Comparing preservice teachers' special education knowledge and attitudes toward the placement of students with disabilities

Ronald Tamura
University of Nevada, Las Vegas

Follow this and additional works at: https://digitalscholarship.unlv.edu/rtds

Repository Citation
https://digitalscholarship.unlv.edu/rtds/2579

This Dissertation is brought to you for free and open access by Digital Scholarship@UNLV. It has been accepted for inclusion in UNLV Retrospective Theses & Dissertations by an authorized administrator of Digital Scholarship@UNLV. For more information, please contact digitalscholarship@unlv.edu.
COMPARING PRESERVICE TEACHERS' SPECIAL EDUCATION KNOWLEDGE AND ATTITUDES TOWARD THE PLACEMENT OF STUDENTS WITH DISABILITIES

by

Ronald Tamura

Bachelor of Science
Florida State University
1989

Master of Education
Lesley University
1994

A dissertation submitted in partial fulfillment of the requirements for the

Doctor of Philosophy Degree in Special Education
Department of Special Education
College of Education

Graduate College
University of Nevada, Las Vegas
May 2004

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
The Dissertation prepared by

Ronald Tamura

Entitled

Comparing Preservice Teachers' Special Education Knowledge and Attitudes Toward the Placement of Students with Disabilities

is approved in partial fulfillment of the requirements for the degree of

Doctor of Philosophy of Special Education

Examination Committee Chair

Dean of the Graduate College
ABSTRACT

Comparing Preservice Teachers' Special Education Knowledge and Attitudes Toward the Placement of Students with Disabilities

by

Ronald Tamura

Dr. Susan Miller, Examination Committee Chair
Professor of Special Education
University of Nevada, Las Vegas

The purposes of this study were: (a) to compare general and special education preservice teachers' attitudes regarding educational placements for students with disabilities, (b) to determine whether these attitudes are disability specific and, (c) to determine whether change in knowledge has an effect on attitude toward placement over the course of a semester while enrolled in introductory classes about students with disabilities. Two groups of respondents comprised of general education and special education preservice teachers participated in this study. A pretest and posttest format was used to gather information. Specifically, data were collected using the Preservice Teacher Service Delivery Survey that measured opinions about appropriate placement choices for students with disabilities, and the degree of confidence related to
these choices. Data collection also included pretest and posttest administration of the Knowledge Test that included content related to law, individual education planning, placement, and service delivery.

There was no statistically significant difference between special and general education preservice teachers' placement choices on the pretest. There was a statistically significant difference on the posttest between special and general preservice education teachers regarding placement choice for students with emotional disturbance. The preservice general education teachers' placement choice for students with emotional disturbance was less restrictive than the preservice special education teachers' placement choice for the same group of students. There were no differences between the special and general education preservice teachers on the Knowledge Test. There was a statistically significant correlation between overall test knowledge and placement choices. Knowledge obtained during an introductory special education course did have an impact on placement choices for students with other health impairments and students with developmental delay. After completing a semester long introductory special education course, both special and general education preservice teachers selected less restrictive placements with increased levels of confidence about these choices.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>APPENDIXES</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>viii</td>
</tr>
<tr>
<td>CHAPTER INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Historical Perspectives Related to Service Delivery Reform Movements</td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>12</td>
</tr>
<tr>
<td>Research Questions</td>
<td>14</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>15</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>17</td>
</tr>
<tr>
<td>Definitions</td>
<td>18</td>
</tr>
<tr>
<td>Summary</td>
<td>25</td>
</tr>
<tr>
<td>CHAPTER 2 REVIEW OF THE RELATED LITERATURE</td>
<td>27</td>
</tr>
<tr>
<td>Preface</td>
<td>27</td>
</tr>
<tr>
<td>Literature Review Procedures</td>
<td>34</td>
</tr>
<tr>
<td>Practicing Teachers' Attitudes toward Inclusion</td>
<td>35</td>
</tr>
<tr>
<td>Practicing Teachers' and Preservice Teachers' Attitudes toward Inclusion</td>
<td>52</td>
</tr>
<tr>
<td>Preservice Teachers' Attitudes toward Inclusion</td>
<td>56</td>
</tr>
<tr>
<td>Summary</td>
<td>76</td>
</tr>
<tr>
<td>CHAPTER 3 METHOD</td>
<td>80</td>
</tr>
<tr>
<td>Research Questions</td>
<td>80</td>
</tr>
<tr>
<td>Participants</td>
<td>81</td>
</tr>
<tr>
<td>Setting</td>
<td>89</td>
</tr>
<tr>
<td>Course Descriptions</td>
<td>89</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>90</td>
</tr>
<tr>
<td>Design and Procedures</td>
<td>93</td>
</tr>
<tr>
<td>CHAPTER 4 RESULTS</td>
<td>99</td>
</tr>
<tr>
<td>CHAPTER 5 DISCUSSION</td>
<td>121</td>
</tr>
<tr>
<td>Preservice Teacher Attitudes Related to Placement of Students with Disabilities</td>
<td>123</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1    Demographic Information for Undergraduate General Education preservice Teachers........................................................................................................ 83
Table 2    Demographic Information for Graduate and Undergraduate Special Education preservice Teachers..................................................................... 86
Table 3    Between group Means and Standard Deviations for pretest placement choices (Special and General Education Preservice Teachers)....... 110
Table 4    Between group Means and Standard Deviations for pretest confidence choices (Special and General Education Preservice Teachers)........ 111
Table 5    Between group Means and Standard Deviations for posttest placement choices (Special and General Education Preservice Teachers)....... 112
Table 6    Between group Means and Standard Deviations for posttest confidence choices (Special and General Education Preservice Teachers)....................................................................................... 113
Table 7    Between group Means and Standard Deviations for the Knowledge Test (Special and General Education Preservice Teachers)........... 114
Table 8    Analysis of Variance for the Knowledge Test (Special and General Education Preservice Teachers)................................................................. 114
Table 9    Summary of Knowledge with Disability .................................................. 117
Table 10   Between group Means and Standard Deviations for students with high incidence disabilities (Special and General Education Preservice Teachers).............................................................................. 118
Table 11   Between group Means and Standard Deviations for students with low incidence disabilities (General Education Preservice Teachers)...... 120
ACKNOWLEDGEMENTS

There are many people to acknowledge for the completion of this dissertation process. I would like to thank Dr. Susan Miller, my committee chair for her continual support and for the direction that she has provided to me. She has been encouraging and very patient as I have labored through this process. Her feedback, mentorship, and support have been welcome and needed.

I also appreciate the support and encouragement from the other members of my committee. Dr. Thomas Pierce provided me with continual positive reinforcement and support throughout my years as a doctoral student, Dr. Beatrice Babbitt provided me with ongoing support and encouragement as a doctoral student, and Dr. Paul Jones provided me with exceptional guidance in the area of research and statistics.

I would also like to acknowledge Dr. Colleen Thoma who began this journey with me and provided me with the tools and confidence to pursue my goals.

I would like to thank the professors and instructors who took time from their classes to facilitate the administration of my study.

Finally, I would like to thank my wife, Judy who has always been there for me to support, nurture, and humor me. Her love and understanding and encouragement have allowed me to realize that I can accomplish anything.
CHAPTER 1

INTRODUCTION

Since the inception of special education services in public school settings, there has been a great deal of debate and controversy regarding appropriate service delivery options for students with disabilities. Consequently, a variety of placement options have been implemented within school districts across America. Special education law and subsequent court cases have provided guidance relative to the appropriate placement of students with disabilities, but varied interpretations of the law along with varied opinions among education professionals have resulted in several major reform movements related to special education service delivery.

Historical Perspective Related to Service Delivery Reform Movements

Mainstreaming and the Cascade of Services: 1970s

In 1975 Congress passed Public Law 94-142, the Education for All Handicapped Children Act (EAHCA). EAHCA had a great impact on education and has over time had an affect on every public school in the country. One of the major principles of EAHCA is the Least Restrictive Environment (LRE). EAHCA mandates that students with disabilities be educated with children without disabilities to the maximum extent appropriate and those students with
disabilities be removed to separate classes or schools only when the nature or severity of their disabilities is such that they cannot receive an appropriate education in a general education classroom with supplementary aides and services (20 U.S.C. § 1412[a][5]). Though provisions in EAHCA are an expression of the 14th Amendment of the Constitution equal protection and equal access doctrine, numerous federal courts have issued decisions on the issue of special education in the least restrictive environment. In the case of Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania (1972) the court determined that placement of students with mental retardation in a regular public school class is preferable to placement in a special public class and established the requirements for a free and appropriate public education. Another court case, Mills v. Board of Education of the District of Columbia (1972), extended the right of education to all children with exceptional educational needs and determined that with supplementary aids and services, placement in the regular public school class is preferable to placement in a special school class. Consequently, the Education for All Handicapped Children Act (P.L. 94-142, 1975) was created to mandate the free and appropriate public education in the least restrictive environment.

Before the EAHCA was enacted, the system for educating students with disabilities was to pull the students out of the general education classes and place them in restrictive settings (e.g., self-contained special education classes, special education schools) (Mercer, 1997). In the early 1970s, a service delivery system that became known as a "cascade" system emerged. This system
included a continuum of services for students with disabilities that ranged from the general education classroom to a separate residential environment. This "cascade" included seven levels in which students could be placed depending on the disability related needs. Included among these levels were (a) general class assignment with or without supportive services, (b) general class assignment plus supplementary instructional services, (c) part-time special class, (d) full-time special class, (e) special school assignment within public school system, (f) homebound instruction, and (g) placement in facilities operated by health or welfare agencies (Deno, 1970).

Concurrent with the emergence of Deno's cascade of services, the term mainstreaming surfaced in the educational world. Mainstreaming was identified as the process of integrating children with disabilities into general education classrooms to instruct both educationally and socially (Heward, 2000). This process included the students earning their way into general education environments through independently completing a series of academic and social tasks. The term mainstreaming emerged from the concept of the Least Restrictive Environment (LRE) and was used extensively to refer to the practice of placing students with disabilities into general education classrooms for the development of social and academic skills. There has been some debate among educators related to the similarities and differences between LRE and mainstreaming. It seems, however, the two concepts are similar when practiced responsibly (i.e., considering optimal social and academic growth for individual students when making placement decisions) (Mercer 1997).
The Regular Education Initiative: 1980s

During the 1980s, there were important court cases regarding the LRE and educating students with disabilities. These court cases laid a foundation for the Regular Education Initiative (REI) reform movement.

One such case involved the Board of Education of the Hendrick Hudson Central School District v. Rowley (1982). The U.S. Supreme Court stated in the Rowley case that the Education for All Handicapped Children Act (EAHCA) requires participating states to educate children with disabilities with children without disabilities whenever possible and that each child with disabilities has the right to an individualized program of instruction and necessary support services. The basis for this decision was the presumption of Education for All Handicapped Children Act (EAHCA) which favors mainstreaming. The court concluded that the EAHCA would be “turned on its head” if parents had to prove their child’s worthiness to be included rather than placing the burden of proof on the school district personnel to determine whether the child should be excluded from the regular education classroom. In the case of Daniel R. R. v. Board of Education (1989), the issue of placement was argued and the court established a test to determine appropriate placement. The first part of the test was to determine whether the student could be educated in the general education environment with supplemental aids and services and to determine how such an education would compare to the benefits of being educated in a special education classroom. The possible negative impact on the other students in each setting was to be considered. The second part of the test was to determine whether
school personnel had taken steps to accommodate the student in the general education classroom. The court cited that school personnel are required to provide supports and adaptations to include the student within the general education environment.

The interpretation of the LRE began to change during the 1980s. This change was a result of the aforementioned litigation and the introduction of the Regular Education Initiative (REI) by Madeleine Will, Assistant Secretary for the U.S. Office of Special Education and Rehabilitation Services in the U.S. Department of Education (Will, 1986). The REI included specific provisions as to the service delivery to students with high incidence disabilities, specifically students with learning disabilities. The basic premise of the REI involved the elimination of the dual system of general education and special education with the contingency that students with learning disabilities could be educated within the general education environment. Unlike Deno's "cascade" of services, REI supporters (e.g., Stainback & Stainback, 1987; Wang, Reynolds, & Walberg, 1986; Will, 1986) suggested that the need for a continuum of services was not necessary and that all students with disabilities could be educated in the general education environment.

Madeleine Will (1986) provided four rationale statements that resulted in the impetus for the REI. These statements were:

1. Some students with learning or behavior problems who need special services do not qualify for special education.
2. Students are stigmatized when they are put in special education placements that separate them from their normally achieving classmates.

3. Special education students usually are identified after they develop serious learning problems; therefore, the emphasis is on failure rather than prevention.

4. The special education system, with its eligibility requirements and rigid rules, may not lead to cooperative school-parent relationships. (p. 200)

The term *inclusion*, used to describe the process of integrating children with disabilities into general education classrooms for social and academic benefit (Heward, 2000), was adopted from the REI movement. Proponents of the REI identified with the social educational value of general education environments and advocated for education of students with all levels of disabilities in general education classrooms.

*The Inclusion Movement: 1990s – present*

In 1990, the EAHCA (P.L. 94-142), was amended and renamed by Congress to *Individuals with Disabilities Education Act Amendments* (IDEA) which became Public Law 101-476). Proponents of *inclusion* suggest that the separation of students based upon the disability and supports needed is not a valid argument for separate settings. They further contend that inclusion should involve educating students with disabilities in the general education environment (Baker, Wang, & Walberg, 1995; Friend & Bursuck, 1999; Staub & Peck, 1995).
The definition of inclusion differs from mainstreaming. Mainstreaming was identified as a movement from separate settings toward the general education environment based upon successfully and independently completing a series of academic and social tasks. This is different from the philosophy of inclusion, that suggests that all students have a right to be educated in general education settings with proper supports and services (Zinkil and Gilbert, 2000).

There are opposing views regarding the inclusion movement. The proponents for inclusion argue that there are benefits for students with all types of disabilities in academic and social arenas in the general education environment (Baker, Wang, & Walberg, 1995; Friend & Bursuck, 1999; Staub & Peck, 1995). The opponents to inclusion argue that inclusive environments have not been proven to be an appropriate setting for all students with disabilities. The opponents also cite that in order to meet specific needs of the individual, a continuum of placements is necessary to address the diverse and individual needs of students with disabilities (Fuchs & Fuchs, 1995; Shanker, 1995; Vaughn & Schumm, 1995).

The education reform movement of the past decade has inspired educators to examine the efficacy of special education services as an ancillary of general education. The notions, interpretations, and practices of the LRE and the language in IDEA, have created controversy surrounding the issue of when children are removed or included into general education settings. In the case of Corey H. v. Illinois State Board of Education (1992), four students and their parents filed a class action lawsuit on behalf of all of the students with disabilities.
in the Chicago Public Schools. Their case cited that students with disabilities were not being educated in the least restrictive environment. In 1997, the Chicago School Reform Board of Trustees settled the case and agreed to establish policies, services and staff development to end the practice of segregating students with disabilities. Several other court cases have supported inclusive education. In the case of Oberti v. Board of Education (1993), the court concluded that school systems should supplement and realign their resources, to move beyond structures and practices that tend to result in the unnecessary segregation of students with disabilities. The court established that there were no reasons established that behavior issues of students could not be dealt with in a general education setting. The court further stated that "inclusion is a right, not a privilege of select few." In the case of Sacramento City Unified School District v. Rachel H. (1994), the court concurred with previous cases regarding whether children with disabilities benefit from nonacademic activities within the general education setting. The court also agreed with previous cases regarding the placement of supplementary aids and services to relieve the burden placed on teachers to provide adequate instruction. The court cited that students with disabilities receive significant nonacademic benefits from involvement with typical peers. The court also found that the Sacramento Unified School District failed to prove that special education classes were superior to general education classrooms. Finally, in the case of McLaughlin v. Holt Public Schools Board of Education (2001), the district court ordered that Emma McLaughlin, a student with disabilities could be educated effectively in her neighborhood elementary
school. The court cited that the school district was required to meet her goals and objectives and to implement her individual education plan within the general education setting. This case was later overturned by the sixth circuit court of appeals. The court cited that the McLaughlin's have failed to meet their burden of demonstrating that a categorical classroom was not an inappropriate placement, stating that the LRE does not mean the neighborhood school (McLaughlin v. Holt Public Schools Board of Education, 2003).

IDEA and its amendments (P.L. 105-17, 1997) state that to the maximum extent appropriate, children with disabilities are to be educated with children who have no disabilities in the general education setting. Removal from the general education setting is to occur when the nature and severity of the disability cannot be addressed satisfactorily even with the use of supplementary aids and services. Also stated in IDEA is that a "continuum of alternative placements" must be provided when the child cannot be satisfactorily educated in general classes (20 U.S.C. § 1412(5)(B)).

The controversy surrounding the implementation of inclusion focuses on whether children with disabilities benefit from placement in general education settings. Unfortunately, the emphasis has been on where services are to be provided rather than on the levels of supports and services needed to promote students' successes in general classroom environments. This emphasis has resulted in the overuse of service delivery systems that segregate students with disabilities (Hardman, McDonnell, & Welch, 1997).
Rueda, Gallego and Moll (2000) suggested that rather than placement in a physical setting, inclusion should be seen as an interaction of a child's unique learning characteristics with the features of specific activity settings. However, there remains differing opinions regarding the interpretation, efficacy, and placement of children with disabilities in inclusive settings. For example, Garrick-Duhaney (1999) found that 17 State Education Agencies (SEA) had policy/position statements that defined the term inclusion, 15 SEA's had policy/position statements that said that children with mild and moderate disabilities should be served in an inclusive setting, and 10 SEA's stated that students with severe disabilities should be served in an inclusive setting. Garrick-Duhaney also found that 12 State Education Agencies cited that the nature and severity of a disability was an appropriate reason to exclude a student from being mainstreamed into the general education environment. Moreover, Garrick-Duhaney noted that the State Education Agencies stated that no form of inclusion is mandated for students with disabilities. Research continues to highlight the concerns that exist in the implementation of inclusion. Inclusion is defined as supporting the placement of students in the least restrictive environment and research has shown that there are tensions and irregularities in determining appropriate placement of children in schools that continue to exist (Fuchs & Fuchs, 1998; Smith & Dowdy, 1998). The vision that one class can meet all educational needs of children seems to be aimed primarily at students with mild disabilities (e.g., specific learning disabilities, emotional disturbance, speech and language impairments). The separation of students with
severe disabilities has remained a common practice. Students placed into separate environments have the opportunity to be progressively included. Progressive inclusion is identified as a movement of a student with disabilities from a separate setting to integrated settings. This movement is contingent upon learning and mastering prerequisite skills (e.g., on-task behaviors, choice-making, problem-solving, and appropriate social skills). Consequently, the perpetuation of the two separate systems of education continues to be maintained because there have been inadequate preparation for including students with severe disabilities in general education classrooms (Kavale & Forness, 2000).

Educational literature and recent litigation concurs that school personnel are continuing to include certain student populations (i.e., students with mild disabilities) while further segregating other students (i.e., students with severe disabilities). This distinction of inclusion will continue to widen the educational gap between the students with disabilities who access general educational settings and the students with disabilities who are taught in a separate setting. The attitudes of practicing teachers regarding appropriate placements for students with disabilities could influence the quality of instruction these students receive. Numerous researchers have surveyed practicing teachers to determine their beliefs about educating students with disabilities in various settings (Brownell & Pajares, 1996; Center & Ward, 1987; Minke, Bear, Deemer, & Griffin, 1996; Olson, Chalmers, & Hover, 1997; Rojewski & Pollard, 1993; Soodak, Podell, & Lehman, 1998).
To further explore and understand the issue of service delivery systems for students with disabilities, it is important to assess the attitudes of educational stakeholders. It is interesting to note that most of the research dealing with attitudes toward appropriate placements for students with disabilities has involved surveying general education practicing teachers or general education preservice teachers. Little is known about how and/or when the attitudes of teachers were developed. Surveying preservice general and special education teachers would provide additional insight regarding the formulation of attitudes toward various service delivery options for students with disabilities. Additionally, it would be interesting to determine whether introductory courses in special education influence preservice teachers' attitudes. This information may have implications for teacher preparation programs.

Statement of the Problem

Based on current literature (Garrick-Duhaney, 1999) and recent litigation (e.g., Corey H., 1992; McLaughlin v. Board of Education, 2001) there appears to be a trend among school personnel to include certain student populations within the general education environment while further segregating other students. This trend concurs with a study conducted by McLeskey, Henry, and Hodges (1998) that ascertained the extent of the inclusion process. The researchers used the Annual Reports to Congress prepared for the U.S. Congress by the Office of Special Education Programs, U.S. Department of Education, to report on the implementation of the Individuals with Disabilities Education Act (IDEA). The
researchers found that there has been a significant increase in the numbers of students being educated in the general education setting between 1986-1987 and 1995-1996. This change, however, was a direct result of an increase in the number of students with mild disabilities moving from a resource setting into a general education setting and the classification of learning disabilities in some states.

In a recent study Tamura and Baker (2003) examined data derived from the Twenty-first Annual Report to Congress (1999), and noted two trends in the provision of special education instruction in both self-contained classroom environments and in the general education settings. The data examined included statewide trends regarding the Least Restrictive Environment and focused on the percentage of students with disabilities enrolled in a separate classroom and the percentage of students with disabilities enrolled in a general education classroom. The data indicate that the number of students with low incidence disabilities (e.g., deaf-blindness, autism, visual impairments) educated in self-contained (separate) classrooms and separate schools has remained fairly consistent over the past ten years. The data also indicate that the number of students with high incidence disabilities (e.g., specific learning disabilities, emotional disturbance, speech and language impairments) educated in the general education classroom has increased over the past ten years. The results of the Tamura and Baker (2003) study support the McLeskey, Henry, and Hodges (1998) study indicating that there have been increases in the number of students with high incidence disabilities (e.g., specific learning disabilities,
emotional disturbance, speech and language impairments) educated in the general education setting, but most individuals with low incidence disabilities still receive special education services within self-contained and separate school environments.

In an attempt to understand the complexity of determining appropriate placements for students with disabilities, researchers have appropriately sought the opinions of practicing general and special education teachers and measured their attitudes through a variety of surveys. It is also appropriate to assess and compare the attitudes of general and special education preservice teachers enrolled in introductory special education courses. Specifically, it would be interesting to determine whether attitudes about placement change over the course of the semester (while enrolled in introductory special education courses) and whether a relationship between attitudes and course knowledge exists. This information would add to the existing literature and provide useful information to teacher educators.

Research Questions

The purposes of this study were: (a) to compare general and special education preservice teachers’ attitudes regarding educational placements for students with disabilities, (b) to determine whether these attitudes are disability specific and, (c) to determine whether change in knowledge has an effect on attitude toward placement over the course of a semester while enrolled in introductory classes about students with disabilities. Two groups of respondents
comprised of general education and special education preservice teachers participated in this study.

The research questions for this study were:

1. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement that is disability specific?

2. Is there a difference between general education and special education preservice teachers' level of knowledge about special education after taking a semester-long introductory course?

3. Does level of knowledge affect general education and special education preservice teachers' attitudes about placement that is disability specific?

4. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement for students with high incidence disabilities?

5. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement for students with low incidence disabilities?

Significance of the Study

Research indicates that teachers' attitudes about specific student disabilities influence the way that the teachers and planning teams mandate service delivery and placement for those students (Kauffman and Hallahan, 1995; Scruggs and
Mastropieri, 1996; Stainback and Stainback, 1994; Taylor, 1988). Current research in this area is limited and involves practicing teachers’ (both general educators and special educators) attitudes towards mainstreaming and inclusion and their interpretations of the Least Restrictive Environment for students with disabilities. The literature also includes research that involves preservice general education teachers’ attitudes toward mainstreaming and inclusion of students with disabilities.

In an attempt to understand the complexity in determining appropriate placements for students with disabilities, researchers have administered a variety of surveys to practicing general and special education teachers to measure their attitudes. Although, the results from these studies may have influenced teacher preparation programs to some degree, the Twenty-first Annual Report to Congress (1999), continues to reflect several trends in the provision of special education instruction in both self-contained classroom environments and in general education settings. Data indicate that the number of students with low incidence disabilities (e.g., deaf-blindness, autism, visual impairments) educated in self-contained classrooms and separate schools has remained fairly consistent over the past ten years. Data also indicate that the number of students with high incidence disabilities (e.g., specific learning disabilities, emotional disturbance, speech and language impairments) educated in self contained (separate) classrooms and separate schools has decreased by almost 50% over the past ten years.
Because of the lack of research in the area of comparing general education and special education preservice teachers' attitudes regarding appropriate placements for students with disabilities, more research is needed. Specifically, research to assess and compare the attitudes of general and special education preservice teachers enrolled in introductory special education courses is needed. Such a study will provide insight into preservice teachers' preconceived ideas about placement and also will provide insight into whether or not these ideas change over the course of a semester. Additionally, the relationship between attitudes and course knowledge can be explored. This study will add to the existing literature and provide useful information to teacher educators.

Limitations

The limitations of this study include the following:

1. Inquiry that includes self-reported data is limited by the respondent's awareness of socially correct answers. Social learning may influence the selected responses.

2. The participants were all chosen in a purposeful sample that included students who were enrolled in teacher education in either the general education or special education departments. Both groups of preservice teachers were enrolled in an introductory course in special education. Therefore, caution should be used prior to generalizing the results to preservice teachers enrolled in other courses.
3. The questionnaire used in this study was designed by the primary researcher of this project and reflects responses that may not accurately reflect the preservice teachers' actual attitudes.

4. The sample is only representative of one university. Therefore, caution should be used prior to generalizing the results to similar students at other universities.

5. The participants could have been influenced over the course of the semester by instructor bias.

6. The difference in the number of participants in each group (general education preservice teachers and special education preservice teachers) may have affected the outcomes of the statistical analyses.

Definitions

Disability Areas

Autism. IDEA definition, "a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(1)(i)). The term does not apply if a child's educational performance is adversely affected primarily because the child has an emotional disturbance." A student
may meet the definition of autism without manifesting the characteristics of autism until after age 3 (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(1)(ii)).

Deafness. IDEA definition, "a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, that adversely affects a child's educational performance" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(3)).

Deaf-blindness. IDEA definition, "concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programs solely for children with deafness or children with blindness" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(2)).

Developmental Delays. IDEA definition, "a child three through nine experiencing delays in one or more of the following areas: physical development, cognitive development, communication development, social or emotional development, or adaptive development, if, by reason thereof, the student needs special education and related services" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(b)(1)).

Emotional Disturbance. IDEA definition, "a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: an inability to learn that cannot be explained by intellectual, sensory, or health factors; an inability to build or maintain satisfactory interpersonal relationships with peers or teachers; inappropriate types of behavior or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; a tendency to develop
physical symptoms or fears associated with personal or school problems" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(4)(i)).

The IDEA regulations specify that the term includes schizophrenia. The term does not apply to a student who is socially maladjusted, unless it is determined that the student has an emotional disturbance (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(4)(ii)).

Hearing Impairment. IDEA definition, "an impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance but that is not included under the definition of deafness" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(5)).

Mental Retardation. IDEA definition, "significantly sub-average general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifesting during the developmental period, that adversely affects a student's educational performance" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(6)). For the purposes of this study, mild mental retardation is defined as, following the federal guidelines and intelligence falling two to three standard deviations below the mean which represents 97-100% of the students who have mental retardation. Severe mental retardation is defined as, following the definition of IDEA but more than three standard deviations below the mean which represents 1-3% of the students who have mental retardation.

Multiple Disabilities. IDEA definition, "concomitant impairments (such as mental retardation-blindness, mental retardation-orthopedic impairment, etc.) the combination of which causes such severe educational needs that they cannot be
accommodated in special education programs solely for one of the impairments.
The term does not include deaf-blindness" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26)§ 300.7(7)).

*Other Health Impairment.* IDEA definition, "having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, and sickle cell anemia, and that adversely affects a child's educational performance." Other health impairment also includes Rhet's disorder and childhood disintegrative disorder" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(9)).

*Orthopedic Impairment.* IDEA definition, "a severe orthopedic impairment that adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.) and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures)" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(8)).

*Specific Learning Disability.* IDEA definition, "a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions
such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(10)(i)).

The term "does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, or emotional disturbance, or of environmental, cultural, or economic disadvantage" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(10)(ii)).

Speech or Language Impairment. IDEA definition, "a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child’s educational performance" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(11)).

Traumatic Brain Injury. IDEA definition, "acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child’s educational performance. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. The term does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma" (20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(12)).

Visual impairment (including blindness). IDEA definition, "an impairment" in vision that, even with correction, adversely affects a child’s educational performance.
The term includes both partial sight and blindness"(20 U.S.C. 1401 (3)(A) and (B) 1401 (26) § 300.7(13)).

Service Delivery Options

Continuum of Alternative Placements. In order to ensure that students with disabilities are placed in the least restrictive environment appropriate, the IDEA also requires that a continuum of alternative placements is available to meet the needs of students with disabilities for special education and related services. This continuum must provide for supplementary services (such as resource room or itinerant instruction) in conjunction with placement in a general education class. The continuum must include, as appropriate, instruction in general education classes; special classes; special schools; community-based programs; homes; hospitals; and institutions (300.551) (20 U.S.C. § 1412(5)(B)).

and (300.552) (20 U.S.C. § 1412(5)(B)). In this study, the continuum includes five placement options: General education classroom, general education classroom with consultation, resource classroom, separate classroom, and separate school.

General Education Classroom – Student is taught by the general education classroom teacher in the general education classroom (Heward, 2000).

General Education Classroom with Consultation – Student is taught by the general education classroom teacher in the general education classroom, and is supported by on-going consultation from specialists (e.g., special education teacher) (Heward, 2000).
Resource Classroom – Student is taught by the general education classroom teacher in the general education classroom and the student spends part of the time being taught by a special education classroom teacher in a resource classroom (Heward, 2000).

Separate Classroom – Student is taught by a special education classroom teacher in a self-contained classroom with access to the general education setting during specials or electives (e.g., music, p.e., art, lunch) (Heward, 2000).

Separate School – Student is taught by a special education teacher in a specially designed separate facility within the public school system (Heward, 2000).

Other Terms

High Incidence Disability. A disability that occurs at a high rate (e.g., specific learning disabilities, emotional disturbance, speech and language impairments).

Inclusion. A 1990s term used to describe the process of integrating children with disabilities into general classrooms for social and academic benefit (Heward, 2000).

Least Restrictive Environment. To the maximum extent appropriate, children with disabilities are educated with children without disabilities in the general education setting. Removal from the general education setting is to occur only when the nature and severity of the disability prevents satisfactory achievement even with the use of supplementary aids and services. A “continuum of alternative placements” must be provided when the child cannot be satisfactorily educated in the general education class (300.550) (20 U.S.C. § 1412(5)(B)).
Low Incidence Disability. A disability that occurs at a low rate (e.g., autism, deafness, deaf-blindness, developmental delay, hearing impairments, multiple disabilities, other health impairments, orthopedic impairments, mild and severe mental retardation traumatic brain injury, visual impairments).

Mainstreaming. A pre 1990s term used to describe the process of integrating children with disabilities into general education classrooms for social and academic benefit. Typically, the student earns his/her way into the general education environment through independently performing a series of academic and social tasks (Heward, 2000).

Summary

In the Twenty-first and the Twenty-fourth Annual Report to Congress (1999, 2002), two trends are reflected in the provision of special education instruction in both self-contained classroom environments and in the general education settings. These trends indicate that the number of students with low incidence disabilities (e.g., deaf-blindness, autism, visual impairments) educated in self contained (separate) classrooms and separate schools has remained fairly consistent from 1988-1989 to 1997-1998 and at the same time, there has been an increase in the number of students with high incidence disabilities (e.g., specific learning disabilities, emotional disturbance, speech and language impairments) educated in the general education setting.

Clearly, the attitudes of practicing teachers regarding appropriate placements for students with disabilities could influence the quality of instruction these students receive. Numerous researchers have surveyed practicing teachers to
determine their beliefs about educating students with disabilities in various settings (Brownell & Pajares, 1996; Center & Ward, 1987; Minke, Bear, Deemer, & Griffin, 1996; Olson, Chalmers, & Hover, 1997; Rojewski & Pollard, 1993; Soodak, Podell, & Lehman, 1998).

This study was designed to investigate the attitudes of preservice teachers enrolled in both general education and special education programs. Specifically, the researcher hoped to determine whether there were preconceived notions related to areas of disability and placement and whether attitudes changed with the acquisition of knowledge over the course of a semester while enrolled in an introductory course on special education. Because it is important to identify specific attitudes regarding areas of disabilities, information from this study can be used to gain insight into developing teacher preparation curriculum for both general and special education majors.
CHAPTER 2

REVIEW OF RELATED LITERATURE

Preface

As noted in Chapter One, the Twenty-first Annual Report to Congress (1999), reflects two trends related to the provision of special education instruction in both self-contained classroom environments and in general education settings. These trends indicate that the number of students with low incidence disabilities (e.g., deaf-blindness, autism, visual impairments) educated in self contained (separate) classrooms and separate schools has remained fairly consistent from 1988-1989 to 1996-1997 and at the same time, there has been an increase in the number of students with high incidence disabilities (e.g., specific learning disabilities, emotional disturbance, speech and language impairments) educated in the general education setting. In the Twenty-first and Twenty-fourth Annual Report to Congress (1999, 2002), data for the 1987-1988 school year indicate that 4,073,610 students ages 6-21 received services under the Individuals with Disabilities Act (IDEA). Of that number, 1,176,191 students received services in a regular classroom (28.9%), 1,628,586 students received services in a resource classroom (40%), and 1,239,631 students received services in a separate classroom, separate facility, residential facility, or home/hospital environment (30.4%). For the school year 1999-2000, 5,665,295 students ages 6-21 received
services under IDEA. Of that number, 2,681,082 students received services in a regular classroom (40.2%), 1,1605,028 students received services in a resource classroom (24.1%), and 1,379,185 students received services in a separate classroom, separate facility, residential facility, or home/hospital environment (20.7%). These numbers indicate that there has been a large increase in the number of students receiving services in the regular classroom (11.3%), a decrease in the number of students receiving services in the resource classroom (15.9%), and a decrease of students being served in a separate classroom, separate facility, residential facility, or home/hospital environment (9.7%). The data also reflect that the number of students with disabilities educated in a separate classroom, separate facility, residential facility, or home/hospital environment has remained around one-fourth of the population of students receiving services under IDEA who are 6-21 years old (Twenty-first Annual Reports to Congress, 2002).

In 1987-1988, the number of students with specific learning disabilities educated in regular classes was 336,542 (17.6% of all students with specific learning disabilities). The number educated in resource classrooms and in separate classrooms were 1,131,297 (59.1%), and 415,193 (21.7%) respectively. In 1999-2000, the number of students with specific learning disabilities educated in the regular classes was 1,295,601 (45% of all students with specific learning disabilities). The number in resource classrooms was 1,081,806 (37.9%), and the number in separate classrooms was 450,816 (15.8%). The data reflect a
decrease in the number of students served in separate classrooms by 5.9 percent.

In 1987-1988, the number of students with emotional disturbance educated in regular classes was 47,038 (12.6% of all students with emotional disturbance). The number educated in resource classrooms and in separate classrooms was 122,990 (32.9%) and 129,416 (34.6%) respectively. In 1999-2000, the number of students with emotional disturbance educated in regular classes was 120,449 (25.8% of all students with emotional disturbance). The number in resource classrooms was 109,416 (23.4%), and the number in separate classrooms was 152,965 (32.8%). The data reflect that the number of students with emotional disturbance educated in separate classrooms decreased by 1.8 percent.

In 1987-1988, the number of students with speech and language impairments educated in regular classes was 704,034 (74.8% of all students with speech and language impairments). The number educated in resource classrooms and in separate classrooms was 185,730 (19.7%), and 35,978 (3.8%) respectively. In 1999-2000, the number of students with speech and language impairments educated in regular classes was 952,339 (87.5% of all students with speech and language impairments). The number educated in resource classrooms and in separate classrooms was 73,417 (6.75%), and 57,346 (5.3%) respectively. The data reflect that the numbers of students with speech and language impairments educated in separate classrooms increased by 1.5 percent.

For students with low incidence disabilities (e.g., deaf-blindness, autism, visual impairments, mental retardation, multiple disabilities, hearing impairments,
orthopedic impairments, other health impairments, traumatic brain injury), the Report to Congress (1999, 2002) identifies in 1987-1988 the number of students with deaf-blindness educated in regular classes was 138 (8.8% of all students with deaf-blindness). The number in resource classrooms and in separate classrooms or separate facilities was 113 (7.2%) and 840 (53.8%) respectively. In 1999-2000, the number of students with deaf-blindness educated in the regular classes was 229 (14.8% of all students with deaf-blindness). The number in resource classrooms 157 (10.2%), and the number in separate classrooms or separate facilities was 828 (53.5%). The data reflect that the number of students with deaf-blindness educated in separate classrooms or in separate facilities decreased by .3 percent. The number of students with deaf-blindness educated in separate environments has remained at the same level.

In 1991-1992, the first year that data were reported for students with autism, the number of students with autism educated in regular classes was 472 (4.7% of all students with autism). The number in resource classrooms and in separate classrooms or separate facilities was 700 (6.9%) and 7,622 (75.2%) respectively. In 1999-2000, the number of students with autism educated in regular classes was 13,539 (20.7% of all students with autism). The number in resource classrooms was 9,476 (14.5%), and the number in separate classrooms or separate facilities was 37,906 (57.8%). The data reflect that the number of students with autism educated in separate classrooms or separate facilities has remained at over half of the total number of students.
In 1987-1988, the number of students with visual impairments educated in regular classes was 8,260 (37.7% of all students with visual impairments). The number in resource classrooms and in separate classrooms or separate facilities was 5,602 (25.6%) and 5,342 (24.4%) respectively. In 1999-2000, the number of students with visual impairments educated in regular classes was 12,663 (49.1% of all students with visual impairments). The number in resource classrooms was 5,029 (19.5%) and the number in separate classrooms or separate facilities was 5,734 (22.2%). The data reflect that the number of students with visual impairments educated in separate classrooms or separate facilities has decreased by 2.2 percent. The number of students educated in separate environments has remained at the same level.

In 1987-1988, the number of students with mental retardation educated in regular classrooms was 33,807 (5.7% of all students with mental retardation). The number in resource classrooms and in separate classrooms or separate facilities was 142,570 (24.0%) and 403,123 (67.8%) respectively. In 1999-2000, the number of students educated in regular classrooms was 85,996 (14.1% of all students with mental retardation). The number in resource classrooms was 180,643 (29.5%), and the number in separate classrooms or separate facilities was 333,489 (54.5%). The data reflect that the number of students with mental retardation educated in separate classrooms or separate facilities has decreased by 13.3 percent. For reporting purposes, all students with mental retardation (mild, moderate, and severe) are categorized together. Although impossible to determine with certainty, the numbers reported in this report to Congress may
suggest that students with mild mental retardation are being included in the general classroom while students with moderate or severe mental retardation comprise one-third of the total number of students and are being educated in separate classrooms or separate facilities.

In 1987-1988, the number of students with multiple disabilities educated in regular classes was 4,867 (7.3% of all students with multiple disabilities). The number in resource classrooms and in separate classrooms or separate facilities was 10,081 (14.4%) and 50,108 (67.2%) respectively. In 1996-1997, the number of students with multiple disabilities educated in regular classes was 13,314 (11.2% of all students with multiple disabilities). The number in resource classrooms was 22,260 (18.8%) and the number in separate classrooms or separate facilities was 68,953 (58.1%). The data reflect that the number of students with multiple disabilities educated in separate classrooms or separate facilities has decreased by 9.1 percent.

In 1987-1988, the number of students with hearing impairments educated in regular classes was 13,613 (24.5% of all students with hearing impairments). The number in resource classrooms and in separate classrooms or separate facilities was 11,632 (21.1%) and 23,474 (42.3%) respectively. In 1999-2000, the number of students with hearing impairments educated in regular classes was 28,670 (40.3% of all students with hearing impairments). The number in resource classrooms was 13,747 (19.3%) and the number in separate classrooms or separate facilities was 21,240 (29.9%). The data reflect that the number of
students with hearing impairments educated in separate classrooms or separate facilities has decreased by 12.4 percent.

In 1987-1988, the number of students with orthopedic impairments educated in regular classes was 13,128 (28.6% of all students with orthopedic impairments). The number in resource classrooms and in separate classrooms or separate facilities was 8,509 (18.3%) and 19,969 (43.1%) respectively. In 1999-2000, the number of students with orthopedic impairments educated in regular classes was 31,660 (44.4% of all students with orthopedic impairments). The number in resource classrooms was 15,637 (21.9%) and the number in separate classrooms or separate facilities was 22,262 (31.2%). The data reflect that the number of students with orthopedic impairments educated in separate classrooms or separate facilities has decreased by 11.9 percent.

In 1987-1988, the number of students with other health impairments educated in regular classes was 14,764 (30.6% of all students with other health impairments). The number in resource classrooms and in separate classrooms or separate facilities was 10,062 (20.8%) and 12,823 (26.5%) respectively. In 1999-2000, the number of students with other health impairments educated in regular classes was 113,546 (44.9% of all students with other health impairments). The number in resource classrooms was 83,925 (33.22%) and the number in separate classrooms or separate facilities was 45,767 (18.1%). The data reflect that the number of students with other health impairments educated in separate classrooms or separate facilities has decreased by 8.4 percent.
In 1991-1992, the first year that data were reported for students with traumatic brain injury, the number of students with traumatic brain injury educated in regular classes was 152 (8% of all students with traumatic brain injury). The number in resource classrooms and in separate classrooms or separate facilities was 171 (9%) and 350 (18.4%) respectively. In 1999-2000, the number of students with traumatic brain injury educated in regular classes was 4,222 (31.0% of all students with traumatic brain injury). The number in resource classrooms was 3,626 (26.7%) and the number in separate classrooms or separate facilities was 4,651 (34.2%). The data reflect that the number of students with traumatic brain injury educated in separate classrooms or separate facilities has increased by 15.8 percent. The Annual Report to Congress data does not include students with deafness and students with developmental delay in the age group of 3 – 9 years.

Literature Review Procedures

A systematic search through three computer databases (i.e., Education Resources Information Center, Academic Search Elite, Professional Development Collection) was conducted. The following descriptors were used: attitudes toward disability, disabilities, disability, exceptional persons, general educator attitudes, general educator perceptions, inclusion, inclusive schools, integration, interpersonal competence, mainstreaming, preservice teachers attitudes, preservice teacher education, preservice teacher perceptions, regular and special education relationship, Regular Education Initiative, self evaluation
(individuals), special education special educators attitudes, special educator perceptions, student attitudes, student characteristics, student teacher attitudes, student teacher relationships, teacher attitudes, teacher collaboration, teacher education, teacher education curriculum, teacher effectiveness, teacher perceptions, teacher surveys, teaching experience, and teaching methods.


Studies were included in this review if: (a) they were published between 1976 and 2002, (b) the subjects were either preservice teachers, general education teachers, or special education teachers, (c) the study included at least 10 subjects, and (d) the purpose of the study was to examine attitudes regarding inclusion, mainstreaming, or integration of students with disabilities.

Review and Analysis of Studies Related to Practicing Teachers' Attitudes about Including Students with Disabilities in General Education Classrooms

General Education Teachers

Brownell and Pajares (1996) conducted a study to examine the efficacy beliefs of general education teachers for instructing students with learning
disabilities and behavior problems. Specifically, the researchers wanted to find out if the teachers' efficacy had a greater effect on reported success with students with disabilities than other variables.

The study included 200 second grade teachers of whom 128 returned responses to a survey instrument entitled, *Working with Diverse Students: The General Educator's Perspective*. The variables of preservice and inservice preparation, teacher efficacy, administrative support, class size, socioeconomic status, and collegiality were measured. All of the participants were 2nd grade general education teachers, employed full-time. The subjects were selected because students with mild disabilities were served in an integrated setting.

The survey used a Likert type scale. Each variable included between 4 to 12 items to answer. The survey was administered in a pilot study with follow-up interviews to ensure the readability and ease of use. The pilot administration also gave the opportunity to solicit feedback regarding individual interpretations of items included on the survey.

The authors used a path analysis to test initial theoretical models. Results from the path analysis techniques reduced the number of models to determine the 'best fit' for the participant's answers. A resulting model represented a 'strong' fit between the data and the final model.

The results indicated that the quality of the preservice preparation had the strongest effect on the teachers' beliefs and also, the more the teachers perceived their preservice education as useful in helping them teach and manage
students with disabilities, the more likely they were to experience success in working with each student (Brownell, M. T., & Pajares, F. M., 1996).

Olson, Chalmers, and Hoover (1997) conducted a study with 10 general education teachers. The subjects were chosen based upon being identified by their administration and their colleagues as being skilled at including students with disabilities in the general education classroom.

The 10 teachers all were employed in both elementary and secondary educational settings. Nine female and one male teacher represented the participant pool. The subjects were randomly chosen from nominations by administrators and special education teachers. The subjects once chosen to participate were given a one hour interview consisting of 12 questions. The responses were analyzed for similarities in theme. Once the themes were distinguished, the researchers then conducted follow-up phone contacts to answer any unclear questions. The subjects were then sent a follow-up questionnaire regarding each theme to ensure that the theme was representative of their responses.

The analysis of the questions resulted in seven themes related to personality, attitude, expectations, teaching methods, and viewpoints about inclusion (Olson, Chalmers, & Hoover, 1997). The seven themes that the authors found were (a) tolerant, reflective, and flexible personalities, (b) responsibility for all students, (c) positive relationships with special education, (d) adjusting expectations, (e) demonstration of interpersonal warmth and acceptance, (f) concerns about
administrative arrangements, and (e) inclusion not always appropriate (Olson, Chalmers, & Hoover, 1997).

The authors concluded that similar to previous research, this qualitative study points to attitudes as a catalyst to successful inclusion practices. However, one facet of their investigation found that 9 of the 10 subjects agreed that in specific situations regarding students with severe and multiple handicaps or emotional disturbance, that inclusion would not be an appropriate placement decision (Olson, Chalmers, & Hoover, 1997). The authors limited sample size and use of subjects who were perceived to be successful inclusion teachers makes the results difficult to validate. This qualitative study that involved identification of themes from open-ended conversations regarding 12 questions about inclusion and practices in inclusion could have had different results if followed up by a quantitative survey. The views of the subjects are hard to generalize to other teaching groups based upon the many variables that exist that could affect the subjects' responses to each question (e.g., small district size, administrative tolerance, district attitude toward inclusive practices, background preservice teaching).

Rojewski and Pollard (1993) conducted a study to identify the attitudes of secondary general educators about mainstreamed students. The study included 437 general education teachers from around the nation. The teachers were employed in the areas of language arts, mathematics, science and social studies (Rojewski and Pollard, 1993).
The researchers obtained the subjects using a two part process of first identifying 10 secondary teachers from all 50 states that taught in each of the four areas of language arts, mathematics, science and social studies. After generating a pool of teachers, the researchers then randomly chose 200 teachers to place in each content area for a cumulative total of 800 subjects.

The researchers then sent out a three part survey to identify the subject's attitudes regarding mainstreamed students. The first part of the survey consisted of a Likert type scale rating with the number one representing a very low attitude agreement and five representing a very high attitude agreement. The subjects were asked about their attitude level regarding teaching students with disabilities and if their college and inservice trainings increased their skills to work with students with disabilities (Rojewski and Pollard, 1993). The second part of the survey included a 22-item Likert type scale rating. The Likert type instrument had a 4-point scale ranging from strongly disagree to strongly agree. The survey asked the subjects about their attitudes related to preparation issues, assessment issues, individual education planning issues, and their perceptions regarding their teaching. The third part of the survey was used to gather demographic information.

Rojewski and Pollard (1993) used percentages and means to report the scores from the Likert type scales. To identify teacher attitudes, they used a varimax-rotated factor analysis to identify main themes. This process was also used to ensure that each factor was independent of one another. The researchers identified through the varimax process, three factors. The first factor
focused on the subject's perceptions toward mainstreaming and their attitude toward inclusive practices. The second factor focused on problems and barriers when a student is placed into the general education classroom. The third factor focused on the subject's responsibilities and their preparation to teach students with disabilities. After the identification of the three factors, a multivariate analysis of variance (MANOVA) was conducted to identify if education level, preservice and inservice training and academic subject taught were a direct result of each of the three factors.

The results of the MANOVA and following post hoc analysis showed there was statistical significance in the influence of education level, preservice and inservice training and academic subject on the first factor of attitudes toward mainstreaming and attitude toward inclusive practices. There was also statistical significance in the influence of education level and preservice and inservice training but not academic subject on the second factor of problems and variables related to placement of students with disabilities in the general education classroom. The researchers found that there was statistical significance in the influence of education level and preservice and inservice training but not academic subject on the third factor of responsibilities and preparation to teach students with disabilities (Rojewski and Pollard, 1993).

The authors concluded that a variety of factors influenced the teachers' attitudes toward students with disabilities. The factors included the teachers' perceptions of mainstreaming and inclusive practices. They also included perceptions about the problems and variables related to placement of students
with disabilities in the general education classroom, and finally, the perceived responsibilities and preparation to teach students with disabilities. The factors had an impact on whether the teachers' had a positive or negative attitude toward students with disabilities.

The authors also conclude that the level of education did not change the teacher's beliefs or improve their perceptions of teaching students with disabilities. They found an identified need to infuse more curricula and training regarding working with students with special needs in teacher preparation programs and at the school based levels (Rojewski and Pollard, 1993).

This was a well designed study and the results show that teachers' attitudes are not influenced by the number of years teaching, certification levels, and number of graduate classes taken. The teachers' attitudes are influenced by the type and frequency of training on students with disabilities (Rojewski and Pollard, 1993).

The purpose of the Soodak, Podell, & Lehman (1998) study was to identify practicing general education teachers' attitudes toward including students with disabilities. There were 188 general education teachers that were included in this study. The teachers were identified through enrollment in graduate education courses from three universities in the state of New York. The teachers obtained additional participants by distributing surveys to personnel in the schools where they taught (Soodak, Podell, & Lehman, 1998).

The researchers used four instruments that were given to each participant as a packet. The participants were asked to complete each survey and return it to
the researchers. The four instruments included, (a) The Response to Inclusion Survey, (b) Teacher Efficacy Scale, (c) Differentiated Teaching Survey, and (d) School Climate Survey. The Response to Inclusion Survey, is a measure that uses a hypothetical situation of placing a student within the respondent's classroom. The student is a student with disabilities from one of five areas of disability (hearing impairment, learning disability, mental retardation, behavior disorder, or physical disability using a wheelchair). The participants then rate whether they would accept or oppose 17 pairs of likely responses to inclusion. The Teacher Efficacy Scale (Gibson and Dembo, 1984) is a survey that allows the participant to answer statements by indicating what level agreement they feel about how they perceive their own effectiveness as teachers and their influence on students. The Differentiated Teaching Survey is a tool that identifies on a six-point scale the number of times (frequency) that the participant conducts specific teaching practices. Finally, the School Climate Survey consists of 10 questions, three questions about the school conditions and seven questions about the participant's perception of the school climate (Soodak, Podell, & Lehman, 1998).

The data were analyzed using factor analysis of the Response to Inclusion Survey. The results of the factor analysis showed that there was a statistically significant variance in the participants' responses on the semantic differential scale with two theme factors emerging (hostility/receptivity and anxiety/calmness) regarding the participants' responses to inclusion. A regression analysis was then conducted using the two factors as the dependent variables and the condition of the student disability, the Teacher Efficacy Scale, the Differentiated
Teaching Survey, and the School Climate Survey as the independent variables. Using these tests, the researchers found that there were statistical significant interactions and main effects in the area of hostility/receptivity with the type of student disability and number of years teaching, between teaching efficacy and use of differentiated instruction, and the use of differentiated instruction and the teacher's years of experience, and the teacher's personal efficacy and the teacher's perceptions of collaborative opportunities. The research showed that teachers were more likely to include students with hearing impairments or physical impairments and be more hostile towards students with mental retardation or behavior disorders (Soodak, Podell, & Lehman, 1998).

The authors also found that there were main effects in the area of anxiety/calmness. They found that the students' disabilities had an effect on the teachers' anxiety levels. The teachers had a higher anxiety level with the inclusion of students with mental retardation and students with physical impairments than students with learning disabilities or behavior disorders. The researchers also found that personal efficacy and class size were statistically significant in correlation with their anxiety. They found that high levels of personal efficacy resulted in lower anxiety and the converse low levels of personal efficacy resulted in higher anxiety. The same results were discussed with the class size. The larger the size of the class, the higher the anxiety, and the smaller the class size, the lower the anxiety (Soodak, Podell, & Lehman, 1998).

The authors conclude that an important finding within their study is that a teacher's receptivity toward including students with learning disabilities
diminishes with experience and that teachers discriminate among students with different disabilities (Soodak, Podell, & Lehman, 1998).

The interesting component of this study is that the researchers found that when a teacher has a greater sense of their personal efficacy or their own beliefs about their own effectiveness that they are less anxious about inclusion.

Special Education Teachers

Cook, Semmel, & Gerber (1996) conducted a study designed to identify principals’ and special education teachers’ attitudes toward inclusion of students with mild disabilities. There were 47 principals and 64 special education teachers that participated in the study. The participants were given a questionnaire that included 21 statements regarding the inclusion of students with mild disabilities in the general education classroom. The questions were derived from the Regular Education Initiative Teacher Survey (Semmel, 1991). For each statement, the participants were asked to rate their responses according to a five-point Likert type scale. The scale extremes were strongly disagree to strongly agree.

The data were analyzed using mean values, univariate analysis and standard deviations. Nonparametric bivariate procedures Mann-Whitney U tests were used to analyze the differences between the principals’ and the special education teachers’ attitudes towards seven specific statements. The statements addressed the special education teacher’s role, teacher preparedness, redistribution of resources, generic instructional/collaborative skills, instructional time, achievement outcomes, and the effectiveness of consultant services. A
follow-up multivariate analysis of variance was used to determine reliable
differentiation between the two groups on the seven specific statements (Cook,
Semmel, & Gerber, 1999).

The results between the two groups showed that there were statistically
significant differences between the two groups. Principals supported the idea that
students with mild disabilities improve their academic achievement when placed
in a general education classroom with consultative services. The special
education teachers did not support the idea as readily. The second significant
difference between the two groups was in the statement that resources that are
mandated for students with mild disabilities should be protected, the special
education teachers strongly agreed, whereas the principals were not in that
strong agreement (Cook, Semmel, & Gerber, 1999).

The authors conclude that the attitudes of special education teachers need to
be considered because the teacher plays an integral role in the implementation
of inclusion.

General Education and Special Education Teachers

Center and Ward (1987) studied general and special education teachers on
their attitudes toward integration, specifically they were interested in answering
five questions about mainstreaming. The questions included asking the general
education teachers about the concept of mainstreaming, about acceptable
behavior with special education support, about the support services that they
were currently receiving to facilitate mainstreaming, and about the skills needed
to mainstream. They also wanted to find out the differences in attitudes between the two groups.

Center and Ward (1987) included 2,219 general education teachers and 332 special education teachers in their study. The participants were selected from all schools in the country of New South Wales, and included all government schools, all Catholic schools, and all independent schools. Each school was given two identical questionnaires. One was to be filled out by a primary level teacher or an early childhood teacher. Another questionnaire was sent out to each school for the special education resource teacher to fill out. The questionnaire included a Likert type survey and the questionnaire also included open-ended questions (Center and Ward, 1987).

The authors used both quantitative analysis and qualitative analysis to identify any significant differences. Means and standard deviations were used among and between groups.

The results of the investigation showed that 77.6% of the teachers both general and special education strongly agreed with the idea of mainstreaming. This agreement was found to be contingent upon the amount of support services available. The authors noted that there was a statistically significant difference between teachers from catholic schools and teachers from government schools. The teachers from catholic schools were more favorable to mainstreaming (Center and Ward, 1987). They also found that teachers attitudes about having students with mild to moderate disabilities in their classrooms was more positive
than students with low incidence disabilities who may need more instruction and management to be successful in the general classroom.

The results showed that there was a significant difference between special education teachers who were more positive about mainstreaming and general education teachers who were the least positive. The authors cite the difference between groups was a result of their opinions about the need level of educational and behavior strategies and extra time needed to work with students with moderate to severe levels of disability (Center and Ward, 1987).

The results of the teachers' attitudes toward support services showed that counselors, specialist counselors, resource teachers, and itinerant teachers all were perceived by the participants as not satisfactory in providing adequate support services. Finally, the authors assessed both general and special education teachers about the skills necessary for mainstreaming. They found that general competence, knowledge of techniques specific to individual learning/behavior disabilities and a sympathetic approach were essential skills. They also found that general agreement regarding ability to work with a resource teacher, and basic knowledge regarding psychological, social, and physical characteristics of students with disabilities was important. The teachers were uncertain regarding structured teacher-directed and unstructured child-directed approaches to curriculum objectives (Center and Ward, 1987).

Chiang (1999) developed a study to find out the attitudes of general and special education teachers towards the implementation of inclusion. There were 13 general education teachers and 6 special education teachers that participated
in the study. All of the teachers worked for the same school district and were selected from the two high schools in the district. The study included giving the participants a survey that solicited responses regarding their perceptions and the impact of the Regular Education Initiative (REI). Interviews were also conducted along with observational data taken from classroom visits.

Data were collected on the survey using a five-point Likert type scale. Recorded data from the interviews and observations were included in the results section of the study. The author of this study did not specify use of any specific data analyses, however, reported differences between the two schools were included. The differences reported were in the adequacy of resources, time for planning and problem solving, the appropriate size of the REI classes, and attendance at professional development meetings regarding the REI. Agreements between the two schools were also reported. The schools agreed to disagree about the availability of on-going staff development, and agreed that there was a lack of specialized support personnel (Chiang, 1999).

The author concluded that successful implementation of inclusive efforts includes factors such as collaboration, communication between general and special educators, on-going staff development, individualized placement, attention to individual educational planning, and parent involvement (Chiang, 1999).

The purpose of the Freytag (2001) study was to identify if there were differences in attitudes regarding inclusion between general and special education teachers based upon the number of preservice courses taken that
addressed inclusion. 48 general and special education teachers in the state of Florida participated in this study. There were 36 general education teachers and 12 special education teachers who participated in this study.

Personal efficacy and teaching efficacy were used to determine attitudes toward inclusion. The author used the Teacher Efficacy Scale (Gibson and Dembo, 1984), and gave the survey to both general and special education beginning teachers who had 0-4 years of teaching experience. The survey included a 30-item Likert type scale along with 8 demographic questions. The responses ranged from strongly disagree to strongly agree.

Data were analyzed using the statistical software program SPSS 9.0, using a factorial analysis of variance from mean score responses from the participants. The results showed that in the area of personal efficacy, there was a statistically significant difference between the general education teachers and the special education teachers on their personal efficacy scores. Data also revealed statistically significant differences between special education teachers' and general education teachers' personal efficacy when meeting the needs of students with disabilities. In the area of teaching efficacy, the results indicated that there were statistically significant differences between the teaching efficacy scores and the number of inclusion courses taken. Special educators displayed a higher efficacy score than the general educators (Freytag, 2001).

The author concludes that the attitudes of teachers are not necessarily influenced by courses that specifically address inclusion. The author also notes that special educators have a higher overall teacher efficacy and that it is
possible that preservice teacher education programs have an influence on the
attitudes and beliefs of teachers.

Minke, Bear, Deemer, & Griffin (1996) wanted to identify teachers' attitudes
regarding the inclusion of students with mild disabilities. The study included
questioning the variables of self-efficacy, competence, teaching satisfaction, and
judging the appropriateness of classroom adaptations.

The study included 185 general education teachers who taught in traditional
classes, and 71 general education teachers and 64 special education teachers
who were part of an integrated teaching setting and co-taught students with and
without disabilities. All of the respondents worked in the same school district.

The measures that was used in this study included a five page questionnaire
that included a definition of mild disabilities (i.e., children with learning disabilities;
educable mental handicaps; emotional disturbance; and/or mild physical, visual,
or hearing impairments), a demographic section, an attitudes toward inclusion
part, a self-efficacy part, a teaching competencies part, an instructional
adaptations part, and a views of the team-teaching arrangement part.

The demographic section included gender, ethnicity, education and teaching
experience questions. The attitudes toward inclusion section included four survey
items using a six point rating scale. The rating asked each respondent to rate
their experience in either the integrated setting or the general educational setting.
The respondents were then asked to rate their satisfaction with teaching students
with mild disabilities on a scale of one to four with one representing

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
dissatisfaction and four representing satisfaction. The participants were also asked to rate their satisfaction with teaching students without disabilities.

The self-efficacy component used a modified (Soodak and Podell, 1993) version of the Teacher Efficacy Scale (Gibson and Dembo, 1984). The self-efficacy scale included 14 items. Eight items addressed the participants' ability to teach students. The final six items addressed any outside factors that would limit the participants' ability to teach students. Outside factors included home environment and family background.

The teaching competencies part included two parts, the first part solicited information from the participants to judge teaching methods, training and the effectiveness of both special and general educators. The second part included rating four groups on teaching and behavior management competencies.

Instructional adaptations section of the survey involved rating six instructional practices in three ways: the first was how often (desirable), the second was how easily can it be completed (feasible), and the third was how often do you currently engage in the practice (frequency). The final part of the survey included three open-ended questions regarding team teaching (Minke, Bear, Deemer, & Griffin, 1996).

Data analyses included both quantitative and qualitative methods. The Kruskal-Wallis one-way analyses of variance were used in conjunction with Mann-Whitney U-Wilcoxon to determine the Z statistics. Qualitative methods (Lincoln and Guba, 1985) were used to delineate meaning units from the open-ended questions. Meaning units were defined as a single thought, suggestion, or
observation. Reliability tests were conducted with a high level of agreement reached for each question (Minke, Bear, Deemer, & Griffin, 1996).

The results of the study indicated that there were statistically significant differences between the special education teachers and the regular education teachers. The special education teachers had a more positive attitude towards inclusive practices than the regular education teachers. The results also showed that the regular education teachers in the integrated settings held similar views to the special education teachers. All three groups of teachers had similar responses and agreed that more resources were necessary to provide services to students with disabilities (Minke, Bear, Deemer, & Griffin, 1996).

Review and Analysis of Studies Related to Practicing Teachers' and Preservice Teachers' Attitudes Toward Inclusion

*General Education Practicing Teachers and General Education Preservice Teachers*

Wilczenski (1992) assessed the attitudes of general education classroom teachers and preservice teachers regarding the physical, academic, behavioral, and social aspects of integrating students with disabilities. The study was conducted based upon the premise that teacher’s attitudes affect behavior, and therefore measuring teachers’ attitudes provides important information for developing an instrument to measure opinions about inclusion. Wilczenski used two groups of individuals to conduct this study. The first group was comprised of 301 regular classroom teachers with varying demographic statistics (e.g., grade
level taught, age, gender) and the second group consisted of 144 undergraduate elementary education majors with varying demographic statistics (e.g., gender, year in school, age).

Wilczenski (1992) developed an instrument to measure attitudes. The instrument contained 32-items using a Likert type scale with six responses from strongly agree to strongly disagree. The instrument measured four areas of inclusive education: physical, academic, behavioral, and social. The instrument included eight questions for each area and included the phrase, "should be in regular classes", as well as a definition for inclusive education. Following a test administration of the instrument, four questions for each area were included to produce a 16-item survey. The survey, Attitudes Toward Inclusive Education Scale (ATIES) uses a total score derived from adding each item together. The range of the ATIES was from a score of 16 meaning most favorable to a score of 96 meaning least favorable. The author then created factor scores based upon the average score of the four items included in each area. The factor scores relate to the Likert type scale with low scores representing more favorable attitudes toward integrating all students with disabilities and a high score representing the least favorable attitudes toward integrating all students with disabilities.

The results of the first 32-item survey were analyzed for the purpose of establishing validity, using the method of principal components procedures and the orthogonal varimax solutions. This process was used and identified four factors with eigenvalues above 1.0. Items on the survey were then assigned to
factors with the highest factor loadings. All of the items that were kept on the survey had to have a factor loading of .55 or higher. The four factors that were identified were (a) making accommodations for students with physical disabilities, (b) making academic modifications, (c) making accommodations for disruptive behaviors, and (d) making accommodations for increasing students' social participation. The second analysis procedure was conducted for the purpose of establishing reliability. The author used Chronbach's alpha to determine internal consistency and cites that the moderate factor intercorrelations indicated that the four identified factors were independent (Wilczenski, 1992).

The results of the survey show that there was a statistically significant difference in the attitudes that were more favorable to including students with social deficits and less favorable to students that required physical accommodations. The results also indicate that there was a statistically significant difference in the attitudes that were more favorable toward making accommodations for students with physical disabilities and less favorable to students who need academic modifications, and that attitudes were more favorable toward making academic modifications than including students with behavior issues.

The final analysis of the ATIES was a cross-validation procedure that was conducted using the 144 preservice teachers. The author found that the results of the preservice teachers' responses indicated the same four factors and that it accounted for 70% of the total variance between the groups. The results of the preservice teachers' responses indicate that there were statistically significant
differences in attitudes towards including students with disabilities in the general education classroom. The results were similar to the practicing teachers' responses.

Wilczenski (1992) concludes that a survey was developed to measure attitudes toward inclusive education. The author found that the survey was found to be a reliable measure and the applications for future research included monitoring attitude changes over time and continued testing for validation and norm referencing.

This study is an important study that identified through survey data that there were no significant differences between two groups of practicing teachers and preservice teachers. The lack of differences in attitudes between the two groups suggests that attitudes regarding students with disabilities may not significantly change over time. The practicing teachers group had been teaching an average of 14 years. The preservice student teachers were one-half first and second year students, and one-half third and fourth year students. The responses indicated that both groups were willing to make physical accommodations but less willing to make academic and behavioral accommodation. This may suggest that courses for implementing strategies to make accommodations and modifications for students with more intensive needs could be developed and incorporated during preservice teaching and training.

The strength of this study is in the suggestion by the author that teachers and preservice teachers attitudes toward inclusion are influenced by the nature of a
disability, how the disability affects learning, type of disability, and how many accommodations and modifications are needed (Wilczenski, 1992).

Review and Analysis of Studies Related to Preservice Teachers’ Attitudes Toward Inclusion

General Education Preservice Teachers

Avramidis, Bayliss, & Burden (2000) conducted a study to measure the attitudes of student teachers (preservice) regarding inclusion of students with disabilities in the general education environment.

The investigators surveyed 135 participants who were student teachers completing their teacher training courses. The researchers developed an instrument that included items from other measures. The first part of the instrument addressed the cognitive area and included 12 items taken from the *Opinions Related to Mainstreaming* (ORM scale Larrivee, 1982). The second part of the instrument addressed the affective area consisted of seven items taken from the *Semantic Differential Scale* (Osgood, Suci, and Tannenbaum, 1957). The third part of the instrument addressed the conative area and included eight items, five items were used to assess the teachers' confidence in meeting the IEP requirements, and the final three questions were open-ended and inquired about incentives and action planning.

Before the instrument was administered, the authors conducted a pilot test. The feedback from the pilot test was then incorporated into the instrument. The instrument was also given to two experts to establish content validity. Then the
instrument was administered to 111 post-graduate student teachers and 24 fourth year undergraduate student teachers.

The authors used a paired sample t-test, a multivariate analysis of variance, and a Pearson correlation method to analyze the data. The first data analysis was conducted using a paired sample t-test between the mean scores of the participants on two affective scales. The first scale measured emotional reactions to placing a student with severe disabilities within a general education classroom and the second scale measured emotional reactions to placing a student with emotional disorders within a general education classroom (Avramidis, Bayliss, & Burden, 2000).

Avramidis, Bayliss, and Burden (2000) found that there was a statistically significant difference between the two affective scales indicating that the student teachers' were more concerned with students exhibiting behavioral difficulties than a student with severe learning difficulty in the general education classroom. The second data analysis procedure included six one-way MANOVAs. The authors were testing for differences in the cognitive, affective and conative components of attitude between groups using gender, age, course taken in the university, area of school where students engaged in school based work, size of the school, and size of the classroom. The authors grouped the participants into three groups based upon their major course of study. The first group included math and science post-graduate majors, the second group included English, history and the arts post-graduate majors, and the third group included the undergraduate student teachers. The results from the analysis indicate that
gender was a statistically significant factor on the conative component. Female participants held a more favorable attitude than male participants. Avramidis, Bayliss, and Burden (2000) also found that participants in the math and science group were less favorable to inclusion than the English, history and arts group. Following the multivariate analysis, the researchers' conducted five one-way MANOVAs for age, area, school size, and class size. They did not find any statistically significant differences in attitude for this information. Using a repeated measure ANOVA, the researchers' found that the participant's confidence in implementing a students' individual education plan (IEP) decreased significantly as the needs for the student intensified and increased. Results from the correlation analysis indicate that there was a strong association between the participants' perceptions of their own skills and their attitudes towards inclusion.

The open-ended questions were qualitatively analyzed using a point system for the frequency of occurrence. The first question asked the participants what they would have needed in order to make their responses more positive. The respondents reported they would need (a) more knowledge of different disabling conditions and different strategies for meeting needs, (b) more experience with included pupils throughout their training, (c) more ancillary support, and (d) more training on managing behavior for students with emotional/behavior disorders (Avramidis, Bayliss, & Burden, 2000).

The second open-ended question asked the participants what they would need to change in the classroom environment. The participants reported (a) different classroom layout that can accommodate students with disabilities, (b)
more resources, both human and material, and (c) smaller class sizes as the primary issues of concern (Avramidis, Bayliss, & Burden, 2000). The last open-ended question asked the participants what needed to be changed in the school. The responses indicated (a) a stronger special education department and (b) developing new school policies regarding inclusion along with more co-operation and support for new staff (Avramidis, Bayliss, & Burden, 2000).

The authors concluded that the participants appeared to have a positive and favorable attitude towards including students with disabilities in the general education classroom. Their findings concur with previous studies that younger teachers and those with fewer years of experience have more favorable attitudes toward ‘integration not inclusion’ and are more supportive (Avramidis, Bayliss, & Burden, 2000). One of the points that the authors make was the lack of confidence found in meeting IEP requirements as the needs for the student intensified. Their results confirm a previous research study conducted by Ward and Dean (1996) that indicated educators’ attitudes were influenced by the nature and severity of a disability and whether the disability presented educational problems.

Finally, one of the limitations that the authors identify is that the instrument that they administered did not provide for a differentiation between the attitudes toward the inclusion of children with different exceptionalities, therefore they suggest their measure may have not accounted for the participant who is against inclusion by not differentiating students with severe disabilities (Avramidis, Bayliss, & Burden, 2000).
Buttery (1981) designed this study to see if there were any attitude changes towards students with exceptionalities after taking a required course on exceptional children. The participants were preservice teachers with concentrations in early childhood, elementary, and middle school general education.

The participants had some intern teaching experience and no personal or family history of exceptionality (Buttery, 1981). There were 49 undergraduate preservice teachers who participated in this study.

A semantic differential was used as the survey instrument. The instrument consisted of 20 items. The first 10 items addressed the idea of a single student with exceptionalities in the general education classroom. The final 10 items addressed the idea of more than one student with exceptionalities in the general education classroom. The instrument also identified 10 different categories of students with exceptionalities and asked each participant to choose between adjective pairs covering the areas of activity, evaluative, and potency factors of the student with exceptionalities in the general education classroom (Buttery, 1981).

The 10 types of students with exceptionalities that were categorized in this study were learning disabled, educable mentally retarded, emotionally disordered, physically handicapped, visually impaired, speech impaired, intellectually gifted, hearing impaired, battered abused, and multiply handicapped (Buttery, 1981).
The instrument was administered as a pre and post measure. The first administration was the first day of the course and the post administration was the last day of the course.

The results were analyzed using mean differences and a two tail test for repeated measures at an alpha level of <.01. There were statistically significant differences between the pre and post administrations. The attitudes of the preservice teachers declined and were less positive towards the students with exceptionalities after completing the course. There were 38 of the 60 mean differences tested that were statistically significant at an alpha level that was <.001.

Attitudes toward the single student with exceptionalities in the general education classroom were significantly lower in all exceptionalities except for students who are battered-abused in the areas of evaluative and potency factors, and students with multiple handicaps in the areas of activity, evaluative, and potency factors (Buttery, 1981).

Attitudes toward multiple students with exceptionalities in the general education classroom were significantly lower in the following exceptionalities; (a) students with learning disabilities in the area of activity factor, (b) students with visual impairments in the areas of activity, evaluative, and potency factors, (c) students who are intellectually gifted in the areas of activity, evaluative, and potency factors, and (d) students with hearing impairments in the areas of activity, evaluative and potency factors (Buttery, 1981).
The results of the study identified a decline in attitude toward students when given more information about exceptional children. These results represent an opposite outcome to the goal of the course which was to develop a positive perception of working with students with exceptional needs in 'mainstreamed' classrooms (Buttery, 1981). This study included only one course section that was taught by the author. Attitudes can be influenced by authority figures teaching each course.

Several variables were not addressed in this study. First, more course sections could have been included to get wider variety among scores or a larger group of participants. Second, the attitudes of preservice special educators could have been included to compare the levels of attitudes, and finally, the study could have included a knowledge component to see if knowledge or exposure to students with exceptionalities had an effect on the lowering of attitudes during the introductory course.

Hoover and Cessna (1984) designed their study to assess the attitudes of preservice general education teachers towards students with disabilities. There were 58 preservice teachers that participated in this study. All of the participants had completed an introductory course that emphasized teaching students with disabilities in the general education classroom. The participants were separated into two groups. The first group comprised of 38 students who had just completed their first aforementioned course in special education. The second group consisted of 27 students who had completed their first course in special
education a year before and were finishing their field experiences (180 hours) in the general education classroom (Hoover and Cessna, 1984).

The instrument consisted of a 32-item survey that used a five point Likert type scale. The scale ranged from strongly disagrees to strongly agree. The survey was entitled ‘Mainstreaming Inventory’ and asked questions regarding three areas. The first area consisted of 16 items and focused on attitudes toward mainstreaming, the second area consisted of 8 items and focused on the participants’ confidence in their ability to work with students with special needs, and the last area of the survey consisted of 8 items and focused on the participants’ roles in the individual education plan process, collaboration with special education personnel, and completing testing and evaluation instruments (Hoover and Cessna, 1984). Both groups completed the measure on the final days of their respective introductory course and field experiences.

The data were analyzed using a T-test of significance with mean differences for each group and the three areas reported. The results indicate there was a statistically significant difference between the two groups. The participants that were enrolled in the introductory course had a higher positive attitude towards educating students with disabilities in the general education classroom. The areas of attitudes toward mainstreaming and on the participants’ roles in the individual education plan process, collaboration with special education personnel, and completing testing and evaluation instruments were also statistically significant. The participants who were enrolled in the introductory course had a higher positive attitude than the participants who were completing their field experiences.
experiences. There was no difference between the groups in the area of confidence in their ability to work with students with disabilities (Hoover and Cessna, 1984).

Hoover and Cessna (1984) concluded that preservice teachers who have not yet experienced working (field experience) with students in general, had a higher positive attitude after completion of their introductory special education course than those preservice teachers who had field experience. Hoover and Cessna (1984) attribute the difference between the attitudes as a result of the field based experience and that the preservice teachers who have engaged in the field experience are or become more aware of potential problems that may arise from mainstreaming students with disabilities in the general education classroom. They also cite the differences may be a result of understanding that the workload and large classroom sizes present challenges as well as working and teaching a student with disabilities.

Hoover and Sakofs (1985) wanted to find out if there was a relationship between the anxiety levels of preservice teachers and their attitudes toward mainstreaming students with disabilities. The participants in this study were 61 preservice elementary education teachers who had completed 200 hours of field experience. Thirty-one of the participants were assigned to a self-contained or resource classroom for their teaching experience. The classes included students with learning disabilities and students with emotional/behavioral disorders. The participants were placed in nine self-contained special education settings and six
resource settings. The other 30 participants were assigned into the general education elementary setting and served as the control group.

The participants were given the "Mainstreaming Inventory" that was developed at the University of Minnesota by May and Furst (1977). The inventory was a 32-item survey with a five point Likert type scale with the range from strongly disagrees to strongly agree. The inventory was given at the end of the field experience. The inventory includes three measured areas; attitudes toward mainstreaming, confidence in the ability to work with students with disabilities, and the attitudes towards the role of the general education teacher in the special education process of evaluation and placement. The inventory also assesses the participants overall attitude towards educating students with disabilities in the general education classroom (Hoover & Sakofs, 1985). The second instrument administered was entitled "Student Teacher Anxiety and Concerns Form" developed by the secondary author. The concerns form was used to assess the participant's levels of concerns during their field experiences and addressed eight areas. The areas included the participant's concerns with (a) the university supervisor's evaluation, (b) the public school cooperating teacher's evaluation, (c) the relationship with the public school cooperating teacher, (d) classroom discipline, (e) person physical and emotional state, (f) teaching behaviors which may focus upon gaining approval and/or affection from students, and (g) self-concern with one's competence as a teacher (Hoover and Sakofs, 1985 p.51).
This concerns measure was administered at the end of each week of the 8 week field experience and included 32-items using a five point Likert type scale with the range from non anxiety provoking to very anxiety provoking.

The data were analyzed using Pearson product-moment correlation coefficients. The data showed that five of the eight sources of anxiety did not correlate significantly with the attitude survey or any of the three areas.

The authors found there were no differences in the anxiety levels based upon placement in the special educational self-contained and resource settings. They did find statistical significance in the correlations between anxiety and physical health/emotional state. They found that the more healthy the participants perceived themselves, the more positive they were toward their role as the general education teacher in the special education evaluation and placement process and they also indicated a higher level of confidence in teaching students with disabilities (Hoover and Sakofs, 1985).

The authors suggested that teacher preparation programs would benefit from preparation in the areas or physical and mental health. Although they cite there was no significant effect in the participants' attitudes toward teaching students with disabilities that related to any source of anxiety, the authors maintain that preservice elementary teachers were more positive and confident in their ability to work with students with disabilities when they had fewer concerns about their physical and emotional health (Hoover & Sakofs, 1985).

The purpose of the Rao and Levan (1999) study was to identify the beliefs and attitudes of general education preservice teachers about teaching students
with disabilities. The participants were 68 undergraduate preservice teachers who were in their final year of a teacher training program.

The measure that was used was a five-part survey that included a demographic information section, a self efficacy scale (Gibson and Dembo, 1984), attitudes toward inclusion, teaching competence, and open ended questions. The self-efficacy scale includes 14-items that are separated into two sections. The first section is on personal teaching efficacy and includes eight questions and the second section is on general teaching efficacy and includes six questions. The participants then rated their responses according to a six-point Likert type scale that ranges from strongly disagree to strongly agree. The attitudes toward inclusion section includes 12 statements and uses a six-point Likert type scale that ranges from strongly disagree to strongly agree. The teaching competence section asked the participants to respond to five statements using a four-point Likert type scale that ranged from not at all competent to highly competent. This section also included an open-ended question that asked the participants to express their opinion on the benefits of additional knowledge and training that would help them include students with disabilities (Rao and Levan, 1999). The survey was administered once to the participants during their regular coursework.

The data were analyzed using frequency distribution, reliability coefficients, Pearson's Product Moment Correlation Coefficient, and a one-way analysis of variance (ANOVA) with a conservative alpha level of <.01 and <.05. The open-
ended question was analyzed using qualitative analysis identifying common theme/ideas/categories (Rao and Levan, 1999).

The results showed that there were unfavorable attitudes toward inclusion. The authors found no statistically significant difference between self-efficacy and competence in teaching and managing behavior. They found that a statistically significant positive correlation between knowledge gained through elective coursework and personal competence in teaching students with disabilities. Finally, they found statistical significance in preservice teachers perceiving themselves to be significantly less competent than special education teachers in teaching, managing behavior, and working with parents (Rao and Levan, 1999).

The authors suggest that based on their results, there needs to be training of the preservice teachers to improve in the areas of teaching efficacy, attitudes, and competence in teaching students with disabilities (Rao and Levan, 1999).

Radmacher, Wilhelm, Hildreth, Bridges, & Cowart (1998) conducted a study to assess the attitudes of general education preservice teachers toward inclusion of students with disabilities in the general education classroom.

The participants in this study were divided into three groups of senior level preservice teachers. The first group was comprised of 35 participants who were enrolled in a one-credit course entitled, *Special Education in the Mainstream*. This course was a required course taken during the first three weeks of the semester concurrently with student teaching. The second group was comprised of 20 participants that were completing their internship for licensure at the elementary certification level. These participants were completing their final
semester before graduation. The third group was comprised of 23 participants who were completing a two semester internship. There were a total of 78 participants who were engaged in this study (Radmacher et. al., 1998).

The instrument that was administered was a pre and post survey that included 17 statements using a five-point Likert type scale ranging from strongly disagree to strongly agree. Radmacher et. al. (1998) used two open-ended questions focusing on “the most positive aspect of having students with and without disabilities working together in the general education classroom” and “what they believed to be the negative aspects of such arrangements” (p. 159).

The data were analyzed using within group analysis and a two-tailed paired samples t-test with an alpha level of <.05. There were statistically significant differences between the pre and post measures in all three groups. The first group had two of the 17 questions, the second group had six of the 17 questions, and the third group had eight of the 17 questions that showed statistical significance.

Responses from the open-ended questions resulted in four major groupings for the first question and six major groupings for the second question. The answers were grouped according to their similarities.

Radmacher et. al. (1998) suggested that extensive field based programs may influence teachers' knowledge and attitudes towards including students with disabilities in the general education classroom. They further noted that extended contact with students with disabilities along with reflective type assignments and group activities may have a positive impact on the preservice teachers' attitudes.
and self-confidence with working with students with special needs (Radmacher et. al., 1998).

Sanche, Champman, & Dineen (1976) wanted to determine whether the attitudes of preservice teachers change after taking a required course on special education, *Methods of Teaching Exceptional Children in Regular Classrooms*. The course had two objectives, the first objective was to provide regular education teachers with competencies to teach children with exceptionalities in regular classrooms, and the second objective was to facilitate the development of positive attitudes towards children with exceptionalities.

The researchers used 106 participants enrolled in five sections of the required course. Each section was administered a pre and post measure called the *Teacher Placement Opinion Form* (TPOF) which represented a shortened version of the *Classroom Integration Inventory* (CII) developed by Haring, Stern, & Cruickshank in 1958. The measure consisted of 30 items about children with exceptionalities. The respondents were instructed to identify a placement option for educational purposes. The choices given to the respondents were: (a) in the regular classroom, (b) in the regular classroom, but in consultation with a resource teacher who may supply materials and/or advice, (c) in regular classroom, but in the resource room part of each day, (d) in full-time special class, (e) in a special day school, and (f) in a residential school (Sanche, Champman, & Dineen, 1976).

The data were coded from one to six, with one being assigned to “regular classroom” and 6 being assigned to “residential school”. The data were analyzed.
using a two-way analysis of variance and mean differences and the researchers found that there was a significant difference between the pre and post measures.

The authors found that the preservice teachers responded more positively to teaching children with exceptionalities within the regular classroom after taking the required course. The authors concluded that their findings did not necessarily support that positive attitudes regarding teaching children with exceptionalities equates to mainstreaming of those students. Their conclusion factored in the inexperience of the participants (Sanche, Champman, & Dineen, 1976).

The strength of this study is the idea that the authors created a uniform set of objectives and materials to be used by each instructor. Another quality of this research is that it uses placement as an indicator for measuring attitude. Using preservice teachers who have not had a great amount of experience with students with disabilities could be beneficial in establishing an indicator of how future educators provide service delivery to students with disabilities. The researchers, however, did not include specific disability areas on their survey and did not measure the relationship between acquired and changed attitudes.

Ward and LeDean (1996) investigated the attitudes of preservice teachers to determine whether they influenced the placement of students with disabilities. There were 179 participants who were part of this study. All of the participants had previously taken courses in psychology and teaching students with disabilities.

The participants were given a survey instrument that included four demographic questions and three questions regarding attitudes toward
integration of students with disabilities in the community. The three attitude questions were measured using a five-point Likert type scale with the range from strongly agree to strongly disagree. The remainder of the survey included 31 child specific situations and/or handicapping conditions (i.e., a child who is hyperactive, a child who has been assessed as moderately intellectually disabled IQ 30-55) and asked the participants to identify an appropriate placement. The placement choices included regular classroom, regular classroom with consultant support, regular classroom with visiting teacher support, regular classroom with withdrawal to special class for basic subjects, special class in regular school with withdrawal to regular classes for non-academic subjects, special class in regular school, special school, residential/hospital special school (Ward and LeDean, 1996). The survey was administered toward the end of the semester during course time.

The data were analyzed using percentage frequencies for the participants' choice of placement for each of the 31 statements. Mean scores and standard deviations were also derived from the data.

The results indicate that the preservice teachers were more favorable towards mainstreaming depending on their perceptions of the level of disability. The statements relating to students with deficient self-help skills, artificial bowel or bladder without parent assistance, moderate intellectual disability, the ability to be dangerous to another person, and multiple disabilities were chosen by a majority of the participants to be educated in a separate or non-mainstreamed environment (Ward and LeDean, 1996).
Ward and LeDean (1996) suggest that their results are similar to previous research that cite the attitudes of informed preservice teachers regarding where to place the student with disabilities is similar to those attitudes of practicing teachers and that placement is dependent upon the nature of the disability.

**General Education Preservice and Special Education Preservice Teachers**

Leyser and Abrams (1983) wanted to determine if training has an impact in changing attitudes of preservice general elementary educators. The participants in this study were enrolled in university coursework within a College of Education. There were three groups involved in this study. The first group of elementary education majors consisted of 36 participants. They were enrolled in a new course that focused on preparing teachers to become effective mainstream teachers. The second group included 122 elementary education majors who were not enrolled in the aforementioned course. Finally, the control group consisted of 148 special education majors (Leyser and Abrams, 1983).

The researchers used the Attitudes Toward Disabled Persons (ATDP) Scale (Yuker, Block, & Young, 1970) which consists of 20 items with a Likert type response. The participants rated their levels of agreement and disagreement on the 20 item statements. The rating scale continuum was from +3 meaning (I agree very much), to a -3 signifying (I disagree very much).

The data were analyzed using a one-way analysis of variance with a conservative alpha level of 0.05 level. The results of the study showed that there was a statistically significant difference between the three groups. Post hoc
analysis using the Sheffé test indicated that there was a statistically significant
difference between the preservice special education teachers and the preservice
elementary education group that was not enrolled in the mainstreaming course.
The preservice special education teachers had a more positive attitude toward
students with disabilities than the preservice elementary education group. Post
hoc analysis also indicated that there was no a difference between the preservice
special education group and the preservice elementary education group who
were enrolled in the mainstreaming course (Leyser and Abrams, 1983).

The authors suggested that the mainstreaming course helped to promote the
development of more accepting attitudes by the course participants. They also
noted that their interpretations of the results do not include pretest data and
therefore they are unable to ascertain the participants' attitudes before
enrollment in the mainstreaming course (Leyser and Abrams, 1983).

Finally, Leyser and Abrams (1983) concluded that their findings demonstrate
that the attitudes towards students with disabilities can be modified.

The purpose of the Shade and Stewart (2001) study was to determine
whether there was a change in attitude towards the inclusion of students with
disabilities before and after an introductory course in special education.
Preservice general and special education teachers participated in this study.

The participants were comprised of 122 preservice general education
(elementary and secondary) students and 73 preservice special education
students. The participants were both enrolled in an introductory undergraduate
course. Both courses were taught by the same instructor and used the same text
and were required to complete similar course materials. The preservice general education course was a 2-week, 30 hour summer course that was required before engaging in student teaching. The preservice special education course was a traditional 15-week, 30 hour course taken over the course of a semester (Shade and Stewart, 2001).

The authors used a 48-item inclusion inventory. The inventory was given at the beginning (pretest) of the course and at the end of the course in the form of a posttest. This inventory was designed to measure two specific variances. The first variance was attitude and the second was the confidence level in the respondent's ability to work with students with disabilities.

The inventory uses a five-point Likert type scale that indicates extremes from strongly disagree to strongly agree as possible responses to the statements. A definition of a mild disability included mild intellectual difficulty, emotional difficulty, sensory difficulty, physical difficulties, or perceptual deficits. The definition of 'average' or 'normal' referred to the general education population who does not exhibit difficulties in achievement. The 48-items include eight subscales; class placements (5 items) behavior (7 items), self-concept (7 items), other students (9 items), time and work (6 items), teacher (9 items) motivation (3 items), and parents (2 items) (Shade and Stewart, 2001).

The data were analyzed using dependent measure t-tests with a conservative alpha level <.05. The results were statistically significant for the general education students. The attitudes changed positively over the course of instruction. Specifically, there was an attitude change for the positive
demonstrated through statistical significance in the areas of behavior, self-concept, other students, teacher, and parents.

The results were statistically significant for the special education students. The attitudes changed positively over the course of instruction. Specifically, there was an attitude change for the positive demonstrated through statistical significance in the areas of class placement, behavior, self-concept, motivation, and parents (Shade and Stewart, 2001).

Shade and Stewart (2001) suggest that a single course of instruction can significantly change the attitudes of preservice general and special education teachers regarding the inclusion of students with mild disabilities into the general education setting. They conclude that as inclusion continues to grow that all preservice teachers need to be prepared to teach students with disabilities and taking a required course in special education proves beneficial in improving the attitudes of preservice teachers.

Summary of Literature Review

There are studies that include general education practicing teachers regarding their attitudes towards inclusion (Brownell and Pajares, 1996; Minke, et. al., 1996; Olson, Chalmers, & Hoover, 1997; Rojewski & Pollard, 1993) and special education practicing teachers (Cook, Semmel, & Gerber, 1999). Studies have also been conducted using both groups together (Chiang, 1999; Freytag, 2001). This body of literature reflects that there are relationships that exist between the attitudes of teachers and how those relationships affect the
implementation of inclusive practices. Research indicates that teachers' attitudes about specific student disabilities influence the way that the teachers and planning teams mandate service delivery and placement for those students (Kauffman and Hallahan, 1995; Scruggs and Mastropieri, 1996; Stainback and Stainback, 1994; Taylor, 1988). The studies have provided insight into practicing teachers' preconceived attitudes about specific disability areas. The study of the attitudes of both practicing teachers and preservice general education and special education teachers is an important component in the area of inclusion and inclusive practices for students with disabilities in the general education classrooms.

Preservice teachers have also been subject to study and the literature reflects that the attitudes of general education preservice teachers include dimensions such as anxiety levels, preservice preparation, disability areas, and other environmental variables that affect the way that the preservice teachers perceive inclusion and inclusive practices (Avramidis, Bayliss, & Burden, 2000; Buttery, 1981; Hoover & Cessna, 1984; Hoover & Sakofs, 1985; Mayhew, 1994; Powers, 1992; Rao & Levan, 1999; Radmacher, et. al., 1998; Sanche, Champman, & Dineen, 1976; Ward & LeDean, 1996).

The research in the area of attitudes towards students with disabilities is somewhat limited in the area of using both general education and special education preservice teachers. Most of the literature focuses on the preservice general education teacher population. The focus on special education preservice teachers is however, very important in that their attitudes toward inclusive
practices often dictate where and when inclusion will occur. If special education preservice teachers have negative attitudes toward inclusion, then inclusion may not be their option of choice when they begin teaching students with disabilities. However, if the special education preservice teachers have a positive attitude towards inclusion, then the likelihood that inclusion will occur is increased.

Research in the area of comparing general and special education preservice teachers' attitudes toward students with disabilities has been limited. In fact, only two studies (Leyser & Abrams, 1983; Shade & Stewart, 2001) were located in this literature search. These two studies were conducted using both general education and special education preservice teachers (Leyser & Abrams, 1983; Shade & Stewart, 2001). The researchers in these studies presented evidence that introductory coursework in special education can significantly affect the attitudes of preservice teachers toward students with disabilities and inclusion.

Both of these studies had limitations that clearly indicate a need for further study. For example, Leyser and Abrams (1983) only measured general attitudes toward persons with disabilities. They did not specifically assess attitudes toward appropriate placement for students with disabilities. In the Shade and Stewart (2001) study, the instrument used to measure preservice teachers' attitudes toward inclusion had multiple subscales. Only one subscale related to classroom placement and this section only included five questions. Thus, the attitude specifically related to placement choices was minimal and did not address all disability categories as defined in IDEA.
Thus, more in-depth research is needed to assess and compare the attitudes of general and special education preservice teachers. Specifically, placement attitudes as they relate to each of the disability categories are needed. This research will provide additional information about the preservice teachers' preconceived attitudes regarding the placement of students with disabilities and their attitudes regarding placement after taking an introductory course on disabilities. The connection between knowledge obtained in the course and attitude change also needs to be explored.
CHAPTER 3

METHODOLOGY

This chapter describes the methodology and procedures used in this study. The chapter has been organized into six major sections including the: (1) research questions, (2) participants, (3) setting, (4) instrumentation, (5) design and procedure, and (6) treatment of data.

Research Questions

The attitudes and knowledge of preservice general education teachers and preservice special education teachers, enrolled in 6 sections of required courses for education majors were measured using the Preservice Teacher Service Delivery Survey (see Appendix A) and the Knowledge Test (see Appendix B). The Preservice Teacher Service Delivery Survey focused on the preservice teachers' attitudes about appropriate educational placements for students with disabilities and their comfort level with choosing those educational placements. The Knowledge Test questions focused on special education law, individual education plans (IEP), placement for students with disabilities, and service delivery options.
The research questions for this study were:

1. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement that is disability specific?

2. Is there a difference between general education and special education preservice teachers' level of knowledge about special education after taking a semester-long introductory course?

3. Does level of knowledge affect general education and special education preservice teachers' attitudes about placement that is disability specific?

4. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement for students with high incidence disabilities?

5. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement for students with low incidence disabilities?

Participants

The participants in this study included general education and special education preservice teachers enrolled in required introductory courses in special education. The courses are designed to provide the students with information related to special education laws, characteristics of students with various disabilities, individual education plans, and modifications and accommodations for students with disabilities. All of the students were required to enroll in these
courses for completion of studies leading to a degree in education with possible certification and or licensure to teach in the State of Nevada.

*Undergraduate General Education preservice Teachers*

The general education preservice teachers were enrolled in three sections of ESP 444, *Special Education Techniques for General Education Teachers*. The total number of participants in the ESP 444 classes was 90 students. See Table 1 for specific characteristics of these participants.

*Special Education preservice Teachers*

The special education preservice teachers were enrolled in one section of ESP 200, *Introduction to Students with Disabilities*. The total number of participants in the ESP 200 classes was 14 students. See Table 2 for specific characteristics of these participants.

*Graduate Level Special Education and General Education preservice Teachers*

The graduate level preservice teachers were enrolled in two sections of ESP 701, *Introduction to Special Education*. The total number of participants in the ESP 701 class was 23 students. See Table 2 for specific characteristics of these participants.
Table 1
Demographic Information for Undergraduate General Education preservice Teachers

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>90</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
</tr>
<tr>
<td>Female</td>
<td>70</td>
</tr>
<tr>
<td>Age</td>
<td>(M = 26.08) years</td>
</tr>
<tr>
<td>Highest degree earned</td>
<td></td>
</tr>
<tr>
<td>H.S. Diploma</td>
<td>60</td>
</tr>
<tr>
<td>A.A. Degree</td>
<td>29</td>
</tr>
<tr>
<td>B.A./B.S.</td>
<td>0</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
</tr>
<tr>
<td>College/University standing</td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>0</td>
</tr>
<tr>
<td>Sophomore</td>
<td>8</td>
</tr>
<tr>
<td>Junior</td>
<td>51</td>
</tr>
<tr>
<td>Senior</td>
<td>31</td>
</tr>
<tr>
<td>Graduate</td>
<td>0</td>
</tr>
<tr>
<td>Overall Grade Point Average (G.P.A.)</td>
<td></td>
</tr>
<tr>
<td>3.5 – 4.0</td>
<td>26</td>
</tr>
<tr>
<td>3.0 – 3.49</td>
<td>43</td>
</tr>
</tbody>
</table>
2.5 - 2.99 19
2.0 - 2.49 2

Program of study
- Elementary Education: 64
- Secondary Education: 24
- Early Childhood Education: 1
- No response: 1

Number of methods courses taken
- 0-1: 60
- 2-3: 24
- 4+: 5
- No response: 1

Practicum classes taken
- Yes: 14
- No: 76

Grade level interested in teaching
- Elementary (K-6): 60
- Middle School (7-8): 2
- High School (9-12): 28

Prior experience with individuals with disabilities  Mean Number of Years
- No Experience: 49
- Immediate Family: 13 12.93 years
  - Autism
  - Down Syndrome

84

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
<table>
<thead>
<tr>
<th></th>
<th>Count</th>
<th>Average Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traumatic Brain Injury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Disabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Retardation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speech Impairment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spina Bifida</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Friend(s)</strong></td>
<td>16</td>
<td>3.82</td>
</tr>
<tr>
<td>ADHD/Dyslexia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cerebral Palsy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deaf</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Down Syndrome (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Retardation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple Disabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Co-worker</strong></td>
<td>4</td>
<td>2.75</td>
</tr>
<tr>
<td>Cerebral Palsy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Retardation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Work Experience</strong></td>
<td>11</td>
<td>2.37</td>
</tr>
<tr>
<td>ADHD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autism (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Disturbance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traumatic Brain Injury</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>6</td>
<td>6.38</td>
</tr>
<tr>
<td>Autism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speech and Language Impairment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spinal Cord Injury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Retardation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADHD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2

Demographic Information for Graduate and Undergraduate Special Education preservice Teachers

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>37</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
</tr>
<tr>
<td>Female</td>
<td>25</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
</tr>
<tr>
<td>Age</td>
<td>M = 27.33 years</td>
</tr>
<tr>
<td>Highest degree earned</td>
<td></td>
</tr>
<tr>
<td>H.S. Diploma</td>
<td>11</td>
</tr>
<tr>
<td>A.A. Degree</td>
<td>3</td>
</tr>
<tr>
<td>B.A./B.S.</td>
<td>21</td>
</tr>
<tr>
<td>Graduate Degree</td>
<td>2</td>
</tr>
<tr>
<td>College/University standing</td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>3</td>
</tr>
<tr>
<td>Sophomore</td>
<td>5</td>
</tr>
<tr>
<td>Junior</td>
<td>2</td>
</tr>
<tr>
<td>Senior</td>
<td>3</td>
</tr>
<tr>
<td>Graduate</td>
<td>23</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
</tr>
<tr>
<td>Overall Grade Point Average (G.P.A.)</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>3.5 - 4.0</td>
<td>17</td>
</tr>
<tr>
<td>3.0 - 3.49</td>
<td>14</td>
</tr>
<tr>
<td>2.5 - 2.99</td>
<td>5</td>
</tr>
<tr>
<td>2.0 - 2.49</td>
<td>0</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program of study</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary Education</td>
<td>1</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>30</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>School Psychology</td>
<td>4</td>
</tr>
<tr>
<td>Psychology</td>
<td>1</td>
</tr>
<tr>
<td>Undecided</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of methods courses taken</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>27</td>
</tr>
<tr>
<td>2-3</td>
<td>6</td>
</tr>
<tr>
<td>4+</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practicum classes taken</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>6</td>
</tr>
<tr>
<td>No</td>
<td>31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade level interested in teaching</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Education (K-6)</td>
<td>22</td>
</tr>
<tr>
<td>Special Education (7-8)</td>
<td>3</td>
</tr>
<tr>
<td>Prior experience with individuals with disabilities</td>
<td>Mean Number of Years</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>No Experience</td>
<td>12</td>
</tr>
<tr>
<td>Immediate Family</td>
<td>8</td>
</tr>
<tr>
<td>19 years</td>
<td></td>
</tr>
<tr>
<td>ADHD</td>
<td></td>
</tr>
<tr>
<td>Autism, Deafness</td>
<td></td>
</tr>
<tr>
<td>Emotional Disturbance (2)</td>
<td></td>
</tr>
<tr>
<td>Learning Disability</td>
<td></td>
</tr>
<tr>
<td>Mental Retardation (2)</td>
<td></td>
</tr>
<tr>
<td>Physical Disability</td>
<td></td>
</tr>
<tr>
<td>Spina Bifida</td>
<td></td>
</tr>
<tr>
<td>Epilepsy</td>
<td></td>
</tr>
<tr>
<td>Friend(s)</td>
<td>7</td>
</tr>
<tr>
<td>5.86 years</td>
<td></td>
</tr>
<tr>
<td>ADD</td>
<td></td>
</tr>
<tr>
<td>ADHD</td>
<td></td>
</tr>
<tr>
<td>Aspergers</td>
<td></td>
</tr>
<tr>
<td>Autism, Blindness</td>
<td></td>
</tr>
<tr>
<td>Traumatic Brain Injury</td>
<td></td>
</tr>
<tr>
<td>Deafness</td>
<td></td>
</tr>
<tr>
<td>Mental Retardation (2)</td>
<td></td>
</tr>
<tr>
<td>Down Syndrome</td>
<td></td>
</tr>
<tr>
<td>Multiple Sclerosis</td>
<td></td>
</tr>
<tr>
<td>Physical Disability</td>
<td></td>
</tr>
<tr>
<td>Co-worker</td>
<td>2</td>
</tr>
<tr>
<td>3.5 years</td>
<td></td>
</tr>
<tr>
<td>Mental Retardation</td>
<td></td>
</tr>
<tr>
<td>Physical Impairment</td>
<td></td>
</tr>
<tr>
<td>Hearing Impairment</td>
<td></td>
</tr>
<tr>
<td>Work Experience</td>
<td>11</td>
</tr>
<tr>
<td>3.55 years</td>
<td></td>
</tr>
<tr>
<td>Aspergers</td>
<td></td>
</tr>
<tr>
<td>Autism (2)</td>
<td></td>
</tr>
<tr>
<td>Mental Retardation (2)</td>
<td></td>
</tr>
<tr>
<td>Physical Impairment</td>
<td></td>
</tr>
<tr>
<td>General Disabilities</td>
<td></td>
</tr>
</tbody>
</table>
This study took place at the University of Nevada, Las Vegas; a large metropolitan university of 25,000 undergraduate and graduate students. As the largest university in the state of Nevada, UNLV has 180 Degree programs at the Bachelor’s, Master’s, and Doctorate levels. The university recently completed a new library that includes more than 600,000 volumes, 6,000 journals, and approximately 300 journals in education. The College of Education (COE) is an accredited program by the National Council for Accreditation of Teacher Education (NCATE). The COE is one of the larger colleges at UNLV, with over 100 full time faculty members. Four of the five departments (Special Education, Educational Administration, Curriculum & Instruction, and Educational Psychology) have fully approved doctoral programs.

Course Descriptions

The participants in this study enrolled in either ESP 200, *Introduction to Students with Disabilities*, ESP 444, *Special Education Techniques in General Education Settings*, or ESP 701, *Introduction to Special Education*. The course description of ESP 200, *Introduction to Students with Disabilities*, according to
the University of Nevada, Las Vegas, Undergraduate Catalog (2002) is, "Survey of the characteristics, training, and educational needs of handicapped and gifted children. Designed for undergraduate students in special education, general education, nursing, counseling, psychology, and related fields. Prerequisite to all subsequent courses in special education" (p.114). The course description of ESP 444, *Special Education Techniques in General Education Settings*, according to the University of Nevada, Las Vegas, Undergraduate Catalog (2002) is, "Exploration of techniques/principles commonly employed in special education and their usefulness to regular class teachers, recreation personnel, parents, and others who work with handicapped children in regular settings" (p. 114). The course description of ESP 701, *Introduction to Special Education*, according to the University of Nevada, Las Vegas, Graduate Catalog (2001) is:

Survey of the characteristics, training, and educational needs of students with disabilities. Designed for graduate students in special education, general education, nursing, counseling, psychology and related fields. Required of all students in the Generalist Program who do not have a bachelor's degree in special education. (p. 105)

Instrumentation

There are two instruments that were used in this study (1) *Knowledge Test*, and (2) *Preservice Teacher Service Delivery Survey* (see Appendices A and B).
Knowledge Test

The Knowledge Test consists of 40 multiple choice questions designed to address content related to the NCATE Standards for these introductory courses. The course syllabi for ESP 444, Special Education Techniques for Regular Education Teachers, ESP 200, Introduction to Students with Disabilities, and ESP 701, Introduction to Special Education were compared to determine NCATE Standards that are common to all three courses. The Content Standards (CS) are endorsed by the Council for Exceptional Children (CEC) as the professional standards for special education and they were used as the foundation for the test questions. The Content Standards that are similar for each course are: (a) CS1 – Foundations, (b) CS4 – Instructional Strategies, and (c) CS7 – Instructional Planning. Within each standard, there are Common Core (CC), Knowledge (K) and Skills (S) components that are similar for each course, they are: (a) rights and responsibilities of students, parents, teachers, and other professionals, and schools related to exceptional learning needs (CEC CS1, CC1 K4), (b) issues in definition and identification of individuals with exceptional learning needs, including those from culturally and linguistically diverse backgrounds (CEC CS1, CC1 K5), (c) issues, assurances and due process rights related to assessment, eligibility, and placement within a continuum of services (CEC CS1, CC1 K6), (d) select, adapt, and use instructional strategies and materials according to characteristics of the individual with exceptional learning needs (CEC CS4, CC4 S3), (e) theories and research that form the basis of curriculum development and instructional practice (CEC CS7, CC7 K1), (f) scope and sequences of general
and special curricula (CEC CS7, CC 7 K2), (g) national, state or provincial, and local curricula standards (CEC CS7, CC 7 K3), (h) technology for planning and managing the teaching and learning environment (CEC CS7, CC7 K4), and (i) roles and responsibilities of the paraeducator related to instruction, intervention, and direct service. The common standards were divided into four categories with each category addressing one of four topics: (a) legal issues (CEC CS1, CC1 K4,5), (b) individual education plans (IEP)(CEC CS4, CC4 S3 CEC CS6, CC6 S2), (c) placement (CEC CS1, CC1 K6), or (d) service delivery (CEC CS1, CC1 K6, CEC CS7, CC7 K-5). Ten questions related to each topic (e.g., legal issues, individual education plans, placement, service delivery) were randomly selected from the Instructor's Manual and Test Bank for Teaching Students with Special Needs in Inclusive Settings (1995). There were a total of 40 questions on the Knowledge Test. The number of questions was necessary to address reliability issues and to allow for separate interpretations of the four topic areas. The Knowledge Test topics were organized in the following order: (a) legal issues, (b) IEP, (c) placement, and (d) service delivery.

Preservice Teacher Service Delivery Survey

The Preservice Teacher Service Delivery Survey consists of 15 questions regarding appropriate placement for students with disabilities. There were five placement options to choose from for each of the 14 federal disability categories. For the purposes of this survey, the area of mental retardation was separated into two questions. The survey distinguished between mild mental retardation and severe mental retardation. The five placement choices addressed the
following service delivery options: general education classroom, the general education classroom with consultation, the resource classroom, a separate classroom, and a separate school. A definition for these five placement options was provided on the survey. Each respondent was asked to identify a placement for each of the 14 federal disability categories plus one category for mild mental retardation. Following each question, the participants were asked to rate their level of comfort about each placement choice. A four-point Likert Scale was provided on the survey and respondents indicated whether they were strongly confident, confident, not so confident, or not confident at all with their choice on various service delivery options for students with each of the 15 types of disability. Attached to the Preservice Teacher Service Delivery Survey was a demographic survey. Specific items on this survey included: gender, age, highest degree earned, university standing, current overall grade point average, major, minor, number of methods courses taken, if they were currently teaching, number of practicum courses taken, grade levels interested in teaching, and prior experience with individuals with disabilities.

Design and Procedures

*Phase One: Instrumentation Development*

The two instruments (i.e., Knowledge Test, Preservice Teacher Service Delivery Survey) were constructed by the researcher. After the Preservice Teacher Service Delivery Survey was created, a panel of experts reviewed the instruments and provided feedback. This panel included four faculty members of
the College of Education, five doctoral students in the College of Education, two professional survey developers, and two course instructors who taught an introductory course in special education. Input was also gathered from a pilot administration. After the review, specific changes to the instrument were instituted. These changes included using a definition page to identify the placement choices, including a five point scale for placement choice, and decreasing the number of questions on the instrument. The changes were made to the instrument and a pilot administration took place with a group of 30 preservice general education teachers. The participants in the pilot administration were asked to provide input and questions regarding the instrument and to identify any confusing or unclear questions. Personnel at the University of Nevada, Las Vegas Cannon Survey Center also reviewed the survey. The Preservice Teacher Service Delivery Survey went through four specific revisions in content, scale, and format to assist in addressing the usability of the instruments. The first step in the revision process and included creating a shorter survey. The first versions of the survey included over 70 questions for the 14 disability areas along with the inclusion of a definition page and a demographic page. This process of identifying the need to streamline the survey led to the second step of the process. The second step in the revision process included using feedback from the pilot study to improve the content and format for readability and user friendliness. From the pilot administration, the feedback and input was used to pare the original survey from over 70 questions to 14 questions with a choice of five responses for each question. After the number of questions
was reduced, another pilot administration was given to five doctoral students in the department of Special Education. Their feedback on the survey was used to create content and format changes. Following the final revisions and submission to a group of professors in the department of Special Education, the survey was revised to include a comfort level component. The survey also included identifying whether the respondents were general education teachers and/or special education teachers and if the respondents were currently teaching as a means to screen the completed surveys.

The Knowledge Test was derived from randomly chosen questions from a test bank. Specifically, some of the questions on the Knowledge Test were adapted from a test bank manual, *Instructor's Manual and Test Bank for Teaching Students with Special Needs in Inclusive Settings* (1995), copyright permission to use for dissertation purposes was granted (see Appendix C). After developing questions, the Knowledge Test topics were organized in the following order: (a) legal issues, (b) IEP, (c) placement, and (d) service delivery. The Knowledge Test was administered to four doctoral level students in the department of Special Education for feedback in the areas of content, usability, format, and clarity of questions. The responses were used to make minor modifications to the test.

**Phase Two: Study Preparation**

The Preservice Teacher Service Delivery Survey, the Knowledge Test, and protocol for human subjects was submitted to the University of Nevada, Las Vegas, Institutional Review Board for approval to conform to University and
federal policies for the ethical use of human subjects in research. After receiving approval, informed consent forms were completed and attached to the 

Preservice Teacher Service Delivery Survey. Each participant was asked to participate in the study and to fill out the informed consent (see Appendix D). The informed consent forms were then collected from each participant before administration of the Preservice Teacher Service Delivery Survey and Knowledge Test. The demographic information page was also attached to each survey. Specific instructions were given to each group of participants to complete the instruments to the best of their ability.

The participants were identified using the master schedule within the College of Education at UNLV. The courses that were used included, three sections of ESP 444, Special Education Techniques in General Education Settings, two sections of ESP 701, Introduction to Special Education, and one section of ESP 200, Introduction to Students with Disabilities. All of the courses were offered during the fall term of 2003. Instructors for each of these courses were identified during this process. Course Instructors were contacted for permission to use their class time to administer the Knowledge Test, and the Preservice Teacher Service Delivery Survey. Packets were created for a pre and post administration of the Knowledge Test and the Preservice Teacher Service Delivery Survey. The first meeting date for each course section was identified and targeted to administer the pretest instrumentation. The third to the last week of the term was identified as the administration date of the posttest instrumentation.
Phase Three: Data Collection

The administration of the instrumentation and collection of data was completed in two phases (i.e., pretest and posttest). The first phase included the administration of the informed consent forms, the Knowledge Test, the Preservice Teacher Service Delivery Survey, and the demographic information page (see Appendix A). The second phase (i.e., posttests) included administration of the Knowledge Test, and the Preservice Teacher Service Delivery Survey without the demographic information page.

Before the administration of the surveys, the students were asked to fill out the informed consent forms for participation in the study. After gathering the consent forms, the first sets of surveys (i.e., pretests) were distributed to participating students enrolled in each course section and were collected using three collection envelopes for each section. Each section included three envelopes labeled with the appropriate course number ESP 444, ESP 200, and ESP 701. Each course was also distinguished by the color of the materials within each packet. ESP 444 received white copies, ESP 200 received light-blue copies, and ESP 701 received canary copies. The first envelope was marked demographic information, the second envelope was marked as PTSDS I, and the third envelope was marked as Knowledge I. These data were gathered on the first meeting date of the courses.

Data for the first set of surveys were entered into SPSS 10, a statistical software package (SPSS, Inc., 1999). Each set of data were separated by special education and general education responses. Demographic information
was also entered into a database to report as cumulative totals for each group (e.g., general education, special education).

The Second sets of surveys were distributed three weeks before the end of the semester. The same collection procedure was used to collect the information. The data were collected using two collection envelopes for each section. Each section included two envelopes for each course section labeled ESP 444, ESP 200, and ESP 701 and were marked as PTSDS II, and Knowledge II. Data for the second posttest administration were entered into SPSS 10 a statistical software package (SPSS, Inc., 1999).
CHAPTER 4

RESULTS

The purposes of this study were: (a) to compare general and special education preservice teachers' attitudes regarding educational placements for students with disabilities, (b) to determine whether these attitudes are disability specific and, (c) to determine whether change in knowledge has an effect on attitude toward placement over the course of a semester while enrolled in introductory classes about students with disabilities..

Preservice teachers' attitudes regarding placement choices and knowledge gained during an introductory special education course were measured using two instruments: (a) the Preservice Teacher Service Delivery Survey (Appendix A), and (b) the Knowledge Test (Appendix B).

The Preservice Teacher Service Delivery Survey focused on placement choices for specific disability categories and also included a section to record the degree of confidence for the chosen placement. The Knowledge Test focused on four specific domains of special education; law, individual educational planning, placement, and service delivery.

Of the 90 participants who were general education preservice teachers, 90 completed the Preservice Teacher Service Delivery Survey and 90 completed the Knowledge Test during the pretest phase of the study. Of the 37 participants
who were special education preservice teachers, 37 completed the *Preservice Teacher Service Delivery Survey* and 37 completed the *Knowledge Test* during the pretest phase of the study. Of the 90 participants who were general education preservice teachers, 76 completed the *Preservice Teacher Service Delivery Survey* and 76 completed the *Knowledge Test* during the posttest phase of the study. Of the 37 participants who were special education preservice teachers, 34 completed the *Preservice Teacher Service Delivery Survey* and 37 completed the *Knowledge Test* during the posttest phase of the study.

Descriptive and inferential statistical procedures were applied to the research data to answer the questions in this study. A .05 level of confidence was used to test for significant differences. The results of the analyses are organized by the research questions.

Research Question 1. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement that is disability specific?

Results from the preservice (general education and special education) teacher responses were entered into SPSS to identify placement choices for each area of disability. Placement choices were coded using numerical values that ranged from 1 to 5 (i.e., 1 = general education classroom, 2 = general education classroom with consultation, 3 = resource classroom, 4 = separate classroom, and 5 = separate school). Degree of confidence scores related to each placement choice were coded with numerical values that ranged from 1 to 4.
(i.e., 1 = very confident, 2 = confident, 3 = not so confident, and 4 = not at all confident).

A Bonferroni post hoc adjustment was used with each between group analyses to control for experimentwise error and was accomplished by computing the correlation coefficients for each of the areas of disability. Each correlation coefficient was converted into a Fisher's z function and a mean for all of the z functions was calculated and converted back to an equivalent correlation coefficient. The equivalent correlation was calculated using the Bonferroni adjustment using the desired alpha level (.05), the number of t-test (15), and the average correlation (pretest placement, \( r = .21 \), posttest placement, \( r = .33 \), pretest level of confidence, \( r = .46 \), posttest level of confidence, \( r = .33 \)). This resulted in an adjusted level of significance equal to .003 for subsequent analyses.

**Pretest Results for Placement Choices**

Results from the independent samples t-test for the pretest for each of the 14 areas of disability are reported in Table 3. The pretest results indicated there were no significant differences between special and general education preservice teachers related to placement choices for students with autism, traumatic brain injury, deaf-blindness, other health impairments, orthopedic impairments, hearing impairments, deafness, multiple disabilities, visual impairments, speech and language impairments, specific learning disabilities, mild mental retardation, severe mental retardation, emotional disturbance, or developmental delay.
More restrictive end of placement continuum (i.e., 3.01). For students with autism (special education $M = 3.76$, $SD = .89$, general education $M = 3.27$, $SD = 1.10$), students with traumatic brain injury (special education $M = 3.97$, $SD = .99$, general education $M = 3.72$, $SD = 1.11$), students with deaf-blindness (special education $M = 3.68$, $SD = 1.23$, general education $M = 3.73$, $SD = 1.27$), students with multiple disabilities (special education $M = 3.51$, $SD = .87$, general education $M = 3.31$, $SD = 1.05$), and students with severe mental retardation (special education $M = 4.05$, $SD = .78$, general education $M = 4.27$, $SD = .83$), both groups of preservice teachers chose a placement that falls on the restrictive end of the continuum. The general education preservice teachers also chose a placement that falls on the restrictive end of the continuum for students with deafness ($M = 3.34$, $SD = 2.39$).

Midway on the placement continuum (i.e., 2.41 – 3.00). Special education preservice teachers chose a placement that falls midway on the continuum for students with deafness ($M = 2.95$, $SD = 1.27$), students with hearing impairments ($M = 2.49$, $SD = 1.01$), students with visual impairments ($M = 2.70$, $SD = 1.26$), students with speech and language impairments ($M = 2.57$, $SD = .83$), students with specific learning disabilities ($M = 2.51$, $SD = .73$), students with mild mental retardation ($M = 2.92$, $SD = .92$), students with emotional disturbance ($M = 2.64$, $SD = .76$), and students with developmental delay ($M = 2.49$, $SD = .87$). General education preservice teachers chose a placement that falls midway on the continuum for students with visual impairments ($M = 2.66$, $SD = 1.26$), and students with mild mental retardation ($M = 2.94$, $SD = .95$). Thus, the special
education and general education preservice teachers chose similar placements for students with visual impairments and for students with mild mental retardation.

*Less restrictive end of placement continuum (i.e., 1.00 – 2.40).* The general education preservice teachers chose a placement that falls on the less restrictive end of the continuum for students with hearing impairments \( (M = 2.20, SD = .90) \), students with speech and language impairments \( (M = 2.35, SD = .89) \), students with specific learning disabilities \( (M = 2.31, SD = .80) \), students with emotional disturbance \( (M = 2.24, SD = .93) \), and students with developmental delay \( (M = 2.27, SD = .87) \).

Both groups of preservice teachers chose a placement that falls on the less restrictive end of the continuum for students with orthopedic impairments (special education \( M = 1.51, SD = .80 \), general education \( M = 1.62, SD = .87 \)), and students with other health impairments (special education \( M = 2.19, SD = .85 \), general education \( M = 2.20, SD = .99 \)).

*Pretest Result for Confidence in Placement Choices*

The pretest results indicated there were no significant differences between special and general education preservice teachers with regard to their degree of confidence related to the placement choices for students with disabilities. The results from the independent samples t-test for degrees of confidence for each of the 14 areas of disability are reported in Table 4. Although not statistically significant, the special education preservice teachers' mean scores for placement confidence were higher than those of the general education preservice teachers.
for students with autism (special education $M = 2.19$, $SD = .74$, general education $M = 2.29$, $SD = .55$), students with traumatic brain injury (special education $M = 2.16$, $SD = .83$, general education $M = 2.39$, $SD = .67$), students with deaf-blindness (special education $M = 2.22$, general education $M = 2.26$, $SD = .78$), students with deafness (special education $M = 2.22$, $SD = .92$, general education $M = 2.29$, $SD = .68$), students with multiple disabilities (special education $M = 2.41$, $SD = .80$, general education $M = 2.43$, $SD = .68$), students with visual impairments (special education $M = 2.19$, $SD = .88$, general education $M = 2.25$, $SD = .65$), and students with mild mental retardation (special education $M = 2.25$, $SD = .87$, general education $M = 2.38$, $SD = .67$). The general education preservice teachers' mean scores for placement confidence were higher than those of the special education preservice teachers for students with orthopedic impairments (general education $M = 2.00$, $SD = .74$, special education $M = 2.16$, $SD = .93$), students with other health impairments (general education $M = 2.25$, $SD = .66$, special education $M = 2.30$, $SD = .85$), students with hearing impairments (general education $M = 2.15$, $SD = .65$, special education $M = 2.19$, $SD = .91$), students with speech and language impairments (general education $M = 2.19$, $SD = .58$, special education $M = 2.28$, $SD = .88$), students with specific learning disabilities (general education $M = 2.16$, $SD = .64$, special education $M = 2.19$, $SD = .88$), students with severe mental retardation (general education $M = 2.15$, $SD = .65$, special education $M = 2.23$, $SD = .82$), students with emotional disturbance (general education $M = 2.30$, $SD = .58$, special education $M = 2.32$, $SD = .85$).
$SD = .78$), and students with developmental delay (general education $M = 2.21$, $SD = .55$, special education $M = 2.30$, $SD = .88$).

**Posttest Results for Placement Choices**

The posttest results indicated there was a statistically significant difference between special and general education preservice teachers related to placement choices for students with emotional disturbance (special education $M = 2.97$, $SD = .97$, general education $M = 2.24$, $SD = .93$). The special education group chose a placement that falls midway on the continuum and the general education group chose a placement that falls on the less restrictive end of the continuum. The results of the posttest placement are reported in Table 5.

There were no significant differences between special and general education preservice teachers on the posttest related to placement choices for students with autism, traumatic brain injury, deaf-blindness, orthopedic impairments, other health impairments, hearing impairments, deafness, multiple disabilities, visual impairments, speech and language impairments, specific learning disabilities, mild mental retardation, severe mental retardation, or developmental delay.

**More restrictive end of placement continuum (i.e., 3.01)**. The special education preservice teachers chose a placement that falls on the more restrictive end of the continuum for students with autism ($M = 3.24$, $SD = .86$), students with traumatic brain injury ($M = 3.61$, $SD = .97$), students with deaf-blindness ($M = 3.15$, $SD = 1.33$), students with multiple disabilities ($M = 3.32$, $SD = 1.04$), and students with severe mental retardation ($M = 4.03$, $SD = .63$). Similarly, the general education preservice teachers chose a placement that falls
on the more restrictive end of the continuum for students with traumatic brain injury \((M = 3.68, SD = 1.15)\), students with deaf-blindness \((M = 3.32, SD = 1.30)\), students with multiple disabilities \((M = 3.07, SD = 1.03)\), and students with severe mental retardation \((M = 3.99, SD = .85)\).

Midway on the placement continuum \((i.e., 2.41 - 3.00)\). For students with deafness \((M = 2.82, SD = 1.11)\), students with visual impairments \((M = 2.52, SD = 1.20)\), students with mild mental retardation \((M = 2.71, SD = .76)\), students with emotional disturbance \((M = 2.97, SD = .97)\), and students with developmental delay \((M = 2.47, SD = .86)\), the special education preservice teachers chose placements that fall midway on the continuum. The posttest data reflect a fewer number of choices for placements that fall midway on the continuum. The general education preservice teachers chose a placement that falls midway on the continuum for students with autism \((M = 2.84, SD = 1.07)\), students with deafness \((M = 2.68, SD = 1.20)\), and for students with mild mental retardation \((M = 2.87, SD = .811)\).

Less restrictive end of placement continuum \((i.e., 1.00 - 2.40)\). For students with orthopedic impairments (special education \(M = 1.79, SD = 1.08\), general education \(M = 1.63, SD = .80\)), students with other health impairments (special education \(M = 2.03, SD = .97\), general education \(M = 1.85, SD = .80\)), students with hearing impairments (special education \(M = 1.88, SD = .88\), general education \(M = 2.00, SD = .90\)), students with speech and language impairments (special education \(M = 2.27, SD = .79\), general education \(M = 2.25, SD = .77\)), and students with specific learning disabilities (special education \(M = 2.18, SD = .87\), general education \(M = 2.16, SD = .85\)).
.94, general education $M = 2.07, SD = .81$), both groups of preservice teachers chose a placement that falls on the less restrictive end of the continuum. The general education preservice teachers also chose a placement that falls on the less restrictive end of the continuum for students with visual impairments ($M = 2.13, SD = 1.02$), students with emotional disturbance ($M = 2.24, SD = .93$), and students with developmental delay ($M = 2.07, SD = .84$).

**Posttest Results for Confidence in Placement Choices**

Results of the independent samples t-test for posttest degree of confidence for placement choice of students with disabilities indicated there was no significant difference between special education and general education preservice teachers. The results are reported in Table 6. Although not statistically significant, the special education preservice teachers' mean scores for placement confidence were higher than those of general education preservice teachers for students with autism (special education $M = 1.87, SD = .72$, general education $M = 2.11, SD = .63$), students with traumatic brain injury (special education $M = 1.87, SD = .67$, general education $M = 2.15, SD = .63$), students with deafblindness (special education $M = 1.90, SD = .65$, general education $M = 2.05, SD = .55$), students with orthopedic impairments (special education $M = 1.83, SD = .65$, general education $M = 1.87, SD = .58$), students with other health impairments (special education $M = 1.81, SD = .60$, general education $M = 1.99, SD = .65$), students with hearing impairments (special education $M = 1.84, SD = .58$, general education $M = 1.93, SD = .51$), students with deafness (special education $M = 1.90, SD = .54$, general education $M = 2.10, SD = .58$), students
with visual impairments (special education $M = 1.87, SD = .56$, general education $M = 2.00, SD = .55$), students with specific learning disabilities (special education $M = 1.77, SD = .62$, general education $M = 1.90, SD = .63$), students with mild mental retardation (special education $M = 1.97, SD = .66$, general education $M = 2.14, SD = .63$), students with severe mental retardation (special education $M = 1.77, SD = .56$, general education $M = 2.16, SD = .65$), students with emotional disturbance (special education $M = 1.90, SD = .65$, general education $M = 2.06, SD = .58$), and students with developmental delay (special education $M = 1.93, SD = .69$, general education $M = 2.10, SD = .58$). For students with speech and language impairments the general education preservice teachers' mean scores for placement confidence were higher than those of special education preservice teachers ($M = 1.89, SD = .54$, special education $M = 1.94, SD = .68$).

Research Question 2. Is there a difference between general education and special education preservice teachers' level of knowledge about special education after taking a semester-long introductory course?

Results from the Knowledge Test for both groups (general education and special education) preservice teacher responses were entered into SPSS to identify mean scores for each group on the pretest and on the posttest. Independent samples t-test and a univariate analysis of variance (ANOVA) were conducted to determine any differences. The results of the analyses are reported in Table 7. The results of the t-test indicated there was no significant difference between the special and general education teachers on the pretest (special education $M = 24.38, SD = 4.65$, general education $M = 24.76, SD = 4.48$). The
general education group scored higher on the pretest than the special education group. There was no significant difference between the special and general education preservice teachers on the posttest (special education $M = 27.41$, $SD = 4.56$, general education $M = 26.58$, $SD = 4.69$). The special education group scored higher on the posttest than the general education group. The scores for the pretest reflect a 61% for the special education preservice teachers and a 62% for the general education preservice teachers. The scores for the posttest reflect a 69% for the special education preservice teachers and a 67% for the general education preservice teachers. Results from the ANOVA (see Table 8) indicate there was no significant difference between the groups on the pretest, $F(1,125) = .182, p > .05$. There was no significant difference on the posttest, $F(1,110) = .788, p > .05$. To adjust for the possibility of significant pre-existing differences in knowledge on the content of the posttest between special and general education preservice teachers, an analysis of covariance (ANCOVA) was conducted using the pretest as a covariant. The results, $F(1,110) = .961, p > .05$, found no statistically significant difference in the Knowledge posttest after controlling for the effect of the pretest scores.
Table 3

*Between group Means and Standard Deviations for pretest placement choices (General Education and General Education Preservice Teachers)*

<table>
<thead>
<tr>
<th>Disability Area</th>
<th>Special Education</th>
<th>General Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M )</td>
<td>( SD )</td>
</tr>
<tr>
<td>Autism</td>
<td>3.76 .89</td>
<td>3.27 1.10</td>
</tr>
<tr>
<td>Traumatic Brain Injury</td>
<td>3.97 .99</td>
<td>3.72 1.11</td>
</tr>
<tr>
<td>Deaf-Blindness</td>
<td>3.68 1.23</td>
<td>3.73 1.27</td>
</tr>
<tr>
<td>Orthopedic Impairments</td>
<td>1.51 .80</td>
<td>1.62 .87</td>
</tr>
<tr>
<td>Other Health Impairments</td>
<td>2.19 .85</td>
<td>2.02 .99</td>
</tr>
<tr>
<td>Hearing Impairments</td>
<td>2.49 1.01</td>
<td>2.20 .90</td>
</tr>
<tr>
<td>Deafness</td>
<td>2.95 1.27</td>
<td>3.34 2.39</td>
</tr>
<tr>
<td>Multiple Disabilities</td>
<td>3.51 .87</td>
<td>3.31 1.05</td>
</tr>
<tr>
<td>Visual Impairments</td>
<td>2.70 1.26</td>
<td>2.66 1.26</td>
</tr>
<tr>
<td>Speech and Language Impairments</td>
<td>2.57 .83</td>
<td>2.35 .89</td>
</tr>
<tr>
<td>Specific Learning Disabilities</td>
<td>2.51 .73</td>
<td>2.31 .80</td>
</tr>
<tr>
<td>Mild Mental Retardation</td>
<td>2.92 .92</td>
<td>2.94 .95</td>
</tr>
<tr>
<td>Severe Mental Retardation</td>
<td>4.05 .78</td>
<td>4.27 .83</td>
</tr>
<tr>
<td>Emotional Disturbance</td>
<td>2.64 .76</td>
<td>2.24 .93</td>
</tr>
<tr>
<td>Developmental Delay</td>
<td>2.49 .87</td>
<td>2.27 .87</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Table 4

*Between group Means and Standard Deviations for pretest confidence (Special and General Education Preservice Teachers)*

<table>
<thead>
<tr>
<th>Disability Area</th>
<th>Special Education</th>
<th>General Education</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Autism</td>
<td>2.19</td>
<td>.74</td>
<td>2.29</td>
</tr>
<tr>
<td>Traumatic Brain Injury</td>
<td>2.16</td>
<td>.83</td>
<td>2.39</td>
</tr>
<tr>
<td>Deaf-Blindness</td>
<td>2.22</td>
<td>1.00</td>
<td>2.26</td>
</tr>
<tr>
<td>Orthopedic Impairments</td>
<td>2.16</td>
<td>.93</td>
<td>2.00</td>
</tr>
<tr>
<td>Other Health Impairments</td>
<td>2.30</td>
<td>.85</td>
<td>2.25</td>
</tr>
<tr>
<td>Hearing Impairments</td>
<td>2.19</td>
<td>.91</td>
<td>2.15</td>
</tr>
<tr>
<td>Deafness</td>
<td>2.22</td>
<td>.92</td>
<td>2.29</td>
</tr>
<tr>
<td>Multiple Disabilities</td>
<td>2.41</td>
<td>.80</td>
<td>2.43</td>
</tr>
<tr>
<td>Visual Impairments</td>
<td>2.19</td>
<td>.88</td>
<td>2.25</td>
</tr>
<tr>
<td>Speech and Language Impairments</td>
<td>2.28</td>
<td>.88</td>
<td>2.19</td>
</tr>
<tr>
<td>Specific Learning Disabilities</td>
<td>2.19</td>
<td>.88</td>
<td>2.16</td>
</tr>
<tr>
<td>Mild Mental Retardation</td>
<td>2.25</td>
<td>.87</td>
<td>2.38</td>
</tr>
<tr>
<td>Severe Mental Retardation</td>
<td>2.23</td>
<td>.82</td>
<td>2.15</td>
</tr>
<tr>
<td>Emotional Disturbance</td>
<td>2.32</td>
<td>.78</td>
<td>2.30</td>
</tr>
<tr>
<td>Developmental Delay</td>
<td>2.30</td>
<td>.88</td>
<td>2.21</td>
</tr>
</tbody>
</table>
Table 5

*Between group Means and Standard Deviations for posttest placement choices (Special and General Education Preservice Teachers)*

<table>
<thead>
<tr>
<th>Disability Area</th>
<th>Special Education</th>
<th>General Education</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Autism</td>
<td>3.24</td>
<td>.86</td>
<td>2.84</td>
</tr>
<tr>
<td>Traumatic Brain Injury</td>
<td>3.61</td>
<td>.97</td>
<td>3.68</td>
</tr>
<tr>
<td>Deaf-Blindness</td>
<td>3.15</td>
<td>1.33</td>
<td>3.32</td>
</tr>
<tr>
<td>Orthopedic Impairments</td>
<td>1.79</td>
<td>1.08</td>
<td>1.63</td>
</tr>
<tr>
<td>Other Health Impairments</td>
<td>2.03</td>
<td>.97</td>
<td>1.85</td>
</tr>
<tr>
<td>Hearing Impairments</td>
<td>1.88</td>
<td>.88</td>
<td>2.00</td>
</tr>
<tr>
<td>Deafness</td>
<td>2.82</td>
<td>1.11</td>
<td>2.68</td>
</tr>
<tr>
<td>Multiple Disabilities</td>
<td>3.32</td>
<td>1.04</td>
<td>3.07</td>
</tr>
<tr>
<td>Visual Impairments</td>
<td>2.52</td>
<td>1.20</td>
<td>2.13</td>
</tr>
<tr>
<td>Speech and Language Impairments</td>
<td>2.27</td>
<td>.79</td>
<td>2.25</td>
</tr>
<tr>
<td>Specific Learning Disabilities</td>
<td>2.18</td>
<td>.94</td>
<td>2.07</td>
</tr>
<tr>
<td>Mild Mental Retardation</td>
<td>2.71</td>
<td>.76</td>
<td>2.87</td>
</tr>
<tr>
<td>Severe Mental Retardation</td>
<td>4.03</td>
<td>.63</td>
<td>3.99</td>
</tr>
<tr>
<td>Emotional Disturbance</td>
<td>2.97</td>
<td>.97</td>
<td>2.24</td>
</tr>
<tr>
<td>Developmental Delay</td>
<td>2.47</td>
<td>.86</td>
<td>2.07</td>
</tr>
</tbody>
</table>

*Note.* *Significant at the p < .003 level.*

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
### Table 6

**Between group Means and Standard Deviations for posttest confidence (Special and General Education Preservice Teachers)**

<table>
<thead>
<tr>
<th>Disability Area</th>
<th>Special Education</th>
<th>General Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
</tbody>
</table>
| Autism                     | 1.87  | .72   | 2.11  | .63   | .10  
| Traumatic Brain Injury      | 1.87  | .67   | 2.15  | .63   | .05  
| Deaf-Blindness              | 1.90  | .65   | 2.05  | .55   | .23  
| Orthopedic Impairments      | 1.83  | .65   | 1.87  | .58   | .81  
| Other Health Impairments    | 1.81  | .60   | 1.99  | .65   | .19  
| Hearing Impairments         | 1.84  | .58   | 1.93  | .51   | .41  
| Deafness                    | 1.90  | .54   | 2.10  | .58   | .12  
| Multiple Disabilities       | 1.94  | .63   | 2.16  | .66   | .11  
| Visual Impairments          | 1.87  | .56   | 2.00  | .55   | .28  
| Speech and Language Impairments | 1.94 | .68   | 1.89  | .54   | .72  
| Specific Learning Disabilities | 1.77 | .62   | 1.90  | .63   | .33  
| Mild Mental Retardation     | 1.97  | .66   | 2.14  | .63   | .22  
| Severe Mental Retardation   | 1.77  | .56   | 2.16  | .65   | .01  
| Emotional Disturbance       | 1.90  | .65   | 2.06  | .58   | .11  
| Developmental Delay         | 1.93  | .69   | 2.10  | .58   | .28  

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
<table>
<thead>
<tr>
<th>Pre/Post</th>
<th>Special Education</th>
<th>General Education</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
</tr>
<tr>
<td>Pretest</td>
<td>24.38</td>
<td>4.65</td>
<td>24.76</td>
</tr>
<tr>
<td>Posttest</td>
<td>27.41</td>
<td>4.56</td>
<td>26.58</td>
</tr>
</tbody>
</table>

Table 8

Analysis of Variance for the Knowledge Test (Special and General Education Preservice Teachers)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Ms</th>
<th>$F$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>1</td>
<td>3.73</td>
<td>.182</td>
<td>.67</td>
</tr>
<tr>
<td>Group</td>
<td>125</td>
<td>20.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>1</td>
<td>17.00</td>
<td>.788</td>
<td>.38</td>
</tr>
<tr>
<td>Group</td>
<td>110</td>
<td>21.56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Research Question 3. Does level of knowledge affect general education and special education preservice teachers' attitudes about placement that is disability specific?

Data from the Knowledge Test and the Preservice Teacher Service Delivery Survey were analyzed using the Pearson's correlation coefficient to indicate the relationship between total score on the Knowledge Test and placement responses on the Preservice Teacher Service Delivery Survey. The results of the analyses are reported in Table 9. The data indicated there were two statistically significant differences, identifying there was a relationship between placement choices for students with other health impairments ($r = -.15, p < .05$) and students with developmental delay ($r = -.17, p < .01$) and the total score on the Knowledge Test. Knowledge and placement were correlated for the general education and special education preservice teachers' attitudes about placement for students with other health impairments and for students with developmental delay. The data indicated the relationship between knowledge and placement was negatively correlated, indicating the higher the level of knowledge, the choice for placement fell on the less restrictive end of the continuum. In other words, the data indicated increased knowledge resulted in selecting more inclusive placements. There were no differences in the relationships between total knowledge and all other areas of disability.

Research Question 4. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement for students with high incidence disabilities?
Data from the specific disability areas of Speech and Language Impairments, Specific Learning Disabilities, and Emotional Disturbance were combined to answer this question. Independent samples t-test was used to identify any mean differences between the two groups on both the pretest responses and posttest responses. A Bonferroni post hoc correction was used with each between group analyses to control for experimentwise error and was accomplished by computing the correlation coefficients for each of the high incidence disability areas. Each correlation coefficient was converted into a Fisher's z function and a mean for all of the z functions was calculated and converted back to an equivalent correlation. The equivalent correlation was calculated using the Bonferroni adjustment using the desired alpha level (.05), the number of t-test (3), and the average correlation (pretest placement, $r = .29$, posttest placement, $r = .38$, pretest level of confidence, $r = .45$, posttest level of confidence, $r = .63$). This resulted in an adjusted level of significance equal to .02 for subsequent analyses.

Results for students with high incidence disabilities are indicated in Table 10. Results indicated there was no difference between the two groups on the pretest for placement choice for students with high incidence disabilities (special education $M = 2.58, SD = .57$, general education $M = 2.38, SD = .65$). There was no difference in degree of confidence between each group on the pretest (special education $M = 2.26, SD = .71$, general education $M = 2.19, SD = .62$). Data for the posttest administration indicated there was no difference between groups on posttest placement choices (special education $M = 2.45, SD = .71$, general
Table 9

Summary of Knowledge with Disability

<table>
<thead>
<tr>
<th>Disability</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autism</td>
<td>.02</td>
<td>.82</td>
</tr>
<tr>
<td>Traumatic Brain Injury</td>
<td>.01</td>
<td>.84</td>
</tr>
<tr>
<td>Deaf-Blindness</td>
<td>.03</td>
<td>.61</td>
</tr>
<tr>
<td>Orthopedic Impairments</td>
<td>-.12</td>
<td>.06</td>
</tr>
<tr>
<td>Other Health Impairments</td>
<td>-.15</td>
<td>.02*</td>
</tr>
<tr>
<td>Hearing Impairments</td>
<td>-.01</td>
<td>.85</td>
</tr>
<tr>
<td>Deafness</td>
<td>.00</td>
<td>.97</td>
</tr>
<tr>
<td>Multiple Disabilities</td>
<td>-.05</td>
<td>.41</td>
</tr>
<tr>
<td>Visual Impairments</td>
<td>.05</td>
<td>.47</td>
</tr>
<tr>
<td>Speech and Language Impairments</td>
<td>-.10</td>
<td>.13</td>
</tr>
<tr>
<td>Specific Learning Disabilities</td>
<td>-.08</td>
<td>.22</td>
</tr>
<tr>
<td>Mild Mental Retardation</td>
<td>-.09</td>
<td>.15</td>
</tr>
<tr>
<td>Severe Mental Retardation</td>
<td>-.06</td>
<td>.40</td>
</tr>
<tr>
<td>Emotional Disturbance</td>
<td>-.07</td>
<td>.27</td>
</tr>
<tr>
<td>Developmental Delay</td>
<td>-.17</td>
<td>.007**</td>
</tr>
</tbody>
</table>

Note. *Significant at the p < .05 level

Note. **Significant at the p < .01 level
education $M = 2.19, SD = .62$). There was no difference in degree of posttest confidence (special education $M = 1.87, SD = .58$, general education $M = 1.95, SD = .48$) for placement of students with high incidence disabilities. On the pretest, the special education preservice teachers chose a placement that falls midway on the continuum. The general education preservice teachers chose a placement that falls on the less restrictive end of the continuum. The general education preservice teachers had a higher degree of confidence on the pretest than the special education preservice teachers.

Research Question 5. Are there differences between general education and special education preservice teachers’ attitudes regarding appropriate placement for students with low incidence disabilities?

Data from the specific disability areas of Autism, Traumatic Brain Injury, Deaf-Blindness, Other Health Impairments, Orthopedic Impairments, Hearing

Table 10

<table>
<thead>
<tr>
<th>Pre/Post</th>
<th>Special Education</th>
<th>General Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Pretest – placement</td>
<td>2.58</td>
<td>.57</td>
</tr>
<tr>
<td>Posttest – placement</td>
<td>2.45</td>
<td>.71</td>
</tr>
<tr>
<td>Pretest – confidence</td>
<td>2.26</td>
<td>.77</td>
</tr>
<tr>
<td>Posttest – confidence</td>
<td>1.87</td>
<td>.58</td>
</tr>
</tbody>
</table>
Impairments, Deafness, Multiple Disabilities, Severe Mental Retardation and Visual Impairments, Developmental Delays, and Mild Mental Retardation were combined to answer this question. A t-test was used to identify any mean differences between the two groups. A Bonferroni post hoc correction was used with each between group analyses to control for experimentwise error and was accomplished by computing the correlation coefficients for each of the areas for low incidence disabilities. Each correlation coefficient was converted into a Fisher's $z$ function and a mean for all of the $z$ functions was calculated and converted back to an equivalent correlation. The equivalent correlation was calculated using the Bonferroni adjustment using the desired alpha level (.05), the number of t-test (12), and the average correlation (pretest placement, $r = .21$, posttest placement, $r = .34$, pretest level of confidence, $r = .45$, posttest level of confidence, $r = .43$). This resulted in an adjusted level of significance equal to .004 for subsequent analyses.

Results for students with low incidence disabilities are indicated in Table 11. Results indicated there was no difference between the two groups for placement choices for students with low incidence disabilities (special education $M = 3.02$, $SD = .59$, general education $M = 2.95$, $SD = .56$). There was no difference in degree of placement confidence between each group on the pretest (special education $M = 2.23$, $SD = .74$, general education $M = 2.25$, $SD = .37$). Data for the posttest indicated there was no difference between the two groups on placement choice (special education $M = 2.80$, $SD = .64$, general education $M = 2.68$, $SD = .60$). There was no difference between the groups in their degree of
confidence for the posttest (special education $M = 1.88$, $SD = .48$, general education $M = 2.06$, $SD = .38$).

On the pretest, both the special education preservice teachers chose a placement that falls on the more restrictive end of the continuum and the general education preservice teachers chose a placement that falls midway on the continuum for students with low incidence disabilities. The general education preservice teachers had a higher degree of confidence on the pretest than the special education preservice teachers. On the posttest, both the special and general education preservice teachers chose a placement that falls midway on the continuum. Although not statistically significant, the posttest degree of confidence for students with low incidence disabilities indicated the special education preservice teachers had a higher degree of confidence regarding placement than the general education preservice teachers.

Table 11

Between group Means and Standard Deviations for students with low incidence disabilities (Special Education and General Education Preservice Teachers)

<table>
<thead>
<tr>
<th>Pre/Post</th>
<th>Special Education</th>
<th>General Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Pretest – placement</td>
<td>3.02</td>
<td>.59</td>
</tr>
<tr>
<td>Posttest – placement</td>
<td>2.80</td>
<td>.64</td>
</tr>
<tr>
<td>Pretest – confidence</td>
<td>2.23</td>
<td>.74</td>
</tr>
<tr>
<td>Posttest – confidence</td>
<td>1.88</td>
<td>.48</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
CHAPTER 5

DISCUSSION

The idea of educating students with disabilities in inclusive settings continues to be an ongoing challenge for teachers, parents, law makers, and school administrators. Much of the research related to attitudes about inclusion has focused on general education practicing teachers (Brownell and Pajares, 1996; Minke, et. al., 1996; Olson, Chalmers, & Hoover, 1997; Rojewski & Pollard, 1993) and special education practicing teachers (Cook, Semmel, & Gerber, 1999). This body of literature reflects that relationships that exist between the attitudes of teachers and the implementation of inclusive practices.

The literature also reflects that preservice teachers' attitudes about inclusion have been studied. Most of these studies include general education preservice teachers and focus on dimensions such as anxiety levels, preservice preparation, disability areas, and other environmental variables that can affect the way the preservice teachers perceive inclusion and inclusive practices (Avramidis, Bayliss, & Burden, 2000; Buttery, 1981; Hoover & Cessna, 1984; Hoover & Sakofs, 1985; Mayhew, 1994; Powers, 1992; Rao & Levan, 1999; Radmacher, et. al., 1998; Sanche, Champman, & Dineen, 1976; Ward & LeDean, 1996).

Research in the area of comparing general and special education preservice teachers' attitudes toward students with disabilities has been limited. Only two
studies have been conducted using both general education and special
education preservice teachers regarding attitudes toward students with
disabilities (Leyser & Abrams, 1983; Shade & Stewart, 2001). These two studies
provided preliminary evidence that introductory special education coursework
can significantly affect the attitudes of preservice teachers towards inclusion.

Most of the preservice literature focuses on general education students. The
focus on special education preservice teachers is, however, very important in
that their attitudes toward inclusive practices often dictate where and when
inclusion will occur. If special education preservice teachers have negative
attitudes toward inclusion, then inclusion may not be their option of choice when
they begin teaching students with disabilities. However, if the special education
preservice teachers have a positive attitude towards inclusion, then the likelihood
that inclusion will occur is increased.

The purposes of this study were: (a) to compare general and special
education preservice teachers’ attitudes regarding educational placements for
students with disabilities, (b) to determine whether these attitudes are disability
specific and, (c) to determine whether change in knowledge has an effect on
attitude toward placement over the course of a semester while enrolled in
introductory classes about students with disabilities. Two instruments were
developed for use in this study: (1) the Preservice Teacher Service Delivery
Survey (see Appendix A), and (2) the Knowledge Test (see Appendix B).

The Preservice Teacher Service Delivery was designed to gather responses
regarding placement choices that were disability specific. The level of confidence
for each choice was also measured. The Knowledge Test was designed to include four specific areas dealing with special education. The areas were law, IEP, service delivery, and placement.

The pretest phase of this study included 90 general education preservice teachers and 37 special education preservice teachers who were enrolled in a semester long introductory course regarding special education. A total of 127 participants were included in the pretest phase of the study. The posttest phase of the study included 76 general education preservice teachers and 34 special education preservice teachers. Thus a total of 110 participants were included in the posttest phase.

Preservice Teacher Attitudes Related to Placement of Students with Disabilities

This first part of the study was designed to collect quantitative data regarding the attitudes and degrees of confidence of preservice general education and special education preservice teachers related to appropriate placement of students with various disabilities. Both groups completed the same survey during the first week of class and again three weeks before the end of the semester. The second part of the study was designed to collect quantitative data regarding the knowledge of preservice general education and special education preservice teachers. Both groups completed the same Knowledge Test during the first week of class and again three weeks before the end of the semester. The remainder of
this chapter includes discussion related to each research question, study conclusions, recommendations for future research and a brief summary.

Research Question 1. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement that is disability specific?

*Discussion of Pretest Results for General and Special Preservice Teachers*

Two separate tests were conducted to determine whether any differences existed between the groups in both the pretest and posttest administrations. Results of the pretest independent samples t-test indicated there was no significant difference between the two groups regarding placement. For students with autism, students with traumatic brain injury, students with deaf-blindness, students with multiple disabilities, and students with severe mental retardation, both groups of preservice teachers chose a placement that falls on the restrictive end of the continuum. The general education preservice teachers for students with deafness also chose a placement for students with deafness that falls on the more restrictive end of the continuum. This could suggest they perceive that students with these disabilities need more support and services and therefore would benefit from a more restrictive placement on the continuum.

The special education preservice teachers chose a placement that falls midway on the continuum for students with deafness, students with hearing impairments, students with deafness, students with visual impairments, students with speech and language impairments, students with specific learning disabilities, students with mild mental retardation, students with emotional
disturbance, and students with developmental delay. The general education preservice teachers chose a placement that falls midway on the continuum for students with visual impairments, and students with mild mental retardation. The special education and general education preservice teachers chose similar placements for students with visual impairments and for students with mild mental retardation, however, for students with hearing impairments, students with speech and language impairments, students with specific learning disabilities, students with emotional disturbance, and students with developmental delay, the special education preservice teachers chose a placement that falls midway on the continuum and the general education preservice teachers chose a placement that falls on the less restrictive end of the continuum. These placement choices could suggest that both groups of preservice teachers have attitudes toward placements that are disability specific.

The general education preservice teachers chose a placement that falls on the less restrictive end of the continuum for students with hearing impairments, students with speech and language impairments, students with specific learning disabilities, students with emotional disturbance, and students with developmental delay. Both groups of preservice teachers chose a placement that falls on the less restrictive end of the continuum for students with orthopedic impairments, and students with other health impairments. Since both groups of preservice teachers were enrolled in introductory special education courses, it is likely that they had limited knowledge regarding the specific disability areas. Thus
their choices may have been based upon either preconceived notions about
disability or prior experience with persons with disabilities.

There were no significant differences between groups in degree of
confidence, indicating both the special education preservice teachers and the
general education preservice teachers were equally confident about choosing a
placement for students with disabilities. Although not statistically different, the
mean pretest scores indicate the special education preservice teachers had a
higher degree of confidence than the general education preservice teachers for
students with autism, students with traumatic brain injury, students with deaf-
blindness, students with deafness, students with multiple disabilities, students
with visual impairments, and students with mild mental retardation. The general
education preservice teachers had a higher degree of confidence than the
special education preservice teachers for students with orthopedic impairments,
students with hearing impairments, students with other health impairments,
students with speech and language impairments, students with specific learning
disabilities, students with severe mental retardation, students with emotional, and
students with developmental delay. Based on these findings, it is plausible that
the pretest degree of confidence could be attributable to an overall uncertainty in
both groups (special and general preservice teachers).
Discussion of Posttest Results for General and Special Preservice Teachers and Pre to Post Differences for Both Groups

The posttest results indicated there was a statistically significant difference between special and general education preservice teachers for the placement of students with emotional disturbance. The special education group chose a placement that falls midway on the continuum and the general education group chose a placement that falls on the less restrictive end of the continuum. The difference in placement choice is interesting to note, because students with emotional disturbance are in the high incidence group category and is therefore expected to be a group that falls on the less restrictive end of the continuum. This could suggest after learning about other areas of disability the general education preservice teachers thought students with emotional disturbance were not as involved as other students with other disabilities. It is difficult to ascertain why there existed a difference between the two groups. Perhaps the special education preservice teacher group understands the individual needs of students with emotional disturbance and is equating service delivery with placement. For example, they could have an understanding that more restrictive environment would result in more services. There was no statistically significant difference between special and general education preservice teachers on the posttest related to placement choices for students with autism, traumatic brain injury, deaf-blindness, orthopedic impairments, other health impairments, hearing impairments, deafness, multiple disabilities, visual impairments, speech and
language impairments, specific learning disabilities, mild mental retardation, severe mental retardation, and developmental delay.

The special education preservice teachers chose a placement that falls on the more restrictive end of the continuum for students with autism, students with traumatic brain injury, students with deaf-blindness, students with multiple disabilities, and students with severe mental retardation. Similarly, the general education preservice teachers chose a more restrictive end of the continuum placement for students with traumatic brain injury, students with deaf-blindness, students with multiple disabilities, and students with severe mental retardation.

It is interesting to note the decrease in restrictive placement choices from pre to posttest among general education preservice teachers. On the pretest and posttest, the general education preservice teachers chose a placement that falls on the more restrictive end of the continuum for five areas of disability (autism, traumatic brain injury, deaf-blindness, deafness, multiple disabilities, and severe mental retardation). The posttest difference for the general education preservice teachers involved placement of students with deafness. These students were no longer included on the more restrictive end of the continuum. The posttest results for the special education preservice teachers fell on the more restrictive end of the continuum for the same five areas of disabilities (autism, traumatic brain injury, deaf-blindness, multiple disabilities, and severe mental retardation) for both pre and posttest. Both groups of preservice teachers chose a placement that falls on the more restrictive end of the continuum for students with low incidence disabilities.
For students with deafness, visual impairments, mild mental retardation, emotional disturbance, and developmental delay, the special education preservice teachers chose a placement that falls midway on the continuum. The posttest data indicate that the special education preservice teachers chose a lower number of areas of disability for placement that falls midway on the continuum on their posttests than their pretests. The general education preservice teachers chose a placement that falls midway on the continuum for students with autism, students with deafness, and for students with mild mental retardation. On the pretest, the preservice general education teachers chose a placement that falls midway on the continuum of placements for three areas of disabilities (visual impairments, speech and language impairments, and mild mental retardation). On the posttest, the general education preservice teachers chose a placement that falls midway on the continuum of placements for three areas of disabilities (autism, deafness, and mild mental retardation). The posttest difference for the general education preservice teachers is that students with visual impairments and students with speech and language impairments were replaced by students with autism and students with deafness for placement that falls midway on the continuum.

For students with orthopedic impairments, students with other health impairments, students with hearing impairments, students with speech and language impairments, and students with specific learning disabilities, both groups of preservice teachers chose a placement that falls on the less restrictive end of the continuum. The general education preservice teachers also chose a
placement that falls on the less restrictive end of the continuum for students with visual impairments, students with emotional disturbance, and students with developmental delay. The general education preservice teachers chose seven areas of disability (orthopedic impairments, other health impairments, hearing impairments, speech and language impairments, specific learning disabilities, emotional disturbance, and developmental delay) on the pretest for a placement that falls on the less restrictive end of the continuum. The posttest difference for the general education preservice teachers was the inclusion of students with visual impairments on the less restrictive end of the continuum. The special education preservice teachers chose a placement that falls on the less restrictive end of the continuum for students with orthopedic impairments and students with other health impairments. On the posttest, the special education preservice teachers included students with hearing impairments, students with speech and language impairments, students with specific learning disabilities, students with emotional disturbance, and students with developmental delay. It is difficult to ascertain the extent of the influence of the semester long course on attitudes toward placement of students with disabilities. The special education preservice teachers increased the number of areas of disability they chose to place on the less restrictive end of the continuum. The general education preservice teacher also increased the number of areas of disability they chose to place on the less restrictive end of the continuum. It is interesting to note that the special education preservice teachers chose to continue to place the same areas of disability on the more restrictive end of the continuum, while the general education preservice
teachers chose to change their placement choices for students with autism and deafness from the more restrictive end of the continuum to a placement that falls midway on the continuum.

There was no statistically significant posttest difference on the degree of placement confidence between the groups mean scores, however, indicated that the special education preservice teachers had a higher degree of confidence than the general education preservice teachers for students with autism, students with traumatic brain injury, students with deaf-blindness, students with orthopedic impairments, students with other health impairments, students with hearing impairments, students with deafness, students with visual impairments, students with specific learning disabilities, students with mild mental retardation, students with severe mental retardation, students with emotional disturbance, and students with developmental delay. For students with speech and language impairments the general education preservice teachers had a higher degree of placement confidence than the special education preservice teachers. On the pretest, the degree of confidence for the special education preservice teachers was higher in eight areas of disability and the degree of confidence for the general education preservice teachers was higher in seven areas of disability. This could suggest the general education preservice group lacks of knowledge about the placement of students with disabilities. The lack of pretest and posttest difference between the two groups could suggest confidence does not necessarily affect attitudes toward placement.
On the posttest, the special education preservice teachers had a higher degree of confidence in 14 of the areas of disability and the general education preservice teachers had a higher degree of confidence in one area of disability. This could suggest that the special education preservice teachers are indicating a higher degree of confidence in their placement choices because they realize they will confidence when they become special education teachers.

Although not statistically significant, the data reflect that both (special education and general education) preservice teachers increased their degree of confidence for all areas of disability. The general education preservice teachers indicated a higher degree of confidence on seven of the areas of disability on the pretest and on the posttest they only had a higher degree of confidence in one area of disability.

The special and general education preservice teachers had similar attitudes related to appropriate placements for students with disabilities (except for students with emotional disturbance). They were also similar with regard to confidence levels related to the placement choices they made.

Research Question 2. Is there a difference between general education and special education preservice teachers’ level of knowledge about special education after taking a semester-long introductory course?

Results indicated there was no statistical difference between the general and special education preservice teachers on course knowledge. The general education group scored higher on the pretest than the special education group and the special education group scored higher on the posttest than the general
education group. Although there was no significant difference between both groups, there was an increase in scores from pretest to posttest for both groups indicating the preservice teachers gained special education knowledge after taking a semester long course. The increase in scores could be an indication of learning; however, it would be difficult to ascertain what accounted for the increase in test scores. The results could indicate the preservice students' overall knowledge did not have an effect on their attitudes toward placement of students with disabilities.

Research Question 3. Does level of knowledge affect general education and special education preservice teachers' attitudes about placement that is disability specific?

The data indicated that there were two statistically significant differences. There was a relationship between placement choice for students with other health impairments and knowledge. There also was a relationship between placement choice for students with developmental delay and the total Knowledge Test score. The data indicated the relationship between knowledge and placement were negatively correlated, indicating the higher the level of knowledge, the greater the likelihood that placement choice would fall on the less restrictive end of the continuum. This makes sense given the results from question number one. For students with other health impairments and students with developmental delay, both groups chose a placement that fell on the less restrictive end of the continuum. The significant results indicate knowledge of unfamiliar areas of disability had an impact on the placement choices. The
relationship between knowledge and area of disability suggests the more awareness of the area of disability, the more likely that the student with other health impairments and developmental delay would be placed on the less restrictive end of the continuum. The results of the analyses should have included more areas of disability. The fact that only two of the 15 areas of disability were statistically significant is cause for concern. Knowledge should have had an impact on all areas of disability. Some of the requirements of the semester long courses included familiarization and awareness of all areas of disability and to be able to make accommodations and/or modifications to ensure successful inclusive practices. Given the course requirements, it is surprising that all of the areas of disabilities were not statistically significant. The total knowledge test scores for the special and general education preservice teachers indicated there were no other relationships between total knowledge and all other areas of disability.

Research Question 4. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement for students with high incidence disabilities?

Data from the specific disability areas of Speech and Language Impairments, Specific Learning Disabilities, and Emotional Disturbance were combined to answer this question. Results indicate there was no difference between the two groups on the pretest for placement of students with high incidence disabilities. There was no difference in degree of confidence between each group on the pretest. There was no difference between both groups on posttest placement.
choice of students with high incidence disabilities. There was no difference in
degree of posttest confidence for placement of students with high incidence
disabilities.

On the pretest, the special education preservice teachers chose a placement
that falls midway on the continuum. The general education preservice teachers
chose a placement that falls on the less restrictive end of the continuum. The
general education preservice teachers had a higher degree of confidence on the
pretest than the special education preservice teachers. On the posttest, both
groups (special and general) education preservice teachers chose a placement
that falls on the less restrictive end of the continuum. The special education
preservice teachers had a higher degree of confidence than the general
education preservice teachers.

The special and general education preservice teachers had similar attitudes
related to appropriate placements for students with high incidence disabilities.
They were also similar with regard to confidence levels related to the placement
choices they made. The results indicate after a semester long course in special
education, the effects of knowledge, exposure, and learning about students with
disabilities did not affect placement or degrees of confidence for students with
high incidence disabilities. The lack of differences between the two groups is
somewhat disappointing, the awareness and knowledge of areas of disabilities
after the semester long course should have had a stronger influence in
determining placement and levels of confidence for both groups of preservice
teachers.
Research Question 5. Are there differences between general education and special education preservice teachers' attitudes regarding appropriate placement for students with low incidence disabilities?

Data from the specific disability areas of low incidence disabilities (e.g., autism, traumatic brain injury, deaf-blindness, other health impairments, orthopedic impairments, hearing impairments, deafness, multiple disabilities, severe mental retardation, mild mental retardation, developmental delay, visual impairments) were combined to answer this question. The pretest results indicated for students with low incidence disabilities there was no difference between the two groups for placement choice. There was no difference on the pretest for degree of confidence between each group. The posttest indicated there was no difference between the two groups on placement and there was no difference between the groups on their degree of confidence for the posttest. On the pretest, both the special education preservice teachers chose a placement that falls on the more restrictive end of the continuum and the general education preservice teachers chose a placement that falls midway on the continuum for students with low incidence disabilities. The general education preservice teachers had a higher degree of confidence on the pretest than the special education preservice teachers. On the posttest, both the special and general education preservice teachers chose a placement that falls midway on the continuum. The posttest degree of placement confidence for students with low incidence disabilities indicated the special education preservice teachers had a
higher degree of confidence regarding placement than the general education preservice teachers.

The special and general education preservice teachers had similar attitudes related to appropriate placements for students with high incidence disabilities. They were also similar with regard to confidence levels related to the placement choices they made. The results indicate after a semester long course in special education, the effects of knowledge, exposure, and learning about students with disabilities did not affect placement or degrees of confidence for students with low incidence disabilities. The lack of differences between the two groups is surprising. Awareness and knowledge of areas of disabilities after the semester long course should have had a stronger influence in determining placement and levels of confidence for both groups of preservice teachers.

Conclusions

Four conclusions may be drawn from this study. These conclusions are based on the quantitative data that were collected.

1. Special and general education preservice teachers agree on appropriate placements for most of the disability categories. Their placement choices only varied related to students with emotional disturbance. Special education preservice teachers were more restrictive about their placement choice for these students.

2. Special education preservice teachers believe in more restrictive placements than general education preservice teachers for students with
1. autism, orthopedic impairments, other health impairments, deafness, multiple disabilities, visual impairments, speech and language impairments, specific learning disabilities, severe mental retardation, emotional disturbance, and developmental delay. General education preservice teachers believe in more restrictive placements than special education preservice teachers for students with traumatic brain injury, deaf-blindness, and mild mental retardation.

2. Special and General education Preservice Teachers were both confident with regard to their placement choices. After taking an introductory course in special education, special education preservice teachers had a higher degree of confidence about their placement choice than general education preservice teachers for students in all of the categories of disabilities (except for students with speech and language impairments).

3. Special and general education preservice teachers both increased their special education knowledge over the course of the semester and both groups selected less restrictive placement options for several disability groups. Both groups’ degree of confidence in selecting appropriate placements increased over the course of the semester.

Recommendations for Future Research

This current study extended previous research by (a) comparing special education preservice teachers to general education preservice teacher attitudes, (b) assessing attitudes related to all disability categories, (c) assessing degrees.
of confidence toward placement, and (d) assessing knowledge. Based on the findings of this study, the following recommendations for future research are made:

1.) Research is needed to determine whether preservice teachers have the proper information to implement modifications and/or accommodations for each area of disability.

2.) Research needs to be conducted to determine how much coursework is needed to adequately prepare preservice teachers to address the needs of students with disabilities in the general education classroom.

3.) Research needs to be conducted to further investigate the effectiveness of coursework that is provided to undergraduate and graduate students in the areas of law, individual education planning, service delivery, placement for students with disabilities, and inclusive practices.

4.) Research needs to be conducted to determine whether professors or instructors of introduction to special education courses have an effect on the preservice teachers’ attitudes toward placement of students with disabilities.

5.) Research similar to this study should be replicated on a larger scale (local, state, and/or national) to determine whether the results can be generalized beyond one university.

6.) Research needs to be conducted on a longitudinal basis (3 to 5 years) to determine whether preservice teachers’ attitudes about placement of
1.) students with disabilities change as they enter the teaching profession and as they gain increased experience.

2.) Research needs to be conducted to determine whether the needs of students with disabilities are being met in various types of settings on the placement continuum.

Summary

The methodology, data collection procedures and data analyses were appropriate for meeting the stated purposes of this study. Findings revealed that special education preservice teachers were more likely to choose more restrictive placements than general education preservice teachers. These attitudes were disability specific related to the placement of students with autism, students with orthopedic impairments, students with other health impairments, students with deafness, students with multiple disabilities, students with visual impairments, students with speech and language impairments, students with specific learning disabilities, students with severe mental retardation, students with emotional disturbance, and students with developmental delay. For students with traumatic brain injury, students with deaf-blindness, and students with mild mental retardation, the general education preservice teachers were more likely to choose a more restrictive placement.

Both special and general education preservice teachers increased their knowledge about special education over the course of a semester. Although not directly related to the questions in this study, analyses revealed there was a
statistically significant increase within each group on the *Knowledge Test*. Both the special education and general education preservice teacher groups increased their scores from pretest to posttest. Significant within group increases were also noted for specific areas on the *Knowledge Test*. The special education preservice teacher group had a statistically significant increase from pretest to posttest in their scores on the IEP section and the Law section of the *Knowledge Test*. The general education preservice teacher group had a statistically significant increase from pretest to posttest in their score on the Law section of the *Knowledge Test*.

Based on the review of literature conducted for this study, there were two studies that included both general and special preservice education teachers (Leyser & Abrams, 1983; Shade & Stewart, 2001). This current study represents an extension of the existing literature. Differing from the previous research, this study included specific placement choices for all categories of disabilities and an assessment of knowledge. The Leyser and Abrams (1983) and Shade and Stewart (2001) studies assessed the attitudes of both general and special education preservice teachers through non-specific disability attitude inventories. Previous research involving practicing teachers included specific disability areas (e.g., hearing impairment, learning disability, mental retardation, behavior disorder, or physical disability using a wheelchair) (Soodak, Podell, & Lehman, 1998). Similar to the Soodak, Podell, & Lehman (1998) found that practicing teachers had a higher anxiety level related to the inclusion of students with mental retardation and students with physical impairments than they had related
to the inclusion of students with learning disabilities or behavior disorders. Similarly, this current study found that the general and special education preservice teachers were more likely to place students with mental retardation (mild and severe) in a more restrictive placement. However, the current study differs from the Soodak, Podell, & Lehman (1998) with regard to preservice teachers’ choice of placement for students with physical impairments. In this study, a less restrictive placement was identified as being appropriate.

Minke, Bear, Deemer, & Griffin (1996) studied attitudes toward the inclusion of students with mild disabilities (i.e., children with learning disabilities; educable mental handicaps; emotional disturbance; and/or mild physical, visual, or hearing impairments). They found that the special education teachers had a more positive attitude towards inclusive practices than the regular education teachers. Contrary to the Minke, Bear, Deemer, & Griffin (1996) findings, this current study identified special education preservice teachers as believing in more restrictive placements than the general education preservice teacher group. Buttery (1981) studied preservice attitudes among general education majors toward students that were categorized as learning disabled, educable mentally retarded, emotionally disordered, physically handicapped, visually impaired, speech impaired, intellectually gifted, hearing impaired, battered abused, and multiply handicapped. Buttery (1981) found the attitudes of the preservice teachers declined and were less positive towards the students with exceptionalities after completing a semester long course. The results of the current study indicated a
more favorable attitude toward placement after the completion of a semester long course.

Ward and LeDean (1996) studied specific disabilities and placement choices. Their results indicate that the general education preservice teachers were more favorable towards mainstreaming depending on their perceptions of the level of disability. This current study is similar to the Ward and LeDean (1996) study in terms of the placement choices. However, the current study differs from Ward and LeDean (1996) because comparisons between general and special education preservice teachers took place. As schools continue to move toward inclusive models of educating students with disabilities, it is important to understand the attitudes of preservice teachers related to placement as these attitudes may persist as they become practicing teachers and ultimately affect their ability and/or willingness to implement modifications and/or accommodations. This, in turn, has several implications for teacher preparation programs. For the school year 1999-2000, 5,665,295 students ages 6-21 received services under IDEA. Of that number, 2,681,082 students received services in a regular classroom (40.2%), 1,1,605,028 students received services in a resource classroom (24.1%). There are over 2.5 million students receiving services in the general education classroom and almost 1.2 million students receiving services in a resource setting. Therefore, understanding specific areas of disabilities and being able to identify what is unique to each student becomes an important component of preservice teacher education. One of the keys to creating individual planning is to identify the uniqueness of each student by
focusing on specific areas of disability. Preservice preparation programs should include curriculum on how to identify those unique characteristics and how to implement appropriate instructional modifications with a variety of settings.

As general education classrooms become increasingly diverse, teacher preparation programs should shift their focus from one-method-for-all teaching to teaching that takes into consideration the unique needs that individual general education students and/or special education students may have. This would include developing individual lessons, adaptation of group curriculum, identifying appropriate modifications, identifying appropriate accommodations, developing individual behavior management, identifying appropriate service delivery models, identifying appropriate placements, and conducting goal specific ecological inventories.

Preservice preparation programs should identify the attitudes toward placement of students with disabilities at the beginning of all introductory courses on special education. Knowledge should also be assessed at the beginning of all introductory courses. This would allow the instructor of the course to identify the areas of disability that are unfamiliar or unclear to the preservice students and the areas of knowledge that are unfamiliar or unclear. This would also allow the focus to be centered on the creation of lectures and instructional activities that focus on deficient areas.

Future research related to appropriate instructional practices for students with various disabilities as well as additional research related to the importance of preservice teacher attitudes will provide valuable information for teacher
educators, such in improving teacher preparation programs and ultimately benefit teachers and their future students.
APPENDIX A

PRESERVICE TEACHER SERVICE DELIVERY SURVEY
Preservice Teacher Service Delivery Survey

Before you fill out the survey, please read the following definitions.

Students with special needs often have a range of placement and service options within an environment that is typically the best suited to meet their individual needs.

1. General Education Classroom – Student is taught by the general education classroom teacher in the general education classroom (Heward, 2000).

2. General Education Classroom with Consultation – Student is taught by the general education classroom teacher in the general education classroom, and is supported by on-going consultation from specialists (e.g., special education teacher) (Heward, 2000).

3. Resource Classroom – Student is taught by the general education classroom teacher in the general education classroom and the student spends part of the time being taught by a special education classroom teacher in a resource classroom (Heward, 2000).

4. Separate Classroom – Student is taught by a special education classroom teacher in a self-contained classroom with access to the general education setting during specials or electives (e.g., music, p.e., art, lunch) (Heward, 2000).

5. Separate School – Student is taught by a special education teacher in a specially designed separate facility within the public school system (Heward, 2000).
*Please answer the following questions by filling in the blank using one letter according to the continuum of placements as a guide then circle one number to indicate your confidence in your placement choice:

<table>
<thead>
<tr>
<th>Placement</th>
<th>Degree of Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = General education classroom</td>
<td></td>
</tr>
<tr>
<td>B = General education classroom with consultation</td>
<td>1= very confident</td>
</tr>
<tr>
<td>C = Resource classroom</td>
<td>2= confident</td>
</tr>
<tr>
<td>D = Separate classroom</td>
<td>3= not so confident</td>
</tr>
<tr>
<td>E = Separate school</td>
<td>4= not confident at all</td>
</tr>
</tbody>
</table>

Students with autism typically should be taught in a _ 1 2 3 4
Students with a traumatic brain injury typically should be taught in a_ 1 2 3 4
Students with deaf-blindness typically should be taught in a_ 1 2 3 4
Students with other health impairments typically should be taught in a_ 1 2 3 4
Students with orthopedic impairments typically should be taught in a_ 1 2 3 4
Students with hearing impairments typically should be taught in a_ 1 2 3 4
Students who are deaf typically should be taught in a_ 1 2 3 4
Students with multiple disabilities typically should be taught in a_ 1 2 3 4
Students with visual impairments typically should be taught in a_ 1 2 3 4
Students with speech and language impairments typically should be taught in a_ 1 2 3 4
Students with specific learning disabilities typically should be taught in a_ 1 2 3 4
Students with mild mental retardation typically should be taught in a_ 1 2 3 4
Students with severe mental retardation typically should be taught in a_ 1 2 3 4
Students with an emotional disturbance typically should be taught in a_ 1 2 3 4
Students who are developmentally delayed typically should be taught in a_ 1 2 3 4
Demographic Information

Gender: M_______ F__ Age: _____

Highest Degree Earned: (H.S. Diploma, A.A. degree, B.A., B.S., Graduate degree)________

College/University standing:
Freshman _____ Sophomore _____ Junior _____ Senior _____
Graduate Student_____

Current UNLV or Transfer G.P.A. (check one)
3.5 – 4.0____ 3.0 – 3.49____ 2.5– 2.99____ 2.0 – 2.49____

Program of Study (check one):
Elementary Education____ Secondary Education____ Special Education____
Other____________________

Number of Teaching Methods (i.e. math methods, science methods) courses taken: 0-1 ____ 2-3 ____ 4+____

Are you currently teaching? Yes ____ No ____

Taken Student Practicum class(s) yet? No Yes (if yes, which ones?______

Grade level interested in teaching

<table>
<thead>
<tr>
<th></th>
<th>General Education</th>
<th>Special Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary grade</td>
<td>K-6 ____</td>
<td>K-6 ____</td>
</tr>
<tr>
<td>Middle School</td>
<td>7-8/subject(s)____</td>
<td>7-8 ____</td>
</tr>
<tr>
<td>High School</td>
<td>9-12/subject(s)___</td>
<td>9-12 ____</td>
</tr>
</tbody>
</table>

Prior experience with individuals with disabilities (fill in all that apply):

<table>
<thead>
<tr>
<th></th>
<th>Number of years</th>
<th>Disability Area (i.e., Autism)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Family</td>
<td>_____</td>
<td>_____________________________</td>
</tr>
<tr>
<td>Friend</td>
<td>_____</td>
<td>_____________________________</td>
</tr>
<tr>
<td>Co-worker</td>
<td>_____</td>
<td>_____________________________</td>
</tr>
<tr>
<td>Work Experience</td>
<td>_____</td>
<td>_____________________________</td>
</tr>
<tr>
<td>Other (please describe)</td>
<td>_____________________________</td>
<td></td>
</tr>
<tr>
<td>No Experience</td>
<td>_____</td>
<td>_____________________________</td>
</tr>
</tbody>
</table>
Knowledge Test

1. The Individuals with Disabilities Education Act (IDEA) requires that students with disabilities...
   a. Be educated in special schools that can provide the services they need.
   b. Have lesson plans different from other students in their class in order to meet their needs.
   c. Be included in all classes and activities in which the regular students participate.
   d. Be educated in the least restrictive environment, based on their IEP.

2. Individual Education Plan (IEP) must be reviewed at least...
   a. On an annual basis.
   b. Every three years.
   c. Whenever a student changes schools.
   d. Within 10 administrative working days if the student moves to another state.

3. This educational setting describes where a student is taught by the general education classroom teacher in the general education classroom, and is supported by on-going consultation from specialists...
   a. Resource classroom.
   b. Separate classroom.
   c. Separate school.
   d. General education with consultation.
   e. General education.

4. What can be defined as "the movement advocating that the general education system assume unequivocal, primary responsibility for all students in our public schools—including identified disabled students as well as those who have special needs of some type"?
   a. The Regular Education Initiative.
   b. The movement to expand the self-contained model.
   c. The restructuring of the resource room.
   d. Mainstreaming.

5. One of the newest disability groups to be officially categorized by the federal government is:
   a. Mental Retardation.
   b. Learning Disabilities.
   c. Autism.
   d. Hearing Impairments.
6. What components of the IEP are key to developing individual instruction?
   a. Levels of performance, annual goals, and short-term objectives.
   b. Statement of related services, evaluation schedules and transition.
   d. All of the above.

7. This educational setting describes where a student is taught by the general education classroom teacher in the general education classroom and the student spends part of the time being taught by a special education classroom teacher in a resource classroom...
   a. Resource setting.
   b. Separate classroom.
   c. Separate school.
   d. General education with consultation.
   e. General education.

8. The terms "mainstreaming" and "inclusion":
   a. Are interchangeable.
   b. Are different but closely related.
   c. Are easily defended.
   d. Can be all of the above.

9. What ensures that no person will be deprived of their legal rights or privileges without appropriate established procedures being followed?
   a. Article 15 under PL 94-142.
   b. The due process clause under the Constitution.
   c. The procedural safeguards statement as stated by IDEA.
   d. One of the many safeguards established under 504.

10. Which one is not a required component of the IEP?
    a. Annual goals and short-term objectives.
    b. Modifications and accommodations.
    c. Methods for reporting progress.
    d. A statement for bias in assessment.

11. This educational setting describes where a student is taught by a special education classroom teacher in a self-contained classroom with access to the general education setting during specials or electives...
    a. Resource classroom.
    b. Separate classroom.
    c. Separate school.
    d. General education with consultation.
    e. General education.
12. The primary advantage of resource rooms over self-contained classrooms is...
   a. More individualized instruction.
   b. More interaction with regular classroom teachers.
   c. Social interactions with non-disabled students.
   d. Smaller classes.

13. Prior to PL 94-142, how many students with disabilities were served in separate classes?
   a. About half.
   b. None.
   c. Nearly all.
   d. One third.

14. Guidelines for procedures in the overall flow pattern for the referral/assessment/individual Education Plan (IEP) process...
   a. Are strictly dictated by the federal government under PL 94-142.
   b. Are regulated by each state with each school district making final interpretations.
   c. Will vary from state to state.
   d. None of the above.

15. This educational setting describes where a student is taught by a special education teacher in a specially designed separate facility within the public school system...
   a. Resource classroom.
   b. Separate classroom.
   c. Separate school.
   d. General education with consultation.
   e. General education.

16. Programs in which students leave for a short instructional period and then return to the general education classroom are usually classified as:
   a. Self-contained classes.
   b. Special classes.
   c. Full inclusion.
   d. Resource programs.

17. The Individuals with Disabilities Education Act (IDEA) was an outgrowth of:
   a. Public Law 94-142.
   b. Section 504 of the Rehabilitation Act.
   c. Public Law 89-10.
   d. Public Law 94-424.
18. Which one of the following is not one of the key purposes of the IEP?
   a. Provide instructional direction.
   b. Function as a basis of evaluation.
   c. Determine the students' disability.
   d. Improve communication among members of the team.

19. This educational setting describes where a student is taught by the general education classroom teacher in the general education classroom...
   a. Resource classroom.
   b. Separate classroom.
   c. Separate school.
   d. General education with consultation.
   e. General education.

20. The term "inclusion" has been used most recently and is a direct outgrowth of the previous concept of the:
   a. Special class movement.
   b. Regular education initiative.
   c. Resource room approach.
   d. Self-contained method.

21. Including all students in a free public education system is a philosophy based upon:
   a. the Constitution of the United States.
   b. the Individuals with Disabilities Education Act.
   c. Public Law 884-456.
   d. the Regular Education Initiative.
   e. the inclusion movement.

22. What individual(s) below may initiate a special education referral?
   a. parent
   b. classroom teacher
   c. physician
   d. all of the above

23. What educational placement for students with disabilities is where the student receives instruction in a facility that is not the general education campus?
   a. Resource setting.
   b. Separate classroom.
   c. Separate school.
   d. General education with consultation.
   e. General education.
24. The greatest challenge to effective inclusion is:
   a. changing the education system.
   b. designing appropriate accommodations.
   c. providing modifications.
   d. acceptance of cultural diversity.

25. The federal law that is a funding statute for students with disabilities is:
   b. the Individuals with Disabilities Education Act.
   c. the Americans with Disabilities Act.
   d. the Exceptional Child Find Act.
   e. the Mental Health Coalition Act of 1975.

26. Appropriate programming should always:
   a. be based on the individual needs of the student and reflected in the student's IEP.
   b. include modifications in the student's education program.
   c. include personnel support in the general education classroom.
   d. involve the use of technology.

27. According to the continuum of placements, the most restrictive setting among these is:
   a. Resource setting.
   b. Separate classroom.
   c. Separate school.
   d. General education with consultation.
   e. General education.

28. Mr. Applebee allows Elsie, a student with learning disabilities, to take oral tests in his classrooms. This is an example of a(n):
   a. accommodation.
   b. unfair testing practice.
   c. modification.
   d. strategy instructional technique

29. Reauthorization of Public Law 94-142 is federal legislation also called:
   a. The Act for Educating All Children.
   b. The Education for Exceptional Children Act.
   c. The Act for Mainstreaming Students with Handicaps.
   d. The Individuals with Disabilities Education Act.
30. Educators should collaborate in which of the following process(es)?
   a. child study and referral
   b. observations and assessments of the child
   c. pre-referral interventions
   d. IEP development
   e. all of the above

31. Which term below describes a setting in which students with disabilities
    learn with their non-disabled peers?
   a. General education.
   b. Resource setting.
   c. General education with consultation.
   d. all of the above.

32. Preparing students for inclusion may include which of the following?
   a. awareness programs
   b. discussions
   c. simulations
   d. all of the above

33. What is the primary purpose of IDEA?
   a. To ensure a free, appropriate public education for all students with
      disabilities.
   b. To require that all students with disabilities be educated in general
      education classrooms.
   c. To require special education for minority students.
   d. To eliminate the use of intelligence tests.

34. What part of the IEP describes this situation: Jamie will work with an
    occupational therapist two times per week for one hour per session...
   a. transition objective
   b. present level of performance summary
   c. annual instructional goal
   d. statement of special services to be provided
   e. none of the above

35. Which term below describes a setting in which students with disabilities
    learn in a class that is not on the comprehensive campus?
   a. Resource classroom.
   b. Separate classroom.
   c. Separate school.
   d. General education with consultation.
   e. General education.
36. Which of the following ensures that no individual will be deprived of his or her legal rights or privileges without appropriate established procedures being followed?
   a. Article 15 under Public Law 94-142
   b. the due-process clause under the constitution
   c. the procedural safeguard statements in the IDEA
   d. among the safeguards mandated in Section 504 of the Rehabilitation Act of 1973
   e. the procedural safeguard provisions in the Americans with Disabilities Act

37. The category Other Health Impaired, includes students with:
   a. orthopedic impairments.
   b. hearing impairments.
   c. visual processing problems
   d. cardiac problems.
   e. acuity disorders.

38. What part of the IEP describes this situation: Jamie currently ranks at the 25th percentile in reading comprehension...
   a. transition objective
   b. present level of performance summary
   c. annual instructional goal
   d. statement of special services to be provided
   e. none of the above

39. Which term below describes a setting in which students with disabilities learn within a self-contained setting or class?
   a. Resource classroom.
   b. Separate classroom.
   c. General education with consultation.
   d. General education.

40. The critical issue underlying successful inclusion is the acceptance of:
   a. students with special needs.
   b. diversity.
   c. special educators.
   d. general educators.
   e. all of the above.
APPENDIX C

PERMISSION LETTER FOR INSTRUCTOR'S MANUAL AND TEST BANK FOR
TEACHING STUDENTS WITH SPECIAL NEEDS IN INCLUSIVE SETTINGS
Permission to Use Copyrighted Material

University of Nevada, Las Vegas

I, Robert Towner

holder of copyrighted material entitled Instructor’s Manual and Test Bank for Teaching Students with Special Needs in Inclusive Settings

authoring by Smith, T. E. C., Followay, E. A., Patton, Linfor, M.

hereby give permission for the author to use the above described material in total or in part for inclusion in a doctoral dissertation at the University of Nevada, Las Vegas.

I also agree that the author may execute the standard contract with University Microfilms, Inc. for microform reproduction of the completed dissertation including the materials to which I hold copyright.

[Signature] [Date]

Robert Towner 5/7/03

Name (typed) Title

Allyn and Bacon Publisher

Representing

This permission is for your dissertation only. If you publish any portion of it that contains our material, you must reapply for permission first.
APPENDIX D

PRESERVICE TEACHER CONSENT FORM
General Information:
I am Ronald Tamura from the UNLV Department of Special Education. I am the researcher on this project. I am a doctoral candidate in the Department of Special Education. You have been invited to participate in a research study. This study involves measuring your attitudes and knowledge about students with disabilities.

Procedures:
If you agree to volunteer to participate in this study, you will be asked to complete a survey and test at the beginning and end of the semester. It should take less than 40 minutes to complete the Preservice Teacher Service Delivery and the Knowledge Test. Directions are included on the form, but if you should have any questions, please consult with the administrating proctor or with the researcher, Ronald Tamura.

Benefits of Participation:
By participating, you should increase your knowledge about your attitudes toward service delivery for students with disabilities, your responses will contribute to the improvement of teacher preparation programs, and your responses will contribute to the improvement of service delivery for students with disabilities. Additionally, this study will result in an increased understanding of preservice teachers' attitudes regarding appropriate placement for students with disabilities and will contribute to the existing literature in teacher education.

Risks of Participation in:
As with any research study, some risks may be involved. However, because this study involves a self-report survey and test, there will be only minimal risk to you. You may not know all the answers to the questions on the survey or test and experience some anxiety. Your answers will not be counted against you. During the administration, you may become tired. If you feel tired during the administration of this study, please ask the administrating proctor or Ronald Tamura to take a break.

Cost/Compensation:
There will be no financial cost to you for participation in this study. Your time is a cost and you will not be compensated for your time. The University of Nevada, Las Vegas may not provide compensation or free medical care for an unanticipated injury sustained as a result of participating in this research study. All responses will be confidential, however should you have questions while completing the survey or the test, please contact the administrating proctor or the researcher, Ronald Tamura.
Participant Consent

INFORMED CONSENT (continued)

Contact Information:
If you have any questions about this study or if you believe you may have
eXperienced harmful effects as a result of participation in this study, please
contact Ronald Tamura at 895-3205 or Dr. Susan Miller (faculty advisor) in the
UNLV Department of Special Education at 895-3205.

For questions regarding the rights of research subjects, you may contact the
UNLV Office for the Protection of Research Subjects at 895-2794.

Voluntary Participation:
Your participation in this study is voluntary. You may refuse to participate in this
study or in any part of this study. You may withdraw at any time without prejudice
to your relation with the university. You are encouraged to ask questions about
this study at the beginning or any time during the research study.

Confidentiality:
All information gathered in this study will be kept completely confidential. No
reference will be made in written or oral materials that could link you to this study.
All records will be stored in a locked file cabinet in the Department of Special
Education at the UNLV for at least 3 years after the completion of the study. After
the storage time, shredding will destroy the information gathered.
Consent:
I have read and understand the above information and agree to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

_________________________  _________________
Signature of Participant     Date

_________________________
Participant Name (Please Print)

Thank you for your cooperation. When you have the completed and signed form, return it to the administering proctor or Ronald Tamura, before you fill out the Knowledge Test and the Preservice Teacher Service Delivery Survey. I must receive this signed informed consent form prior to your participation in the study.
REFERENCES


Sacramento City Unified School District v. Rachel H., 14 E3d 1398 (9th Cir. 1994).


VITA

Graduate College
University of Nevada, Las Vegas

Ronald Tamura

Home Address:
9101 W. Sahara Avenue #105
PMB 141
Las Vegas, Nevada 89117

Degrees:
Bachelors of Science, Psychology, 1989
Florida State University

Master of Education, Special Education, 1994
Lesley University

Publications:


Dissertation Title: Comparing Preservice Teachers’ Special Education Knowledge and Attitudes Toward the Placement of Students with Disabilities

Dissertation Examination Committee:
Chairperson, Dr. Susan Miller, Ph. D.
Committee Member, Dr. Thomas Pierce, Ph. D.
Committee Member, Dr. Beatrice Babbitt, Ph. D.
Graduate Faculty Representative, Dr. Paul Jones, Ed. D.