, 8*(1), 23-31.

Burts, D., Hart, C., Charlesworth, R., Fleege, P., Mosley, J., & Thomasson, R. (1992). Observed activities and stress behaviors of children in developmentally appropriate and inappropriate kindergarten classrooms. *Early Childhood Research Quarterly, 7*(2), 297-318.

Burts, D., Hart, C., Charlesworth, R., & Kirk, L. (1990). A comparison of frequencies of stress behaviors observed in kindergarten children in classrooms with developmentally appropriate versus developmentally inappropriate instructional practice. *Early Childhood Research Quarterly, 5*(3), 407-423.

Carta, J., Schwartz, J., & McConnell, S. (1991). Developmentally appropriate practice: Appraising its usefulness for young children with disabilities. *Topics in Early Childhood Special Education, 11*, 1-20.

Carta, J. J. (1994). Developmentally appropriate practices: Shifting the emphasis to individual appropriateness. *Journal of Early Intervention, 18*(4), 342-348.

Cassidy, D. J., Buell, M. J., Pugh-Hoese, S., & Russell, S. (1995). The effect of education on child care teachers' beliefs and classroom quality. Year one evaluation of the TEACH early child associate degree scholarship program. *Early Childhood Research Quarterly, 10,* 171-183.

Cavallaro, C. C., Haney, M., & Cabello, B. (1993). Developmentally appropriate strategies for promoting full participation in early childhood settings. *Topics in Early Childhood Special Education, 13*(3), 293-307.

Charlesworth, R. (1998a). Developmentally appropriate practice is for everyone. *Childhood Education, 74*(5), 274-282.

Charlesworth, R. (1998b). Response to Sally Lubeck's "Is developmentally appropriate practice for everyone?" *Childhood Education, 74*(5), 293-298.

Charlesworth, R., Hart, C., Burts, D., & Hernandez, S. (1991). Kindergarten teachers' beliefs and practices. *Early Child Development and Care, 70,* 17-35.

Charlesworth, R., Hart, C. H., Burts, D. C., Thomasson, R. H., Mosley, J., & Fleege, P. O. (1993). Measuring the developmental appropriateness of kindergarten teachers' beliefs and practices. *Early Childhood Research Quarterly, 8,* 255-276.

Cole, K. N., Mills, P. E., Dale, P. S., & Jenkins, J. R. (1991). Effects of preschool integration for children with disabilities. *Exceptional Children, 58*(1), 36-45.

Council for Exceptional Children. (1993). CEC policy on inclusive schools and community settings. *Exceptional Children, 25*(4, Suppl.1), 1.

Diamond, K. E., Hestenes, L. L., & O'Connor, C. E. (1994). Integrating young children with disabilities in preschool: Problems and promise. *Young Children, 49*(2), 68-75.

Dinnebeil, L., McInerney, W., Fox, C., & Juchartz-Pendry, K. (1998). An analysis of the perceptions and characteristics of childcare personnel regarding inclusion of young children with special needs in community-based programs. *Topics in Early Childhood Special Education, 18*(2), 118-128.

The Education for All Handicapped Children Act (EAHCA) of 1975, 20 U.S.C. § 1400 *et seq.*

Elkind, D. (1986). Formal education and early childhood education: An essential difference. *Phi Delta Kappan, 67*(9), 631-636.

Fender, M. J., & Fielder, C. (1990). Preservice preparation of regular educators: A national survey of curricular content in introductory exceptional children and youth courses. *Teacher Education and Special Education, 19,* 572-579.

Gallagher, P. (1997). Teachers and inclusion: Perspectives on changing roles. *Topics in Early Childhood Special Education, 17*(3), 363-386.

Gettinger, M., Stoiber, K. C., Goetz, D., & Caspe, E. (1999). Competencies and training needs for early childhood inclusion specialists. *Teacher Education and Special Education, 22*(1), 41-54.

Goffin, S., Wilson, C., Hill, J., & McAninch, S. (1997). Policies of the early childhood field and its public: Seeking to support young children and their families. In J. Isenberg & M. Jalongo (Eds.), *Major trends and issues in early childhood education: Challenges, controversies, and insights* (pp. 13-28). New York: Teachers College Press.

Goodlad, J. I., & Field, S. (1993). Teachers for renewing schools. In J. I. Goodlad & T. C. Lovitt (Eds.), *Integrating general and special education* (pp. 229-252). New York: Merrill.

Green, K., Rock, D. L., & Weisenstein, G. R. (1983). Validity and reliability of a scale assessing attitudes toward mainstreaming. *Exceptional Children, 50*(2), 182-3.

Guidelines for preparation of early childhood professionals. (1996). Washington, DC: National Association for the Education of Young Children, Division for Early Childhood of the Council for Exceptional Children, & National Board for Professional Teaching Standards.

Hardman, M., McDonnell, J., & Welch, M. (1997). Perspectives on the future of IDEA. *Journal of the Association for Persons with Severe Handicaps, 22*(2), 61-77.

Hart, C., Burts, D., Durland, M., Charlesworth, R., DeWolf, M., & Fleege, P. (1998). Stress behaviors and activity type participation of preschoolers in more and less developmentally appropriate classrooms: SES and sex differences. *Journal of Research in Childhood Education, 12(2),* 176-196.

Heston, M. L., Raschke, D., Kliewer, C., Fitzgerald, L. M., & Edmiaston, R. (1998). Transforming teacher preparation in early childhood education: Moving to inclusion. *Teacher Education and Special Education, 21*(4), 278-292.

Hyson, M. C., Hirsh-Pasek, K., & Rescorla, L. (1990). The classroom practices inventory: An observation instrument based on NAEYC's guidelines for developmentally appropriate practices for 4- and 5-year-old children. *Early Childhood Research Quarterly, 5*(4), 475-494.

Individuals with Disabilities Education Act (IDEA) of 1990, 20 U.S.C. § 1400 *et seq.*

Isenberg, J., & Brown, D. (1997). Development issues affecting children. In J. Isenberg & M. Jalongo (Eds.), *Major trends about issues in early childhood education:*

Challenges, controversies, and insights (pp. 29-42). New York: Teachers College Press.

Isenberg, J. P. (1990). Teachers' thinking and beliefs about classroom practice. *Childhood Education, 66,* 322-327.

Johnson, A., & Cartwright, C. (1979). The roles of information and experience in improving teachers' knowledge and attitudes about mainstreaming. *The Journal of Special Education, 13*(4), 453-462.

Katz, L. G., & Raths, J. (1992). Six dilemma in teacher education. *Journal of Teacher Education, 43,* 376-385.

Kessler, S., & Swadener, B. B. (Eds.). (1992). *Reconceptualizing the early childhood curriculum: Beginning the dialogue.* New York: Teachers College Press.

Kilgo, J., & Bruder, M. B. (1997). Creating new visions in institutions of higher education: Interdisciplinary approaches to personnel preparation in early intervention. In P. J. Winton, J. McCollum, & C. Catlett (Eds.), *Reforming personnel preparation in early intervention* (pp. 88-101). Baltimore: Paul H. Brookes.

Kilgo, J., Johnson, L., Lamontagne, M., Stayton, V., Cook, M., & Cooper, C. (1999). Importance of practices: A national study of general and special early childhood educators. *Journal of Early Intervention, 22*(4), 294-305.

Kirk, R. H. (1998). The link between university course work and preservice teachers' attitudes toward students with special learning needs. *College Student Journal, 32*(1), 153-60.

Knight, D., & Wadsworth, D. (1998). A national survey of special education teacher preparation programs regarding their inclusion of family focused components of the CEC common core of knowledge and skills. *Teacher Education and Special Education, 21*(3), 214-226.

Kostelnik, M. J. (1992). Myths associated with developmentally appropriate programs. *Young Children, 11*(1), 17-23.

LaParo, K., Sexton, D., & Snyder, P. (1998). Program quality characteristics in segregated and inclusive early childhood settings. *Early Childhood Research Quarterly, 13*(1), 151-167.

Larrivee, B. (1982). Factors underlying regular classroom teachers' attitude toward mainstreaming. *Psychology in the Schools, 19,* 374-379.

Larrivee, B., & Cook, L. (1979). Mainstreaming: A study of the variables affecting teacher attitude. *The Journal of Special Education, 13*(3), 315-324.

Lerner, R. M. (1986). *Concepts and theories of human development* (2nd ed.). New York: Random House.

Lubeck, S. (1994). The politics of developmentally appropriate practice: Exploring issues of culture, class, and curriculum. In B. L. Mallory & R. S. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 17-43). New York: Teachers College Press.

Lubeck, S. (1996). Deconstructing "child development knowledge" and "teacher preparation". *Early Childhood Research Quarterly, 11,* 147-167.

Lubeck, S. (1998a). Is DAP for everyone? A response. *Childhood Education, 74*(5), 299-301.

Lubeck, S. (1998b). Is developmentally appropriate practice for everyone? *Childhood Education, 74*(5), 283-292.

McLean, M. E., & Odom, S. L. (1993). Practices for young children with and without disabilities: A comparison of DEC and NAEYC practices. *Topics in Early Childhood Special Education, 13*(3), 274-292.

McMullen, M. B. (1997). The effects of early childhood academic and professional experience on self perceptions and beliefs about developmentally appropriate practices. *Journal of Early Childhood Teacher Education, 18*(3), 55-68.

The Merriam-Webster Dictionary. (1997). Springfield, MA: Merriam-Webster.

Miller, P., & Stayton, V. (1996). Personnel preparation in early education and intervention: Recommended preservice and inservice practices. In S. Odom & M. McLean (Eds.), *Early intervention/Early childhood special education: Recommended practices* (pp. 329-358). Austin, TX: Proed.

Miller, P., & Stayton, V. (1998). Blended interdisciplinary teacher preparation in early education and intervention: A national survey. *Topics in Early Childhood Special Education, 18*(1), 49-58.

Miller, P. H. (1993). *Theories of developmental psychology* (4th ed.). New York: Freeman.

Minzenberg, B., Laughlin, J., & Kaczmarek, L. (1998). Early childhood special education in the developmentally appropriate classroom: A framework for conversation. *Young Exceptional Children, 2*(2), 10-17.

Monahan, R., Marino, S., & Miller, R. (1996). Teacher attitudes toward inclusion: Implication for teacher education in schools 2000. *Education, 117*(2), 316-20.

Munby, H., & Hutchinson, N. (1998). Using experience to prepare teachers for inclusive classrooms: Teacher education and the epistemology of practice. *Teacher Education and Special Education, 21*(2), 75-82.

National Association for the Education of Young Children. (1986). NAEYC position statement on developmentally appropriate practice in programs for 4- and 5-year-olds. *Young Children, 41*(6), 20-29.

New, R., & Mallory, B. (1994). Introduction: The ethic of inclusion. In B. Mallory & R. New (Eds.), *Diversity and developmentally appropriate practices: Challenges for early childhood education* (pp. 1-13). New York: Teachers College Press.

Odom, S. L., & McLean, M. E. (Eds.). (1996). *Early intervention/early childhood special education: Recommended practices*. Austin, TX: Pro-ed.

Paul, P. V., & Ward, M. E. (1996). Inclusion paradigms in conflict. *Theory into Practice, 35*(1), 4-11.

Popham, W. J. (1975). *Educational evaluation.* Englewood Cliffs, NJ: Prentice Hall.

Puckett, M., Marshall, C. S., & Davis, R. (1999). Examining the emergence of brain development research. *Childhood Education, 76*(1), 8-12.

Pugach, M. C. (1996). Reflections on current issues facing teacher education/special education. *Teacher Education and Special Education, 19*(3), 207-208.

Raines, S. (1997). Developmental appropriateness: Curriculum revisited and challenged. In J. Isenberg & M. Jalongo (Eds.), *Major trends and issues in early childhood education: Challenges, controversies, and insights* (pp. 78-89). New York: Teachers College Press.

Ramey, S. L., & Ramey, C. T. (1992). Early educational intervention with disadvantaged children-To what effect? *Applied and Preventive Psychology, 1,* 131-140.

Ray, J. M. (1992). *Achievement of first and second grade students from developmentally appropriate and developmentally inappropriate kindergarten classrooms.* Unpublished master's thesis, Louisiana State University and Agricultural and Mechanical College, Baton Rouge.

Rosenberg, M. S. (1996). Current issues facing teacher education and special education. *Teacher Education and Special Education, 19*(3), 209-210.

Scruggs, T. E., & Mastropieri, M. A. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. *Exceptional Children, 63*(1), 59-74.

Sexton, D., Daly, T., Lobman, M., & Snyder, P. (2000). Developmental appropriate practice (DAP) beliefs of general and special early childhood educators. Manuscript submitted for publication.

Sexton, D., Kelley, M., & Aldridge, J. (1998). Continuing tensions in education. *Childhood Education, 74*(5), 258-261.

Sexton, D., Snyder, P., Wolfe, B., Lobman, M., Stricklin, S., & Akers, P. (1996). Early intervention inservice training strategies: Perceptions and suggestions from the field. *Exceptional Children, 62*(6), 485-495.

Shanker, A. (1996). Quality assurance: What must be done to strengthen the teaching profession. *Phi Delta Kappan, 78,* 220-224.

Shore, R. (1997). *Rethinking the brain: New insights into early development.* New York: Families and Work Institute.

Spodek, B., & Saracho, O. N. (1990). Preparing early childhood teachers for the twenty-first century: A look to the future. In B. Spodek & O. N. Saracho (Eds.), *Yearbook in early childhood education: Vol. 1. Early childhood teacher preparation* (pp. 209-221). New York: Teachers College Press.

Statistical Package for the Social Sciences (SPSS) graduate pack 9.0 for Windows [Computer software]. (1998). Chicago, IL: Microsoft.

Stainback, W., Stainback, S., & Stefanich, G. (Spring, 1996). Learning together in inclusive classrooms: What about the curriculum? *Teaching Exceptional Children,* 14-19.

Stayton, V. D., & Miller, P. S. (1993). Combining general and special early childhood education standards in personnel preparation programs: Experiences from two states. *Topics in Early Childhood Special Education, 13*(3), 372-387.

Stott, F., & Bowman, B. (1996). Child development knowledge: A slippery base for practice. *Early Childhood Research Quarterly, 11,* 169-183.

Turnbull, A., & Turbiville, V. (1996). Society's response to differences: A sociological perspective. *Remedial and Special Education, 17,* 134-141.

Turnbull, A. P., & Turbiville, V. P. (1995). Why must inclusion be such a challenge? *Journal of Early Intervention, 19*(3), 200-202.

Vartuli, S. (1999). How early childhood teacher beliefs vary across grade level. *Early Childhood Research Quarterly, 14*(4), 489-514.

Verma, A. K. (1992). *Achievement of kindergarten, first and second grade children from developmentally appropriate and inappropriate kindergarten classrooms.* Un-

published master's thesis, Louisiana State University and Agricultural and Mechanical College, Baton Rouge.

Villa, R. A., Thousand, J. S., & Chapple, J. W. (1996). Preparing teachers to support inclusion: Preservice and inservice programs. *Theory into Practice, 35*(1), 42-50.

The Vocational Rehabilitation Act of 1973, 29 U.S.C. § 701 *et seq.*

Voltz, D. L., & Elliott, R. N., Jr. (1997). Collaborative teacher roles in facilitating inclusion: Preservice preparation for general and special educators. *The Teacher Educator, 33,* 44-60.

Welch, M. (1996). Teacher education and the neglected diversity: Preparing educators to teach students with disabilities. *Journal of Teacher Education, 47*(5), 355-366.

Werner, M. (1997). *Developmentally appropriate practice beliefs of Native and non-Native American Head Start education coordinators.* Unpublished doctoral dissertation. University of Alabama at Birmingham, Birmingham.

Williams, D. (1990). Listening to today's teachers: They can tell us what tomorrow's teachers should know. *Teacher Education and Special Education, 13*(3-4), 149-153.

Wise, A. E. (1996). Building a system of quality assurance for the teaching profession: Moving into the 21st century. *Phi Delta Kappan, 78,* 191-192.

Wolery, M., & Bredekamp, S. (1994). Developmentally appropriate practices and young children with disabilities: Contextual issues in the discussion. *Journal of Early Intervention, 18*(4), 331-341.

Wolery, M., Strain, P., & Bailey, D. (1992). Reaching potentials of children with special needs. In S. Bredekamp & T. Rosegrant (Eds.), *Reaching potentials: Appropriate curriculum and assessment for young children* (Vol. 1, pp. 92-113). Washington, DC: National Association for the Education of Young Children.

Wood, M. (1998). Whose job is it anyway? Educational roles in inclusion. *Exceptional Children, 64*(2), 181-195.

Yell, M. (1998). *The law and special education.* Englewood Cliffs, New Jersey: Prentice Hall.

APPENDIX A

LITERATURE REVIEW TABLES

Table A1

Major Studies Using the Teacher Beliefs Scale (TBS)

Study	Respondents	Validity indices	Reliability indices	Major findings
Bartowiak (1996)	77 preschool teachers and administrators	Not reported	Not reported	There was a significant correlation between TBS and teacher attributes and a negative correlation between TBS and evaluator attributes.
Buchanan, Burts, Bidner, White, & Charlesworth (1998)	Primary version given to 277 primary teachers	Forced 4 factors; DAP beliefs, DAP activities, DIP beliefs, DIP activities	Pilot study = .79 Actual study subscales = Cronbach's alpha ranged from .55 to .87	The more children with disabilities in class the more likely DAP. ECE less DIP than elementary. Activities in first grade were more DIP than other grades, but beliefs were more DAP. More experienced were more congruent with guidelines.
Burts, Hart, Charlesworth, & Kirk (1990)	113 kindergarten teachers from four southern states	Principal Components Analysis – 4 factors	Cronbach's alpha ranging from .68 - .85 for the four factors	TBS used to help identify a developmentally appropriate and a developmentally inappropriate classroom to study child stressors. Using the CCSBI (Classroom Child Stress Behavior Instrument), it was found that boys in the developmentally inappropriate classroom exhibited more stress behaviors than those in the developmentally appropriate classroom.
Burts, Hart, Charlesworth, Fleege, Mosley, & Thomasson (1992)	204 kindergarten teachers	Principal components analysis with varimax rotation	Not reported	TBS used to help identify DAP and DIP classrooms. Using the CCSBI boys in the inappropriate classroom exhibited more stress behaviors. There were also differences related to SES and race.

Table A1 (Continued)

Study	Respondents	Validity indices	Reliability indices	Major findings
Cassidy (1995)	34 teachers; 19 with scholarships to attend community college programs in child development and ECE; and 15 comparison teachers	ANCOVA revealed significant gain for scholarship teachers from pretest to posttest $p = .0286$	Not reported	The scholarship teachers responded in a more developmentally appropriate manner at the posttest. The TBS mean did not change for the control group.
Charlesworth, Hart, Burts, & Hernandez (1991)	113 kindergarten teachers in four southern states	Principal components analysis with varimax rotation – 4 factors accounting for 64% of the variance	Cronbach's alpha on the four factors ranged from .68 - .85.	There was a positive correlation between DAP beliefs and activities and DIP beliefs and activities.
Charlesworth, Hart, Burts, Thomasson, Mosley, & Fleege (1993)	204 kindergarten teachers	Principal components analysis with varimax rotation – 6 factors accounting for 52.3% of variance	Cronbach's alpha on the six factors ranged from .58 - .84.	Observations confirmed scores from TBS on strongest beliefs factor (DIP activities and materials). TBS could be used for identifying teachers who use more developmentally appropriate activities than developmentally inappropriate activities.
Hart, Burts, Durland, Charlesworth, DeWolf, & Fleege (1998)	3 DIP preschool classrooms; 3 DAP preschool classrooms; 102 preschool children	Not reported; referred to Charlesworth et al., 1993.	Not reported	There was twice the level of overall stress behavior observed in DIP classrooms. In DIP classroom, low SES exhibited significantly more stress behaviors. Males also exhibited more stress behaviors in the DIP classroom while doing small motor and paper and pencil tasks. No SES or gender differences were found in DAP classrooms.
LaParo, Sexton, & Snyder (1998)	58 teachers (29 segregated classrooms; 29 inclusive)	Not reported	Cronbach's alpha for total survey was .88.	The ranges and mean scores were similar across both settings.

Table A1 (Continued)

Study	Respondents	Validity indices	Reliability indices	Major findings
Ray (1992)	91 first grade teachers; 73 second grade teachers, 166 first grade students; 145 second grade students.	Not reported	Not reported	Children from DAP kindergarten had overall higher averages than those from DIP kindergartens. There were no significant differences between high and low SES in DIP classrooms. Low SES children in DAP classrooms scored higher than low SES children in DIP classrooms in all areas but reading and spelling.
Sexton, Daly, Lobman, & Snyder (2000)	74 early childhood and 39 early childhood special education teachers (N = 113) in a southern state.	Principal components analysis with varimax rotation – 3 factors accounting for 52.4% of variance	Cronbach's alpha for the six factors ranged from .65 - .91. Total scale was .90.	The results were similar between the two groups. The major areas of difference were related to appropriateness of implementing behavioral teaching and classroom management strategies.
Vartuli (1999) (slightly different version of TBS)	137 educators; 18 Head Start, 20 kindergarten, 33 first grade, 33 second grade, 33 third grade	Not reported	Cronbach's alpha .94 – total scale; high school = .86, kindergarten = .91, first = .91, second .92, third = N/A	As the grade level increased the level of self-reported developmentally appropriate beliefs and practices decreased. Teachers with fewer years' experience and early childhood certified educators were more likely to believe in and practice DAP.
Verma (1992)	200 kindergarten children; 154 first grade children; 141 second grade children; 204 kindergarten teachers.	Not reported	Not reported	Children from DAP kindergarten classrooms scored no differently on standardized tests in kindergarten, first or second grade, than children from DIP kindergarten classrooms. High SES children scored higher overall than low SES children. Low SES males from DIP kindergarten classrooms scored lower than any other group.

Table A1 (Continued)

Study	Respondents	Validity indices	Reliability indices	Major findings
Werner (1997)	376 education coordinators; 136 employed by Native American Head start programs; 268 employed by non-Native American Head Start Programs	Factor validity – 6 components accounting for 52.3% of variance	Cronbach's Alpha for total scale: .87 Cronbach's Alpha for 6 factors: .47-.77	Education coordinators at Native American Head Start programs held statistically significant lower DAP beliefs than education coordinators at non-Native American Head Start Programs

Note. TBS = Teacher Beliefs Scale, Preschool Version. DAP = developmentally appropriate practice. ECE = early childhood education. DIP = developmentally inappropriate practice. SES = socioeconomic status.

Table A2

Major Studies Using the Opinions Relative to Mainstreaming/Integration

Study	Respondents	Validity indices	Reliability indices	Major findings
Antonak & Larrivee (1995)	376 education professionals (16% special education; 84% general education)	Principal components analysis with rotation – 4 factors accounting for 41% of variance	Cronbach's alpha for total survey - .88	ORI scores were significantly related to scores measuring global attitudes towards people with disabilities as a group.
Green, Rock, & Weisenstein (1983)	168 university students	Principal components analysis – single major factor and seven additional factors accounting for small but significant amounts of variance	Total scale - .89	The scale primarily assesses classroom organization and classroom management of exceptional children.
Larrivee (1982)	941 general education teachers (K-12)	Principal components analysis – 5 factors accounting for 52.4% of variance.	Not reported	Attitudinal dimension may be far more significant than factors generally considered to be of fundamental importance, such as academic development and classroom management issues.
Larrivee & Cook (1979)	941 general education teachers in 6 New England states.	Not reported	Split-half reliability - .92	Regular classroom teachers' perception of degree of success with special needs student had most significant relationship to teacher attitude.

Note. ORI = Opinions Relative to Integration.

Table A3

Studies on Teacher Preparation and the Effects on Beliefs About Inclusion and/or DAP

Study	Respondents	Validity indices	Reliability indices	Major findings
Cassidy (1995)	34 teachers; 19 with scholarships to attend community college programs in child development and early childhood education; and 15 comparison teachers	ANCOVA revealed significant gain for scholarship teachers from pretest to posttest $p = .0286$	Not reported	The scholarship teachers responded in a more developmentally appropriate manner at the post-test. The TBS mean did not change for the control group.
Johnson & Cartwright (1979)	29 prospective regular education teachers; contrast groups were 27 prospective teachers enrolled only in the information course and 28 prospective teachers enrolled only in the experience course	Not reported	Not reported	Attitudes increased significantly when information was combined with experience. Training of regular education teachers should be given top priority in order for mainstreaming to succeed.
McMullen (1997)	Preservice and inservice early childhood professionals (4 groups: 23 new students; 23 student teachers; 19 novices; and 19 veterans)	Not reported	Not reported	Beliefs about DAP differed significantly across the four groups. The more experience, the stronger the DAP beliefs. New students and student teachers differed significantly from veterans.
Monahan, Marino & Miller (1996)	342 regular classroom teachers	Not reported	Not reported	75% of teachers felt they did not have the instructional skills and educational background to teach students with special needs.

Table A3 (Continued)

Study	Respondents	Validity indices	Reliability indices	Major findings
Scruggs & Mastropieri (1996)	Synthesized 10 studies from between 1975-1994	Not reported	Not reported	Overall, 70% did not believe that general education teachers had sufficient training or expertise for inclusion. General education teachers support the idea of inclusion, however, as the severity of exceptionality increased, the support dropped significantly. Teachers became more positive after extended training.
Williams (1990)	114 general educators	Not reported	Not reported	Studied the appropriateness of a course used to prepare general educators for working with children with disabilities.51% felt that there were fairly adequately prepared; 6% felt extremely prepared.

Note. DAP = developmentally appropriate practice. TBS = Teacher Beliefs Scale, Preschool Version.

APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

DIRECTIONS: Please answer ALL questions as completely as possible. If you need more space for your answers, please use the space that is closest to the question being answered.

INFORMATION ABOUT YOURSELF

1. What is your date of birth? Month: ___ Day: ___ Year: ____

2. What is your marital status? (Check one)

- ❑ Single
- ❑ Married
- ❑ Divorced/separated
- ❑ Engaged
- ❑ Widowed

3. What is your gender? (Check One)
- ❑ Male
- ❑ Female

4. What is your race/ethnic background? (Check One)
- ❑ African American/Black
- ❑ Caucasian/White
- ❑ Hispanic
- ❑ Asian
- ❑ Native American/Indian
- ❑ Other (Please specify) _____

5. What is your approximate total yearly income (to the nearest thousand)? _____

6. Check your degree program?
- ❑ Early childhood education
- ❑ Elementary education
- ❑ Early childhood and elementary education
- ❑ Blended special education and general education or child development (please specify area)
- ❑ Other (Please specify)

7. Why did you choose your major?

8. Are you a full-time or part-time student? (Circle one)

9. How many TOTAL hours have you completed towards your degree? _____

10. How many hours of EDUCATION courses have you completed? _____

11. How many semester hours of practicum have you completed? _____

12. Which University do you attend?
- ❑ University of Alabama at Birmingham
- ❑ Jacksonville State University
- ❑ Samford University

13. Are you employed? ___ yes ___ no
If yes, are you full-time or part-time? (Circle one)

14. Do you have any children? ____ yes ____ no
If yes, how many? ____

15. Do any of your children have a disability? ____ yes ____ no
If yes, please identify it. ___

16. Do you know a person with a disability? ____ yes ____ no
If yes, please check below to describe the relationship.
- ❑ Acquaintance (e.g. neighbor, store clerk)
- ❑ Casual (e.g. fellow student, coworker, employee
- ❑ Close (e.g. roommate, near relative)
- ❑ Intimate (e.g. spouse, child, sibling)

17. At this point, what do you consider your primary resource for working with children in an inclusive setting? (Check one)
- ❑ Courses
- ❑ Practicum
- ❑ Independent reading
- ❑ Personal experience

18. At this point, what do you consider your primary resource for developmentally appropriate practices? (Check one)
- ❑ Courses
- ❑ Practicum
- ❑ Independent reading
- ❑ Personal experience

19. Additional Comments

APPENDIX C

INSTRUMENTS

Date: ____/____/_____
MM DD YY

I.D. #: ___ ___ ___ ___
(last 4 digits of SS#)

Teacher Beliefs Scale

You do not need to complete this section.
Rank the following (1-6) by the amount of influence you feel that each has on the way you plan and implement instruction. (Please be sure to use each number only once).
ONE (1) EQUALS MOST INFLUENCE AND SIX (6) EQUALS LEAST INFLUENCE

Parents ____
Parish/school/center policy ____
Principal/director ____
Teacher (yourself) ____
State regulations ____
Other teachers ____

Please respond to the following items by circling the number that *most nearly represents* YOUR PERSONAL BELIEFS about the importance of that item in a preschool program for young children with disabilities

1 = not important at all
2 = not very important
3 = fairly important
4 = very important
5 = extremely important

1. As an evaluation technique in the preschool program, standardized group tests are _____.	1	2	3	4	5
2. As an evaluation technique in the preschool program, teacher observation is _____.	1	2	3	4	5
3. As an evaluation technique in the preschool program, performance on worksheets and workbooks is _____.	1	2	3	4	5
4. It is _____ for preschool activities to be responsive to individual differences in	1	2	3	4	5

interest.					
5. It is _____ for preschool activities to be responsive to individual differences in development.	1	2	3	4	5
6. It is ____ that each curriculum area be taught as separate subjects at separate times.	1	2	3	4	5
7. It is ____ for teacher-pupil interactions in preschool to help develop children's self-esteem and positive feelings towards learning.	1	2	3	4	5
8. It is ____ for children to be allowed to select many of their own activities from a variety of learning areas that the teacher has prepared. (blocks, centers, art, housekeeping, etc.)	1	2	3	4	5
9. It is ____ for children to be allowed to cut their own shapes, perform their own steps in an experiment, and plan their own creative drama, art, and writing or scribbling activities.	1	2	3	4	5
10. It is ____ for preschoolers to learn to work silently and alone on seatwork.	1	2	3	4	5
11. It is ____ for preschoolers to learn through active exploration.	1	2	3	4	5
12. It is ____ for preschoolers to learn through interaction with other children.	1	2	3	4	5
13. Workbooks and/or ditto sheets are ____ to the preschool program.	1	2	3	4	5
14. Routine group practice on shapes, numbers, letters, months and/or words, etc. using materials such as flashcards and charts is ____ to the preschool program for instructional purposes.	1	2	3	4	5
15. A structured reading or pre-reading program is ____ to the preschool program.	1	2	3	4	5
16. In terms of effectiveness, it is ____ for the teacher to talk to the whole group and make sure everyone participates in the same activity.	1	2	3	4	5
17. In terms of effectiveness, it is ____ for the teacher to move among groups and individuals, offering suggestions, asking questions, and facilitating children's involvement with materials and activities.	1	2	3	4	5
18. It is ____ for teachers to use their authority through treats, stickers, and/or stars to encourage appropriate behavior.	1	2	3	4	5
19. It is ____ for teachers to use their authority through punishments and/or reprimands to encourage appropriate behavior.	1	2	3	4	5
20. It is ____ for children to be involved in establishing rules for the classroom.	1	2	3	4	5

21. It is ____for children to be instructed in recognizing the single letters of the alphabet, isolated from words.	1	2	3	4	5
22. It is ____ for children to color within predefined lines.	1	2	3	4	5
23. It is ____ for children in preschool to form letters correctly on a printed line.	1	2	3	4	5
24. It is ____ for children to have stories read to them individually and/or on a group basis.	1	2	3	4	5
25. It is ____ to children to dictate stories to the teacher.	1	2	3	4	5
26. It is ____ children to see and use functional print (telephone book, magazines, etc.) and environmental print (cereal boxes, potato chip bags, etc.) in the preschool classroom.	1	2	3	4	5
27. It is ____ for children to participate in dramatic play.	1	2	3	4	5
28. It is ____ for children to talk informally with adults.	1	2	3	4	5
29. It is ____ for children to experiment with writing by inventing their own spelling.	1	2	3	4	5
30. It is ____ to provide many opportunities to develop social skills with peers in the classroom.	1	2	3	4	5
31. It is ____ for preschoolers to learn to read.	1	2	3	4	5
32. In the preschool program, it is ____ that math be integrated with all other curriculum areas.	1	2	3	4	5
33. In teaching health and safety, it is ____ to include a variety of activities throughout the year.	1	2	3	4	5
34. In the classroom setting, it is ____ for the child to be exposed to multicultural and nonsexist activities.	1	2	3	4	5
35. It is ____ that outdoor time have planned activities.	1	2	3	4	5
36. Input from parents is ____.	1	2	3	4	5

Opinions Relative to Mainstreaming-Adapted

CIRCLE THE NUMBER THAT MATCHES YOUR ATTITUDE TOWARDS THE GIVEN STATEMENT

1 = disagree very much
2 = disagree pretty much
3 = disagree a little
4 = agree a little
5 = agree pretty much
6 = agree very much

Item	Statement						
1	Many of the things teachers do with regular students in a classroom are appropriate for students with special needs.	1	2	3	4	5	6
2	The needs of a student with a disability can best be served through special, separate classes.	1	2	3	4	5	6
3	The classroom behavior of a student with special needs generally requires more patience from the teacher than does the behavior of a child without special needs.	1	2	3	4	5	6
4	The challenge of being in a general education classroom will promote the academic growth of the student with special needs.	1	2	3	4	5	6
5	The extra attention a student with a disability requires will be to the detriment of the other students	1	2	3	4	5	6
6	Inclusion offers mixed group interaction, which will foster understanding and acceptance of differences.	1	2	3	4	5	6
7	It is difficult to maintain order in a general education classroom that contains a student with a disability.	1	2	3	4	5	6
8	General education teachers possess a great deal of the expertise necessary to work with students with disabilities.	1	2	3	4	5	6
9	The behavior of students with disabilities will set a bad example for the other students.	1	2	3	4	5	6

10	Isolation in a special education class has a negative effect on the social and emotional development of a student with a disability.	1	2	3	4	5	6
11	The student with a disability will probably develop academic skills more rapidly in a special education class than in a general education class.	1	2	3	4	5	6
12	Most students with disabilities do not make an adequate attempt to complete their assignments.	1	2	3	4	5	6
13	Inclusion of students with disabilities will require significant changes in the general education classroom procedures.	1	2	3	4	5	6
14	Most students with disabilities are well behaved in the general education classroom.	1	2	3	4	5	6
15	The contact students without a disability have with students with a disability in an inclusive setting may be harmful.	1	2	3	4	5	6
16	General education teachers have sufficient training to teach children with disabilities.	1	2	3	4	5	6
17	Students with disabilities will monopolize the teacher's time.	1	2	3	4	5	6
18	Including a student with a disability will promote his/her social independence.	1	2	3	4	5	6
19	It is likely that a student with a disability will exhibit behavior problems in a general education classroom setting.	1	2	3	4	5	6
20	Diagnostic-prescriptive teaching is better done by special education teachers than by general education teachers.	1	2	3	4	5	6
21	Inclusion of students with disabilities can be beneficial for students without disabilities.	1	2	3	4	5	6
22	Students with disabilities need to be told exactly what to do and how to do it.	1	2	3	4	5	6
23	Inclusion is likely to have a negative effect on the emotional development of the student with a disability.	1	2	3	4	5	6
24	Increased freedom in the classroom creates too much confusion.	1	2	3	4	5	6
25	The student with a disability will be socially isolated by the students without disabilities.	1	2	3	4	5	6

26	Parents of a student with a disability present no greater problem for a general education teacher than those of a student without a disability.	1	2	3	4	5	6
27	Inclusion of students with disabilities will necessitate extensive retraining of general education teachers.	1	2	3	4	5	6
28	Students with disabilities should be given every opportunity to function in the general education classroom, where possible.	1	2	3	4	5	6
29	Students with disabilities are likely to create confusion in the general education classroom.	1	2	3	4	5	6
30	The presence of students with disabilities will promote acceptance of differences on the part of students without disabilities.	1	2	3	4	5	6

APPENDIX D

IRB APPROVALS

THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

Office of the Institutional Review Board for Human Use

Form 4: IRB Approval Form
Identification and Certification of Research
Projects Involving Human Subjects

The Institutional Review Board for Human Use (IRB) has an approved Multiple Project Assurance with the Department of Health and Human Services. The Assurance became effective on February 1, 1994 and the approval period is for five years. The Assurance number is M-1149.

Principal Investigator:	Isabel Killoran
Protocol Number:	X980709001
Protocol Title:	A Longitudinal Investigation on How Preservice Teacher Preparation Affects Perspectives Towards Developmentally Appropriate Practice and Inclusion

The IRB reviewed and approved the above named project on 07-20-98. The review was conducted in accordance with UAB's Assurance of Compliance approved by the Department of Health and Human Services. This Project will be subject to Quarterly continuing review as provided in that Assurance.

This project received EXPEDITED COMMITTEE review.

Date: 7/20/98

Marilyn Doss

Marilyn Doss, M.A.
Vice Chair of the Institutional Review Board for Human Use (IRB)

Investigators please note:

The IRB approved consent form used in the study must contain the IRB approval date and expiration date.

IRB approval is given for one year unless otherwise noted. For projects subject to annual review research activities may not continue past the one year anniversary of the IRB approval date.

Any modifications in the study methodology, protocol and/or consent form must be submitted for review and approval to the IRB prior to implementation.

Adverse Events and/or unanticipated risks to subjects or others at UAB or other participating institutions must be reported promptly to the IRB.

The University of Alabama at Birmingham
1120 Administration Building • 701 South 20th Street
Birmingham, Alabama 35294-0111 • (205) 934-3789 • FAX (205) 975-5977

Memo

To: Charlotte Davis

From: Isabel Killoran (Education Building, Room 113)

CC:

Date: 08/17/98

Re: changes to protocol number x980709001 (see attached)

Ms. Davis,

As per our conversation, here is the memo you asked me to send. There are two components of the demographic portion of my research that I would like to change, as well as tightening up the title.

1. The title: A longitudinal investigation of developmentally appropriate practice and inclusion perspectives held by preservice early childhood and elementary educators instead of A longitudinal investigation on how preservice teacher preparation affects perspectives towards developmentally appropriate practice and inclusion.
2. Demographic form: I would like to add a Comments section at the end of the form.
3. Demographic form: Unlike the other University I will be collecting data at, UAB does not have a cohort system in place for the preservice teachers. Consequently, I will not be able to find them all in the same class next year when I go back for my second and third data collection. I would like to remedy this problem by requesting that they write in a telephone number or address that I can contact them so I can give them the survey again.

If you have any questions, you may contact me at 982-1983,

Thank you

Isabel Killoran

APPROVED 9-1-98
MARILYN DORE, M.A.
Vice Chair-IRB

funded 982-1983

UAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

Office of the Institutional Review Board for Human Use

Form 4: IRB Approval Form
Identification and Certification of Research
Projects Involving Human Subjects

The Institutional Review Board for Human Use (IRB) has an approved Multiple Project Assurance with the Department of Health and Human Services and is in compliance with 21 CFR Parts 50 and 56 and ICH GCP Guidelines. The Assurance became effective on January 1, 1999 and the approval period is for five years. The Assurance number is M-1149, identification number 01.

Principal Investigator:	ISABEL KILLORAN
Protocol Number:	X980709001
Protocol Title:	A Longitudinal Investigation on How Preservice Teacher Preparation Affects Perspectives Towards Developmentally Appropriate Practice and Inclusion

The IRB reviewed and approved the above named project on 10-1-99. The review was conducted in accordance with UAB's Assurance of Compliance approved by the Department of Health and Human Services. This Project will be subject to Annual continuing review as provided in that Assurance.

This project received **EXPEDITED** review.

IRB Approval Date: 10-1-99

Date IRB Approval Issued: 10-1-99

Marilyn Doss

Marilyn Doss, M.A.
Vice Chair of the Institutional Review Board for Human Use (IRB)

Investigators please note:

The IRB approved consent form used in the study must contain the IRB approval date and expiration date.

IRB approval is given for one year unless otherwise noted. For projects subject to annual review research activities may not continue past the one year anniversary of the IRB approval date.

Any modifications in the study methodology, protocol and/or consent form must be submitted for review and approval to the IRB prior to implementation.

Adverse Events and/or unanticipated risks to subjects or others at UAB or other participating institutions must be reported promptly to the IRB.

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Birmingham, Alabama 35294-0111 • (205) 934-3789 • FAX (205) 934-1301

APPENDIX E

SUMMARY OF SAMPLE DEMOGRAPHICS

Time 1

The mean age of the sample at Time 1 was 26.4 years. The participants from Group A were slightly older with a mean age of 28.9 years. Groups B and C had mean ages of 25.9 and 25.7, respectively (Table E1).

Table E1

Age of Sample

	Total group		Group A		Group B		Group C	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Time 1 ($N = 83$)	316.4 26.4 yr.	93.1 7.8 yr.	346.9 28.9 yr.	28.2 2.4 yr.	310.9 25.9 yr.	94.8 7.9 yr.	308.2 25.7 yr.	82.7 6.9 yr.

Note. Age is shown in total months and in years and months. yr. = years.

As is typical in most early childhood and elementary education preservice programs, the gender of the original sample was overwhelmingly female ($n = 77$). Males represented only 7% of the participants ($n = 6$) (Table G2). This gender split remained constant throughout the three collection points. Group A was all female. Group B had the largest percentage of male students, with 13.9% of respondents at Time 1 identifying themselves as male.

The self-identified ethnicity yielded the following ethnic make-up of the sample: 10.8% African American/Black, 88% Caucasian/White, and 1.2% self-identified as Irish. This individual was incorporated into the Caucasian/White population, resulting in a total of 89.2%. None of the participants self-identified as Hispanic, Asian, or Native American/Indian. Group A was made up of 93.3% self-identified Caucasian/White participants ($n = 14$). Only one participant identified African American/Black as his or her

race. At Time 1, 84.4% of the sample from Group C self-identified as Caucasian/White ($n = 27$). The remainder identified themselves as African American/Black ($n = 5$) (Table E2).

Table E2

Gender and Self-identified Ethnicity of Sample

	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Time 1 ($N = 83$)								
Female	77	92.8	15	100	31	86.1	31	96.9
Male	6	7.2	0	0.0	5	13.9	1	3.1
Time 1 ($N = 83$)								
African American/Black	9	10.8	1	6.7	3	8.3	5	15.6
Caucasian/White	74	89.2	14	93.3	33	97.2	27	84.4

At Time 1, 47 members (56.6%) of the sample were part of either Group A or Group C; both of these programs were taught through the larger university. The remainder ($n = 36$, 43.4%) were in Group B. Seventy-seven (92.8%) of all of the participants were full-time students. Six students (7.2%) were parttime (Table E3).

All of the participants verbally identified themselves as early childhood or elementary preservice educators prior to the administration of the instruments at Time 1. Upon analyzing the data, however, there were several variations in education programs. Table E4 outlines the degree programs identified by the sample. At Time 1, 16.9% were early childhood majors, 65.1% were elementary majors, 8.4% were seeking a dual major in early childhood and elementary education, 1.2% were seeking a dual major in special

Table E3

Enrollment Status of Participants

	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Time 1 (N = 83)								
Fulltime	77	92.8	13	86.7	32	88.9	32	100.0
Parttime	6	7.2	2	13.3	4	11.1	0	0.0

education and elementary, 1.2% were in physical education, 1.2% were in each of fifth year elementary education and fifth year special education, 2.4% were in the fifth year early childhood education program, and 2.4% were seeking dual majors in elementary and middle school education.

These programs were distributed among the groups as follows. Sixty percent of the participants from Group A were in the early childhood program (n = 9). One participant was in each of elementary education, early childhood and elementary education, special education and elementary education, P.E., fifth year elementary education, and fifth year special education.

Group B's participants represented the following programs: 5 (13.9%) early childhood majors, 22 (61.1%) elementary majors, 5 (13.9%) early childhood and elementary dual majors, 2 (5.6%) fifth year early childhood majors, and 2 (5.6%) elementary and middle school majors. Thirty-one (96.9%) of the participants from Group C were in the elementary education program. Only one person (3.1%) was completing a dual major in early childhood and elementary education.

Table E4

Degree Programs of Total Sample

Degree program	*f*	%
Time 1 (N = 83)		
Early childhood education	14	16.9
Elementary education	54	65.1
Early childhood and elementary education	7	8.4
Special education and elementary education	1	1.2
Physical education	1	1.2
Fifth-year elementary education	1	1.2
Fifth-year special education	1	1.2
Fifth-year early childhood education	2	2.4
Elementary and middle school education	2	2.4
Degree programs of subgroups		
Group A (n = 15)		
Early childhood education	9	60.0
Elementary education	1	6.7
Early childhood and elementary education	1	6.7
Special education and elementary education	1	6.7
Physical education	1	6.7
Fifth-year elementary education	1	6.7
Fifth-year special education	1	6.7
Fifth-year early childhood education	0	0.0
Elementary and middle school education	0	0.0
Group B (n = 36)		
Early childhood education	5	13.9
Elementary education	22	61.1
Early childhood and elementary education	5	13.9
Special education and elementary education	0	0.0
Physical education	0	0.0
Fifth-year elementary education	0	0.0
Fifth-year special education	0	0.0
Fifth-year early childhood education	2	5.6
Elementary and middle school education	2	5.6

Table E4 (Continued)

Degree program	*f*	%
Group C (n = 32)		
Early childhood education	0	0.0
Elementary education	31	96.9
Early childhood and elementary education	1	3.1
Special education and elementary education	0	0.0
Physical education	0	0.0
Fifth-year elementary education	0	0.0
Fifth-year special education	0	0.0
Fifth-year early childhood education	0	0.0
Elementary and middle school education	0	0.0

The participants were asked to try to describe why they chose their majors. The responses were anecdotal and, when analyzed, were clustered into seven possible categories: (a) prior experience; (b) wants to work with children; (c) excitement or beliefs about the field; (d) prerequisite; (e) career goal, gift or calling; (f) family influence; and (g) to improve the system. At Time 1, the majority of the participants (67.5%) expressed "wanting to work with children" as the reason behind choosing their majors (n = 56). Twelve percent believed teaching was a "gift, calling, or career goal" (n = 10). "Experience" was an influencing factor for 8.4% of the participants (n = 7). A few (4.8%) believed that they could "change the system" by becoming teachers (n = 4). "Excitement or beliefs" about teaching, having education as a "prerequisite," or "family influence" rounded out the categories (3.6%, 2.4%, and 1.2%, respectively; Table E5).

On the demographic questionnaire, the participants were requested to document, in semester hours, their completed education courses and practicum courses. The information that was provided was not always valid. Any number that seemed completely out

of line was categorized under invalid. For example, at Time 2, two students reported completing 374 and 500 semester hours of practicum courses. Based on the program requirements, these are implausible hours and probably reflect an estimate of contact hours.

Table E5

Responses to "Why did you choose your major?" (Total sample, N = 83)

Category	*f*	%
Experience	7	8.4
Wants to work with children	56	67.5
Excitement/beliefs	3	3.6
Prerequisite	2	2.4
Career goal/gift/calling	10	12.0
Family influence	1	1.2
To improve the system	4	4.8

Table E6 lists the frequencies of the hours that were reported for education and practicum courses. Group C was the only group that appeared to correctly report their completed education and practicum hours. At Time 1, 92.3% of the students had completed no hours of practicum (n = 24). One person reported completing 6 hr; another reported completing 9 hr. Six participants did not respond to the question.

The majority of the participants (71.1%) did not report having any children. Nine students (10.8%) had one child; 8 (9.6%) had two children; 4 (4.8%) had three children; 2 (2.4%) had three children; and 1 participant (1.2%) did not respond. Of those that reported having children, only one participant (1.2%) had a child with a disability. The type of disability was not reported.

Eleven (73.3%) of the participants of Group A reported having no children at Time 1. Of those having children, 13.3% had one child and 13.3% had two children (n = 2 each). Twenty-five (69.4%) of Group B's participants had no children. One of these

Table E6

Self-Reported Completed Education and Practicum Course Hours

Reported semester hours	*f*	%
Self-reported completed education hours		
Time 1 (N = 83)		
0-12	13	15.6
13-24	28	33.7
25-36	20	24.1
37-48	6	7.2
49-60	3	3.6
60-72	3	3.6
72+	1	1.2
Not reported	9	10.8
Self-reported completed practicum course hours		
Time 1 (N = 83)		
0-12	61	73.5
13-24	6	7.2
25-36	1	1.2
37-48	0	0.0
49-60	0	0.0
61-72	0	0.0
72+	0	0.0
Not reported	15	18.0

Note. Students were asked to report in semester hours. Some columns do not add up to 100 % due to rounding.

participants reported having a child with a disability. Five (13.9%) had one child; three (8.3%) had two children; one (2.8%) had three children; and two (5.6%) had four chil-

dren. Most of Group C's participants reported having no children (71.9%; $n = 23$); two had one child; three each had two or three children; and one person did not respond. None of these children were reported as having a disability. These figures were constant throughout the collections.

The participants were requested to report on their personal relationships with people with disabilities. They were given four options: (a) acquaintance (e.g., neighbor, store clerk); (b) casual (e.g., fellow student, coworker, employee); (c) close (e.g., roommate, near relative); and (d) intimate (e.g., spouse, child, sibling). Table E7 documents their responses.

Table E7

Self-Reported Relationship With Person With Disability

	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Time 1 ($N = 83$)								
None	19	22.9	4	26.7	7	19.4	8	25.0
Acquaintance	20	24.1	3	20.0	9	25.0	8	25.0
Casual	21	25.3	6	40.0	9	25.0	6	18.8
Close	13	15.7	1	6.7	6	16.7	6	18.8
Intimate	2	2.4	1	6.7	1	2.8	0	0.0
Multiple	8	9.6	0	0.0	4	11.1	4	12.5

At Time 1, 22.9% of the participants reported not knowing anyone with a disability (n =19), 20 (24.1%) knew an acquaintance with a disability, 21 (25.3%) knew someone casually who had a disability, 13 (15.7%) knew someone close who had a disability, 2 (2.4%) people reported having an intimate relationship with someone with a disability, and 8 (9.6%) participants checked multiple responses.

The participants reported on their primary resources for working with children in an inclusive setting. The participants were asked to check one of four options: (a) courses, (b) practicum, (c) independent reading, and (d) personal experience. At Time 1, the majority (41%) of the participants believed that courses were their primary resource for working with children in inclusive settings (n = 34). Twenty-six (31.3%) believed that personal experience was their primary resource. This was followed by 17 (20.5%) believing that practicum was the most valuable resource on inclusion. Only 6% believed that independent reading was their primary resource (n = 5).

The participants from Group A viewed courses and personal experience as having equal weight for primary resources for inclusion (n = 6, 40.0%). Group B also viewed courses and personal experience almost equally (n = 12, 33.3% and n = 14, 38.9%, respectively). Seven (19.4%) believed that practicum was the primary resource for inclusion; while three (8.3%) believed independent reading served as the primary resource. In Group C, 50% of the participants reported courses as being their primary resource for working in inclusive settings (n = 16), 28.1% believed practicum was their main resource (n = 9), 18.8% believed it was personal experience (n = 6), and only one, 3.1% (n = 1), thought that his or her independent reading was the primary resource (Table E8).

Provided the same options, the participants were asked to do the same for resources for DAPs (Table G8). At Time 1, 47 participants (56.6%) believed that courses were their primary resource for DAP, 24.1% believed it was their practicum (n = 20); 6% believed it was their independent reading (n = 5), 10.8% believed it was their personal experience (n = 9), and 2.4% did not respond to this question (n = 2).

The participants from Group A viewed courses as the primary resource for DAP (n = 10, 66.7%). The majority of participants from Group B viewed their courses as the

Table E8

Primary Resource for Working With Children in an Inclusive Setting and for DAP

Relationship	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Inclusion Time 1 (*N* = 83)								
Courses	34	41.0	6	40.0	12	33.3	16	50.0
Practicum	17	20.5	1	6.7	7	19.4	9	28.1
Independent reading	5	6.0	1	6.7	3	8.3	1	3.1
Personal experience	26	31.3	6	40.0	14	38.9	6	18.8
Not reported	1	1.2	1	6.7				
DAP Time 1 (*N* = 83)								
Courses	47	56.6	10	66.7	19	52.8	18	56.3
Practicum	20	24.1	1	6.7	10	27.8	9	28.1
Independent reading	5	6.0	2	13.3	2	5.6	1	3.1
Personal experience	9	10.8	1	6.7	4	11.1	4	12.5
Not reported	2	2.4	1	6.7	1	2.8		

Note. DAP = developmentally appropriate practice.

primary resource for DAP (*n* = 19, 54.3%). Ten (27.8%) regarded the practicum as the main resource; 4 (11.1%) believed it was personal experience; 2 (5.6%) believed it was independent reading; and 1 person did not respond. From Group C, 56.3% chose courses as their main resource for DAP (*n* = 18). Practicum was chosen by 28.1% of Group C participants (*n* = 9), 12.5% believed their primary resource was personal experience (*n* = 4), and one person identified independent reading.

Time 2

Demographic characteristics of the preservice educators for Time 2 are presented in the following tables and paragraphs. The age of the participants was tabulated from the completion date of the instruments and the provided birthdate. The mean age was 27 years (Table E9).

Table E9

Age of Sample

	Total group		Group A		Group B		Group C	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Time 2 (n = 36)	323.4 27 yr.	93.08 7.8 yr.	353.93 29.5 yr.	109.18 9.1 yr.	317.9 26.5 yr.	94.8 7.9 yr.	315.22 26.3 yr.	82.7 6.9 yr.

Note. Age is shown in total months and in years and months. yr. = years.

At Time 2, the participants self-identified as 8.3% African American/Black, and 91.7% Caucasian/White. None of the participants self-identified as Hispanic, Asian, or Native American/Indian. All of the participants from Group B self-identified as Caucasian/White (Table G10).

Only 25% of the respondents were from Group B (n = 9). Ten (27.8%) respondents were from Group A; the remainder, 47.2%, were part of Group C (n = 17). By Time 2, 11.1% (n = 4) of the participants had graduated from their program. The majority was still fulltime (n = 29, 80.6%), with only 8.3% parttime (n = 3) (Table E10).

At Time 2, 27.8% were in early childhood education; 58.3% were in elementary education, 5.6% were seeking dual majors in early childhood and elementary education,

Table E10

Self-identified Ethnicity and Enrollment Status of Sample

	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Time 2 (n = 36)								
African American/Black	3	8.3	1	10.0	0	0.0	2	11.8
Caucasian/White	33	91.7	9	90.0	9	100.0	15	88.2
Time 2 (n = 36)								
Fulltime	29	80.6	7	70.0	6	66.7	16	94.1
Parttime	3	8.3	2	20.0	0	0.0	1	5.9
Graduated	4	11.1	1	10.0	3	33.3	0	0.0

2.8% were seeking dual majors in special education and elementary education, and 5.6% were in the elementary and middle school dual program (Table E11).

Table E11

Degree Programs of Total Sample

Degree program	*f*	%
Time 2 (n = 36)		
Early childhood education	10	27.8
Elementary education	21	58.3
Early childhood and elementary education	2	5.6
Special education and elementary education	1	2.8
Physical education	0	0.0
Fifth year elementary education	0	0.0
Fifth year special education	0	0.0
Fifth year early childhood education	0	0.0
Elementary and middle school education	2	5.6

At Time 2, the reasons for choosing the major varied from Time 1 (Table E12). "Wanting to work with children" was still the biggest influence (45.5%). "Excitement or beliefs" about education was the next most influential (27.3%). A larger percentage (15.2%) than at Time 1 believed teaching was a "calling, gift or career goal." Two participants (6.1%) were "influenced by their families." Only 3% (n = 1) believed that she could "change the system" by becoming a teacher compared with the 4 participants who believed he or she could make a difference at Time 1. Only one person (3%) was required to take education as a "prerequisite."

At Time 2, a large percentage of students did not report their education or practicum hours (33%). Group C was the only group that appeared to correctly report their

Table E12

Responses to "Why did you choose your major?"

Category	*f*	%
Experience	0	0.0
Wants to work with children	15	45.5
Excitement/beliefs	9	27.3
Prerequisite	1	3.0
Career goal/gift/calling	5	15.2
Family influence	2	6.1
To improve the system	1	3.0

completed education and practicum hours. Only three participants (25.0%) had not completed any practicum. Six (50%) had completed 6 hr; one had completed 9 hr and the remainder did not respond or responded implausibly (n = 7) (Table E13).

Table E13

Self-reported Completed Education and Practicum Course Hours

Reported Semester Hours	*f*	%
Self-Reported Completed Education Hours		
Time 2 (n = 36)		
0-12	0	0.0
13-24	2	5.6
25-36	5	13.9
37-48	5	13.9
49-60	7	19.4
60-72	4	11.1
72+	1	2.8
Not Reported	12	33.3
Self-Reported Completed Practicum Course Hours		
Time 2 (n = 36)		
0-12	17	47.2
13-24	3	8.3
25-36	2	5.6
37-48	0	0.0
49-60	0	0.0
61-72	0	0.0
72+	0	0.0
Not Reported	12	33.3
Invalid	2	5.6

There were still 66.7% of the participants without children. Three participants had one child (8.3%); eight (22.2%) had two children and one (2.8%) had three children. No one reported having a child with a disability at this collection point. At Time 2, 13.9% still reported not knowing anyone with a disability (n = 5) (Table E14). The majority of the participants (30.6%) reported knowing an acquaintance with a disability (n = 11). Seven people (19.4%) each had a casual relationship or a close relationship with a person

with a disability. Three (8.3%) reported that they had an intimate relationship with a person with a disability and three respondents checked multiple responses.

Table E14

Self-Reported Relationship With Person With Disability

	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Time 2 (n = 36)								
None	5	13.8	2	20.0	1	11.1	2	11.8
Acquaintance	11	30.6	6	60.0	3	33.3	2	11.8
Casual	7	19.4	1	10.0	2	22.2	4	23.5
Close	7	19.4	0	0.0	2	22.2	5	29.4
Intimate	3	8.3	1	10.0	1	11.1	1	5.9
Multiple	3	8.3	0	0.0	0	0.0	3	17.6

By Time 2, no one reported independent reading as being the primary resource for working with children in an inclusive setting. Practicum was the lead response (47.2%; n = 17). Twelve participants (33.3%) still believed that courses were the primary resource for working with children in inclusive settings (Table E15). At Time 2, the participants from Group A were almost evenly split between courses and practicum as their primary resource (n = 4 and n = 6, respectively). From Group B, all the responses were related to experiences: 55.6% believed practicum was the primary resource for inclusion (n = 5); 44.4% believed experience was their primary resource (n = 4). Group C still had a large percentage (47.1%) viewing courses as the main resource; practicum was chosen by a larger group (35.3%; n = 6) than at Time 1; and three people (17.6%) viewed their personal experience as the main resource for working in inclusive settings. No one chose independent reading as their main resource.

Table E15

Primary Resource for Working With Children in an Inclusive Setting and for DAP

Relationship	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Inclusion Time 2 (*n* = 36)								
Courses	12	41	4	40.0	0	0.0	8	47.1
Practicum	17	20.5	6	60.0	5	55.6	6	35.3
Independent Reading	0	6.0	0	0.0	0	0.0	0	0.0
Personal experience	7	31.3	0	0.0	4	44.4	3	17.6
DAP Time 2 (*n* = 36)								
Courses	16	44.4	7	70.0	3	33.3	6	35.3
Practicum	16	44.4	3	30.0	5	55.6	8	47.1
Independent Reading	0	0.0	0	0.0	0	0.0	0	0.0
Personal experience	4	11.1	0	0.0	1	11.1	3	17.6

Note. DAP = developmentally appropriate practice.

The participants were evenly split between courses and practicum as their primary resource for DAP (*n* = 16, 44.4%, respectively). No one believed that independent reading was a primary resource, but four (11.1%) still viewed personal experience as their primary resource. The participants from Group A believed overwhelmingly that courses were the primary resource (*n* = 7; 70%). Group B participants were split between practicum (*n* = 5; 55.6%) and courses (*n* = 3; 33.3%). One person believed personal experience was the primary resource for DAP. By this time, 47.1% of Group C's participants believed that practicum was their primary resource for DAP (*n* = 8); 35.3% still viewed courses as their main resource (*n* = 6); and 17.6% believed it was personal experience (*n* = 3) (Table E15).

Time 3

At Time 3, the mean age of the sample was 27 years and 7 months. Twenty-six (86.7%) of the respondents were female (Table E16). The respondents at Time 3, self-identified as 10% African American/Black, and 90% Caucasian/White (Table G16). None of the participants self-identified as Hispanic, Asian, or Native American/Indian. All of the respondents from Groups A and B self-identified as Caucasian/White. Full-time students represented 83.3% of the participants (n = 25) (Table E17).

Table E16

Gender and Self-identified Ethnicity of Sample

	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Time 3 (n = 30)								
Female	26	86.7	4	66.6	6	75.0	16	100.0
Male	2	6.7	0	0.0	2	25.0	0	0.0
Missing	2	6.7	2	33.3				
Time 3 (n = 30)								
African American/Black	3	10.0	0	0.0	0	0.0	3	18.3
Caucasian/White	27	90.0	6	100.0	8	100.0	13	81.3

At Time 3, 23.3 % were early childhood education majors, 70 % were elementary education majors, 3.3 % were in the dual early childhood/elementary program, and 3.3 %

Table E17

Enrolment Status of Participants

	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Time 3 (n = 30)								
Full-time	25	83.3	5	83.3	5	62.5	15	93.8
Part-time	0	0.0	0	0.0	0	0.0	0	0.0
Graduated	0	0.0	0	0.0	0	0.0	0	0.0
Not reported	5	16.7	1	16.7	3	37.5	1	6.2

were in the dual elementary and middle school program (Table E18). All of the respondents from Group A were early childhood education majors (n = 6); 62.5% of Group B were elementary majors (n = 5), and 100.0% of Group C were elementary majors (n = 16).

Table E18

Degree Programs of Total Sample

Degree program	*f*	%
Time 3 (n = 30)		
Early childhood education	7	23.3
Elementary education	21	70.0
Early childhood and elementary education	1	3.3
Special education and elementary education	0	0.0
Physical education	0	0.0
Fifth year elementary education	0	0.0
Fifth year special education	0	0.0
Fifth year early childhood education	0	0.0
Elementary and middle school education	1	3.3

Fifty percent of the participants chose teaching as a career because of their desire to work with children ($n = 9$). Six preservice educators believed that teaching was their calling (33.3%). The remaining respondents chose teaching because of beliefs they held or wanting to improve the system (5.6% and 11.1%, respectively) (Table E19).

Table E19

Responses to "Why did you choose your major?" (Total Sample)

Category	*f*	%
Experience	0	0.0
Wants to work with children	9	50.0
Excitement/beliefs	1	5.6
Prerequisite	0	0.0
Career goal/gift/calling	6	33.3
Family influence	0	0.0
To improve the system	2	11.1

Only 7 respondents completed the question on education hours (23.3 %). All had completed over 35 semester hours of courses. A few more completed the section on practicum hours; however, some of the data is questionable. It is unlikely that a student completed 42 semester hours because this would be equivalent to 14 courses of practicum (Table E20).

Table E20

Self-reported Completed Education and Practicum Course Hours

Reported Semester Hours	*f*	%
Self-Reported Completed Education Hours		
Time 3 (n = 30)		
0-12	0	0.0
13-24	0	0.0
25-36	1	3.3
37-48	3	10.0
49-60	3	10.0
61-72	0	0.0
72+		
Not reported	23	76.7
Self-Reported Completed Practicum Course Hours		
Time 3 (n = 30)		
0-12	6	0.0
13-24	3	10.0
25-36	0	0.0
37-48	1	3.3
49-60	0	0.0
60-72	0	0.0
72+	0	0.0
Not Reported	20	66.7

Note. Students were asked to report in semester hours. Some columns do not add up to 100 % due to rounding.

At Time 3, 20% of the participants still did not know anyone with a disability; 26.7% knew an acquaintance with a disability; 26.7% had a casual relationship with a person with a disability; 23.3% had a close relationship; and 10% had an intimate relationship (Table E21).

Table E21

Self-Reported Relationship With Person With Disability

	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Time 3 (n = 30)								
None	6	20.0	1	16.7	1	12.5	4	25.0
Acquaintance	8	26.7	2	33.3	2	25.0	4	25.0
Casual	6	20.0	1	16.7	3	37.5	2	12.5
Close	7	23.3	1	16.7	2	25.0	4	25.0
Intimate	3	10.0	1	16.7	0	0.0	2	12.5

The majority of the participants believed that practicum was their primary resource for working with students in an inclusive setting (n = 14; 48.3%). Seven respondents believed that courses and personal experience were each their primary resource. Only one person thought that independent reading served as their primary resource (Table E22). Group A was evenly split between courses, practicum, and personal experience as the primary resource for inclusion (33.3% each). Group B was fairly evenly split, with practicum having a slight advantage (n = 3, 37.5% versus n = 2, 25.0%). Group C firmly believed that practicum was their primary resource for inclusion; 56.3% chose this option.

Using the same response options, the participants were fairly evenly split between courses (n = 10), practicum (n = 11), and personal experience (n = 7) as their primary resources for developmentally appropriate practices (Table E22). No one in Group B

believed that practicum was their primary resource for developmentally appropriate practices. In Group C, 62.5% of the respondents chose practicum as their main resource for developmentally appropriate practices.

Table E22

Primary Resource for Working With Children in an Inclusive Setting and for DAP

Relationship	Total group		Group A		Group B		Group C	
	f	%	*f*	%	*f*	%	*f*	%
Inclusion Time 3 (n = 30)								
Courses	7	24.1	2	33.3	2	25.0	3	18.8
Practicum	14	48.3	2	33.3	3	37.5	9	56.3
Independent reading	1	3.4	0	0.0	0	0.0	1	6.3
Personal experience	7	24.1	2	33.3	2	25.0	3	18.8
Missing					1	12.5		
DAP Time 3 (n = 30)								
Courses	10	33.3	2	33.3	5	62.5	3	18.8
Practicum	11	36.7	1	16.7	0	0.0	10	62.5
Independent reading	0	0.0	0	0.0	0	0.0	0	0.0
Personal experience	7	23.3	2	33.3	3	37.5	2	12.5
Missing	2	6.7	1	16.7			1	6.2

Note. Some columns do not add up to exactly 100% due to rounding. DAP = developmentally appropriate practice.

APPENDIX F

FINAL COMPONENT SOLUTIONS

Table F1

Final 5-Component Solution for Teacher Beliefs Scale (TBS) (Time 1)

Statement Number		Component I	II	III	IV	V
1.	As an evaluation technique in the preschool program, standardized group tests are ___.	.516	-.060	.304	-.129	-.175
2.	As an evaluation technique in the preschool program, teacher observation is ___.	.151	.606	-.066	.261	.010
3.	As an evaluation technique in the preschool program, performance on worksheets and workbooks is ___.	.693	-.163	.086	.061	.115
4.	It is ___ for preschool activities to be responsive to individual differences in interest.	.182	.288	.307	.207	.567
5.	It is ___ for preschool activities to be responsive to individual differences in development.	.125	.393	.286	.150	.554
6.	It is ___ that each curriculum area be taught as separate subjects at separate times.	*.401*	.149	.207	.517	.186
7.	It is ___ for teacher-pupil interactions in preschool to help develop children's self-esteem and positive feelings towards learning.	.027	.574	-.098	-.143	.235
8.	It is ___ for children to be allowed to select many of their own activities from a variety of learning areas that the teacher has prepared. (blocks, centers, art, housekeeping, etc.)	-.108	.642	.283	-.073	-.015
9.	It is ___ for children to be allowed to cut their own shapes, perform their own steps in an experiment, and plan their own creative drama, art, and writing and scribbling activities.	-.134	.661	*.420*	-.247	.037
10.	It is ___ for preschoolers to learn to work silently and alone on seatwork.	.568	-.072	-.089	.145	.097
11.	It is ___ for preschoolers to learn through active exploration.	.138	.619	.009	.189	.070
12.	It is ___ for preschoolers to learn through interaction with other children.	.048	.666	.067	.355	-.074

Table F1 (Continued)

Statement Number		Component I	II	III	IV	V
13.	Workbooks and/or ditto sheets are ___ to the preschool program.	.586	-.024	.131	.169	.368
14.	Routine group practice on shapes, numbers, letters, months and/or words. etc. using materials such as flashcards and charts is ___ to the preschool program for instructional purposes.	.581	-.099	.101	-.089	.289
15.	A structured reading or pre-reading program is ___ to the preschool program.	.632	-.056	-.044	-.113	.056
16.	In terms of effectiveness, it is ___ for the teacher to talk to the whole group and make sure everyone participates in the same activity.	.590	.038	.169	-.089	.329
17.	In terms of effectiveness, it is ___ for the teacher to move among groups and individuals, offering suggestions, asking questions and facilitating children's involvement with materials and activities.	-.330	.550	-.027	.272	-.016
18.	It is ___ for teachers to use their authority through treats, stickers, and/or stars to encourage appropriate behavior.	.243	-.038	-.109	.000	.669
19.	It is ___ for teachers to use their authority through punishments and/or reprimands to encourage appropriate behavior.	.286	.060	.067	-.065	.705
21.	It is ___ for children to be instructed in recognizing the single letters of the alphabet, isolated from words.	.612	-.038	.067	-.244	.430
22.	It is ___ for children to color within predefined lines.	.604	.207	-.086	.169	.259
23.	It is for children in preschool to form letters correctly on a printed line.	.805	.170	-.046	-.069	.017
24.	It is ___ for children to have stories read to them individually and/or on a group basis.	-.013	.566	.137	.349	-.014

Table F1 (Continued)

Statement Number		Component I	II	III	IV	V
25.	It is ___ to children to dictate stories to the teacher.	-.314	-.046	.564	.317	-.116
26.	It is ___ for children to see and use functional print (telephone book, magazines, etc.) and environmental print (cereal boxes, potato chip bags, etc.) in the preschool classroom.	-.146	.018	.621	.061	.094
27.	It is ___ for children to participate in dramatic play.	.209	.103	.727	.312	.016
28.	It is ___ for children to talk informally with adults.	.293	.123	.727	.205	.023
29.	It is ___ for children to experiment with writing by inventing their own spelling.	.184	.103	.635	.065	-.062
30.	It is ___ to provide many opportunities to develop social skills with peers in the classroom.	.098	.275	.310	.427	.135
31.	It is ___ for preschoolers to learn to read.	.663	.307	.027	-.045	-.040
32.	In the preschool program, it is ___ that math be integrated with all other curriculum areas.	-.317	.001	.054	.585	.062
33.	In teaching health and safety, it is ___ to include a variety of activities throughout the year.	-.078	.265	.201	.773	-.042
34.	In the classroom setting, it is ___ for the child to be exposed to multicultural and nonsexist activities.	.116	.176	.242	.721	.108
35.	Input from parents is ___.	.007	.041	.192	-.137	-.534

Note. The lower coefficient of an item which cross-loaded is italicized. Only five components met the criteria of having at least three item coefficients of .40 or greater. An item which cross-loaded was assigned to the component in which it loaded the highest. Key to Component: I [Inappropriate materials and activities], II [Appropriate materials and activities], III [Appropriate literacy activities], IV [Curriculum Beliefs], V [Beliefs about Structure].

Table F2

Final 3-Factor Solution for Opinions Relative to Mainstreaming-Adapted at Time 1

Statement Number		Component I	II	III
1.	Many of the things teachers do with regular students in a classroom are appropriate for students with special needs.	.471	.019	.290
2.	The needs of a student with a disability can best be served through special, separate classes.	.283	.354	.602
3.	The classroom behavior of students with special needs generally requires more patience from the teacher than does the behavior of a child without special needs.	.056	-.009	.506
4.	The challenge of being in a general education classroom will promote the academic growth of the student with special needs.	.765	-.002	.172
5.	The extra attention a student with a disability requires will be to the detriment of the other students.	.272	.253	.624
6.	Inclusion offers mixed group interaction, which will foster understanding and acceptance of differences.	.704	.218	-.204
7.	It is difficult to maintain order in a general education classroom that contains a student with a disability.	-.271	.061	-.618
9.	The behavior of students with disabilities will set a bad example for the other students.	.028	.234	.436
10.	Isolation in a special education class has a negative effect on the social and emotional development of a student with a disability.	.748	-.228	.098
11.	The student with a disability will probably develop academic skills more rapidly in a special education class than in a general education class.	.480	.384	*.427*
13.	Inclusion of students with disabilities will require significant changes in the general education classroom procedures.	-.124	*.490*	*.490*
15.	The contact students without a disability have with students with a disability in an inclusive setting may be harmful.	*.520*	.537	-.156
17.	Students with disabilities will monopolize the teacher's time.	.164	.501	*.498*

Table F2 (Continued)

Statement Number		Component I	II	III
18.	Including a student with a disability will promote his/her social independence.	.665	.109	.082
19.	It is likely that a student with a disability will exhibit behavior problems in a general education classroom setting.	.070	.668	.242
20.	Diagnostic-prescriptive teaching is better done by special education teachers than by general education teachers.	-.182	.438	.341
21.	Inclusion of students with disabilities can be beneficial for students without disabilities.	.778	.196	.018
22.	Students with disabilities need to be told exactly what to do and how to do it.	.001	.636	.221
23.	Inclusion is likely to have a negative effect on the emotional development of the student with a disability.	.368	.507	.127
24.	Increased freedom in the classroom creates too much confusion.	.146	.696	-.050
25.	The student with a disability will be socially isolated by the students without disabilities.	.257	.681	.204
27.	Inclusion of students with disabilities will necessitate extensive retraining of general education teachers.	-.215	.273	.629
28.	Students with disabilities should be given every opportunity to function in the general education classroom, where possible.	.728	.184	.179
29.	Students with disabilities are likely to create confusion in the general education classroom.	.142	.695	.178
30.	The presence of students with disabilities will promote acceptance of differences on the part of students without disabilities.	.766	.250	.053

Note. The lower coefficient of an item which cross-loaded is italicized. Only three components met the criteria of having at least three item coefficients of .40 or greater. An items which cross-loaded was assigned to the component in which it loaded the highest. Key to Component: I [Positive beliefs about inclusion], II [Negative beliefs about inclusion], III [Beliefs about the requirements for including a student with special needs].

APPENDIX G

QUESTION ITEM MEANS FOR INSTRUMENTS

Table G1

Question Item Means for Teacher Beliefs Scale–Total Group (Time 1)

	Response number					
	1	2	3	4	5	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Question 1	0	6 (7.2%)	16 (19.3%)	36 (43.4%)	25 (30.1%)	3.964
Question 2	0	4 (4.8%)	7 (8.4%)	26 (31.3%)	46(55.4%)	4.373
Question 3	1 (1.2%)	10 (12%)	31 (37.3%)	34 (41.0%)	7 (8.4%)	3.434
Question 4	0	0	14 (16.9%)	42 (50.6%)	27 (32.5)	4.159
Question 5	0	0	7 (8.4%)	42 (50.6%)	34 (41.0%)	4.325
Question 6	2 (2.4%)	11 (13.3%)	18 (21.7%)	34 (41.0%)	18 (21.7%)	3.663
Question 7	0	1 (1.2%)	0	10 (12.0%)	72 (86.7%)	4.841
Question 8	0	2 (2.4%)	14 (16.9%)	34 (41.0%	33 (39.8%)	4.181
Question 9	0	2 (2.4%)	6 (7.2%)	32 (38.6%)	43 (51.8%)	4.398
Question 10	5 (6.0%)	12 (14.5%)	26 (31.3)%	29 (34.9%)	11 (13.3%)	3.349
Question 11	0	1 (1.2%)	2 (2.4%)	21 (25.3%)	59 (71.1%)	4.663
Question 12	0	0	0	18 (21.7%)	65 (78.3%)	4.783
Question 13	1 (1.2%)	6 (7.2%)	27 (32.5%)	31 (37.3)	18 (21.7%)	3.711
Question 14	11 (13.3%)	38 (45.8%)	21 (25.3%)	11 (13.3%)	2 (2.4%)	2.458
Question 15	19 (22.9%)	27 (32.5%)	27 (32.5%)	8 (9.6%)	2 (2.4%)	2.361
Question 16	13 (15.7%)	17 (20.5%)	33 (39.8%)	18 (21.7%)	2 (2.4%)	2.747
Question 17	0	1 (1.2%)	4 (4.8%)	27 (32.5%)	51 (61.4%)	4.542
Question 18	10 (12.0%)	17 (20.5%)	30 (36.1%)	14 (16.9%)	12 (14.5%)	3.012
Question 19	6 (7.2%)	9 (10.8%)	30 (36.1%)	28 (33.7%)	10 (12.0%)	3.325
Question 20	1 (1.2%)	2 (2.4%)	11 (13.3%)	32 (38.6%)	37 (44.6%)	4.229
Question 21	23 (27.7%)	28 (33.7%)	21 (25.3%)	7 (8.4%)	4 (4.8%)	2.296

Table G1 (Continued)

	Response number					
	1	2	3	4	5	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Question 22	3 (3.6%)	12 (14.5%)	26 (31.3%)	22 (26.5%)	20 (24.1%)	3.530
Question 23	2 (2.4%)	10 (12.0%)	30 (36.1%)	28 (33.7%)	13 (15.7%)	3.482
Question 24	0	0	4 (4.8%)	18 (21.7%)	61 (73.5%)	4.687
Question 25	1 (1.2%)	9 (10.8%)	18 (21.7%)	33 (39.8%)	22 (26.5%)	3.795
Question 26	2 (2.4%)	3 (3.6%)	29 (34.9%)	22 (26.5%)	27 (32.5%)	3.831
Question 27	1 (1.2%)	1 (1.2%)	18 (21.7%)	32 (38.6%)	31 (37.3%)	4.096
Question 28	1 (1.2%)	3 (3.6%)	17 (20.5%)	28 (33.7%)	34 (41.0%)	4.096
Question 29	7 (8.4%)	13 (15.7%)	17 (20.5%)	19 (22.9%)	27 (32.5%)	3.554
Question 30	0	0	6 (7.2%)	22 (26.5%)	55 (66.3%)	4.590
Question 31	14 (16.9%)	14 (16.9%)	23 (27.7%)	24 (28.9%)	8 (9.6%)	2.976
Question 32	1 (1.2%)	10 (12.0%)	29 (34.9%)	25 (30.1%)	18 (21.7%)	3.590
Question 33	0	1 (1.2%)	8 (9.6%)	31 (37.3%)	43 (51.8%)	4.398
Question 34	0	1 (1.2%)	7 (8.4%)	29 (34.9%)	46 (55.4%)	4.446
Question 35	6 (7.2%)	13 (15.7%)	16 (19.3%)	20 (24.1%)	28 (33.7%)	3.614
Question 36	0	0	5 (6.0%)	20 (24.1%)	58 (69.9%)	4.639

Note. Missing values were assigned the mean scores of the item and assigned to the closest response number. Key to responses: 1 (*not at all important*), 2 (*not very important*), 3 (*fairly important*), 4 (*very important*), 5 (*extremely important*).

Table G2

Question Item Means for the Opinions Relative to Mainstreaming-Adapted--Total Group (Time 1)

	Response number						
	1	2	3	4	5	6	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
1	8 (9.6%)	12 (14.5%)	22 (26.5%)	19 (22.9%)	12 (14.5%)	10 (12.0%)	3.542
2	5 (6.0%)	9 (19.8%)	22 (26.5%)	10 (12.0%)	12 (14.5%)	10 (12.0%)	3.952
3	10 (12.0%)	26 (1.3%)	1 (1.2%)	21 (25.3%)	8 (9.6%0	5 (6.0%)	2.963
4	3 (3.6%)	3 (3.6%)	14 (16.9%)	27 (32.5%)	25 (30.1%)	11 (13.3%)	4.217
5	3 (3.6%)	13 (15.7%)	24 (28.9%)	23 (27.7%)	11 (13.3%)	9 (10.8%)	3.639
6	2 (2.4%)	3 (3.6%)	6 (7.2%)	18 (21.7%)	27 (32.5%)	27 (32.5%)	4.759
7	13 (15.7%)	25 (30.1%)	15 (18.1%)	16 (19.3%)	12 (14.5%)	2 (2.4%)	2.939
8	7 (8.4%)	11(13.3%)	12 (14.5%0	16 (19.3%)	13 (15.7%)	24 (28.9%)	4.072
9	0	1 (1.2%)	6 (7.2%)	13 (15.7%)	27 (32.5%)	26 (43.4%)	5.096
10	5 (6.0%)	5 (6.0%)	13 (15.7%)	19 (22.9%)	22 (26.5%)	19 (22.9%)	4.265
11	6 (7.2%)	12 (14.5%)	19 (22.9%)	24 (28.9%)	16 (19.3%)	6 (7.2%)	3.598
12	0	4 (4.8%)	3 (3.6%)	17 (20.5%)	29 (34.9%)	30 (36.1%)	4.939
13	16 (19.3%)	23 (27.7%)	25 (30.1%)	12 (14.1%)	6 (7.2%)	1 (1.2%)	2.663
14	2 (2.4%)	6 (7.2%)	23 (27.7%)	25 (30.1%)	23 (28.9%)	3 (3.6%)	3.866
15	0	3 (3.6%)	8 (9.6%)	12 (14.5%)	27 (32.5%)	33 (39.8%)	4.952
16	30 (36.1%)	22 (26.5%)	17 (20.5%)	8 (9.6%)	4 (4.8%)	2 (2.4%)	2.277
17	2 (2.4%)	12 (14.5%)	28 (33.7%)	18 (21.7%)	16 (19.3%)	7 (8.4%)	3.659
18	1 (1.2%)	4 (4.8%)	2 (2.4%)	29 (34.9%)	27 (32.5%)	20 (24.1%)	4.651
19	1 (1.2%)	5 (6.0%)	24 (28.9%)	25 (30.1%)	18 (21.7%)	10 (12.0%)	4.012
20	10 (12.0%)	19 (22.9%)	31 (37.3%)	14 (16.9%)	7 (8.4%)	2 (2.4%)	2.939

Table G2 (Continued)

	Response number						
	1	2	3	4	5	6	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
21	1 (1.2%)	5 (6.0%)	6 (7.2%)	20 (24.1%)	26 (31.3%)	25 (30.1%)	4.687
22	5 (6.0%)	11 (13.3%)	20 (24.1%)	19 (22.9%)	18 (21.7%)	10 (12.0%)	3.771
23	1 (1.2%)	1 (1.2%)	10 (12.0%)	20 (24.1%)	29 (34.9%)	22 (26.5%)	4.699
24	2 (2.4%)	8 (9.6%)	23 (27.7%)	19 (22.9%)	20 (24.1%)	11 (13.3%)	3.964
25	2 (2.4%)	4 (4.8%)	17 (20.5%)	18 (21.7%)	29 (34.9%)	13 (15.7%)	4.289
26	3 (3.6%)	12 (14.5%)	23 (27.7%)	15 (18.1%)	20 (24.1%)	10 (12.0%)	3.807
27	14 (16.9%)	18 (21.7%)	23 (27.7%)	16 (19.3%)	4 (4.8%)	8 (9.6%)	3.024
28	1 (1.2%)	0	4 (4.8%)	20 (24.1%)	21 (25.3%)	37 (44.6%)	5.060
29	4 (4.8%)	1 (1.2%)	18 (21.7%)	25 (30.1%)	25 (30.1%)	10 (12.0)	4.157
30	0	2 (2.4%)	4 (4.8%)	25 (30.1%)	21 (25.3%)	31 (37.3%)	4.904

Note. Missing values were assigned the mean scores of the item and assigned to the closest response number. Key to responses: 1 (*disagree very much*), 2 (*disagree pretty much*), 3 (*disagree a little*), 4 *(agree a little*), 5 (*agree pretty much*); 6 (*agree very much).*

Table G3

Question Item Means for Teacher Beliefs Scale--Total Group (Time 2)

	Response number					
	1	2	3	4	5	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Question 1	0	1 (2.8%)	4 (11.1%)	10 (27.8%)	21 (58.3%)	4.429
Question 2	0	0	0	9 (25.0%)	27 (75.0%)	4.743
Question 3	0	0	9 (25.0%)	20 (55.6%)	7 (19.4%)	3.943
Question 4	0	0	7 (19.4%)	17 (47.2%)	12 (33.3%)	4.143
Question 5	0	0	2 (5.6%)	15 (41.7%)	19 (52.8%)	4.486
Question 6	0	1 (2.8%)	3 (8.3%)	17 (47.2%)	15 (41.7%)	4.286
Question 7	0	0	1 (2.8%)	2 (5.6%)	33 (91.7%)	4.886
Question 8	0	1 (2.8%)	4 (11.1%)	14 (38.9%)	17 (47.2%)	4.314
Question 9	0	0	2 (5.6%)	12 (33.3%)	22 (61.1%)	4.543
Question 10	1 (2.8%)	2 (5.6%)	13 (36.1%)	11 (30.6%)	9 (25.0%)	3.686
Question 11	0	0	0	5 (13.9%)	31 (86.1%)	4.857
Question 12	0	0	0	8 (22.2%)	28 (77.8%)	4.771
Question 13	0	0	3 (8.3%)	21 (58.4%)	12 (33.3%)	4.257
Question 14	5 (13.9%)	8 (22.2%)	12 (33.4%)	8 (22.2%)	3 (8.3%)	2.886
Question 15	13 (36.1%)	5 (13.9%)	9 (25.0%)	8 (22.2%)	1 (2.8%)	2.402
Question 16	3 (8.3%)	5 (13.9%)	12 (33.4%)	12 (33.4%)	4 (11.1%)	3.264
Question 17	0	0	0	6 (16.7%)	30 (83.4%)	4.820
Question 18	3 (8.3%)	2 (5.6%)	12 (33.3%)	10 (27.8%)	9 (25.0%)	3.543
Question 19	2 (5.6%)	5 (13.9%)	7 (19.4%)	14 (38.9%)	8 (22.2%)	3.571
Question 20	0	0	3 (8.3%)	6 (16.7%)	27 (75.0%)	4.657
Question 21	6 (16.7%)	8 (22.2%)	9 (25.0%)	9 (25.0%)	4 (11.1%)	2.914

Table G3 (Continued)

	Response number					
	1	2	3	4	5	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Question 22	0	0	10 (27.8%)	14 (38.9%)	12 (33.3%)	4.057
Question 23	0	4 (11.1%)	4 (11.1%)	15 (41.7%)	13 (36.1%)	4.029
Question 24	0	0	1 (2.8%)	3 (8.3%)	32 (88.9%)	4.857
Question 25	1 (2.8%)	5 (13.9%)	11 (30.6%)	7 (19.5%)	12 (33.3%)	3.657
Question 26	0	1 (2.8%)	6 (16.7%)	6 (16.7%)	23 (63.9%)	4.429
Question 27	0	2 (5.6%)	4 (11.1%)	9 (25.0%)	21 (58.3%)	4.371
Question 28	0	1 (2.8%)	5 (13.9%)	14 (38.9%)	16 (44.4%)	4.257
Question 29	0	2 (5.6%)	3 (8.3%)	10 (27.8%)	21 (58.3%)	4.400
Question 30	0	0	0	11 (30.6%)	25 (69.55)	4.686
Question 31	3 (8.3%)	2 (5.6%)	9 (25.0%)	16 (44.5%)	6 (16.7%)	3.543
Question 32	1 (2.8%)	5 (13.9%)	8 (22.2%)	17 (47.2%)	5 (13.9%)	3.543
Question 33	0	0	3 (8.3%)	19 (52.8%)	14 (38.9%)	4.314
Question 34	0	0	2 (5.6%)	13 (36.1%)	21 (58.4%)	4.514
Question 35	1 (2.8%)	9 (25.0%)	14 (38.9%)	7 (19.4%)	5 (13.9%)	3.171
Question 36	0	0	3 (8.3%)	16 (44.5%)	17 (47.2%)	4.400

Note. Missing values were assigned the mean scores of the item and assigned to the closest response number. Key to responses: 1 (*not at all important*), 2 (*not very important*), 3 (*fairly important*), 4 (*very important*), 5 (*extremely important*).

Table G4

Question Item Means for Opinions Relative to Mainstreaming-Adapted--Total Group (Time 2)

	Response number						
	1	2	3	4	5	6	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
1	2 (5.6%)	4 (11.1%)	6 (16.7%)	7 (19.4%)	11 (30.6%)	6 (16.7%)	4.083
2	0	8 (22.2%)	10 (27.8%)	6 (7.2%)	7 (8.4%)	5 (13.9%)	3.750
3	4 (11.1%)	12 (33.3%)	8 (22.2%)	2 (5.6%)	8 (22.2%)	2 (5.6%)	3.111
4	0	2 (5.6%)	7 (19.4%)	14 (38.9%)	9 (25.0%)	4 (11.1%)	4.167
5	1 (2.8%)	6 (16.7%)	8 (22.2%)	7 (19.4%)	6 (16.7%)	8 (22.2%)	3.972
6	0	0	1 (2.8%)	8 (22.2%)	12 (33.3%)	15 (41.7%)	5.139
7	0	2 (5.6%)	7 (19.4%)	9 (25.0%)	10 (27.8%)	8 (22.2%)	4.429
8	12 (33.3%)	13 (36.1%)	6 (16.7%)	2 (5.6%)	2 (5.6%)	1 (2.8%)	2.222
9	0	2 (5.6%)	1 (2.8%)	6 (16.7%)	19 (52.8%)	8 (22.2%)	4.833
10	1 (2.8%)	4 (11.1%)	4 (11.1%)	6 (16.7%)	12 (33.3%)	9 (25.0%)	4.417
11	2 (5.8%)	5 (13.9%)	8 (22.2%)	14 (38.9%)	6 (16.7%)	1 (2.8%)	3.543
12	0	3 (8.3%)	0	5 (13.9%)	19 (52.8%)	9 (25.0%)	4.857
13	3 (8.3%)	12 (33.3%)	9 (25.0%)	5 (13.9%)	6 (16.7%)	1 (2.8%)	3.056
14	0	6 (16.7%)	9 (25.0%)	12 (33.3%)	7 (19.4%)	2 (5.6%)	3.722
15	0	1 (2.8%)	1 (2.8%)	8 (22.2%)	9 (25.0%)	17 (47.2%)	5.111
16	14 (38.9%)	13 (36.1%)	7 (19.4%)	1 (2.8%)	1 (2.8%)	0	1.943
17	1 (2.8%)	5 (13.9%)	8 (22.2%)	10 (27.8%)	10 (27.8%)	2 (5.6%)	3.806
18	0	0	2 (5.6%)	9 (25.0%)	12 (33.3%)	13 (36.1%)	5.000
19	1 (2.8%)	0	14 (38.9%)	11 (30.6%)	8 (9.6%)	2 (5.6%)	3.861
20	6 (16.7%)	10 (27.8%)	6 (16.7%)	12 (33.3%)	2 (5.6%)	0	2.829

Table G4 (Continued)

	Response number						
	1	2	3	4	5	6	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
21	0	0	3 (8.3%)	8 (22.2%)	10 (27.8%)	15 (41.7%)	5.028
22	1 (2.8%)	7 (19.4%)	3 (8.3%)	10 (27.8%)	6 (16.7%)	9 (25.0%)	4.118
23	0	0	3 (8.3%)	10 (27.8%)	10 (27.8%)	13 (36.1%)	4.917
24	0	3 (8.3%)	5 (13.9%)	10 (27.8%)	11 (30.6%)	7 (19.4%)	4.389
25	0	0	2 (5.6%)	8 (22.2%)	15 (41.7%)	11 (30.6%)	4.972
26	2 (5.6%)	7 (19.4%)	10 (27.8%)	4 (11.1%)	8 (22.2%)	5 (13.9%)	3.667
27	4 (11.1%)	11 (30.6%)	12 (33.3%)	4 (11.1%)	5 (13.9%)	0	2.861
28	0	0	1 (2.8%)	10 (27.8%)	11 (30.6%)	14 (38.9%)	5.056
29	0	1 (2.8%)	6 (16.7%0	11 (30.6%)	11 (30.6%)	7 (19.4%)	4.472
30	0	0	0	11 (30.6%)	11 (30.6%)	14 (38.9%)	5.083

Note. Missing values were assigned the mean scores of the item and assigned to the closest response number. Key to responses: 1 (*disagree very much*), 2 (*disagree pretty much*), 3 (*disagree a little*), 4 (*agree a little*), 5 (*agree pretty much*); 6 (*agree very much*).

Table G5

Question Item Means for Teacher Beliefs Scale–Total Group (Time 3)

	Response number					
	1	2	3	4	5	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Question 1	1 (3.3%)	3 (10.0%)	4 (13.3%)	9 (30.0%)	13 (43.3%)	4.000
Question 2	0	0	3 (3.6%)	7 (23.3%)	20 (66.6%)	4.552
Question 3	1 (3.3%)	3 (10.0%)	11 (36.7%)	7 (23.3%)	8 (26.7%)	3.586
Question 4	0	2 (6.7%)	8 (26.7%)	10 (33.3%)	10 (33.3%)	3.929
Question 5	1 (3.3%)	1 (3.3%)	5 (16.7%)	14 (46.7%)	9 (30.0%)	3.964
Question 6	4 (13.3%)	6 (20.0%)	3 (10.0%)	10 (33.3%)	7 (23.3%)	3.345
Question 7	1 (3.3%)	0	1 (3.3%)	4 (13.3%)	24 (80.0%)	4.630
Question 8	0	2 (6.7%)	4 (13.3%)	10 (33.3%)	14 (46.7%)	4.207
Question 9	1 (3.3%)	1 (3.3%)	5 (16.7%)	7 (23.3%)	16 (53.3%)	4.222
Question 10	1 (3.3%)	2 (6.7%)	7 (23.3%)	11 (36.6%)	9 (30.0%)	3.828
Question 11	0	0	0	9 (30.0%)	21 (70.0%)	4.679
Question 12	0	0	0	7 (23.3%)	23 (76.7%)	4.759
Question 13	2 (6.7%)	2 (6.7%)	8 (26.7%)	11 (36.7%)	7 (23.3%)	3.607
Question 14	5 (16.7%)	13 (43.4%)	8 (26.7%)	2 (6.7%)	2 (6.7%)	2.464
Question 15	4 (13.3%)	11 (36.7%)	6 (20.0%)	6 (20.0%)	3 (10.0%)	2.759
Question 16	2 (6.7%)	5 (16.7%)	13 (43.4%)	7 (23.3%)	3 (10.0%)	3.143
Question 17	0	1 (3.3%)	2 (6.7%)	13 (43.3%)	14 (46.7%)	4.345
Question 18	2 (6.7%)	4 (13.3%)	11 (36.7%)	10 (33.3%)	3 (10.0%)	3.300
Question 19	1 (3.3%)	7 (23.3%)	10 (33.3%)	8 (26.7%)	4 (13.3%)	3.241
Question 20	0	1 (3.3%)	5 (16.7%)	14 (46.6%)	10 (33.3%)	4.103
Question 21	3 (10.0%)	11 (36.7%)	8 (26.7%)	4 (13.3%)	(4 (13.3%)	2.821

Table G5 (Continued)

	Response number					
	1	2	3	4	5	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
Question 22	1 (3.3%)	4 (13.3%)	7 (23.3%)	11 (36.6%)	7 (23.3%)	3.621
Question 23	1 (3.3%)	5 (16.7%)	9 (30.0%)	11 (36.7%)	4 (13.3%)	3.429
Question 24	0	0	3 (10.0%)	12 (40.0%)	15 (50.0%)	4.429
Question 25	2 (6.7%)	2 (6.7%)	4 (13.3%)	14 (46.6%)	8 (26.7%)	3.793
Question 26	0	0	5 (16.7%)	15 (50.0%)	10 (33.3%)	4.179
Question 27	1 (3.3%)	2 (6.7%)	5 (16.7%)	10 (33.3%)	12 (40.0%)	4.000
Question 28	1 (3.3%)	1 (3.3%)	10 (33.3%)	10 (33.3%)	8 (26.7%)	3.759
Question 29	1 (3.3%)	2 (6.7%)	4 (13.3%)	11 (36.6%)	12 (40.0%)	4.035
Question 30	1 (3.3%)	0	2 (6.7%)	12 (40.0%)	15 (50.0%)	4.345
Question 31	3 (10.0%)	4 (13.3%)	11 (36.6%)	8 (26.7%)	4 (13.3%)	3.207
Question 32	1 (3.3%)	2 (6.7%)	10 (33.3%)	10 (33.3%)	7 (23.3%)	3.643
Question 33	0	1 (3.3%)	9 (30.0%)	12 (40.0%)	8 (26.7%)	3.900
Question 34	0	1 (3.3%)	3 (10.0%)	14 (46.7%)	12 (40.0%)	4.250
Question 35	2 (6.7%)	5 (16.7%)	11 (36.6%)	9 (30.0%)	3 (10.0%)	3.207
Question 36	1 (3.3%)	1 (3.3%)	3 (10.0%)	12 (43.3%)	12 (40.0%)	4.138

Note. Missing values were assigned the mean scores of the item and assigned to the closest response number. Key to responses: 1 (*not at all important*), 2 (*not very important*), 3 (*fairly important*), 4 (*very important*), 5 (*extremely important*).

Table G6

Question Item Means for Opinions Relative to Mainstreaming-Adapted--Total Group (Time 3)

	Response number						
	1	2	3	4	5	6	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
1	1 (3.3%)	3 (10.0%)	5 (16.7%)	5 (16.7%)	12 (40.0%)	4 (13.3%)	4.200
2	2 (6.7%)	4 (13.3%)	5 (16.7%)	9 (30.0%)	8 (26.7%)	2 (6.7%)	3.767
3	7 (23.3%)	15 (50.0%)	2 (6.7%)	1 (3.3%)	4 (13.3%)	1 (3.3%)	2.448
4	0	1 (3.3%)	2 (6.7%)	7 (23.3%)	15 (50.0%)	5 (16.7%)	4.700
5	1 (3.3%)	5 (16.7%)	8 (26.7%)	10 (33.3%)	3 (10.0%)	3 (10.0%)	3.856
6	0	0	4 (13.3%)	4 (13.3%)	10 (33.3%)	12 (40.0%)	5.000
7	1 (3.3%)	3 (10.0%)	6 (20.0%)	4 (13.3%)	5 (16.7%)	11 (36.7%)	4.414
8	7 (23.3%)	7 (23.3%)	9 (30.0%)	2 (6.7%)	3 (10.0%)	2 (6.7%)	2.759
9	0	3 (10.0%)	1 (3.3%)	3 (10.0%)	10 (33.3%)	13 (43.3%)	4.967
10	1 (3.3%)	2 (6.7%)	9 (30.0%)	4 (13.3%)	5 (16.7%)	9 (30.0%)	4.241
11	0	4 (13.3%)	8 (26.7%)	6 (20.0%)	9 (30.0%)	3 (10.0%)	3.967
12	1 (3.3%)	2 (6.7%)	2 (6.7%)	4 (13.3%)	12 (40.0%)	9 (36.1%)	4.690
13	0	6 (20.0%)	10 (33.3%)	5 (16.6%)	8 (26.7%)	1 (3.3%)	3.586
14	1 (3.3%)	4 (13.3%)	6 (20.0%)	12 (40.0%)	6 (20.0%)	1 (3.3%)	3.679
15	1 (3.3%)	2 (6.7%)	2 (6.7%)	2 (6.7%)	7 (23.3%)	16 (53.3%)	5.000
16	9 (30.0%)	12 (40.0%)	5 (16.7%)	2 (6.7%)	1 (3.3%)	1 (3.3%)	2.233
17	1 (3.3%)	3 (10.0%)	8 (26.7%)	10 (33.3%)	5 (16.7%)	3 (10.0%)	3.800
18	1 (3.3%)	0	1 (3.3%)	8 (26.7%)	12 (40.0%)	8 (26.7%)	4.778
19	1 (3.3%)	3 (10.0%)	6 (20.0%)	11 (36.6%)	7 (23.3%)	2 (6.7%)	3.862
20	1 (3.3%)	9 (30.0%)	13 (43.3%)	5 (16.7%)	1 (3.3%)	1 (3.3%)	2.966

Table G6 (Continued)

	Response number						
	1	2	3	4	5	6	*M*
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
21	1 (3.3%)	3 (10.0%)	1 (3.3%)	9 (30.0%)	12 (40.0%)	4 (13.3%)	4.345
22	2 (6.7%)	7 (23.3%)	8 (26.7%)	7 (23.3%)	3 (10.0%)	3 (10.0%)	3.367
23	1 (3.3%)	0	7 (23.3%)	8 (26.7%)	8 (26.7%)	6 (20.0%)	4.345
24	1 (3.3%)	6 (20.0%)	4 (13.3%)	6 (20.0%)	8 (26.7%)	5 (16.7%)	3.966
25	1 (3.3%)	3 (10.0%)	2 (6.7%)	4 (13.3%)	11 (36.7%)	9 (30.0%)	4.600
26	4 (13.3%)	5 (16.7%)	8 (16.7%)	4 (13.3%)	7 (23.3%)	2 (6.7%)	3.367
27	4 (13.3%)	9 (30.0%)	8 (26.7%)	3 (10.0%)	5 (16.7%)	1 (3.3%)	2.967
28	0	0	2 (6.7%)	10 (33.3%)	7 (23.3%)	11 (36.7%)	4.900
29	0	2 (6.7%)	7 (23.3%)	8 (26.7%)	5 (16.7%)	8 (26.7%)	4.333
30	0	1 (3.3%)	4 (13.3%)	6 (20.0%)	6 (20.0%)	13 (43.3%)	4.867

Note. Missing values were assigned the mean scores of the item and assigned to the closest response number. Key to responses: 1 (*disagree very much*), 2 (*disagree pretty much*), 3 (*disagree a little*), 4 (*agree a little*), 5 (*agree pretty much*); 6 (*agree very much*).

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I certify that I have read this document and examined the student regarding its content. In my opinion, this dissertation conforms to acceptable standards of scholarly presentation and is adequate in scope and quality, and the attainments of this student are such that she may be recommended for the degree of Doctor of Philosophy.

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