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ARE WE PREPARED FOR REFORM? A STUDY OF TRADITIONALLY- AND ALTERNATIVELY-CERTIFIED SPECIAL EDUCATION TEACHERS IN TEXAS

By

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ABSTRACT

ARE WE PREPARED FOR REFORM? A STUDY OF TRADITIONALLY- AND ALTERNATIVELY-CERTIFIED SPECIAL EDUCATION TEACHERS IN TEXAS

By

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New laws and policies promise to make dramatic changes in the field of special education. The Individuals with Disabilities Education Act Amendments of 1997 and the No Child Left Behind Act of 2001 address standards for special education students and require that they be included in statewide assessments and accountability systems. While the demands on special education teachers change and grow, the field of teacher preparation has been placed under pressure to respond to these changes (President's Commission on Excellence in Special Education, 2002). One area of teacher preparation that has changed is that of certification options for potential teachers. This option is highly touted by the government and by influential national groups as an answer to problems of teacher shortages and to criticisms of inadequate teacher preparation (Dill, 1996; President's Commission on Excellence in Special Education, 2002). However, the field has not yet begun to explore how well prepared special education teachers from any certification route are to meet the changing world of practice (Coleman, 2001). This study examined the knowledge of new teachers surrounding changes in special education law and practice through a Web-based survey of alternatively- and traditionally-certified special education teachers in Texas. These teachers were assessed as to their knowledge of three areas related to the Individuals with Disabilities Education Act Amendments of 1997 and the No Child

Left Behind Act of 2001: content and achievement standards, assessment, and access to the general education curriculum.

To my family:

My husband Jered

My children Adam and Seth

My parents Mara and Philo

My brother and sister Aaron and Hope

for Everything.

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INTRODUCTION

Introduction to the Study

Federal legislation such as the Individuals with Disabilities Education Act Amendments of 1997 (IDEA '97) and the No Child Left Behind Act of 2001 (NCLB) will have a significant impact on both teacher practices and teacher preparation in special education (Coleman, 2001; McLaughlin & Thurlow, 2003; President's Commission on Excellence in Special Education, 2002). One of the main goals of this reform movement is to shift special education as a system from a focus on process and compliance to one that responds to calls for accountability for student performance and student outcomes (President's Commission on Excellence in Special Education, 2002). Now, schools are required to ensure that special education students have access to the general education curriculum and participate in state assessments (Thurlow, McLaughlin, & Elliott, 2003). Many education professionals see these steps as critical to improving special education student outcomes (Thompson, Lazarus, & Thurlow, 2003).

However, researchers and government officials alike are questioning teachers' ability to make such changes and are emphasizing the role and importance of teacher preparation as a means to achieve the goals of federal policy (President's Commission on Excellence in Special Education, 2002; Thurlow et al., 2003). Aside from inadequate preparation, other problems involved in implementing the changes initiated by federal policy include special education teacher attitudes and beliefs supporting individualized instruction and curriculum, and alternate assessments (Belden

Russonello & Stewart, 2003; Ward, Montague, & Linton, 2003). Researchers are urging teacher preparation programs to take responsibility for preparing teachers who have the ability, skills and attitudes necessary to reform and inform the field of special education (Thompson et al., 2003; Whitten & Rodriguez-Campos, 2003).

One type of teacher preparation that has been identified by the federal government as a possible solution to these and other problems is alternative certification (President's Commission on Excellence in Special Education, 2002; Task Force on Teaching as a Profession, 1986). Alternative certification usually involves older teacher candidates who already have a bachelor's degree, and alternative programs are usually shorter and more focused on field experience than the traditional university-based four or five year undergraduate programs (Rosenberg & Sindelar, 2003). Although various types of alternative certification have existed for decades, No Child Left Behind opens the door to these programs and encourages their expansion (Brownell, Sindelar, Bishop, Langley, & Seo, 2002). Although researchers have determined that alternative certification programs do attract more diverse candidates, and that successful programs involve intensive classroom study, mentoring, and supervision, research on alternative certification programs is scarce (Wilson, Floden, & Ferrini-Mundy, 2001). Comparisons of the knowledge and performance of teachers from traditional and alternative programs have had mixed results (Wilson et al., 2001; Zeichner & Schulte, 2001). Limitations of existing studies include: (1) many are self-studies, (2) they often rely on questionable measures such as supervisor ratings, (3) they attempt to compare extremely diverse groups of

teachers, or (4) they report on programs that are constantly in a state of flux (Wilson et al., 2001; Zeichner & Schulte, 2001).

Within special education, the research base on alternative certification is almost nonexistent, despite the fact that nearly 10% of new teachers are becoming certified through alternate routes (SPeNSE, 2002). Most of the alternative certification programs in special education are even newer than those in general education (Buck, Polloway, & Robb, 1995; Geiger, Crutchfield, & Mainzer, 2003). Although one pilot study has located programs around the country and collected basic factual data on these programs, neither detailed program descriptions nor outcome data on graduates exists (Geiger et al., 2003; NCPSE, 2003a; Rosenberg & Boyer, 2003).

While many see alternative certification as a solution to problems such as poor preparation, a homogeneous teacher population, and teacher shortages, others believe that they pose a serious threat to teacher quality and to the future of the teaching profession, in part due to their reduced focus on coursework and under-reliance on faculty for supervision (Buck et al., 1995; Geiger et al., 2003). As a field, special education needs to examine the efficacy of both alternative and traditional programs in preparing teachers to meet the new wave of challenges brought on by current reform efforts.

Statement of the Problem

With the passage of the Individuals with IDEA '97 and NCLB, which mandate access to the general education curriculum and inclusion of students with disabilities in general accountability systems, officials predict radical changes in the field of

special education (Coleman, 2001; Pugach & Warger, 2001; Thompson et al., 2003). Researchers question whether teachers prepared under any route are adequately prepared to meet the challenges brought on by new legislation (Coleman, 2001; O'Shea, Stoddard, & O'Shea, 2000). Further, professionals are urging more research in the area of alternative certification for several reasons: (a) alternative certification is growing rapidly, (b) it may offer a solution to serious shortages in the field, and (c) the field of special education has very little knowledge about the characteristics or quality these programs (Buck et al., 1995; Geiger et al., 2003). In an age in which the following conditions exist, the study of teacher preparation in special education is crucial to the future of the field:

- the entire field of special education practice is reorganizing
- teacher preparation is under scrutiny for failure to produce effective teachers
- immediate solutions are needed to address teacher shortages
- unstudied alternative routes are becoming commonplace

Purpose of the Study

The purpose of this study was to assess the perceptions, knowledge and reasoning of special education teacher candidates related to IDEA '97 and NCLB. The study included candidates from both traditional and alternative certification programs in order to compare responses. It assessed teacher candidates in three areas: (a) content and achievement standards, (b) assessment, and (c) access to the general education curriculum. This knowledge base is critical for teachers in the field of special education, who will be responsible for carrying out the reforms mandated by

these two laws (Thompson et al., 2003; Thurlow & Thompson, 2003). The purpose of this study was threefold:

- to assess special education teacher candidates' perceptions of their preparation, both generally and with respect to skills related to IDEA '97 and NCLB;
- to assess special education teacher candidates' knowledge and reasoning surrounding the implementation of IDEA '97 and NCLB; and
- to assess differences between new traditionally- and alternatively-certified special education teacher candidates in the above areas

The research questions guiding this study were:

- What are special education teacher candidates' perceptions of their preparation, both generally and related to IDEA '97 and NCLB?
- What is the breadth and depth of special education teacher candidates' knowledge and reasoning needed for the implementation of IDEA '97 and NCLB?
- What differences exist between new traditionally- and alternatively-certified special education teachers in their perceptions, knowledge, and reasoning surrounding the implementation of IDEA '97 and NCLB?

CHAPTER 2

A REVIEW OF LITERATURE

The Changing Face of Special Education

Both the Individuals with Disabilities Education Act Amendments of 1997 (IDEA '97) and the No Child Left Behind Act of 2001 (NCLB) were developed as part of the movement toward standards-based reform that included students with disabilities in these reform efforts. IDEA '97 includes several provisions to be addressed in students' IEPs that reflect this movement: a statement of present performance and needs and how they affect progress in the general curriculum, annual goals and objectives related to progress in the general curriculum, and services, supports and modifications needed for success in the general curriculum. In addition, IDEA '97 ensures that students with disabilities participate in all state- and district-wide assessment (Thurlow et al., 2003).

No Child Left Behind builds on these themes. In general, the act requires all states to develop accountability plans. These plans include a single assessment and accountability systems for all students, and the development and alignment of grade-level content standards with these assessments. Schools must report data on student participation and assessment results in order to demonstrate whether they have made Adequate Yearly Progress (AYP), based on benchmarks for achievement that are set by the state and federal government. Adequate Yearly Progress also takes the performance of several subgroups into account, including that of students with disabilities (Thurlow et al., 2003).

Both IDEA '97 and NCLB promise to make radical changes in special education. Thurlow (2002) writes that "the greatest promise of standards-based reform for students with disabilities ... is that it will result in programmatic and instructional improvements" (p. 199). She explains that the first step in applying standards involves special educators in obtaining the state standards and determining how they are being applied. The application of uniform standards is extremely new to the field, which has traditionally relied on individualized standards as outlined in each student's IEP (McLaughlin & Thurlow, 2003).

Similarly, many students with disabilities historically have been exempted from state testing (Ward et al., 2003). However, standardized testing is one of the hallmarks of NCLB, mandating the participation of all students. Special education teachers are now involved in crucial decision-making processes regarding the selection of options for state testing and accommodations (Hollenbeck, Tindal, & Almond, 1998).

As for access to the general education curriculum, Pugach and Warger (2001) report that through this provision, "IDEA has focused attention – as well as compliance requirements – squarely on the curriculum" (p. 194). They continue by arguing that the curriculum historically has been excluded from discussion of special education practices. They assert that special educators can no longer view the curriculum as the content of a student's IEP.

Thurlow and Thomspon (2003) have articulated the points of intersection of these two crucial laws as they affect students with disabilities. They write, "together, [IDEA '97 and NCLB] require us to address content standards, achievement standards,

assessment, and access to the general curriculum." These new laws are seen as making a significant impact on the field of special education. McLaughlin and Thurlow (2003) explain that "the concept of uniform and common standards is foreign to many [special education] teachers" (p. 446). They argue that the long tradition of separate standards and individualized instruction for students with disabilities hinders teachers' ability to address these new policy demands, or even to see policy goals as possible to achieve. The authors consider teachers' knowledge of how to provide appropriate supports and accommodations to allow access to the general education curriculum, how to interpret results of statewide assessment, and how to adjust for instruction as imperative for the special educators of today and tomorrow (McLaughlin & Thurlow, 2003).

As a result of the emphasis of reformers on these three areas, the field of special education has shifted from a focus on individual goals and individualized instruction to a focus on inclusion in general education classrooms and the application of uniform standards, curricula, and assessments (McLaughlin & Thurlow, 2003). Special education teachers themselves are reporting changes in the field caused by these new mandates. In a nationwide survey of 400 general and special education teachers, over half of special education teachers indicated that (1) the curriculum for special education students is more similar to that of general education students compared to three years ago; and (2) special education students are learning more content that is based on the state academic standards compared to three years ago (Belden Russonello & Stewart, 2003).

As for the future of the accountability movement, researchers predict an increasing trend toward holding both teachers and students accountable for student performance, through promotion and graduation examinations, teacher examinations, merit pay raises, and other policies (Barton, 1999; DeFur, 2002). State accountability policies are being clarified and expanded, as well as being articulated through rules for how students with disabilities will participate and be accounted for within these systems (Thurlow, Lazarus, Thompson, & Robey, 2001). Another way in which special education teachers are being affected by NCLB is through the "highly qualified teacher" mandate. In 2003-2004, no state required secondary special education teachers to possess degrees or pass certification exams in the content areas they taught, even though the frequency of occurrence of special education teachers teaching content classes was still widespread (Carlson, Brauen, Kalein, Schroll, & Willig, 2002). These practices are problematic, as only about 10% of special education teachers are licensed in language arts or social sciences, and 5% or less in science or mathematics (Coleman, 2001). Further, they run counter to the highly qualified teacher mandate, and are still being scrutinized at the state and federal levels ("Quality counts 2004: Special education in an era of standards," 2004).

As Whitten and Rodriguez-Campos (2003) summarize, "[the current reform] movement has created the need to redefine the roles of special education teachers and prepare them to assume different roles .... to meet these challenges teacher preparation programs across the nation are modifying and redeveloping their programs" (p. 138). However, as the results of this study demonstrate, teacher preparation programs may not be doing enough to ensure adequate preparation in this age of reform. Although

new teachers know the facts of the reform movement and its basis in law, they are not being well prepared to make the kind of changes in the field discussed above (Brownell, Sindelar et al., 2002).

Teacher Preparation in a Changing Field

These new reforms and resulting policies have researchers questioning whether in fact teacher preparation programs are preparing special educators to meet these goals (Coleman, 2001; President's Commission on Excellence in Special Education, 2002). O'Shea, Stoddard, and O'Shea (2000) state that "preparing educators to work with students with disabilities in general education curricula is fundamental to legal mandates and educational reform" (p. 125). Clearly, attention to all of these new competencies needed by special education teachers is of paramount importance if the field of special education wishes to prepare and retain high quality teachers who will effectively change the face of practice in special education and who will be able to affect student outcomes.

This study uses the three points of intersection of NCLB and IDEA '97 that have been articulated by Thurlow and Thompson (2003): (a) content and achievement standards, (b) assessment, and (c) access to the general education curriculum. The importance of teacher knowledge of IDEA '97 and NCLB, as well as competencies surrounding changes in practice due to these laws, is supported by national standards for teachers. Evidence of this emphasis can be seen in the standards put forth in each piece of what is referred to as "the three-legged stool" to achieve teacher quality: accreditation (Council for Exceptional Children's professional standards for new teachers, included by NCATE), licensing (Interstate New Teacher Assessment and

Support Consortium's beginning teacher standards), and certification boards (National Board for Professional Teaching Standards for advanced certification) (National Commission on Teaching and America's Future, 1996).

For the accreditation piece, the Council for Exceptional Children's (CEC) Common Core of Knowledge and Skills Essential for All Beginning Special Education Teachers requires teachers to be able to "conduct instructional and other professional activities consistent with the requirements of law, rules and regulations, and local district policies and procedures." The standards also include knowledge and skills needed for the implementation of IDEA '97 and NCLB, such as knowledge of "legal provisions, regulations, and guidelines regarding assessment, reporting and using data to guide decisions regarding placement and instruction, knowledge of curriculum, collaboration and consultation with general education teachers and other school personnel in order to support student integration into various learning environments (Council for Exceptional Children, 2002).

As for teacher licensure, the Interstate New Teacher Assessment and Support Consortium (INTASC) recommends that both general and special education teachers "have knowledge of the major principles and parameters of federal disabilities legislation" (INTASC, 2001, p. 16). They also assert the importance of teacher knowledge and skills in making accommodations, adaptations and modifications to the general education curriculum in order to include students with disabilities into general education. In addition, the standards stress the importance of collaboration between general and special education teachers in order to ensure shared responsibility for students and improved outcomes. They require both general and special education

teachers to have in-depth knowledge of curriculum, instruction, and modes of inquiry in the content areas they teach (INTASC, 2001).

Certification Boards have also recognized these changes. The National Board for Professional Teaching Standards (NBPTS) requires teachers to possess knowledge and skills in all three areas mentioned above. They assess teachers as to their "grounding in special education as well as vocational and general education laws that affect students with disabilities" (NBPTS, 2003b, p. 13). They refer to skills important to the implementation of IDEA '97 and NCLB in each of their four areas of standards, including communication skills, understanding assessment, a core body of knowledge in the content areas, and the use of modifications, adaptations and accommodations in order to support students in general education.

Because of the great need for standards addressing the three areas that are the focus of this study, the Educational Policy Reform Research Institute (EPRRI) and the National Center on Educational Outcomes (NCEO) collaborated to produce a set of principles that encompass "key knowledge and skills that all educators need to increase the participation and performance of students with disabilities in standards-based environments" (Thompson et al., 2003, p. 17). These ten standards include knowledge of how to tie IEP goals to grade-level content standards, how to support students with disabilities in achieving grade-level academic standards, and recognition that federal legislation related to standards, assessment and access applies to every student.

No Child Left Behind addresses teacher preparation specifically by requiring that all teachers be "highly qualified" by the year 2006. It defines "highly qualified"

as those teachers who hold full state licensure or those who hold a bachelor's degree and who have passed certain state tests (Brownell, Sindelar et al., 2002). Brownell et al. (2002) discuss how this provision opens the door to alternative certification programs and reflects the current Administration's belief that traditional programs fail to attract the best teacher candidates by "imposing high barriers and tolerating low standards" (p. 2). This type of policy will have a significant impact on special education teacher preparation, as special education has always experienced severe and widespread teacher shortages (Boe, Cook, Bobbitt, & Terbanian, 1998).

A History of Alternative Certification

Between 1950 and 1970, the teaching force in the United States doubled in size (Dill, 1996). As states began to increase certification requirements, researchers initiated studies that involved tracking the rapid teacher turnover, noting that it was mainly the best and brightest who left the teaching profession (Schlechty & Vance, 1983; Vance & Schlechty, 1982). Teacher education institutions were blamed for an inability to recruit and retain talented individuals as teachers, and for requiring teacher candidates to take a variety of "soft" courses that pose no utility for them as teachers (Galluzzo & Ritter, 1986). Influential groups such as the Holmes Group and the Carnegie Foundation wrote or commissioned reports condemning current teacher education practices, claiming that "too few [teacher candidates] completed academically demanding undergraduate programs...too many...complain that their education courses failed to prepare them for teaching" (Task Force on Teaching as a Profession, 1986, p. 71). Universities were not seen as committed to colleges of education, and the promise of low wages and limited opportunities for advancement

combined with increased career options also contributed to the choices of high-ability individuals to pursue options outside the teaching profession (Dill, 1996).

In the 1980s, a variety of non-traditional teacher education programs were established in several states in order to compensate for shortages found particularly in urban and rural areas, and to attract the type of individuals mentioned above who had chosen not to pursue a degree in education. In addition, these programs were expected to "serve as a catalyst to reform traditional teacher education" (Zeichner & Schulte, 2001, p. 268). As alternative certification programs proliferated, debate among the various stakeholders in teacher education began to escalate. Proponents of alternative certification believed that individuals simply needed content knowledge (which candidates already possessed) and a quality internship in order to be effective teachers. They hoped that these programs would lure the "best and brightest" into teaching by offering reduced coursework and by recognizing and offering credit for candidates' varied life experiences through "fast-track" certification options (Dill, 1996). Those involved in traditional teacher education argued that such alternative routes undermined education as a field by denying the existence of a specialized body of knowledge that is crucial in order for candidates to become effective teachers. They felt that teacher education institutions had been threatened, as those institutions historically had held exclusive rights to prepare teachers (Dill, 1996; Zeichner & Schulte, 2001).

Fenstermacher (1990) characterized this debate by focusing on three continuums surrounding issues pertaining to the preparation of teachers. These three continuums are: (1) how close training occurs to practice; (2) the extent to which

training emphasizes pedagogy versus content; and (3) the extent to which training focuses on conforming to practices or to revising practice. Alternative certification tends to place training close to practice, emphasize content over pedagogy, and concentrate on conforming to current practices in the field. He emphasized that the debate over alternative versus traditional certification had "focused on *how* training should be carried out, with scant attention to the *goals* and *purposes* for initial teacher preparation" (p. 164).

Others outside the teacher education arena also had a voice in the debate. In the early 1990s, the Bush administration came out in favor of alternative certification, and commissioned a series of studies through the Office of Educational Research and Improvement (OERI) (Dill, 1996). This stance marked the first federal involvement in teacher preparation, an area that historically had been left strictly under state regulation (Fenstermacher, 1990). A decade later, in December of 2001, Congress passed the reauthorization of the Elementary and Secondary Education Act (ESEA). This act granted over three billion dollars for Title II, Preparing, Training and Recruiting High Quality Teachers and Principals, which includes "establishing programs that ... recruit qualified professionals from other fields ... and provide such professionals with alternative routes to teacher certification" (Feistritzer & Chester, 2003, p. 1). In addition, criticisms of traditional routes to teacher certification have been made by influential groups such as the Fordham Foundation and the Milken Family Foundation, as well as by the federal government (Rosenberg & Sindelar, 2003). These groups support alternatives as a means to recruit more talented and more diverse individuals into the teaching profession.

Currently, the U.S. Department of Education's highly touted Meeting the Highly Qualified Teachers Challenge also supports alternative certification programs, which the report terms "a model for the future" (U. S. Department of Education, 2002, p. 15). The U.S. Department of Education (2002) argues that traditional teacher education programs fail to recruit the best students, citing "high barriers, low standards" (p. 12.) They discuss the fact that only 38% of teachers hold degrees in non-education fields, and that under the current system, quality candidates who desire to pursue a teaching career even after completing only two or three years of college still face overwhelming obstacles to becoming certified. The authors of the report claim that traditional teacher preparation has not succeeded in preparing teachers well, citing data from the National Center for Education Statistics that measured new teachers' feelings of preparedness for implementing curriculum and performance standards, using technology, and meeting the needs of diverse learners (e.g. fewer than 36 percent felt 'very well prepared' to implement curriculum and performance standards). The report concludes that alternative certification programs hold great promise for preparing a more diverse and better-qualified workforce in teaching, as evidenced by the content area backgrounds and diversity of candidates that is often found in alternative certification programs.

Similar factors have contributed to the growth of alternative certification programs in the area of special education, from six states in 1991 to 24 states in 1995 (Buck et al., 1995). These factors include the extreme teacher shortages and serious teacher attrition that reach nearly every part of the country. The annual attrition rate for special education teachers has been estimated to be as high as 10%, with a

persistent annual shortage of about 29,000 fully certified teachers (Boe et al., 1998). Another factor is the great need for multicultural personnel in an area in which 32% of the students but only 14% of the teachers come from linguistically or ethnically diverse backgrounds. Overrepresentation of minority students is a serious issue in the field of special education, and efforts to rectify these problems over the last 20 years have been largely unsuccessful (Artiles & Trent, 1994). Advocates of alternative certification within special education claim that investing in and expanding programs will help provide solutions to some of these persistent problems in the field (Finn Jr., Rotherham, & Hokanson Jr., 2001).

One of the major confounding factors in conducting research on alternative certification is in the definition of the term itself (Buck et al., 1995; Chappelle & Eubanks, 2001; Darling-Hammond, 1990; Geiger et al., 2003). "Alternative certification" has been used to refer to everything from "crash courses" for emergency certification to intensive, sustained programs for individuals with college degrees and various life experiences (Feistritzer & Chester, 2003). Some researchers have sidestepped this issue by declaring alternative certification to be whatever the states define as such (Shen, 1997). Others have defined it simply as a post-baccalaureate teacher education program designed for those who have degrees in non-education fields (Adelman, 1986; Feistritzer & Chester, 2003).

Darling-Hammond (1990) articulates some of the immense variations in programs that account for some of the difficulty in defining alternative certification. First, there are clear variations among routes in terms of amount of required coursework, and in when candidates enter the teaching force (e.g. immediately after a

six-week intensive course versus after two years of sustained course and fieldwork). Second, great variation among the different states' certification standards adds another layer of complexity to defining alternative certification. Some states require master's degrees, while others require only 18 hours of education coursework at the undergraduate level in order to become fully certified. These differences not only affect alternative certification programs but create inconsistencies even for those who follow traditional routes. Additionally, some states have GPA requirements, and some give college credit for hours spent outside the university (e.g. in study groups). Third, there are variations in who is certifying teachers (i.e., local versus state entities). In her discussion of various alternatives to the four- or five-year undergraduate teacher education program, Darling-Hammond makes a distinction between "alternative certification", programs that reduce standards, and "alternate routes," which hold candidates to the same standards as traditional college- and university-based programs. Later, Zeichner and Schulte (2001) refer to both of these programs as "alternative certification."

Feistritzer and Chester (2003), who have written numerous yearly volumes updating the status of alternative teacher certification by state, developed over ten separate categories to describe the various paths to certification. In an attempt to consolidate some of these categories, Chappelle and Eubanks (2001) distinguish between alternative certification and what they term "other non-traditional routes to teaching." Their assessment is similar to Darling-Hammond's, in that they view alternative certification as a program that waives one or more state-mandated licensure requirements, while non-traditional routes hold teachers to the same standards as

traditionally prepared teachers. They create five categories of routes to teaching: traditional routes, emergency licensure, undergraduate non-traditional routes, postgraduate non-traditional routes, and alternative certification. Their conception of "alternative certification" is that it requires a non-education bachelor's degree, demonstrable competence in curriculum area(s), intensive summer training, and may involve passing state licensure examinations in a subject area.

In the area of alternative certification in special education, Rosenberg and Sindelar (2003) use three scales in order to evaluate the extent to which various routes to teacher certification may be classified as "traditional" or "alternative." The first component is program length and structure, with alternative certification programs being shorter than traditional programs and allowing candidates to begin teaching immediately or shortly after beginning their programs of study. The second component is delivery mode, with alternative certification programs being more focused on field experience as opposed to traditional university classroom instruction. The third component is candidate population. Usually, candidates in alternative certification programs are older and have more diverse backgrounds than those in traditional programs. They have college degrees, but often in non-education fields. In the current study, the scales identified by Rosenberg and Sindelar (2003) were used in order to identify traditional and alternative programs, as they were developed specifically to describe alternative certification programs in the area of special education, and were based on the available literature in the field. In addition, the study draws on the pool of alternative certification programs identified by Rosenberg and colleagues in a subsequent study (NCPSE, 2003a; Rosenberg & Boyer, 2003).

The current study utilized this pool, as it was the only national pool of alternative programs in special education available at the time of the study.

What Is Known About Alternative Certification

General education. One area of alternative certification that has been studied involves the population of teacher candidates themselves. Researchers have investigated the demographics of this population and their academic ability as compared to that of traditionally certified individuals, as well as the settings in which they work and their retention rate. One area of general consensus is that alternative certification programs do seem to be attracting more individuals of color than traditional programs (Haberman, 1999; Hutton, Lutz, & Williamson, 1990; Lutz & Hutton, 1989; Shen, 1997). However, Zeichner and Schulte (2001) state that this finding may be due to the location of the programs, rather than to features of the program itself. Many alternative certification programs are in urban areas and feed into urban districts, where more individuals of color reside. In general, these individuals are also more likely to have grown up and to have attended school in urban areas than traditionally certified teachers (Natriello & Zumwalt, 1993; Stoddart, 1990). In their review of the peer-reviewed literature on alternative certification, Zeichner and Schulte (2001) found that most studies reported an older population, and some showed that more men entered these programs. However, they assert that the latter finding may be due more to the type of content-area certification offered by the various programs rather than to any unique characteristic of alternative certification (e.g. more men than women have degrees in science and mathematics; and therefore, more men may apply to a program that offers alternative certification in those areas).

The settings in which these candidates are teaching is also a general area of consensus in the literature. Candidates are more likely to teach in urban settings and/or teach children of color (Houston, Marshall, & McDavid, 1993; Shen, 1997; Wilson et al., 2001). Additionally, they are less likely to be teaching in an area in which they are certified, even after they complete their programs (Wilson et al., 2001). These findings are not surprising, given that one of the reasons for the popularity of alternative certification is that it provides teachers to fill areas of greatest need, such as in urban schools, which are also more likely to have teachers teaching out of field (Ingersoll, 2001).

As for candidates' ability level, several studies reported no differences between the GPAs and/or content exam scores when comparing candidates from alternative and traditional certification routes (Guyton, Fox, & Sisk, 1991; Zeichner & Schulte, 2001). In their review of the data-based literature on alternative certification, Wilson et al. (2001) concluded that "alternate routes have a mixed record for attracting the 'best and brightest'" (p. 27), as comparisons of test scores and GPAs of teachers certified through traditional and alternate routes appear to vary by program and even by study.

Data on teacher retention also present a mixed story. Some researchers determined that a higher percentage of traditionally certified teachers intended to stay until retirement (Shen, 1997), whereas others observed a lower attrition rate among alternatively certified teachers than what would be expected among traditionally certified teachers (Stoddart, 1990). Shen's data is based on results from teacher questionnaires, whereas Stoddart's is based on the percent of alternatively-certified teachers who left the school district, and compares these percentages to national

averages. However, Natriello and Zumwalt (1993) explain that most of the differences in retention observed between traditionally and alternatively certified teachers are not due to their certification route, but rather to the grade level and subject matter they teach. For example, special education teachers are much more likely to leave the field than general education teachers, regardless of their route to certification.

Another area of study is that of the alternative certification programs themselves. In their review of the peer-reviewed literature on 14 different alternative certification programs, Zeichner and Schulte (2001) summarized descriptions of components of alternative certification programs. The studies were selected because they described and examined one specific alternative certification program, rather than grouping several diverse programs together. The authors found that all of the programs required bachelor's degrees, and many required secondary teachers to possess a major in the subject area. Admission requirements varied; several had GPA requirements, and some required passing various basic skills and/or subject area exams. The amount of coursework and preparation required before candidates could be hired as teachers ranged from none to ten weeks. Most of the coursework focused on classroom management, curriculum, and methods; few included courses in learning and development. All of the programs involved mentoring, and one half required additional coursework or training during the school year. The characteristics of the teaching faculty of these programs also varied considerably; some candidates were taught solely by school employees, some by university faculty, and some by a combination of both.

Candidate performance is also a crucial area for study. However, both comparative evaluations and attempts to tie type of certification to student performance have reported mixed results, and some researchers question whether results have any utility due to differences in programs and populations studied (Sindelar & Marks, 1993; Wilson et al., 2001). For example, one author observed that principals rated traditionally certified teachers higher on instructional planning and skills (Jelmberg, 1996). However, the researcher relied on results of principal questionnaires, and the alternatively-certified teachers in this study were in the process of completing a three year program of professional development supervised by the school district. Another researcher found that alternatively certified teachers were rated at least as high, if not higher, by mentors than traditionally certified teachers (Lutz & Hutton, 1989). Finally, a third study determined marked differences at the beginning of the school year on many of the 16 items included in classroom observations, but all of these differences had disappeared by the end of the year. This study also compared alternatively- and traditionally-certified beginning teachers. However, the alternatively-certified teachers were interns who had already completed two years of paid field experience before entering their program. Their performance was evaluated three times by independent, trained observers who completed the Teacher Evaluation Scale (Sandlin, Young, & Karge, 1992). With different programs, different instruments and methods, and different respondents, these studies are difficult, if not impossible, to compare.

Several researchers have also investigated the relationship between teacher certification status and student achievement. Again, the results have been mixed, and

fraught with methodological difficulty (Sindelar & Marks, 1993). Some found no difference in student performance based on certification status (Sandlin et al., 1992; Stafford & Barrow, 1994). While the Sandlin article relied on classroom observations made by trained observers, the Stafford and Barrow study was conducted by the school district's supervisory agency. The Stafford and Barrow study compared test scores of students of traditionally- and alternatively-certified teachers. In their study, the alternative certification program required a summer program, weekly meetings for ten weeks, monthly observations, and candidates could complete certification at the end of the first year of teaching; whereas the Sandlin study reported on interns who had already completed two years of supervised, paid field experience.

Another study reported no difference in classroom observations, student achievement, and self-reports of ability and preparedness in matched samples of middle school teachers (Miller, McKenna, & McKenna, 1998). The alternatively-certified teachers in this study also completed summer training, and were observed eight times each year in addition to coursework and mentoring. Two certified teachers were trained as observers, and together, they observed all participants at a pre-scheduled time. The researchers also interviewed all teacher participants and compared their students' standardized test scores. Neither measure differed by teachers' certification status. Most recently, a Mathematica study found no difference in the reading scores of students of traditionally certification teachers and those trained through Teach For America, seen by some as an alternative certification program. The study also discovered that the students of Teach For America teachers showed significantly higher scores on mathematics tests than traditionally certified new and

veteran teachers (Decker, Mayer, & Glazerman, 2004). However, it is important to note the unusually high quality of Teach for America candidates: nearly all held leadership positions while in college, and they have an average G.P.A. of 3.5 (Teach for America, 1996).

In conclusion, some particularly problematic aspects of these studies severely limit their usefulness. First, the newness of many of the alternative certification programs and the fact that they are in constant change renders comparison of graduates extremely difficult (Geiger et al., 2003; Wilson et al., 2001). Second, problems with definitions present difficulties for the comparison of programs that are often enormously diverse (Feistritzer & Chester, 2003). All of the diversity in program simply complicates the task of identifying comparable groups of teachers to study. For example, some of the studies count teachers who have completed a two-year paid internship and those who have completed a six-week summer course as "alternatively certified." They count as "first year teachers" both those who are beginning their course of study (alternative) and those who have completed their course of study (traditional).

Third, teachers themselves are often confused about their certification status. Wilson et al. (2001) reported that 52% of teachers who said they were alternatively certified also held an undergraduate major in education, so their reports may confound studies. Fourth, many of the studies on alternative certification are self-studies, and many are not peer-reviewed. Some studies are overseen by independent agencies, some by school districts, and some by university researchers, all of who may or may not have connections with the agency responsible for implementing the alternative

certification program. This fact opens the possibility of researcher and/or participant bias, as these individuals had a stake in the outcome of the research (Wilson et al., 2001; Zeichner & Schulte, 2001).

Finally, many of the instruments used to measure teacher performance are of limited value. For example, several used what Wilson et al. (2001) term "problematic proxies for subject matter knowledge" (p. 30) in order to test candidates, which refers to problems with instruments that researchers used to ascertain how much subject matter knowledge is possessed by the candidate. Many studies relied solely on the perceptions of teachers, mentors, and/or supervisors, rather than on repeated observations and/or subject matter tests, thereby exacerbating the problem of subjectivity (Wilson et al., 2001).

Those who have conducted studies and/or written syntheses about alternative certification and about teacher preparation in general outline several paths for future research. There is widespread consensus about the great need for high-quality research in this area as well as the need to address the problems of previous research that have seriously limited the meaningful interpretation of results (Rosenberg & Sindelar, 2003; Wilson et al., 2001; Zeichner & Schulte, 2001). Authors emphasize the importance of conducting research in each of three areas: program models, program evaluation, and teacher evaluation, in order to aid in comparing quality of alternative and traditional programs. Well-conducted evaluation of teachers from the various routes is seen as crucial in order to determine the effectiveness of alternative certification. To this end, Wilson et al. (2001) assert the need for taking comparisons of matched pairs of traditionally prepared and alternatively certified teachers.

Special education. Overall, about seven percent of current special education teachers were certified through alternative routes, with newer teachers being more likely to have been certified in this manner (10%). A full 12% of teachers of students with emotional disturbance were certified through alternative certification programs. All of these numbers are higher than those in general education, in which only about 4.5% of teachers were certified through alternative routes (SPeNSE, 2002).

However, research in alternative certification within special education remains extremely limited. This problem is due at least partially to the fact that such programs are newer and less common than alternative certification programs offered in general education, despite the fact that they are certifying a larger percentage of practicing teachers (Buck et al., 1995; SPeNSE, 2002). In 1995, Buck et al. reported that out of the 39 states that offered alternative certification programs, only 24 included programs to certify special education teachers. Geiger et al. (2003) conducted a pilot study of ten states, six of which offered alternative certification in special education. The states were selected purposefully in order to ensure representativeness of population, amount of involvement in alternative certification, categorical versus non-categorical licensure, rural versus urban, and relative severity of special education teacher shortages. In general, the authors found that these programs were based on the same standards as traditional programs in their respective states, and that candidates were required to pass the same tests. Supervision was generally provided by mentor teachers, rather than by university faculty.

Another important consideration that should distinguish special education from general education alternative certification programs is that many alternative

certification programs in general education are predicated on the content model; that is, that individuals need to know only the subject area and be able to communicate well in order to be an effective teacher (Sindelar & Marks, 1993). This philosophy is problematic in the area of special education, which does not have a "content" per se (Sindelar & Marks, 1993). Those entering alternative certification programs in special education may or may not have a background working with individuals with disabilities, or have a background in general education. Further, traditional preservice programs in special education are longer than those in general education. Yet, on average, Sindelar and Marks (1993) report that alternative certification reduces the credit hours required in a typical secondary program by 36%, a typical elementary program by 63%, and a typical special education program by 74%.

A few articles have described the content of various alternative certification programs in special education. These self-studies reported greater candidate diversity than traditional programs, and participants showed high satisfaction with the programs on self-report instruments (Burstein & Sears, 1998; Edelen-Smith & Sileo, 1996; Epanchin & Wooley-Brown, 1993). However, several researchers observed high attrition among candidates (Banks & Necco, 1987; Edelen-Smith & Sileo, 1996; Gaynor & Little, 1997). A few studies have attempted to compare special education teachers who were certified through different types of programs. For example, Shepherd and Brown (2003) asserted that traditional candidates are better qualified because they received higher scores on the Texas state teachers' examination. Nougaret (2003) found that traditionally-certified special education teachers greatly surpassed teachers with emergency licensure (those with no preparation) on

observational measures of preparation, classroom environment, and instruction. However, due to all the problems with this research, which parallel those found in the general education literature, Rosenberg and Sindelar (2003) concluded that, "at this point, we find the evidence on effectiveness of [alternative certification programs] to be either unconvincing, missing, or suspect" (p. 14).

Based on the literature that does exist in the area of alternative certification in special education, Rosenberg and Sindelar (2003) outline three areas that they term "indicators of effective [alternative certification] programs." First, they found that meaningful IHE/LEA collaboration was crucial to candidates' success. They stress the importance of investing the time and effort necessary to sustain such a partnership. Second, the authors recommend "adequate program length with a variety of learning activities." They emphasize a strong connection between course- and fieldwork, and experimenting with alternative formats such as block scheduling and distance education, due to the life circumstances of many of the participants. Finally, "IHE supervision and building-based mentor support" was also deemed important to candidate learning. The authors suggest careful mentor selection and extensive supervision and feedback on the part of both mentor and faculty. However, these elements are also included in most of the reviews of the literature on common features in traditional special education teacher preparation programs (Brownell, Ross, Colon, & McCallum, 2002). Rosenberg and Sindelar (2003) conclude their report by presenting three areas of "extreme concern" for alternative certification. These include a need for an adequate definition of alternative certification, a shortage of

high-quality research, and a lack of focus on professional standards in alternative certification programs.

Compounding these problems is the fact that many special education alternative certification programs have not even been located (Buck & Robb, 1995). Recently, however, a comprehensive search for these programs was completed. This project was conducted jointly between the National Clearinghouse for Professions in Special Education (NCPSE) and the Center on Personnel Studies in Special Education (COPSSE) (NCPSE, 2003a; Rosenberg & Boyer, 2003). This project located 79 alternative certification programs in special education around the country and collected basic facts about these programs, including length of program and requirements for entry. Its purpose was to create a searchable, online database for use by prospective special education teachers.

Conclusion

The current standards-based reform movement in education has made the three areas of content and achievement standards, assessment, and access to the general education curriculum crucial knowledge for special education teachers (Thurlow & Thompson, 2003). Practices in special education are changing, but it is unknown if and how much teacher preparation is responding to these changes (Thompson et al., 2003). However, it is known that the way in which special education teachers are being certified is changing dramatically (Geiger et al., 2003). Very little about these programs or their quality has been documented (Rosenberg & Sindelar, 2003).

This study's purpose was to assess the perceptions, knowledge and reasoning of special education teacher candidates with respect to two laws affecting special

education practice, the Individuals with Disabilities Education Act Amendments of 1997 (IDEA '97) and the No Child Left Behind Act (NCLB). The study assessed teacher candidates in the three areas identified by Thurlow and Thompson (2003) as the areas of intersection of the two laws: content and achievement standards, assessment, and access to the general education curriculum. It also compared candidates from alternative and traditional certification programs. Research has not addressed the effects of these new laws on teacher preparation in special education, either in traditional or in alternative programs. It has not compared candidates at the same point in their training; rather, it has compared them at the same point in their teaching. This study extends previous research by investigating the changes that new reform efforts in education have made in teacher preparation. It asks three research questions:

- What are special education teacher candidates' perceptions of their preparation, both generally and related to IDEA '97 and NCLB?
- What is the breadth and depth of special education teacher candidates' knowledge and reasoning needed for the implementation of IDEA '97 and NCLB?
- What differences exist between new traditionally- and alternatively-certified special education teachers in their perceptions, knowledge, and reasoning surrounding the implementation of IDEA '97 and NCLB?

CHAPTER 3

METHODOLOGY

This study was designed to assess and compare the perceptions, knowledge and reasoning of new traditionally- and alternatively-certified special education teachers with respect to new laws affecting special education practice. The study used a web-based survey methodology in order to investigate the preparedness of special education teacher candidates in general, as well as the differences between traditionally- and alternatively-certified teacher candidates. This section states the research setting, participants, the instrument, data collection, and methods of data analysis.

Research Setting

The target population for this study was special education teacher candidates in the state of Texas who were certified at the end of the 2003-2004 school year. One state was selected in order to minimize the confounding variable of a wide variety in standards and licensure requirements across states (Geiger et al., 2003). The state of Texas was chosen (1) because it had the greatest number of alternative certification programs in special education, as reported by the National Clearinghouse in Professions on Special Education (NCPSE, 2003a), and (2) because of its deeply-rooted and long-standing accountability system (Alford, 2001). These traits helped bypass some of the difficulties involved in conducting research in alternative certification, including new and unstable programs and having a small population of alternatively-certified teachers from which to draw.

Texas accountability systems. Texas first established a state exit exam and reported district-level performance data on all statewide exams in 1984. The state's recent assessment, the Texas Assessment of Academic Skills (TAAS) was established in 1990, but was replaced by the Texas Assessment of Knowledge and Skills (TAKS) in 2003-2004. In 1996, the state mandated that students with disabilities who were exempted from the TAAS participate in alternative assessment, and in 1999, the scores of special education students were included in district-level data (Alford, 2001).

Currently, each special education student's ARD Committee (Admission, Review and Dismissal) decides in which state assessments the student will participate. The student may participate in either the TAKS, the State-Developed Alternative Assessment (SDAA), designed for students in special education for whom the TAKS is not appropriate, or a Locally Development/Determined Alternate Assessment (LDAA) for students with more severe disabilities for whom neither of the other assessments is appropriate (U. S. Department of Education, 2003). Seven to eight percent of all students are taking the SDAA (about 55% of all special education students), and about one percent is taking the LDAA (eight to nine percent of all special education students) (Neeley, 2004). Texas submitted a proposal for evaluation of these test results for AYP (Adequate Yearly Progress, as defined by NCLB), requesting exemption to the 1% cap on usage of alternate assessment scores when calculating AYP (Neeley, 2004). However, this plan was rejected. Texas now must reduce the percentage of students taking alternate assessments dramatically in order to comply with the plan outlined by the federal government in NCLB. If districts exceed the 1% cap on percentage of students taking alternate assessments, those scores will

count as "not proficient," regardless of the actual score (*Summary of TEA proposal for 2004 AYP with USDE responses*, 2004).

Alternative certification in Texas. In 1984, the Texas legislature created an alternate certification route in order to address its serious teacher shortages (Dill, 1994). These programs have been expanding yearly due to increasing demand. In 2004, the percent of first-year teachers from alternative programs exceeded the percent of first-year teachers from traditional programs for the first time (Teacher Quality Bulletin, 2004).

According to the National Clearinghouse for Professions in Special Education there were 20 traditional and 14 alternative programs in special education in Texas as of the year 2003 (NCPSE, 2003a, 2003b). The alternative programs vary greatly. The seven that reported a certification range all certify teachers to teach early childhood through secondary. Two are NCATE or CEC approved, four are not, and three did not know their approval status. Although none of the programs uses teacher candidates as paraprofessionals, all but one require full-time teaching during the course of training. They all offer a mentor, and only one does not require a bachelor's degree for entry. Program lengths range from one to four years, with an average of just under two years (NCPSE, 2003a).

Participants

The National Clearinghouse of Professions in Special Education (NCPSE) identified 20 traditional and 14 alternative special education teacher preparation programs in the state of Texas (NCPSE, 2003a, 2003b). Supervisors in these 34 programs were contacted via mail and e-mail and asked to provide the number of

individuals in their program who would complete their certification at the end of the 2003-2004 school year. Selecting teachers who were certified at the same time circumvented one of the most confounding variables in research involving comparison of traditionally- and alternatively-certified teachers; the problem of unequal populations. For example, alternatively- and traditionally-certified individuals who are in their first year of teaching are difficult to compare because the majority of alternatively-certified teachers can be seen as being in the midst of, rather than having already finished, their preparation program (Wilson et al., 2001; Zeichner & Schulte, 2001). The 34 supervisors indicated a total of 633 teacher candidates: 485 from alternative programs and 148 from traditional programs.

Based on Rosenberg and Boyer's (2003) description of alternative certification programs in special education, the majority of Texas alternative programs last between 13 and 24 months (64%), and 83% require full-time teaching during that time period. Most offer university credits (81%) and include a mentorship (90%). Eighty-three percent require a Bachelor's degree for entry into the program, and 59% are CEC and/or NCATE approved.

Instrument

The instrument used to assess the perceptions, knowledge and reasoning of new traditionally- and alternatively-certified special education teachers was a Web-based survey (see Appendix A). The survey was subdivided into five sections: demographic information, open-ended assessment of teacher knowledge, teacher perceptions of preparation, case-based assessment of teacher reasoning, and test of teacher knowledge. The last four sections all assessed the same three areas: content

and achievement standards, assessment, and access to the general education curriculum. However, the multiple methodologies (participant perception as measured on a Likert scale, assessment of knowledge as measured by a standard test-like format, assessment of reasoning through completion of open-ended responses to vignettes) helped strengthen the design through triangulation (Patton, 1990).

The first section, demographic information, asked participants to provide the level of school in which they are employed or student teaching, their age and gender, and the primary disabilities of the students they serve. The second section was an open-ended assessment of teacher knowledge about IDEA '97 and NCLB. It asked participants to generate three provisions contained in IDEA '97 and NCLB. The IDEA '97 question specifically referred to "NEW provisions," in order to elicit new provisions surrounding standards, assessment, and/or access to the general education curriculum, rather than the basics of the original law (e.g. IEPs and Free and Appropriate Public Education).

The third section, teacher perception of preparation, asked participants to rate the quality of their preparation, both in general and related to the three areas identified by Thurlow and Thompson (2003) as the intersection of IDEA '97 and NCLB. Respondents' answers were recorded on a six-point Likert-type scale, ranging from "strongly disagree" to "strongly agree." The survey used the following three questions to assess teacher perceptions in the three areas:

- content and achievement standards: "My program taught me to know and be able to use the state academic standards with my students"

- assessment: "My program taught me about the options for the state standardized test (e.g. the different tests and accommodations), and how to implement these options"
- access: "My program taught me how to make modifications, accommodations, and adaptations for my students in general education settings"

The fourth section of the survey, case-based assessment of teacher reasoning, involved participants in responding to a short vignette (see Appendix A). This section consisted of five short-answer questions, all related to a vignette about "Sara," a hypothetical middle-school student with a learning disability who exhibited poor literacy skills and received poor grades ("D's") in her general education classes. Participants were asked to answer five questions that tapped teachers' reasoning skills related to the three categories of standards, assessment, and access. The five questions were:

1. What additional information about Sara's program would you want to ask the teachers before making recommendations to the team?

2. What are the THREE most important issues in Sara's education that you think should be addressed in her IEP, and why?

3. How would you support Sara's reading and writing in the general education classroom?

4. What factors would you consider when making decisions about participation in state standardized testing (e.g. whether she should take the regular or an alternate exam, what accommodations, if any, she should have)? and

5. Do you think that Sara should be held to the same academic standards as non-disabled students? Why or why not?

The use of case methods as a pedagogy in teacher education is not new. However, since the push for increased standards in both public schools and in teacher education institutions in the 1980s, interest in and use of case-based instruction has increased dramatically (Merseth, 1996). "Case knowledge" is seen as "knowledge of specific, well-documented, and richly described events" (L. S. Shulman, 1986, p. 11), and its purpose is to assist teachers in "practicing the basic professional processes of analysis, problem solving, and decision making" (Doyle, 1990, p. 10). One type of case that is widely used involves teacher candidates in explaining and describing practices that are considered crucial for all teachers to know and to be able to apply in the classroom (Merseth, 1996).

Shulman (2000) asserts that "during the last decade, several educators have viewed case-based pedagogy as one of the most promising reforms in teacher education and professional development" (p. 2). She describes the benefits of using such pedagogy, which includes bridging theory and practice in teacher education, and guiding teachers' decision-making in the classroom by helping them identify problems, multiple perspectives, and determine possibilities for action. The use of case-based instruction in special education preservice programs is relatively new, but is seen as equally promising for reasons similar to those mentioned by researchers in the area of general education (Elksnin, 2001). In 1998, Elksnin (1998) found that 78% of participants in a survey of the membership of the Council for Exceptional Children's Teacher Education Division used case methods with their preservice

students. McNaughton, Hall, and Maccini (2001) conclude that case-based instruction is widespread among special education teacher educators as well as among their general education counterparts.

Despite the common use of case-based methods as instructional pedagogy in teacher education programs, the use of cases as a method of teacher assessment is not as prevalent. Two papers published in the late 1980s view case methods as a promising direction for assessing teacher performance. First, Dwyer (1989) predicted the use of case-like assessments as alternatives to the traditional pencil-and-paper assessments used to license teachers. Second, Barnes (1987) touts case method evaluation as a way to assess teaching in its complexity, by measuring teachers' ability to "use classroom events as occasions for restructuring their goals in order to achieve multiple intensions for learners" (p. 2), skills that are not measured by traditional teacher assessments. She sees case method evaluation as a tool to access the richness of the problem-solving frameworks teachers possess in different areas. National organizations such as the National Board for Professional Teaching Standards (NBPTS) also include case-based assessment as part of their teacher assessments. For example, special education teachers who wish to become nationally certified through NBPTS must pass a six-part formal assessment. Four of these sections include case-based methods that involve candidates in analyzing student profiles (NBPTS, 2003a).

Barnes (1987) outlines three guidelines for producing cases for use as teacher assessment. In order to obtain validity, she states that cases must (1) approximate the realities of classroom teaching; (2) be manageable in their level of complexity; and (3) allow teachers to create their own meanings from the information provided (p. 13).

The case selected for the purposes of this instrument follows these guidelines in that it is short, presents real problems of practice, and allows teachers to interpret the situation rather than selecting from forced-choice responses.

The fifth section of the survey, a test of teacher knowledge of IDEA '97 and NCLB, was also based on the three points of intersection of IDEA '97 and NCLB identified by Thurlow and Thompson (2003). This section consisted of 12 multiple choice questions, with four questions in each of the three areas referred to above. The individual questions were based in part on a test bank developed by Braden and Elliott (2003) in order to assess teacher knowledge surrounding assessment and accountability.

The instrument was field tested with 61 teacher candidates at a large Midwestern university. A reliability of .97 was calculated among the six teacher perception questions. Using Winsteps, an item reliability of .80 was found on the test of teacher knowledge. Based upon participants' responses to the pilot, distracters in the test of teacher knowledge that were not evenly distributed were modified. At the conclusion of the survey, participants were asked to provide comments about the clarity of qualitative questions, which were also modified accordingly.

Data Collection

Supervisors of teacher candidates of all 34 institutions were contacted to obtain the number of students in their programs, and to solicit their students' participation in the study. Follow-up telephone calls were made to supervisors who did not respond to the solicitations. Consenting supervisors were given a list of ID numbers to assign to their students for purposes of anonymity. The ID numbers indicated the program of

the teacher candidate. The supervisors were then asked to e-mail all students who would be certified at the end of the 2003-2004 school year, requesting that they participate in the study.

Participants' responses were collected online. Although the use of Web surveys is relatively new, particularly in the field of education, it is considered a very promising method for collecting large amounts of data quickly, efficiently, and in a manner that maximizes cost-effectiveness and response rates (Carbonaro, Bainbridge, & Wolodko, 2002; Merseth, 1996; Schillewaert, Langerak, & Duhamel, 1998).

As the characteristics of early survey respondents often differ considerably from late respondents, and because e-mail reminders can contribute up to one-third of the final sample size, appropriate follow-up was crucial. Such follow-up should be less than the traditional two-week reminder due to the immediacy of e-mail and Web-based responses (Vehovar, Batagelj, Manfreda, & Zaletel, 2002). Therefore, follow-ups were made weekly for three weeks following the first contact to the supervisors of non-responders, either via e-mail or via telephone. Supervisors were encouraged to forward messages to their students asking them to respond to the survey.

Data Analysis

The qualitative and quantitative data from each section of the survey were analyzed separately, and the results from each section compared. First, qualitative data were coded, and responses from the open-ended assessment of teacher knowledge scored. Second, demographics and quantitative data (teacher perception ratings and the test of teacher knowledge) were summarized. Finally, participants' responses were compared across section.

Coding procedures. Responses to both the open-ended assessment of teacher knowledge and the case-based assessment of teacher reasoning were coded by using inductive analysis (see tables 1 and 2 for a sample; a complete list of sample codes for all questions can be found in Appendix B) (Janesick, 2000). Selective coding was used to generate smaller categories encompassing each response. This type of coding is used to sort large amounts of data, and the codes generated by the process account for most of the individuals' responses. As the coding progressed, codes were compared to subsequent responses and revised in order to continue to encompass individual responses. Broader categories were then created from the codes in order to develop a more manageable list (Charmaz, 2000).

More specifically, lists were generated by reading the complete responses. Next, the list was shortened into general categories that still encompassed individual responses. All responses were coded using these categories, and the categories revised during the coding process in order to reflect all of the individual responses. This coding procedure resulted in 12 or 13 categories for each question. Finally, these categories were collapsed into four or five for purposes of quantitative analysis. The size of each of the final categories was set so as to capture at least four but less than 45 percent of the responses.

In the case-based assessment of teacher reasoning, questions 1, 2, 3, and 4 often generated more than one response per individual. These responses were separated and treated separately. For example, "allow her to have extra one on one instruction. Give her extra time to complete assignments and allow her to take the writing and reading lessons home with her" was coded as three responses in the following categories: one-

on-one in-class instruction, modify assignments, and work with family /take home assignments.

Table 1

Sample Coding for Open-Ended Assessment of Teacher Knowledge (IDEA '97)

Response	Code	Category
all students must have access to an education	FAPE (free appropriate public education)	Basic Rights
increased concentration on parent participation	parental involvement	Basic Rights
least restrictive environment	LRE	Basic Rights
regular education teachers are included in ARD (annual) meetings	gened teacher at IEP	IEP and Service Provisions
TBI added	change in categories served	IEP and Service Provisions
ADHD as a specific condition under OHI	change in categories served	IEP and Service Provisions
higher accountability for schools	school accountability	Increased Accountability
who will take the state wide tests	standardized testing	Increased Accountability
changed the assessments made them stronger to ensure proper growth	standardized testing	Increased Accountability

Table 2

Sample Coding for Open-Ended Assessment of Teacher Reasoning (Question 1)

Response	Code	Category
Sara's weaknesses in the general education subjects	academic strengths/weaknesses	current academic progress
I would like to know Sara's ... learning styles	learning style/response to instruction	current academic progress
what are her IEP goals currently and how are the (sic) being met in both settings?	current goals and process	current academic progress
Does she fail primarily due to low test scores? Or is she not turning in assignments?	reason for failing grades	personal /background issues
What do her spocial (sic) interactions look like?	socio-emotional issues	personal /background issues
Does she have any vision or hearing problems?	medical history / issues	personal /background issues
what were her scores (on standardized tests)?	breakdown of test scores	response to testing
have any modifications been made to the state exams to reflect Sara's levels of achievement?	standardized testing issues	response to testing
when taking the state standardized test did she have alternative testing?	standardized testing issues	response to testing

Scoring procedures. Responses to the open-ended test of teacher knowledge (the provisions of IDEA '97 and NCLB) were scored on a scale from zero to two (see Table 3). A score of zero was assigned to responses in which participants expressed that they did not know an answer, or responses that were uncodable in that they did not provide sufficient information for evaluation (e.g. "graduation" or "services must be provided.") A score of one was assigned to partially correct provisions of IDEA '97 or NCLB. Responses receiving this score included those in which participant mentioned a provision of another education law, indicated a topical area with

insufficient explanation (e.g. "assistive technology" instead of "assistive technology must now be considered by the IEP team" for IDEA '97 or "increased accountability" instead of "schools are held accountable for student outcomes" for NCLB), or gave a response that was partially correct (e.g. "reading and writing assessments" for NCLB, when writing is not included explicitly in the law). Many IDEA '97 responses assigned a score of one referred to provisions of the original IDEA law (e.g. "free and appropriate public education," or "manifestation determination." A score of two was assigned to correct provisions of IDEA '97 and NCLB. These responses included both a correct topical area as well as a brief explanation (e.g. "participation in statewide testing" instead of "assessments," or "transition plans starting at age 14" instead of "transition plan"). Inter-rater reliability was conducted by presenting and explaining the scoring guidelines and template to the rater and asking the rater to score 15% of the data independently. An inter-rater reliability of 85% was found on the scoring of this portion of the survey.

Table 3

Sample Scoring for Open-Ended Test of Teacher Knowledge (IDEA '97)

Response	Score	Explanation
state and district wide testing of children with disabilities	2	a major tenet of IDEA '97 is that all students will be included in testing
every student with a disability needs an IEP	1	central concept of IDEA, but not a new provision of IDEA '97
technology	0	not enough information to score
general education teachers in IEP meeting	2	IDEA '97 does require general education teachers to attend IEP meetings
free and appropriate public education	1	again, a central concept of IDEA, but not a new provision of IDEA '97
add categories	0	not enough information to score
access to general education curriculum (sp) for sp. ed. students	2	another major change in IDEA
gives parents more role	1	IDEA '97 does provide more parental safeguards, but the response does not explain how parents are given more of a role
autism	0	not enough information to score

Table 4

Sample Scoring for Open-Ended Test of Teacher Knowledge (NCLB)

Response	Score	Explanation
special ed is not exempt from state testing	2	one of the major tenets of NCLB involves student participation in state testing
perform work at or above grade level	1	a major goal of NCLB is for students to improve performance, but the response does not explain or state how this is to be achieved
no student will fail	0	not enough information to score
identifying schools that need improvement	2	another major goal is to identify and provide for schools that need improvement
revamp accountability	1	accountability is central to NCLB, but the response does not explain or state how this is to be achieved
benchmarks	0	not enough information to score
report cards must be sent to parents to show school progress	2	NCLB does require this action on the part of schools
empower parents	1	parental empowerment is a goal, but the response does not explain or state how this is to be achieved
corrective actions	0	not enough information to score

Quantitative data analysis. Five major questions were addressed in the quantitative analysis: (1) Were individuals' responses to one section related to their responses to other sections? (2) Were responses to any section related to certification type? (3) Did participants know more about IDEA '97 or about NCLB? (4) In what area(s) did they feel better prepared, IDEA '97 or NCLB? Standards, access, or assessment? and (5) Is the number of times participants mentioned the three areas in open-ended responses related to their perception of their preparation or their scores on other sections?

For the first question, correlations were computed among participants' responses to the overall perception question, their total scores on the open-ended assessment of

teacher knowledge, and their total scores on the test of teacher knowledge. Second, independent sample t-tests were run to determine whether any of the three scores used above differed by certification type. Third, a matched-sample t-test was used to determine participants' differences in mean scores on the two questions (IDEA '97 and NCLB) of the open-ended assessment of teacher knowledge. Fourth, an ANOVA was used to determine whether differences existed among participants' responses to the five specific perception questions (IDEA '97, NCLB, standards, access, and assessment). Then t-tests were used to determine which means differed from the others, by grouping IDEA '97 with NCLB, and by grouping standards, access, and assessment together.

Finally, the last question was addressed by creating a variable, which represented the number of times participants mentioned the three areas of standards, assessment, and access in their responses to the case-based assessment of teacher reasoning. It was derived by counting: (1) answers included under the categories of "response to testing" for question 1, (2) "issues with state assessment" for question 2, and (3) a response of "yes" to question 5, indicating that the participant believed the student should be held to the same standards as her non-disabled peers. Correlations were used to determine whether this variable was related to perception of preparation or participants' scores on the open-ended assessment of teacher knowledge or the test of teacher knowledge.

CHAPTER 4

RESULTS

Demographic Data

Of the 34 special education teacher preparation programs listed on the National Clearinghouse for Professions in Special Education (NCPSE) database (NCPSE, 2003a, 2003b), 11 alternative and 16 traditional special teacher preparation programs in the State of Texas claimed to have certified at least one teacher at the end of the 2003-2004 school year. Among these teacher preparation programs, six (55%) alternative and nine (57%) traditional programs participated in the survey. In sum, surveys were returned by 194 of the 633 special education teacher candidates, comprising a 31% return rate overall, and a 43% return rate from responding programs. As depicted in Table 4, 126 teacher candidates from alternative programs returned the survey, as did 65 teacher candidates from traditional programs.

Table 5

Participants' Certification Type

	Frequency	Percent of responders
Traditional	65	34.0
Alternative	126	66.0
Missing Data	3	-
Total	194	100.0

The majority of teacher candidates (52%) were currently student teaching (traditional) or teaching (alternative) in elementary schools. Twenty three percent

were placed in high schools and 38% in middle schools (see Table 5). School type was unrelated to certification type.

Table 6

Participants' School Type

	Frequency	Percent of responders
Elementary School	101	53.3
Middle School	38	20.0
High School	45	23.7
Other	6	3.2
Missing Data	4	-
Total	194	100.0

Gender and age of teacher candidates were both related to certification type. Overall, 86% of the sample was female and 14% male. The sample is representative of the overall gender distribution of the beginning special education teacher workforce (Billingsley, 2002). Alternative candidates were more likely to be male than traditional candidates, (X^2 (1, N = 189) = 12.793, p<0.01). As shown in Table 6, 21% of alternative candidates responded that they were male, whereas less than 2% of traditional teacher candidates were male.

Table 7

Participants' Gender by Certification Type

	Percent Male	Percent Female	Total
Traditional	1.6	98.4	14.3
Alternative	20.8	79.2	85.7
Total	14.3	85.7	100.0

Age of teacher candidates also differed greatly by certification type. Overall, the majority of the sample (57%) fell within the 20-29 age range, 23% in the 30-39 age range, and the remainder 40 and over (see Table 7). Among traditional teacher candidates, 83% were 20-29 years old, as would be expected among college graduates. However, less than half of alternative teacher candidates (43%) fell in the 20-29 age range. Thirty percent were 30-39 years old, 14% 40-49, and 12% were 50 or older. This difference was also statistically significant, (t (185) = 4.720, p<0.01), and can be predicted based on other studies comparing candidates from traditional and alternative certification programs (Wilson et al., 2001; Zeichner & Schulte, 2001).

Table 8

Participants' Age by Certification Type

	20-29	30-39	40-49	50-59	60+	Total
Traditional	83.1	7.7	7.7	1.5	-	100.0
Alternative	43.4	30.3	13.9	11.5	0.8	100.0
Total	57.2	22.5	11.8	8.0	0.5	100.0

Participants were asked to indicate up to three classifications of student disabilities that they taught most often. Out of the ten disabilities categories, most reported teaching students with learning disabilities (73%), emotional disturbance (50%), and mental retardation (44%). All but eight of the participants (96.4%) reported teaching students in at least one of the "high incidence" disability categories. Participants were least likely to report teaching students with severe and profound disabilities (10%), hearing impairment (7%), and visual impairment (6%) (see Table 8). The majority of respondents (70.6%) selected three categories, and there were no differences in the number of categories marked by alternative and traditional candidates.

Table 9

Disability Categories of Students Taught By Participants

	Yes	No
Learning Disabilities	142	52
Emotional Disturbance	96	98
Mental Retardation	84	110
Autism	68	126
Other Health Impairment	61	133
Speech-Language Impairment	58	136
Physical Disabilities	31	163
Severe and Profound Disabilities	20	174
Hearing Impairment	17	177
Visual Impairment	12	182

Teacher Perceptions

Respondents were asked to rate their perceptions of their teacher preparation programs in six related questions (see Appendix A). These questions included (1) overall preparation for their current teaching or student teaching positions, (2) preparation in knowledge of policies and procedures mandated by both IDEA '97 and NCLB, and (3) preparation in knowledge and practices related to each of the three areas of standards, assessment, and access to the general education curriculum. In general, respondents indicated positive perceptions of their preparation, regardless of certification type, age, school, or disability type served. Both the means and modal scores for all six questions were on the positive side of the Likert scale, as shown in Table 12. However, significant differences were found for gender, in that males displayed poorer perceptions of their preparation than did females, with means of 2.0 and 3.5 out of 6, respectively ($F(1, 188) = 11.962$, $p = .001$).

Responses to all six questions were highly correlated with one another, with correlations ranging from .811 to .916, $p<.001$. However, there were statistically significant differences in mean responses to some of the questions, $F(4.049) = 9.872$, $p < .001$, $\eta^2 = .049$ (see Table 9). Specifically, means for questions regarding preparation for NCLB and for assessment were significantly lower than the other four questions. These means were about 3.8 on the six-point scale. Questions receiving the highest scores were those inquiring about knowledge of IDEA '97 and access to the general education curriculum (about 4.2 for both).

Table 10

Participants' Perceptions of Their Preparation

	Mean[a]	Standard Deviation
Overall	4.21	1.43
IDEA '97	4.25	1.26
NCLB	3.78	1.30
Standards	4.18	1.42
Assessment	3.79	1.44
Access	4.29	1.56

[a]Mean was calculated on a six-point scale with 1 = strongly disagree and 6 = strongly agree

Description of Data

Open-ended assessment of teacher knowledge. In general, participants demonstrated wider and more accurate knowledge about NCLB than they did about IDEA '97. Nearly half of the responses about IDEA '97 were simply statements about the basic rights of students and parents, as outlined in the original law (P.L. 94-142), in 1975 (e.g. Free and Appropriate Public Education (FAPE), Least Restrictive Environment (LRE)) (see Table 10). The remainder of the responses, many of which referred to a previous reauthorization of IDEA rather than IDEA '97, alluded to very specific provisions, such as an addition of a disability category or a change in IEP provisions (e.g. consideration of a student's need for assistive technology). Only 7% of participants mentioned increased accountability as a provision of this law.

Table 11

Provisions of IDEA '97 Named By Participants

	Frequency	Percent of responders
Basic rights	106	49.1
IEP and service provisions	69	31.9
Don't know	25	11.6
Increased accountability	16	7.4
Missing Data	47	-
Total	263	100.0

Aside from the basic rights of students and parents, the only category that captured greater than ten percent of the IDEA '97 responses was "don't know / unsure." For NCLB, three categories captured more than ten percent of participants' responses: accountability and school improvement (15%), highly qualified teachers (20%), and assessment / standards (23%) (see Table 11). About six percent of respondents alluded to the background philosophy of NCLB such as helping disadvantaged students or ensuring success, and only 5% mentioned a change in parental rights. NCLB responses indicated some knowledge of how the law affects special education teachers and students explicitly, with 20% of responses about highly qualified teachers (includes paraprofessionals), and 7% about specific provisions for special education students and teachers (e.g. special education students must participate in standardized testing).

Table 12

Provisions of NCLB Named By Participants

	Frequency	Percent of responders
Assessment / standards	53	22.6
Highly qualified teachers	48	20.4
Accountability / school improvement	35	14.9
Basic philosophy / don't know	33	14.0
Other specific provisions	66	28.1
Missing Data	28	-
Total	263	100.0

Although incorrect answers (those receiving a score of zero) were no more common for IDEA '97 than they were for NCLB, entirely correct responses (those receiving a score of two) were much more common for NCLB. The most common response to receive a score of zero were "don't know / unsure" and uncodable responses: only 16 responses for NCLB and six responses for IDEA '97 were neither "don't know / unsure" or uncodable. Incorrect answers occurring more than once involved inclusion mandates for IDEA '97 and mandates about graduation, promotion, or retention and individualized curriculum / instruction for NCLB.

More than twice as many NCLB responses (98) received the maximum score of two than IDEA '97 responses (40) (see Figure 1). This discrepancy is due mainly to the fact that a score of one was assigned to responses that referred to other laws (e.g. a response of "LRE" under IDEA '97). Participants could earn a maximum

possible score of six when scores for both questions were combined (two points possible for each of three responses). Whereas a slightly higher number of participants received scores of four to six on NCLB (44) than received scores of one to three (38), nearly 3 ½ times the number of participants received scores of one to three on IDEA '97 (66) than received scores of four to six (19) (see Figure 2). Responses were measured by number (how many provisions each participant named out of a total of three) and score (on a scale from 0 to 2), and coded by type (what provisions were named).

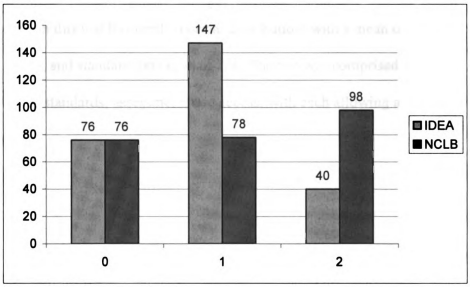

Figure 1. *Participants' IDEA '97 and NCLB scores*

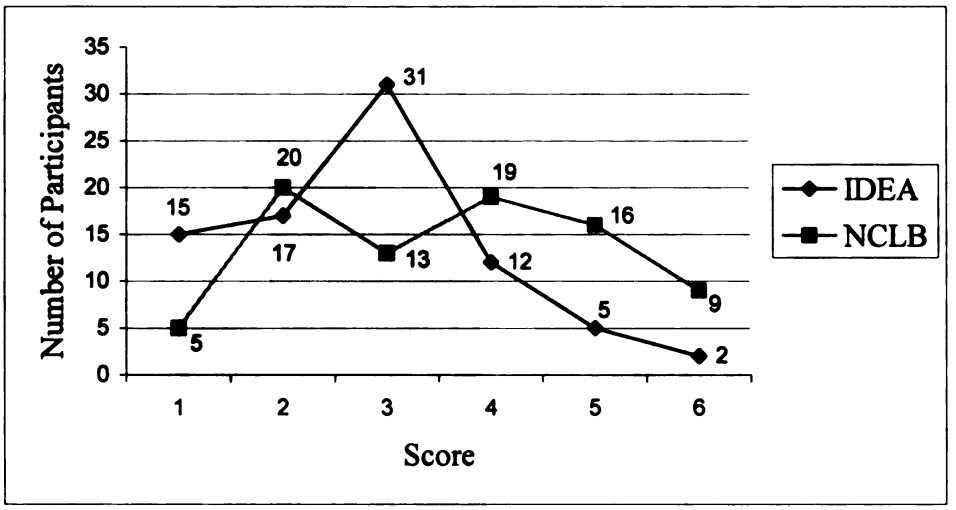

Figure 2. *Participants' total IDEA '97 and NCLB scores*

Multiple-choice test. As can be seen in Figure 3 and Table 12, participants' scores on this test followed a normal distribution, with a mean of 5.6 of a possible 12 (46.7%), and standard deviation of 1.9. The test was comprised of three subtests in the areas of standards, assessment, and access, with each allowing a potential score of four.

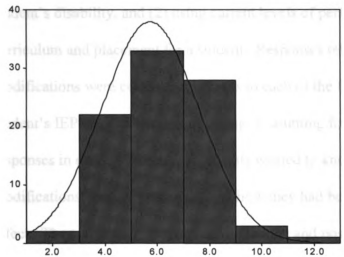

Figure 3. *Participants' total test scores*

Table 13

Participants' Test Scores

	Overall score[a]	Assessment subtest[b]	Standards subtest	Access subtest
Mean	5.64	2.24	1.39	2.07
Median	6.00	2.00	1.00	2.00
Mode	5.00	3.00	1.00	2.00
Standard deviation	1.92	0.92	0.83	1.01
N	96	92	92	95

[a] Overall score has 12 possible points

[b] Each subtest has 4 possible points

Assessment of teacher reasoning. Two major themes emerged from participants' responses across all five questions that give insight into their reasoning in

their teaching practices: (1) using accommodations and/or modifications to bypass a student's disability, and (2) using current levels of performance to determine the curriculum and placement for a student. Responses related to accommodations and/or modifications were common responses to each of the four questions addressing the student's IEP and current programming, accounting for 20 to 36 percent of the total responses in each question. Participants wanted to know what accommodations and/or modifications Sara was receiving and how they had been implemented, and to what effect. They suggested the need for reviewing and possibly changing her current accommodations and/or modifications. The most common reaction of participants to question 4, which asked what factors they would consider when making decisions about participation in state testing, was to suggest specific accommodations and/or modifications for the testing, such as extended time or having questions read to her. Less than half (45%) of responses recommended actual factors, such as current level of performance or grades (see Table 13).

Participants tied Sara's current performance to the curriculum she should receive, her placement (i.e. self-contained / special education classes versus general education classes), and the level of state test they recommended for her. Over half (54%) of participants believed that Sara should not be held to the same academic standards as non-disabled students. The most common reason for this response was because of her disability and/or low achievement level. Of those who responded "maybe" Sara should be held to the same standards (20%), most supported their response by stating that Sara needs significant modification in order to be successful. Either reviewing current placement and/or recommending more restrictive placement

was a major response category for all three questions asking about Sara's program and IEP. Even though question 3 asked participants how they would support the student *in the general education classroom*, 8% of responses mentioned the need for a separate reading program, and 6% recommended pull-out support. Again, when participants were asked what factors they would consider in making decisions about state testing, over one-fourth (27%) of responses were simply to recommend an alternate exam for the student. Those who gave reasons cited her low ability and/or performance level.

Table 14

Responses to Open-Ended Questions

Additional Information Requested (Question 1)			Three Important Issues for the IEP (Question 2)		
	Frequency	Percent		Frequency	Percent
Accommodations / modifications	88	35.7	Current Functioning	79	30.2
Current academic progress	80	33.2	Literacy Skills	69	26.3
Personal / background issues	57	23.7	Accommodations / modifications	61	23.3
Response to Testing	18	7.5	Review placement	27	10.3
Total	241	100.0	Issues with state assessment	26	9.9
			Total	262	100.0
Methods to Support Reading and Writing (Question 3)			Factors for Making Decisions About Testing (Question 4)		
	Frequency	Percent		Frequency	Percent
Accommodate / modify	96	43.6	Current performance and abilities	52	29.7
Read to her / write for her	49	22.3	Suggested Specific modifications / accommodations	48	27.4
Teach skills / strategies	33	15.0	Alternate exam	47	26.9
One-on-one instruction	33	15.0	Previous testing	19	10.9
Collaborate	9	4.1	Modifications used in classroom	9	5.1
Total	220	100.0	Total	175	100.0

Participants were fairly consistent in how they addressed the three areas of standards, assessment, and access. As for standards, they did not appear to view them as being one set of grade-level expectations for everyone in that grade, but as multiple sets of benchmarks, to be tied to a student's achievement/ ability level. One responded, "I beleive (sic) that Sara should be held accountable for goals and objectives as stated in the IEP's because that is the academic standard proposed," and another, "I think she should be held to the same academic standards as her skill level ... to hold her accountable for the academic standards that go with her age would be a little harsh." Only one or two participants alluded to standards in each of the other four questions, which did not explicitly address them.

Many participants discussed assessment (in terms of standardized testing) in their responses, even though only one question directly addressed this issue. Again, they primarily appeared to be concerned about making proper decisions about which type of test most closely matched Sara's performance level in the classroom, and implementing appropriate accommodations and/or modifications on state tests. They did not discuss tying testing to instruction, curricula and/or standards (either special or general education).

As for access to the general education curriculum, most participants addressed this issue in terms of accommodations and/or modifications made for Sara in the general education classroom. Respondents asked which accommodations and/or modifications had been targeted for Sara, her response to them, and/or how they were implemented. Again, responses indicated that participants believed in questioning and/or changing Sara's placement, most often to a more restrictive placement, due to

her perceived academic limitations. Only four discussed the importance of access to the general education curriculum, or tied this access to assessment and/or state standards. Those participants who did mention these issues recommended that Sara be tested at the level of curriculum that she is receiving, rather than testing her knowledge of the general education curriculum.

Results of Statistical Tests

First, correlations were taken to determine if any relationship existed between survey sections. Perceptions of preparation was unrelated to scores from either of the assessments ($r = .007$ for test score, $r = .075$ for IDEA /NCLB score). However, participants' scores in the two assessments (open-ended assessment of teacher knowledge, and the multiple-choice test) were moderately correlated ($r=.378$, $p = .007$). Second, an independent samples t-test was conducted to determine if responses to any section was related to certification type. Although neither score was related to certification type, overall perception of preparation was, with traditional candidates rating their preparation significantly higher than alternative candidates ($t(147) = 2.096$, $p = .04$).

Third, scores on the two questions of the open-ended assessment of teacher knowledge were compared through a matched samples t-test. Sixty-eight individuals responded to both sections. Scores on both sections were moderately correlated ($r = .336$, $p = .005$). In addition, scores on the NCLB question were significantly higher than scores on the IDEA '97 question ($t(68) = -3.189$, $p = .002$). Fourth, a repeated-measures ANOVA was used to determine differences among the five specific perception questions (perceptions of preparation for IDEA '97 versus NCLB, and

perceptions of preparation for standards, access, and assessment). Overall differences were found between means of some of the perception questions ($F(3.953) = 9.586$, $p = .000$). Specifically, comparisons of the IDEA '97 and NCLB perception questions showed that participants rated their preparation for IDEA '97 significantly higher than their preparation for NCLB (mean difference = .476, $p = .000$). Comparisons of the three area perception questions (standards, assessment, and access) showed that participants rated their preparation for assessment lower than the other two (mean differences of -.372 and -.483, $p = .000$).

The last question asked whether the number of times participants mentioned the three areas in their open-ended responses was related to their perceptions of their preparation or to their scores on either assessment. Although neither score was related to this variable ($r = -.035$ for test score, $r = -.055$ for IDEA/NCLB score), the variable was moderately correlated with overall perception of preparation ($r = .323$, $p = .002$). Those who mentioned assessment, access, and/or standards more during their discussion of a student's situation rated their preparation higher than those who mentioned the three areas less in their response.

Summary of Findings

The study had an overall return rate of 31%. About 2/3 of the participants were alternative candidates, and 1/3 traditional candidates. Alternatively certified individuals were more likely to be male and older than traditional candidates. The majority of participants taught in elementary schools, and most taught students with mild disabilities.

In general, participants had positive perceptions of their preparation, although they were less positive about their preparation for NCLB than IDEA '97, and less positive about their preparation for assessment than for the other two areas of standards and access. Differences were found by certification type; traditional candidates rated their preparation higher than alternative candidates. As for the open-ended assessment of teacher knowledge, participants showed more accurate knowledge about the provisions of NCLB than the provisions of IDEA '97. The majority of responses to the IDEA '97 questions were either basic rights or "don't know / unsure." Participants' scores on the multi-choice test of teacher knowledge showed more knowledge about assessment than the other two areas. The average score on this test was less than 50%.

With respect to the open-ended assessment of teacher reasoning, participants showed consistency in response across all five questions. When planning for a hypothetical student, their responses most often involved using accommodations and/or modifications in order to bypass the student's disability, and using current functioning to determine the student's curriculum and placement. Most believed that the student should not be held to the same standards as her peers in general education. Although participants did indicate concerns involving statewide assessment throughout the five questions, the great majority did not tie standards or the general education curriculum with assessment. The more times participants mentioned standards, assessment, or access to the general education curriculum in their responses to the five questions, the higher they rated their teacher preparation.

CHAPTER 5

DISCUSSION AND IMPLICATIONS

Introduction

Overall, teacher candidates appeared to be fairly satisfied with their preparation. Participants did feel well prepared to implement these new laws, but their knowledge and reasoning surrounding IDEA '97 and NCLB did not cover the three areas assessed in this study. Although they did have basic knowledge of the tenets of IDEA '97 and NCLB and how the laws would affect them and their students, their knowledge when planning for a hypothetical student did not include making connections between the three areas assessed. They advocated for individual instruction for students, although this instruction did not include teaching skills or strategies to facilitate students' access to the general education curriculum. Finally, few differences were found between alternatively- and traditionally-certified candidates, a significant finding in an age in which great debate exists over certification type, and in an area that experiences chronic teacher shortages. However, one finding that should be considered was that traditional candidates rated the quality of their preparation significantly higher than alternative candidates.

The results of this study illustrate several issues in the field of education. First, despite the trend in schools toward increased focus on the three areas of standards, assessment, and access to the general curriculum, the results of this study indicate that teacher preparation in these areas may not be keeping pace with the field, regardless of certification type. However, new teachers still report feeling well prepared for special education practice. Second, a clear gap exists between current policy and current

practice about the educational needs of students with disabilities. Third, the findings indicate a tension between the need to prepare teachers to be informed about and act as critical participants in the policy debate, and the need to prepare teachers to adapt to a changing school system as it follows the policy climate.

The Policy- to- Practice Gap

This study found a significant gap between changes in special education policy and practice and the way in which new special education teachers are being prepared. In the case-based assessment of teacher reasoning, participants repeatedly mentioned the use of modifications and/or accommodations when thinking about students' IEPs and discussing potential interventions. However, only a few participants commented on the use of modifications and/or accommodations in the context of standards, curriculum, or content across the five questions. Those who did mention standards, curriculum, or content did so in one of two ways: (1) they suggested that accommodations and/or modifications needed to be made to the curriculum or to standards (e.g. "the curriculum would have to be modified ... according to her needs," "because I would be forced to lower standards for her I would [use these modifications]", or (2) they believed accommodations and/or modifications needed to be made to ensure access to the general education curriculum (e.g. "I would ask for [specific modifications] that way Sara can be exposed to the same curriculm (sic) that her nondisabled peers are exposed to," and "I would ask Sara to [use specific modifications] so that she can be included in many more of the general education studies."

Despite the nationwide push toward inclusion in general education classes and holding all students to a set of uniform standards, many participants still commented on the need to review the student's placement and/or proposed a separate placement and separate academic programming. When participants gave a reason for making this recommendation, it was the students' low literacy and/or academic performance level. For example, they explained, "her instruction in the gen ed classes is obviously at the frustration level and needs to be at the instructional level," and "I don't think at the levels that Sara is reading and writing that she should be in the general education classroom."

Even though participants placed a heavy emphasis on individualized instruction in their discussion, few mentioned teaching specific skills or strategies, either inside or outside the general education classroom. Their responses neglect several key instructional elements necessary for helping low-achieving readers to succeed, both in terms of increasing literacy and in mastering general education content. For example, the integration of reading and writing skills with learning strategies is critical in improving reading and writing outcomes (Vaughn, Gersten, & Chard, 2000). Learning strategies help students approach academic tasks in a systematic manner, giving them the tools necessary to meet the demands they face in their general education classes (Ellis, Deshler, Lenz, Schumaker, & Clark, 1991). Additionally, combining strategy instruction with content area learning is fundamental when including students in general education content courses (Ellis, 1993), thereby assisting access to the general education curriculum. Strategies for facilitating inclusion were addressed directly in question 3 in the case-based assessment of teacher

reasoning, and the great majority of participants suggested various modifications or accommodations, rather than teaching such specific skills or strategies.

Only two of the participants in this study agreed with the need to give the student access and hold her accountable to the general education standards because these are the standards upon which she would (or should) be assessed. Most believed that the student should be held to different standards and given an alternate state assessment. When discussing standards, eight participants mentioned explicitly the need to hold her accountable for learning the goals stated in her IEP, or those her team had set for her, rather than the general education academic standards: "I beleive (sic) that Sara should be held accountable for her goals and objectives as stated in the IEP's because that is the academic standard proposed." This dichotomy should not exist in special education practice, as teachers are now expected to work with colleagues to align IEP goals with state standards and ensure that students do have access to the general education curriculum (Thompson et al., 2003).

The remainder of the participants who stated that the student should not be held to the same standards as her non-disabled peers cited her low ability and/or performance level. Several appeared quite emphatic about the necessity of holding the student to different standards: "it is unfair to expect the students (with learning disabilities) to perform at that level," "she could begin to shut down and stop caring and working so hard. Now we have a discipline problem as well as a learning disability," "That's like asking a cat to bark," "why should she be expected to do something that she clearly cannot do? Education is suppose (sic) to be about being

individualized so that all children can succeed," "expecting her to perform to the same standards ... is unreasonable and perhaps unconstitutional as well."

These findings align closely with that of the Belden Russonello and Stewart (2003) study, which also found that a majority of both special and general education teacher believed that most special education students should be held to an alternate set of academic standards and be given alternate assessment. Currently, the state of Texas allows a student's ARD (Admission, Review, and Dismissal) Committee (the IEP team) to decide what assessment a student is to take. Their guidelines indicate that committees are to select the assessment "that most closely aligns to the instruction the student is receiving in the [general education curriculum]" (Scott, 2003, p. 1).

However, at the time of the study, the state department of education had just received notification that they would be required to reduce the percentage of students taking alternate assessments from seven or eight percent to one percent, if they want the scores to count toward AYP (*Summary of TEA proposal for 2004 AYP with USDE responses*, 2004). This new rule may be difficult to implement, especially in light of the finding of this study that over one-fourth of the sample recommended an alternate exam for a hypothetical student with a learning disability and low reading level. Additionally, teachers may not be prepared to implement some crucial inclusive practices, such as skill or strategy instruction. Decisions at the federal and state levels will have marked impact on decisions made by special education teachers at the local level, which new teachers may not embrace.

The current state of limbo of Texas law may account for some of the patterns in participants' responses. For example, Texas still places many students in restrictive

settings. While 46% of U.S. students with disabilities spend 80% of their day in general education classes, only 26% of students in Texas fall into this category (Ward et al., 2003). The state does allow decision-making regarding testing to be tied to the curriculum the student is receiving. It allows separate standards and separate tests for students with disabilities, to be determined on an individual basis. However, these rules and procedures are changing annually in a reflection of the evolving policy climate (Scott, 2003). These changes will result in many fewer students being allowed to participate in alternate assessments, and in alternate assessments being more closely aligned with the general education standards and curricula (Neeley, 2004). Based on the results of this study, it may be difficult for the state to succeed in these efforts. Research has shown that teachers must play an active, strong role in any successful educational policy initiative (Fullan, 1991; Sarason, 1990). Consensus amount teachers is crucial (Fullan, 1991). Further, Sarason (1990) comments on the necessity of considering history when implementing policy. The history of special education as a distinct system with separate funding, placements, structure, rules and accountability cannot be taken lightly when planning for systemic reform.

Overall, responses to the perception questions showed that participants felt positive about their preparation for their current positions, as well as in each sub-category. This general response pattern is predictable, as it has been observed in several other studies measuring special education teacher perceptions of their preparation (Belden Russonello & Stewart, 2003; Lyon, Vaassen, & Toomey, 1989; O'Shea et al., 2000). Participants' responses to open-ended questions asking them to provide provisions of IDEA and NCLB, as well as their responses to the vignette

about a middle school student with learning disabilities, show that they may be better prepared for special education practices not assessed in this study, such as making individualized decisions about placement, assessment, and instruction, or making modifications and accommodations in the general education classroom. Research has not yet shown which set of practices best support student outcomes, or whether or how these can work together successfully (Stodden, Galloway, & Stodden, 2003). However, it is important to note that the number of times participants in this study mentioned the three areas of standards, assessment, and access to the general education curriculum in the case-based assessment of teacher knowledge, was related positively to their perceptions of their preparation. This finding raises questions about whether those candidates who have more in-depth knowledge and awareness of the three areas may be better prepared for teaching than those who do not.

In particular, participants appeared to possess the most knowledge of assessment. They mentioned issues involving state assessment when answering questions in the case-based assessment of teacher knowledge that were related to other issues, such as the IEP. Their scores on the assessment subtest of the test of teacher knowledge were significantly higher than scores on the access and standards subtests. Issues with state testing were major categories for both question 1, asking what additional information participants would want to ask about the student, as well as for question 2, asking participants to list three important issues for the student's IEP. It is important to note, though, that less than ten percent of the responses to both questions fell under this category. For question 1, most wanted to know (1) if the student had taken, qualified for, or considered the alternate assessment, and/or (2) what

accommodations and/or modifications she had been given in the past. For example, "Has an [alternate assessment] been suggested?" "Have any modifications been made to the state exams to reflect Sara's level of achievement?"

Interestingly, participants felt least prepared to deal with assessment than with the other two areas of standards and access. This discrepancy may be due to the prominence of assessment in public policy and in the stakes that are often tied to results of assessments. Because of the possibility that assessment might affect them directly, teacher candidates may feel less confident about their preparation in this area.

Teacher candidates seemed concerned with the decision-making surrounding both type of testing and selecting accommodations and/or modifications. For example, they explained, "Sara should take state tests that would allow her to be successful but at the same time be a true assessment of what she knows," "Why has her [state testing] not been modified to her current educational levels?" "[consider] what test she will take and how much (sic) modifications or accommodations will be required." The fact that assessment was a major category in two questions may be due to the fact that, of the three areas, assessment is most visible. Special education teachers everywhere are now involved in decision-making and/or implementation of state testing policies, and addressing these processes in the IEP was mandated by IDEA '97.

It is important to note that the State of Texas does have well-developed accountability systems and has taken initiative in aligning standards for teacher preparation and certification with standards for students (Thompson et al., 2003). The new state certification examinations for special education teachers, part of the Texas

Examinations of Educator Standards (TExES) went into effect in Fall 2003. The standards for special educators include requirements that new special education teachers (1) have knowledge of major legislation affecting students with disabilities, (2) be able to work collaboratively to design IEP goals and objectives that are aligned with state standards, (3) be able to use information from a variety of sources to suggest and implement appropriate accommodations and/or modifications, and 94) understand the significance of state testing in planning for students (Thompson et al., 2003). Clearly, Texas has taken these three areas into account when designing programs and planning for the education of new special education teachers.

Although preservice programs may be emphasizing other competencies for special education teachers (e.g. making adaptations / accommodations, individualizing curriculum and instruction), teachers do appear to be considering assessment-related factors in their planning for students. This finding may indicate a shift toward consideration of these policy changes in teacher education. Additionally, it may reflect the documented trend in implementation of education policy whereby schools and teachers incorporate only the most superficial aspects of the policy, and the school system remains impervious to the remainder of the policy changes, particularly the deep, systemic changes (Cuban, 1993).

Teacher Beliefs and Attitudes

Another critical issue in the research-to-practice gap involves teacher attitudes and beliefs surrounding these three areas. Beliefs among special education teachers and other professionals regarding these laws may be contributing to participants' beliefs that the special education student in the vignette should not be held to the same

standards and should not participate in the same state testing or receive the same curriculum as her general education peers. Some participants expressed the opinion that she should be educated in separate settings. In this study, as in others, concern can be seen most clearly in responses regarding regular state testing, particularly among participants who recommended an alternate assessment rather than suggesting factors for consideration for making decisions about state testing (26.5%). Comments included, "the child is obviously functioning at a low level," "because she is at a lower educational level mentally and always will be the alternate test is the only one she would ever be able to pass," "first of all what would giving her a test that she consistently has not passed do for her self esteem motivation and frustration levels?" and "no need to set her up for failer (sic) again."

The fact that special and general education teachers hold such attitudes toward state-mandated standardized testing, is well-documented (Barksdale-Ladd & Thomas, 2000; Belden Russonello & Stewart, 2003; Crawford, Almond, Tindal, & Hollenbeck, 2002; Ward et al., 2003). Special education teachers often feel that their students should be held to different standards, and receive different curricula, from their general education peers. They state a strong belief in individual curricula and individualized instruction (Belden Russonello & Stewart, 2003; Crawford et al., 2002). Belden et al. (2003) state that the results of their survey of both general and special education teachers indicated that, "public school teachers soundly reject mandates for special education students outlined in NCLB. [They oppose] mandating that special education students take the same standardized tests as their general

education counterparts. They also oppose mandating that special education instruction be aligned with state academic content standards for students their age" (p. 2).

A Texas-based survey shows that these educators' opinions do not differ from those expressed nationally. In a survey of 286 general education and 91 special education teachers, Ward et al. (2003) found that teachers did not agree with the practice of standardized testing for their students. In particular, they believed that the testing did not improve student motivation, that it negatively affected inclusive practices, and that it was not a good measure of student learning. Participants in the current study already appear to agree with these opinions held by practicing special education teachers. They recommended alternate assessments and modified standards, and many mentioned a need to review the student's placement. They believe in the use of a student's current level of performance to determine curriculum, testing, and placement, rather than the use of a uniform set of standards for all students.

While these beliefs and attitudes can be seen as problematic, they can also be viewed as symptomatic of problems inherent in standards-based reform, and can be seen as a warning sign for educational professionals intent on implementing these reform measures. Many professionals predict a loss of specialized curricula and instruction tailored to students' needs (Huefner, 2000; Schwartzbeck, 2003; "Special education at a crossroads," 2004). Belden Russonello and Stewart (2003) concluded, "public school teachers soundly reject mandates for special education students outlined in [NCLB] ... [They] oppose mandating that special education instruction be aligned with state academic content standards for students their age" (p. 2).

Many special education experts concur. They warn that uniform standards do not allow for individual differences, and that uniform standards and assessment do not give students the opportunity to demonstrate all that they have learned. They predict a loss of the kind of flexibility that would allow professionals to match assessments to students' skill levels. These experts suspect increased dropout rates may be a consequence of decreased individualization. Their concerns are validated by studies conducted in states instituting high-stakes exams (i.e. promotion and/or graduation exams), which linked increased dropout rates to the implementation of such policies (B. Griffin & Heidorn, 1996; Reardon, 1996). They recommend increased flexibility in setting standards and planning for assessment, while simultaneously keeping students involved in assessment and accountability systems ("Special education at a crossroads," 2004).

These concerns are so widespread that they are reflected in the Council for Exceptional Children's (CEC) Policy on Assessment and Accountability (Council for Exceptional Children, 2003). In this document, the Council expresses the position that the IEP team make assessment decisions based on individual needs and that all assessment scores, whether from a standard assessment, a standard assessment with accommodations, or an alternate assessment, be counted equally toward the district assessment index. This last statement would negate NCLB's current incentive for all students to participate in one assessment.

As implementation of reform relies heavily on teacher consent and initiative, such views may be difficult for reformers to overcome (Cohen, 1995; Fullan, 1991). Cohen (1995) outlines several criteria for addressing probable success or failure of

reform efforts, including teacher awareness of initiatives, attitudes toward the reform, teachers' discourse surrounding the efforts, and finally, their incorporation of the measures into their classrooms. The current study indicates some knowledge but little buy-in on the part of teacher candidates.

Participants in the current study were already frustrated by a lack of individualization for students, commenting on the need for alternative assessments and special classes for those students with greater literacy needs. They focused on basic rights of students and parents when asked about IDEA, and discussed a variety of accommodations and modifications for used in both general and special education settings. They felt generally well prepared to meet the needs of their students. However, they did not recommend specific strategies to improve her achievement. Therefore, the results of this study support those advocating for a continued focus on individualized instruction for students with disabilities (Huefner, 2000; Schwartzbeck, 2003; "Special education at a crossroads," 2004).

Potential Effects of the Policy –to –Practice Gap

Special education professionals appear to agree that practices in special education are changing rapidly as a result of the recent reform movement (Coleman, 2001; Pugach & Warger, 2001; Thurlow, 2002). However, many special educators also believe that this movement is detrimental to their students (Belden Russonello & Stewart, 2003). If these observations are true, the field of education potentially could be confronted with increased teacher attrition, in addition to less-than-desirable implementation of reform.

Teacher attrition is already a problem of large magnitude in Texas as well as throughout the United States (Boe et al., 1998; Brownell, Smith, & McNellis, 1997; Herbert, 2004). Higher attrition rates have also been well documented among completers of alternative certification programs, a large majority in this sample (Harris, Camp, & Adkinson, 2003; Herbert, 2004; Natriello & Zumwalt, 1993). Special education teacher attrition has been linked to several factors that are salient to this situation, including statewide testing mandates, inadequate teacher preparation, and what Wisniewski and Gargiulo (1997) label "role conflict," which occurs when formal roles and responsibilities clash with the reality of a teacher's work life (Mastropieri, 2001; Sultana, 2002; Wisniewski & Gargiulo, 1997). For example, the stated goals of holding all students to one standard and participating in one assessment might be difficult to achieve with students who are performing several years below grade level. Further, the need to provide individualized instruction and curricula might conflict with the goals of holding all students to one set of standards.

The policy-to-practice gap is quite serious in an age of accountability, in which both students and teachers are being required to adapt to a changing school climate. Teacher attrition, already of great concern in the field, can also be impacted by problems with these laws and by problems with teacher preparation. Consequently, quality teacher education, in any form, is an imperative. Teacher candidates must be informed about any new mandates and their projected impact on practice in the schools. Additionally, they must have the attitudes, beliefs and tools necessary to make the changes demanded by the field. These conclusions illustrate a tension inherent in teacher preparation, the tension between teachers are autonomous

individuals with a mandate and the power to do what they feel is best for their students, and teachers as part of the larger system that follows reform efforts in the attempt to improve outcomes for all students.

Teachers are central to reform efforts (Cohen, 1995; Fullan, 1991). However, reform efforts are often transient, and schools often make minimal efforts to comply, resulting in little, if any, lasting change (Cuban, 1993). Clearly, teacher preparation programs cannot place great emphasis on the latest reform, lest it be moot by the time teacher candidates enter the world of practice, or only a few years hence. Programs' slates are already full with mandates from states, professional organizations, and their own institutions (Sindelar & Rosenberg, 2000). However, programs can and should inform teachers about current trends and issues with the field and any likely resultant changes. They can encourage teachers to become active in the policy debate and to continue their own learning through ongoing growth. Such growth involves reflection on classroom practice in order to improve teaching, a vital task for teachers that should be encouraged at all levels (Feiman-Nemser, 2001). Teachers' work is notoriously autonomous (Cusick, 1992; Lortie, 1975). Therefore, it is crucial that they are given the tools to advocate and to do what is best for students, and also to stay open to new ideas and grow as a teacher.

As the National Board for Professional Teaching Standards emphasis in their Exceptional Needs Standards, teachers must have knowledge of policies and "relate special education legislation and litigation to current policy and practice" (NBPTS, 2001, p. 13), in addition to serving as advocates for students and helping shape policy

through that advocacy by connecting with the larger community of educational professionals, community leaders, and families.

Implications

The results of this study show a gap between the changing policy environment in special education and the education teacher candidates are receiving in their preparation programs. These trends were consistent across certification type. As is the case with their more experienced counterparts, teacher candidates involved in this study believed that their students should not be held to the same standards as their same-grade peers in general education. Many advocated alternate assessment for students in special education.

Generally, they seemed knowledgeable about the basics of IDEA and NCLB. Although candidates appeared concerned about making proper decisions surrounding assessment, they felt least comfortable about dealing with this issue. Responses focused on the importance of individualized instruction for students with disabilities. Candidates' concerns for students clashed with the goals of standards-based reform. Tensions between the goals of reformers and the goals of teacher preparation programs were apparent.

The findings of this study have implications for several different areas in the field of special education. These areas include policy, teacher education, research, and school administration. Based on the results of this study as well as previous research, recommendations for closing this research-to-practice gap are presented.

Policy. One important conclusion of this study is that alternative and traditional candidates' responses were nearly indistinguishable from one another.

Although many education professionals have denounced alternative certification (Dill, 1996; Zeichner & Schulte, 2001), this study offers no conclusive evidence suggesting that one certification type is better than another in preparing special education teacher candidates for the changing policy environment in the schools. As noted previously, there is conflicting opinion and evidence in the effectiveness of alternative versus traditional certification. Brownell et al. (2002) do believe that at least some alternative programs are effective: "[some alternative programs] do bring into the field individuals for whom traditional, campus-based programs seem inappropriate – second career professionals and retired military personnel, for example – and they can help to diversify the teaching workforce" (p. 16). The different demographics of this population can be seen in the results of this study. On the other hand, Nougaret's (2003) study showed large differences in scores on planning and classroom environment as well as instruction between traditionally- certified special education teachers and those with no training.

Alternative candidates show a comparable amount of knowledge about IDEA '97 and NCLB, as per open-ended generative questions as well as a multiple-choice test. Their reasoning surrounding decision-making for a hypothetical student with learning disabilities is also similar. Although their perceptions of their preparation did differ, in that traditional candidates rated their preparation higher than alternative candidates, more research is needed before arriving at any conclusions about the superiority of one type of program over another.

Second, states should create or expand formal induction programs through policy initiatives. At least some special education teachers may be exiting their

preparation programs without some skills that are emphasized by those who wish to implement standards-based reform, such as the ability to align students' IEP goals with state standards, to align standards with curricula with instruction with assessment, and to make appropriate assessment-related decisions. Teacher education programs, especially alternative programs, are quite limited in their ability to teach all needed skills, particularly in a job that is as diverse as that of a special education teacher. All of the requirements placed on programs by states and overseeing agencies also limit the programs' capacity to expand course- and fieldwork. Additionally, they have no reason to tailor their programmatic focus to current policy trends, as policies are constantly changing (Cuban, 1993).

Therefore, if policymakers wish to produce teachers who have skills in these areas, quality induction and professional development opportunities for teachers would be of paramount importance. Continued professional development has also been shown to ameliorate attrition and improve teacher quality (Carlson et al., 2002). Through formal policy initiatives such as mentoring, induction programs, quality professional development, required coursework, and release time for observation and study, teachers can obtain the knowledge that is missing from their preparation programs (C. C. Griffin, Winn, Otis-Wilborn, & Kilgore, 2002).

Third, another important conclusion of this study was in the alignment of teacher candidates' beliefs about the importance of individualized instruction, curricula and assessment with those reported by researchers across the country (Belden Russonello & Stewart, 2003; "Special education at a crossroads," 2004; Ward et al., 2003). Many special education professionals are concerned about the possible

loss of the original focus of special education law, which was on IEPs and the procedural safeguards necessary to ensure the implementation of these specialized plans for students with exceptional needs ("Special education at a crossroads," 2004). Some predict resistance to these new policies, led by concerned teachers and administrators (Huefner, 2000).

Such resistance and/or incomplete implementation would not be surprising, given the lack of buy-in to the new policies by teachers (Cohen, 1995; Cuban, 1993). Policymakers may need to rethink the strong emphasis placed on uniform standards, curricula, and assessment mandated by IDEA '97 and by NCLB. While all students should be held to high standards and assessed to determine progress, they also have unique needs that are often outside narrowly defined state mandated curricula. These needs include basic literacy for students at all levels: vocational, social and life skills goals, and behavioral goals (Huefner, 2000; Kauffman, 1999).

Teacher education. This study has several implications for the preparation of special education teachers. First and foremost, the findings of this study indicate a need for teacher education to: (1) instruct teacher candidates in the basics of standards-based reform and how to teach students under this paradigm; (2) be aware of the potential risks of this movement and instruct candidates in other effective teaching practices; and (3) prepare candidates for future changes in special education practice. Presently and in the near future, special education teachers are expected to hold most students to one standard and know how to guide them in accessing the general education curriculum (Thompson, Lazarus, & Thurlow, 2003). Teaching research-based practices such as presenting learning strategies in the context of general

education content can help teacher candidates learn to give students access to the general education curriculum while boosting students' independence (Ellis, 1993; Ellis et al., 1991).

However, these mandates can lead to poor teaching practices such as "teaching to the test" (Barton, 1999). Teacher candidates need to know how to avoid "teaching to the test" by preparing students for state testing through quality teaching. Additionally, risks of standards-based reform include overlooking essentials for many students in special education, such as basic literacy, vocational training and career goals, and study and social skills (Huefner, 2000; Kauffman, 1999). Teacher candidates need to know effective techniques for teaching reading, behavioral intervention, and transition planning on an individual level. Teacher preparation programs should consider that the policy climate in education is always changing (Cuban, 1993). Teachers need to have the tools to adapt to new environments and new policies as they emerge, as a part of their own growth and development as teachers and learners.

Further, the accountability movement has put pressure on institutions of higher education to step up accountability in teacher education, including increased attention to assessment (Conderman, Katsiyannis, & Franks, 2001; Lin, 2002; Wolf & Dietz, 1998). Institutions of higher education are now facing the challenges of balancing state certification requirements, the licensure requirements of professional organization, and accreditation standards, and are expected to document successful implementation of all (Sindelar & Rosenberg, 2000). In addition, the government is calling for direct ties between teacher education and student performance (President's

Commission on Excellence in Special Education, 2002; U. S. Department of Education, 2002).

Traditionally, teacher candidates were given pencil-and-paper tests in order to evaluate their suitability for the classroom. Such is still the case for teacher certification in Texas, and in many other states as well. However, these practices have fallen out of favor due to problems with authenticity and criticisms that they do not relate to the real world of teaching or its complexity (Conderman et al., 2001; Lin, 2002; Wolf & Dietz, 1998). Shulman (1988) mentioned problems with a variety of methods for assessing teachers, and proposed a "union of insufficiencies," or a mix-and-match approach to assessment in order to compensate for the strengths and weaknesses of the various methods.

The results of this study also point to a need for more in-depth assessment of teacher candidates as they appeared to have knowledge of IDEA '97 and NCLB and the three areas covered by those laws, but did not use this knowledge when discussing their planning processes for a hypothetical student. The instrument used in the current study did not measure whether candidates did not have knowledge of the three areas of whether they felt that other areas were more important to consider when planning for students. Perhaps states and institutions of higher education should consider using case-based assessments such as the one used in this study, and/or performance assessments, in addition to their traditional assessments in order to test and certify teacher candidates. All assessments need to be aligned precisely with the standards proposed, as well as the knowledge, dispositions and skills needed for the kind of

practice desired. This kind of direct alignment is rare in current state certification examinations (Thompson et al., 2003).

Another crucial issue that stems from the findings of this study is that of beliefs and attitudes on the part of teacher candidates that do not support the goals of the standards-based reform movement. Repeatedly, research has shown the difficulty of changing preservice teachers' prior beliefs and attitudes (National Center for Research on Teacher Learning, 1992; Wideen, Mayer-Smith, & Moon, 1998). The teacher candidates involved in this study already believed that students with disabilities should not be accountable to the same standards as their peers in general education. Either candidates already held these beliefs and attitudes before they entered their teacher preparation programs, or they acquired them during their courses of study. Given the lack of "apprenticeship of observation" of most special education teachers (most did not spend 13+ years in special education classrooms, or have many special education students as classmates) as noted by Pugach (1992), it is likely that teacher candidates acquired these beliefs during their preparation programs. This conclusion is reinforced by a study reviewing the syllabi of sixteen representative education schools across the United States. The authors of this study reported that many teacher educators appear to be teaching "resistance" to the standards-based reform movement, which they postulate might render teachers unprepared for the demands of teaching in contemporary schools (Steiner & Rozen, 2004, p. 142).

Regardless of their personal opinion about these policies, instructors and teacher preparation programs as a whole need to examine their own beliefs and attitudes in this area, and attempt to determine the source of preservice teachers'

dispositions. Teachers need to understand that grade-level academic standards currently apply to every student, and how to work within that framework to bring quality education to students with varying needs and abilities (Thompson et al., 2003). However, they also need to understand the importance of other goals and objectives for special education students, such as literacy and career preparation (Huefner, 2000; Wigle & Wilcox, 2003).

The National Center for Research on Teacher Learning (1992) recommends "extended, ongoing assistance that is grounded in classroom practice" (p. 4). Programs need to be designed in a manner that encourages to allow teacher candidates to question their beliefs, engage in discussion, and experiment with practice while in supportive environments (Feiman-Nemser, 2001; National Center for Research on Teacher Learning, 1992). Programs need to use the principles they endorse in every course at every level, in every field experience, and to discuss them with every supervising teacher. They should weave them into classroom assignments and assessments, and encourage candidates to question them with every assignment and field experience. The use of these methods could include grappling with issues such as:

- How do teachers provide both remedial (i.e. basic skills) instruction and instruction in grade-level academic content?
- What is the best way to ensure access to the general education curriculum?
- How does a teacher help align instruction, curriculum, and assessment for students with varying ability and performance levels?

- How does a teacher comply with state testing requirements without "teaching to the test"?
- How can academic, vocational and life skill needs be balanced, given the student's requirement of participation in grade-level academic standards and assessment?

Research. The outcomes of this study suggest many directions for future research. First, some of the elements of effective programming in teacher education are still speculative, whether in traditional or alternative programs (Brownell, Bishop, McLeskey, & Sindelar, 2003). The existence of data reinforcing the effectiveness even some of these elements in producing quality teachers would make a great contribution to teacher education and assist in the creation of model programs. Instruments are needed that can relate teacher practices to student outcomes. Such instruments would aid in teacher preparation, evaluation, and professional development. Potential research questions in this area include:

- What effect do standards used in preparation programs have on teacher candidates?
- How can preparation programs prepare teachers for practice within the current reform movement as well as for practice under future reforms?
- How can preparation programs prepare teachers to be lifelong learners, and to balance the needs of their students with the need to comply with current legislation?

Second, heated debate still continues over the effectiveness of one model of teacher education over another (i.e. traditional certification versus alternative

certification). This study yielded few conclusions with respect to this debate. Some questions that could be used to investigate further include:

- Do traditional candidates in fact feel better prepared for their positions than alternative candidates? If so, why?
- Do candidates from traditional (or alternative) programs have a more positive impact on student outcomes?
- Are alternative certification programs succeeding in ameliorating teacher shortages in high-need areas?
- Do candidates from traditional (or alternative) programs possess greater knowledge and skills in various crucial areas (e.g. transition, collaboration, content-area knowledge, teaching basic skills)? If so, what programmatic elements are responsible for the difference?
- How do the practices of alternatively- and traditionally-certified special education teachers compare?

Third, teacher education practices and standards vary widely across states and even across institutions. Recently, teacher education has come to rely heavily on standards, and is beginning to tie those standards with curriculum and instruction and with the performance of teacher candidates (Conderman et al., 2001). However, the results of this study suggest that some teacher candidates may not be using the content addressed in the standards when planning for students. More research is needed to address this problem, including consideration of questions such as:

- What effect do standards for teacher education have on candidates' performance?

- What program elements contribute to candidates' acquisition and application of the standards in their teaching practice?
- What are the effects of standards-based reform in teacher education on candidates practice? their students' performance?

School administration. Finally, if teacher candidates are not well prepared to meet the goals of current reform movements, it would be in the best interest of school administration to establish the supports needed to accomplish this goal. Additionally, support from administration and colleagues has been linked to retention among special educators (Gersten et al., 2001; Littrell, Billingsley, & Cross, 1994; Wisniewski & Gargiulo, 1997). Research has shown that new teachers adapt to the environment in the field, and that school personnel and the school environment have much more influence over their beliefs and practices than do university instructors (Richardson, 1996). This phenomenon places school administrators in a powerful position with respect to shaping the beliefs as well as the practices of new teachers.

When designing induction programs, school administrators should be guided by research that outlines what dispositions and practices are needed from their new special education teachers in order to meet new mandates, and what they believe will improve outcomes for their special education students. In their review of the literature on teacher induction in special education, Griffin, Winn, Otis-Wilborn, and Kilgore (2002) state that effective induction programs have clear goals, a "culture of shared responsibility and support," offer a continuum of support, and provide formal and informal opportunities for interaction with colleagues (p. 3). Results of this study show a need for such induction programs, based on the standards-based movement,

that are focused any or all of the following: (1) aligning state standards, curriculum, and instruction with each other and with assessment systems; (2) aligning IEP goals with state standards and carrying out those goals; (3) supporting special education students in general education settings and collaborating with general education teachers; and (4) making appropriate assessment decisions for students with disabilities. However, future reform movements may call for different emphases in teacher induction.

As with teacher education programs, a clear vision, multiple supports, and coherence in content presented across setting are crucial. School officials need to decide what is required for new teachers to improve outcomes for students with disabilities and develop induction programs to support that vision, in collaboration with practicing teachers. They are also in a strong position to influence new teachers' attitudes and beliefs with respect to the goals of reform movements, as is necessary to comply with new legislation.

Limitations

This study has five major limitations, including limited response rate and incomplete responses, indirect measures, a limited sample, the grouping of diverse programs under one category, and limited content measurements. These limitations affect generalizability of the study, particularly to different states, different areas of teacher knowledge and reasoning, and to performance in the field.

First and foremost, response rates were difficult to measure and should be seen as limiting the study's results. Nonresponse occurred at several levels. At the program level, potential participants were omitted from the pool by supervisors who

did not wish to participate or who neglected to pass along the e-mail invitation. This problem could have been avoided with access to a list of candidates' names and e-mail addresses. At the individual level, nonresponse occurred by individuals within participating programs and also within the survey itself. Again, follow-ups could only be made through the candidates' supervisors, rather than through direct contact with the individual. Direct contact with non-respondents is the most effective method for increasing response rate.

Participation in surveys is contingent upon participants' interest in the subject matter presented as well as the difficultly of the task and the amount of effort required by the participant (Beatty & Herrmann, 2002). This fact could account for the rapid drop off in responses after the first set of demographic question (from N=194 to N=101), and an increase in responses to the Likert-type perception questions (N=149), which could be answered more rapidly than the open-ended questions. Few conclusions can be reached about differences between responders and non-responders; however, it can be postulated that responders may have had more interest in, or stronger opinions about, the subject matter (IDEA '97 and NCLB) or about their teacher preparation in general, than non-responders. Teacher candidates from traditional programs had a much higher response rate than those from alternative programs. This finding could be due to the fact that the traditional programs were smaller, allowing candidates to have more contact with their supervisors. On the other hand, traditional candidates may have had more knowledge about or interest in the subject matter than alternative candidates.

Additionally, in order to calculate population size and response rate, this study relied upon the National Clearinghouse for Professions in Special Education (NCPSE) database of teacher preparation programs (NCPSE, 2003a, 2003b) for the population of special education teacher preparation programs. It also relied upon supervisors at these programs (both responding and non-responding programs) to give an accurate account of the number of special education teachers their programs would be certifying that semester. Also of importance is the small number of respondents from traditional programs. Despite the fact that these candidates are overrepresented in the sample, the population includes a much larger percentage of alternative candidates than traditional candidates. This small number of participants from traditional programs (n=66) limited quantitative data analysis.

Nonresponse in Web surveys can stem from a variety of unique issues, including potential participants who do not have Internet access or who have lower comfort levels with the use of technology, incorrect e-mail addresses / misspellings, and attitudes about unsolicited e-mail (Vehovar et al., 2002). This population received the invitation from their supervisors, who were likely to have correct e-mail addresses of their students. In addition, the recipients most likely had Internet access and had received previous e-mails from their supervisors. However, individuals' attitudes toward the use of technology and of Web-based surveys in general are still unknown (Vehovar et al., 2002).

Second, the survey attempted to measure perceptions, knowledge, and reasoning surrounding participants' preparation related to IDEA '97 and NCLB, particularly in the three areas of standards, assessment, and access to the general

education curriculum. It did not measure teachers' practices directly through use of an observational component. Although the open-ended vignette questions attempted to measure teachers' reasoning about students, the gap between an individual's reasoning on paper and their reasoning in the context of special education practice could be significant.

Third, the study included individuals from only one state. This decision was made because of the diversity in standards and licensure requirements, as well as in the programs and regulations in the public schools, across state. In addition, the one state represented was chosen purposefully, because of its large population of alternatively-certified teachers and because of its long-standing involvement in accountability systems for both students and teachers. Despite this tradition, at the time of the study, Texas still allowed large numbers of special education students to be placed in separate settings and to take alternate assessments. These practices undoubtedly affected participants' responses when considering placement and planning for services for a hypothetical student. All of these issues limit the study's generalizability to other states.

Fourth, this study groups alternative programs together in order to compare teacher candidates from alternative and traditional programs. However, researchers have remarked repeatedly on the great diversity across alternative programs. These programs vary by type of supervising institution, length of program, amount of coursework required, type of supervision and entrance requirements, among many others (Feistritzer & Chester, 2003; Wilson et al., 2001). This study does not take that

diversity into account, other than to note no differences among the responses of participants in alternative programs of different lengths.

Finally, this study measures perceptions, knowledge and reasoning in only one area (IDEA '97 and NCLB). It does not measure candidates' perceptions, knowledge or reasoning in any other area. Other crucial areas for special education teacher preparation include teaching reading, collaboration, transition, writing effective IEPs, and behavior management (York & Reynolds, 1996). Effective special educators have a variety of tools at their fingertips, and that these tools require a great diversity of knowledge and skills (Stough & Palmer, 2003). It should not be assumed that poor or insufficient preparation in one area automatically coincides with problems in other areas, or that these teachers necessarily will be ineffective in the classroom.

Conclusion

Recent federal legislation promises to change practices in special education from focusing on individualized instruction to including all students in general education accountability systems and applying uniform standards (Thompson et al., 2003). These changes require a simultaneous shift in practices in teacher education (Whitten & Rodriguez-Campos, 2003). While demands on traditional teacher education change and grow, alternative certification options have become popular and have come to the forefront of debate in the field (Rosenberg & Sindelar, 2003; Sindelar & Marks, 1993). Researchers are questioning whether either traditional or alternative certification programs can meet the challenges imposed on them by the standards-based reform movement (Brownell, Sindelar et al., 2002; O'Shea et al., 2000).

This study's purpose was to assess the perceptions, knowledge and reasoning of special education teacher candidates with respect to two laws affecting special education practice, the Individuals with Disabilities Education Act Amendments of 1997 (IDEA '97) and the No Child Left Behind Act (NCLB). The study compared candidates from alternative and traditional certification programs. It assessed teacher candidates in the three areas identified by Thurlow and Thompson (2003) as the areas of intersection of the two laws: content and achievement standards, assessment, and access to the general education curriculum.

The study assessed 194 individuals, representing approximately 30% of special education teacher candidates in the state of Texas. About 2/3 of the participants were from alternative certification programs, and 1/3 from traditional programs. Texas was selected because of its large population of alternative certification programs and because of its long history of involvement with accountability systems in education, both in the public schools and in teacher education. The instrument was a Web-based survey with five sections: demographic information, open-ended assessment of teacher knowledge, teacher perceptions of preparation, case-based assessment of teacher reasoning, and test of teacher knowledge. Each of the last four sections assessed teacher candidates in the three areas of standards, assessment, and access to the general education curriculum. Participants were recruited through their supervisors, who were asked to forward solicitations to those students who would become certified special education teachers at the end of the 2003-04 school year.

Although traditional candidates rated their preparation more highly than alternative candidates, no differences were found in knowledge, or reasoning between

alternatively- and traditionally-certified teacher candidates with respect to the tenets and implications of IDEA '97 and NCLB for special education practice. The results of this study yielded important findings for special education teacher preparation in any form. Researchers point to the importance of knowledge and skills related to standards, assessments, and access to the general education curriculum for all those educating students with disabilities. They assert that special education teachers must be able to connect grade-level academic standards with curriculum, instruction and assessment for students with disabilities in order to create coherent programs and improve historically poor student outcomes (Thompson et al., 2003).

However, the results of this study show a general lack of preparedness in all of these areas on the part of special education teacher candidates, regardless of certification type. These teachers did demonstrate knowledge of IDEA '97 and NCLB and the implications of these laws for schooling, especially in the area of assessment. In their reasoning surrounding programming for a hypothetical student with learning disabilities, the majority felt the student should not be held to the same standards as her general education peers. Participants advocated the need for individual standards and individualized curricula for students with disabilities, yet they did not demonstrate a knowledge of what essential skills and strategies to teach or how to teach them.

This study leads to several implications for different groups. First, policymakers and teacher educators should put results over method by participating in the improvement of teacher education through the creation of coherent programs rather than arguing over whether traditional routes to teaching are better than alternative routes, or vice versa. Second, policymakers should consult with special

education teachers and other professionals about how best to serve students with disabilities. When creating and revising policy, they need to ensure that the best interests of all students are being considered. They also need to take into account the beliefs of educators when planning for implementation. Third, teacher education programs need to consider exposing teacher candidates to the study of policy and change in order to ensure that they have both the knowledge and skills needed to improve their practice and to student achievement under any reform movement. Researchers should continue to study elements of effective and coherent programming in teacher education and attempt to tie such programming to student outcomes. Finally, school administrators need to build effective induction programs that encourage and support teachers in their efforts to comply with new legislation, and to extend the work of teacher education programs.

The President's Commission on Excellence in Special Education concluded that, "The current system of pre-service and in-service education is not sufficient to produce personnel who can ensure students with disabilities achieve satisfactory outcomes" (p. 57). Teacher educators and policymakers need to go beyond rhetoric-filled debates about traditional versus alternative routes to teacher education. Coherent teacher education programs that include course- and fieldwork focused on preparing teachers to maintain high quality teaching under any reform movement need to be created. Special education must continue to advocate for students to ensure that they receive quality instruction by well-educated teachers, teachers who are prepared to hold all students to high standards and to provide for their individual needs. A solid system of preservice education and professional development is necessary to keep

teachers in the field and to ensure that they do have the knowledge and skills necessary to extend their learning, to keep abreast of policy changes, and to improve outcomes for every student.

APPENDIX A: SURVEY INSTRUMENT

Thank you for participating in my dissertation! If you respond to EACH QUESTION, you will be put into a random drawing for cash prizes of $100, $50, and $25. The survey has 26 questions total.

-- Leah Wasburn-Moses, Doctoral Student, Michigan State University

Informed Consent Form

The purpose of this study, Are We Prepared for Reform? is to understand your opinions of your preparation and your knowledge of new laws affecting special education. By agreeing to participate in this study, you will be asked to complete this Web-based survey. Completing this survey should take about 15-20 minutes. You should also know that:

(1) Your privacy will be protected to the maximum extent allowable by law. The researcher will not know your name or any identifying information, UNLESS YOU SHOULD WIN ONE OF THE MONETARY REWARDS. In that case, the researcher will contact your supervisor to determine your name and address. After mailing your check, the researcher will destroy all documents with your name and address. No identifying information will be used during conference presentations or in any published work.

(2) Your participation in this study is completely voluntary. You may refuse to answer any or all questions in the study at any time, without penalty. If you request them, results of the study will be made available to you.

(3) If you have any questions about this study, please contact the researcher, Leah Wasburn-Moses, wasburnm@msu.edu, or her advisor, Dr. Carol Sue Englert, 340 Erickson Hall, Michigan State University, East Lansing, MI 48824, (517) 355-1835, carolsue@msu.edu. If you have any questions or concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact, anonymously if you wish, Dr. Peter Vasilenko, Chair of the University Committee on Research Involving Human Subjects (UCRIHS) by phone: (517) 355-2180, fax: (517) 432-4503, e-mail: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

You indicate your voluntary agreement to participate by completing and submitting this survey.

Basic Information

1. Please enter the ID number you have been given for this survey:

   _____

2. Type of school in which you are currently employed / student teaching:

   elementary___middle___ high school ___ other ___

3. Your gender: male ___ female ___

4. Your age:

   20-29 ___ 30-39 ___ 40-49 ___ 50-59 ___ 60+ ___

5. My degree is/will be in: _____

6. The disability categories of the students I teach are (please mark NO MORE THAN THREE):

___ learning disabilities
___ mental retardation
___ emotional disturbance
___ physical disabilities
___ hearing impairment
___ visual impairment
___ speech-language impairment
___ other health impairment
___ autism
___ severe and profound disabilities

General Questions

7. What are three of the NEW provisions contained in the Individuals with Disabilities Education Act Amendments of 1997 (IDEA '97)?

a. _____

b. _____

c. _____

8. What are three of the provisions contained in the No Child Left Behind Act of 2001?

a. _____

b. _____

c. _____

9. Opinions of Teacher Preparation: Please answer the following questions about your teacher preparation program by checking in the appropriate box.

	strongly agree					strongly disagree
My program prepared me well for my current teaching/student teaching position.						
My program gave me sufficient knowledge of special education policies and procedures as mandated under the Individuals with Disabilities Education Act Amendments of 1997 (IDEA '97).						
My program gave me sufficient knowledge of special education policies and procedures as mandated under the No Child Left Behind Act of 2001.						
My program taught me to know and be able to use the state academic standards with my students.						
My program taught me about the options for the state standardized test (e.g. the different tests and accommodations), and how to implement these options.						
My program taught me how to make modifications, accommodations, and adaptations for my students in general education settings.						

Teaching Scenario

Sara is a 13-year-old 7th grader with learning disabilities. Her reading is at the third grade level, her writing at a second grade level, and math achievement at fourth grade. As a result of her problems with literacy, she has difficulty reading and comprehending material and producing written work in all of her content-area classes. Currently, she is placed in special education language arts and math classes, and in general education social studies, science, and electives. She consistently receives Ds in her general education academic classes, although she does not exhibit poor behavior or attendance. Although she has attempted to take the state standardized test in the past, she has never received a passing score in any subject area.

You will be Sara's 8th grade special education teacher, and as such you are part of her annual IEP team meeting. The following five questions address how you would help plan for Sara.

10. What additional information about Sara's program would you want to ask the teachers before making recommendations to the team?

11. What are the THREE most important issues in Sara's education that you think should be addressed in her IEP, and why?

a.

b.

c.

12. How would you support Sara's reading and writing in the general education classroom?

13. What factors would you consider when making decisions about participation in state standardized testing (e.g. whether she should take the regular or an alternate exam, what accommodations, if any, she should have)?

14. Do you think that Sara should be held to the same academic standards as non-disabled students? Why or why not?

Last Section!

Please read the statements below, and circle the correct answer. Remember that this exercise is ANONYMOUS, and your individual responses will not be shared with anyone. There are 12 multiple-choice questions.

15. According to the Individuals with Disabilities Education Act Amendments of 1997 (IDEA '97), if the IEP team determines that a student cannot participate in statewide testing, the IEP must include:

a. a statement as to why the test is inappropriate and how the student will be alternately assessed
b. a statement as to why the test is inappropriate and how the student will be harmed by participating in the test
c. a statement as to why the test is inappropriate and how the student's goals and objectives help address areas in which the student is lacking in basic skills
d. a statement as to why the test is inappropriate and how the student will work toward participating in statewide testing

16. According to No Child Left Behind, who is responsible for setting the academic standards for students with disabilities?

a. the federal government
b. the Council for Exceptional Children (CEC)
c. the state governments
d. the IEP team

17. According to No Child left Behind, the general education curriculum must be aligned with:

a. state standards
b. the principles of IDEA
c. students' individual needs
d. goals established by the Council for Exceptional Children (CEC)

18. No Child Left Behind now (as of 2004) requires standards and assessments to be in place in what areas?

a. reading and mathematics
b. reading and writing
c. each state decides
d. reading, mathematics, science, and social studies

19. Under IDEA '97, students' IEPs must include a statement about:

a. how the child is involved in and progressing in learning reading and mathematics
b. how the child is involved in and progressing in the general education curriculum
c. how the child performs behaviorally and academically in general education classes
d. how the child performs during statewide testing situations

20. According to IDEA '97, who must participate in statewide testing?

a. all students
b. all students who are included in general education classes
c. all students who are not classified as mentally retarded
d. all students who have basic academic skills

21. According to No Child Left Behind, what percent of all students can be held to standards other than the regular state grade-level academic achievement standards?

a. 1%
b. 10%
c. no percentage specified in NCLB
d. depends on the school

22. According to IDEA '97, IEP goals must include accommodations and supports necessary:

a. to comply with the Council for Exceptional Children (CEC) standards
b. to meet requirements for high school completion
c. to meet NCLB guidelines
d. to participate in the general education curriculum

23. According to No Child Left Behind, states must provide the following for students with disabilities:

a. accommodations and alternate assessments
b. standards appropriate for a student's cognitive level
c. a plan for increasing inclusion in each school district
d. adaptive criteria for Adequate Yearly Progress (AYP)

24. What is the best definition of educational accountability?

a. responsibility for providing each child what he or she needs
b. responsibility for individualizing curriculum for all students
c. responsibility for producing student learning
d. responsibility for providing testing opportunities for all students

25. "Access to the general education curriculum" (IDEA '97) means that:

a. students with disabilities should learn basic reading and writing skills before they can be included in the general education curriculum
b. students with disabilities should be exposed to assistive technology to help them succeed in the general education curriculum
c. students with disabilities should be provided with textbooks and instruction that is on grade level
d. students with disabilities should learn the content and skills that define the general education curriculum

26. According to No Child Left Behind, state academic standards must be linked to:

a. IEP guidelines
b. assessments
c. state goals and objectives
d. school performance

27. Thank you for completing my survey! If you wish to be considered for inclusion in future projects based on the results of this study, please enter your e-mail address here:

_____

APPENDIX B: SAMPLE CODING

Table 15

Sample Coding for Open-Ended Assessment of Teacher Knowledge (NCLB)

Response	Code	Category
fair and equal education	equal opportunity for all	basic philosophy
alerts parents to information about their child's school	change in parental rights	basic philosophy
expand scope and frequency of student testing	assessment / standards	assessment / standards
adequate yearly progress	accountability	accountability / school improvement
holding schools accountable for student achievement	school improvement	accountability / school improvement
must pass TEKS in 3rd 5th & 8th to proceed (Texas initiative)	change in promotion policies	other specific provisions
school funding is dependent upon TEKS performance	funding changes	other specific provisions
language training for LEP students	provisions for LEP students	other specific provisions

Table 16

Sample Coding for Open-Ended Assessment of Teacher Reasoning (Question 2)

Response	Code	Category
get her up to current grade level in reading	literacy skills	literacy skills
what stage is Sara at and what does she need to progress?	current level of performance	current functioning
how she learns best	strengths / weaknesses	current functioning
developing math concepts to see if she cannot make more than a years growth	math skills	current functioning
definitely class schedule should be looked at very careful (sic) so Sara can be successful	review placement	review placement
does she qualify for alternative testing in her state	issues with state assessment	issues with state assessment

Table 17

Sample Coding for Open-Ended Assessment of Teacher Reasoning (Question 3)

Response	Code	Category
assignments may need to be shorter for her writing and she may need more time to complete instruction	modify assignments	modify / adapt
consider oral administration of tests	modify tests / grading	modify / adapt
adapting materials to be sure that she can comprehend (sic) what is taking place in the classroom	modify texts / materials	modify / adapt
working with the general education teachers to make sure modification is being done according to the ARD committee	work with general ed teacher	collaborate
working extensively with the family and making as many modifications as needed	work with family	collaborate
I would give her more phonics and reading comprehension practice ... that she can do on an individual basis	separate reading program	teach skills / strategies
working on her reading skills in the special education classroom to build those skills	pull-out support	teach skills / strategies
if at all possible I would have a helping teacher that would guide Sara's reading and writing	one-on-one in-class instruction	one-on-one instruction

Table 18

Sample Coding for Open-Ended Assessment of Teacher Reasoning (Question 4)

Response	Code	Category
based on her grade levels Sara should probably take the alternate exam	recommended alternate exam	recommended alternate exam
oral administration for math testing would be recommended	suggested specific modifications / accommodations	suggested specific modifications / accommodations
does she do better in small groups?	learning style	current performance and abilities
I would look at the grades and benchmark's (sic) taken on those subject (sic)	grades / test scores in classes	current performance and abilities
I would consider whether she is able to understand the questions by herself on the state test or whether she can read the grade level test	abilities and current level of performance	current performance and abilities
accomodations (sic) should match those that have been provided in classroom experiences	modifications used in the classroom	modifications used in the classroom

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