COMPETENCIES NEEDED BY BUSINESS TEACHERS TO WORK WITH STUDENTS WHO HAVE DISABILITIES

by

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ABSTRACT

The purpose of this study was to determine the perceptions of an expert group of secondary school business teachers regarding whether previously identified competencies for working with students who have disabilities are important for secondary business teachers. The research questions used as a guide to conduct the study were:

1. From a list of identified competencies compiled from course objectives and literature, to what extent did the members of the expert panel of secondary school business teachers in Virginia and agree on competencies that are essential for business teachers related to working with students who have disabilities?
2. What comparisons can be made among the ratings of competencies by the members of the expert panel?

The data were collected using a modified, two-round Delphi technique. The initial instrument used in Round I was developed by the researcher based on a literature review and authenticated by a validation panel. The 28 competencies were grouped in eight topical categories to assist in the review by the validation panel. The 16 members of a nominated Delphi panel were business education teachers from Virginia. The Delphi panel responded to the competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. The Round

II instrument consisted of four competencies that did not meet consensus in Round I by having a standard deviation equal to or less than 1, and consensus was achieved on all four competencies in Round II. Of the original 28 competencies, 27 achieved the predetermined minimum mean score of 3.5 to be considered as important.

The category of classroom management had the highest mean rating of 4.61 on the 5.0 scale. Also, the mean ratings were high for the categories of inclusion (4.31) and individual education programs (4.29). The two categories that had the lowest mean ratings (3.88) were characteristics of learners and transition services. Recommendations based on the results were made for improved policy and practice and for further research.

DEDICATION

My faith in God has given me the ability to persevere. It was my spiritual strength that guided, directed, encouraged, and comforted me through this recent challenge of my educational experiences and I will be forever grateful. I graciously accept this blessing, but I give all the glory to my spiritual counselor.

To my husband and best friend, Thomas, I could not have done this without your support. We discussed the impact this would have on our marriage before I started the program, but I don't think we understood the sacrifices we would have to make over the next seven years and nine months. Thank you for understanding when I went five hours away from you for the summers of 1995 and 1996; left your side at 2:00 a.m. or 4:00 a.m. to study; took work on vacations; could not accompany you to a movie or other family events. I appreciate the countless times you drove me to Blacksburg as I studied and the times you proofread my work.

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To my dear mother, Clara Rollins James, who was my first teacher. Thank you for teaching me values, and at an early age instilling in me the importance of a good education.

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CHAPTER 1

INTRODUCTION

At a time when our educational system expects teacher shortages, more demands are being made on teachers. Teachers are expected to teach increasingly diverse learners, meet higher standards, and be held accountable for the success of their students and their schools on standardized tests. This study focuses on the competencies necessary for business education teachers to work with students who have disabilities. As an increasing number of students with disabilities are being taught in career and technical classes, teachers are realizing the necessity of developing additional skills to work effectively with these students (Wood & Jones, 1994).

Reports developed by the Virginia Department of Education Office of Career and Technical Education Services indicated a large number of students with disabilities enrolled in career and technical education classes in the 2000-2001 school year (Virginia Department of Education, Office of Career and Technical Education Services, 2002). Teachers are expected to meet the needs of all students. According to the Individuals with Disabilities Education Act, students with disabilities have mental retardation, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbances, orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific

learning disabilities and who, by reason thereof, need special education and related services (Individuals with Disabilities Education Act [IDEA] Amendments of 1997, 1997, p. 10).

This chapter provides a brief overview of the professional development of teachers and issues related to career and technical education teachers and students with disabilities, including higher standards and accountability, characteristics of learners, and legislative background. Also included are a statement of the problem, purpose and research questions, significance, assumptions, delimitations, and definition of terms.

Professional Development of Teachers

The Carnegie Forum on Education and the Economy presented a report titled *A Nation Prepared: Teachers for the 21st Century* in 1986. The Forum maintained that a profession of well-educated teachers was the key to success for greater performance from high school graduates and that reform could be achieved only by increasing the skills, aspirations, and capabilities of the nation's teachers (Carnegie Forum on Education and the Economy, 1986).

The professional development of teachers is a continuous process. Roskos and Bain (1998) found that as teachers engaged in a professional development activity (a graduate study course), they evolved in their understanding of learning and adapting conceptual context in practice. Professional development activities in the form of inservice education or graduate courses may help career and technical education teachers to work with students who have disabilities.

Wood (1999) studied the degree of importance of technical competencies for beginning secondary business teachers and found that all of the 102 competencies of the

National Standards for Business Education (NBEA, 1995) were considered to be of average importance, more than average importance, or essential importance for beginning secondary business teachers to perform successfully.

Issues Related to Business Teachers and Students with Disabilities

A large number of students receive special services in secondary schools and this situation challenges educators to accommodate students with different abilities. McLeskey, Henry, and Axelrod (1999) suggested that teachers who are entering the profession should be prepared to meet the needs of students with disabilities.

The federal government mandated that all students receiving special education services have an Individual Education Program (IEP). The Individuals with Disabilities Education Act (IDEA) of 1990 also required that at age 14 each of these students has an IEP that includes transition plans (Armstrong, 2001). Langone (1998) suggested that teachers work as a team to meet the needs of students with disabilities.

Even though teachers have more students with special needs, the teachers will be held accountable for the success of all students. The federal administration has called for higher standards and accountability in *No Child Left Behind Act 2001*. Accountability of teachers in Virginia was addressed when the 1999 Virginia General Assembly enacted the *Education Accountability and Quality Enhancement Act (HB 2710 and SB 1145),* which was aimed at supporting educator productivity and accountability (Virginia Department of Education, Division of Teacher of Education and Licensure, n.d.).

Teachers must identify the educational characteristics of learners with special needs to be effective in the classroom. This essential task will help the teacher to design, implement, and evaluate appropriate instructions and be able to respond to the needs of the increasingly diverse population (Lopez-Reyna & Bay, 1997). Mick (1994) stated that it is important to identify characteristics of learners, for example, if students are emotionally disturbed, they are entitled to teachers specifically trained to work with them and to receive mental health services.

There is a legal foundation for providing appropriate services to students with disabilities. Since the 1960s, the U. S. Congress has passed a series of laws to protect the rights of students with unique educational characteristics. These laws were developed because the needs of individuals with disabilities were often ignored by society and these individuals were not given the same rights as others. Lawsuits were filed demanding equal education and employment opportunities for all people (Sarkees-Wircenski, & Scott, 1995). Such legal actions provided momentum for the passage of the Civil Rights Act of 1964. This act was followed by the Education of All Handicapped Children Act of 1975, which mandated that a free and appropriate public education be provided for every person with a disability between the ages of 3 and 21. The Rehabilitation Act of 1973 reaffirmed the rights of handicapped persons in the workplace by establishing affirmative action programs and prohibiting discrimination against individuals with handicaps (Sarkees-Wircenski, & Scott, 1995). The Americans with Disabilities Act clarified the rights of individuals with disabilities, and the Workforce Investment Act of 1998 enhanced employment and rehabilitation programs (Asselin, 2000). A more

complete discussion of legislation is located in Chapter 2. Also, a listing and description of selected federal laws related to students with special needs is provided in Appendix A.

Statement of the Problem

The problem this study attempted to address was the apparent absence of a validated list of competencies of secondary business teachers to work with the large numbers of students in their classes who have disabilities. Competencies have previously been identified for teachers in general, but not verified as important for business teachers.

Purpose and Research Questions

The purpose of this study was to determine the perceptions of an expert group of secondary school business teachers regarding whether previously identified competencies for working with students who have disabilities are important for secondary business teachers. The research questions used as a guide to conduct the study were:

1. From a list of identified competencies compiled from course objectives and literature, to what extent did the members of the expert panel of secondary school business teachers in Virginia and agree on competencies that are essential for business teachers related to working with students who have disabilities?
2. What comparisons can be made among the ratings of competencies by the members of the expert panel?

Significance of the Study

The results of this study will contribute to the limited research on the competencies essential for teachers to work with students with disabilities. Teacher educators and leaders of professional organizations may use the results of this study to evaluate their preparation programs and professional development activities. State and local administrators may use the results of this study to plan, implement, and evaluate appropriate professional development for beginning and experienced business teachers.

Assumptions

This study was conducted with secondary business teachers in the state of Virginia. The researcher made the following assumptions:

1. The respondents are knowledgeable in the area of this study.
2. The respondents will truthfully provide their responses to the items.
3. The modified Delphi technique is a valid method for collecting and analyzing the responses.

Delimitations of the Study

The researcher recognizes the following delimitations that are inherent in the design of the study:

1. The participants in this study were delimited to secondary business teachers from the state of Virginia.
2. The study is delimited by the accuracy of the perceptions of secondary business teachers of the needs of business teachers working with students who have disabilities.

Definition of Terms

For this study, the following definitions are be used:

Business education: A career and technical education program including courses in business and information technology.

Business education teacher: An individual who teaches business and information technology courses at the secondary level; also referred to as a business teacher or a business and information technology teacher.

Business education and career and technical education supervisors: Individuals who administer secondary business and information technology education and/or career and technical education programs and personnel for a local school district in Virginia.

Competencies: Knowledge and skills essential for teachers; in this study focused on working with students who have disabilities.

Expert: A secondary business education teacher selected by a member of the nomination panel, which was composed of local business education and career and technical education supervisors.

Individual Education Program (IEP): A written statement for each child with a disability that is developed, reviewed, and revised in accordance with section 614 (d) of the Individuals with Disabilities Education Act Amendments of 1997.

Modified Delphi method: A technique for achieving consensus that involves soliciting two or more rounds of opinions from a panel of experts.

Secondary schools: Middle schools, comprehensive high schools, technical centers, and alternative education programs.

Students with disabilities: Students who have mental retardation, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbances, orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities and who, by reason thereof, need special education and related services (Individuals with Disabilities Education Act [IDEA] Amendments of 1997, 1997, p. 10).

Chapter Summary

Teachers need to have competencies that will help them to be more effective in the classroom by meeting the needs of diverse learners. Secondary business teachers are faced with the pedagogical challenge of preparing students with disabilities for entry-level positions in the world of work as well as for personal applications of business content.

Chapter 2 presents a review of relevant literature regarding the professional development of teachers. Issues related to business teachers and students with disabilities are also discussed in Chapter 2. The chapter concludes with an overview of the modified Delphi technique as a method for collecting information. Described in Chapter 3 are the research procedures and analysis. The results of the study are reported in Chapter 4. Chapter 5 provides a summary, conclusions, and recommendations for improved practice and further research in this area of study.

CHAPTER 2

REVIEW OF LITERATURE

A large number of students require special education services in secondary schools and this challenges educators to accommodate students with different abilities. The success of students is a crucial responsibility of all teachers.

Teachers who are entering the profession should be prepared to meet the needs of students with disabilities (McLeskey, Henry, & Axelrod, 1999). Professional development of teachers should include training on how to plan instruction for students with disabilities and how to be an effective member of an Individual Education Program team.

This chapter considers the following areas related to students with disabilities: professional development of teachers, career and technical education teachers and students with disabilities, standards for working with students with disabilities, instructional needs and strategies, accountability, and legislation. Chapter 2 concludes with an overview of the Delphi and modified Delphi techniques.

Professional Development of Teachers

Professional development programs for classroom teachers are one way to help all students meet high standards. The professional development of preservice, beginning, and experienced teachers will be discussed in this section. *A Nation at Risk* informed the federal government in the early 1980s that the modification of teacher education programs was essential (Bartholome, 1997).

As a result of the *A Nation Prepared: Teachers for the 21st Century* report, presented in 1986, the Carnegie Forum on Education and the Economy maintained that a profession of well-educated teachers was the key to success for greater performance from high school graduates. The Forum also stated that reform could be achieved only by increasing the skills, aspirations, and capabilities of the nation's teachers (Carnegie Forum on Education and the Economy, 1986). Goal 4 of the National Education Goals Report was that all teachers in the country would have access to programs that will continue to improve their professional skills and provide an opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century (National Education Goals Panel, 1997; Arneson, 1999). The professional development of new teachers and the continued professional development of experienced teachers are considered a critical topic of discussion for the academic arena.

Preservice Teachers

In the literature there is extensive concern for preservice teachers regarding course work and practical experience to assist them in working with students with disabilities. There are various views on how America prepares teachers for the classroom of the future, especially how to accommodate students from diverse populations.

Research was conducted by Roskos and Bain (1998) to identify features of the learning environment that promoted an intellectual focus of professional development. The author also sought to determine how teachers learned critical concepts. The participants were 15 teachers and one principal from a public elementary school in a Northeastern Ohio suburban community. The qualitative study was conducted over a two-year period. The results of the study indicated that as teachers engaged in a professional development activity

(a graduate study course), they evolved in their understanding of learning and adapting conceptual context in practice (Roskos & Bain, 1998).

A study conducted by Jones and Black (1995) examined state certification requirements for regular and vocational teacher regarding students with disabilities the perceptions of state vocational special needs supervisors on the certification requirements. The participants were certification offices of the education department of every state and the District of Columbia and state vocational special needs supervisors. Two questionnaires were administered to collect the data. The authors suggested that universities should offer more courses that prepare teachers to work with diverse student populations.

Another concern for preparing teachers is whether future teachers are being provided with adequate practical educational experience. Teacher preparation courses must go beyond basic skills and knowledge. Teachers need more courses with practical experience, not just lecture classes (Rojewski & Schell, 1995). The purpose of a study by Gee (1997) was to compare the perception of two groups of preservice teacher education students on their perceived future professional curricular needs. The participants were randomly selected undergraduate (N=84) seniors and graduate (N=72) students enrolled in education courses. The researcher concluded that preservice field experiences should begin in the sophomore year. The study also found that both groups agreed that interdisciplinary, team-taught classes in behavioral management, exceptionalities, and learning disorders would be more effective than the conventional instruction in separate subjects (Gee, 1997).

Beginning Teachers

Professional development is necessary to aid beginning teachers who have completed teacher education programs in becoming more effective in the classroom. Beginning business

teachers should enroll in programs to complement their teaching skills. Appropriate professional development activities are especially critical during the formative years of a teacher's career in order to enhance one's professional growth (Camp & Heath-Camp, 1989).

The purpose of a study administered by Thomas and Kiley (1994) was to identify the problems and concerns of new middle and high school teachers and to distinguish between the concerns of the first-year, second-year, and experienced but non-tenured teachers. The participants were 68 new middle and high school teachers in a growing school district in Maryland who completed a questionnaire. The authors concluded that the main concerns of first-year teachers under the age of 25 (63% of the respondents) included dealing with individual student differences and working with students with special needs. The results also indicated that 15% of beginning teachers leave the profession after the first year of teaching, and more than 50% leave within six years. The researcher recommended more opportunities for inservice activities, peer monitoring, and professional development programs for all teachers (Thomas & Kiley, 1994).

Experienced Teachers

The professional development of teachers is a continuous process. The training received in undergraduate programs provides only a foundation for continued education. Bradley (1996) recommended that teachers receive an additional two weeks of employment each year to allow for in-depth professional development that will lead to an enhancement of student learning.

In Virginia, 295 business teachers were surveyed by Weidegreen (1994) to determine the professional development needs they perceived as important. The participants were business educators who attended a series of regional conferences sponsored by the Virginia

Business Education Association. The study resulted in a list of nine priorities of professional development, ranked from the most important to the least important by business teachers. The nine priorities were: (a) to align business education with academics; (b) to align curriculum with workforce needs; (c) to provide keyboarding support (K-12); (d) to create partnerships with business/industry; (e) to refine curriculum; (f) to develop communication skills of students; (g) to facilitate teacher/staff development; (h) to develop, implement, and revise curriculum; and (i) to create interdisciplinary initiatives. The researcher concluded that business teachers are concerned about meeting the needs of the workforce, aware of the importance of integrating into academic curriculum, and desire their professional organizations to be their advocates for increased professional development. It was recommended that the professional organizations act as advocates at the local and state level for business educators (Weidegreen, 1994).

Funds are necessary for the professional development of teachers. Rust (2000) stated that the allocation or reallocation of funds is necessary to provide more teachers and principals with instructional and leadership skills needed to help even the hardest-to-reach child acquire new levels of basic competency.

An investigation by Plosz (1993) of educable mentally handicapped and trainable mentally handicapped students from elementary to high school recommended providing inservice to all staff about students with disabilities. The researcher studied the referral process of educable (EMH) and the trainable (TMH) mentally handicapped student from elementary to secondary schools and from secondary schools to collegiate schools. The participants were special education teachers from Regina Public Schools who provided services for (EMH) and (TMH) students and the students themselves. The teachers were

interviewed and 131 files of the students were examined. The researcher found that many students had not received vocational assessment in secondary school. Also, the researcher found that 43.8 % of the students received social assistance and 20.8% lived in foster homes. In the study, the instructional staff expressed that they were unhappy with the referral process and that mainstreaming was not common (Plosz, 1993).

Professional Development of Career and Technical Education Teachers

Traditional Licensure

Teacher licensure requirements vary from state to state. Virginia has two methods of receiving traditional licensure: (a) through a Virginia college or university that has an approved teacher preparation program; and (b) through reciprocity by being licensed in another state (Virginia Department of Education, Routes to Licensure, n.d.).

In order to obtain an endorsement to teach secondary business courses in the state of Virginia, one must graduate from an approved teacher preparation program in business education or complete course work that includes Accounting, Economics, Business Law, Business Principles, Management, Marketing, Finance, Insurance, Communications, Business Systems and Procedures, Computer Applications, Word Processing and Information Systems, Keyboarding, and supervised business experience (Virginia Department of Education, Licensure Regulations for School Personnel, n.d.).

Alternative Licensure

Career and technical education is experiencing a nationwide shortage of teachers, therefore alternative licensure is important to the recruiting and maintaining qualified

teachers. Alternative licensure minimizes the preparation needed before teaching and emphasizes on-the-job training (Zumwalt, 1996). Alternative licensure is common in career and technical education because historically trade and technical areas such as carpentry and auto mechanics have hired teachers who did not complete teacher education programs for licensure. Because career and technical education teachers are included in the teacher shortage, school districts are accepting more alternatively licensed teachers.

In 1997, 41 states had alternative certification or licensure programs, compared to only 18 states in 1986 (Shen, 1998). Considering the increase, a study was conducted to investigate the cumulative effect of alternative certification or licensure on the teaching force of elementary and secondary public schools and to compare the characteristics of traditionally licensed and the alternatively licensed elementary and secondary public school teachers. The data for the study were collected from a large national survey conducted by the National Center for Education Statistics and included a nationally representative sample of teachers certified in 1984-85 (N=14,719) and 1993-94 (N=800,412). The results of the study were mixed, because it found that alternative licensure does not reduce the teacher shortage in rural schools; however, a statistically significant higher percentage of alternatively licensed teachers work in urban schools. Additionally, alternative licensure did not result in recruiting a statistically significant higher percentage of male and mature individuals; however, a statistically significant higher percentage of alternatively licensed teachers than traditionally licensed teachers teach mathematics and science. The researcher recommended that the educational community and society need to determine whether alternative licensure is ultimately good for our children, the teaching profession, and society (Shen, 1998).

An area of career and technical education in which teachers have rapidly taken advantage of the alternative certification is technology education, due to its growing demand. An 11-question survey was mailed to all state supervisors of technology education in 1997 to assess issues regarding the licensure requirements for and the demands of technology educators. Supervisors from 42 of the 50 states responded. The average number of technology education positions that went unfilled because of lack of qualified applicants was 19 per state. Eighty-five percent of the state supervisors indicated that they were aware of technology education positions within their state that went unfilled for lack of qualified applicants. The researcher concluded that because of the current supply and demand of technology education teachers, a number of states have no choice but to explore alternative routes to licensure (Litowitz, 1998).

Career and Technical Education Teachers and Students with Disabilities

The preparation of career and technical education teachers, whether traditionally or alternatively certified, should include training to work with students with disabilities. Career and technical teacher educators need to address the concerns of the special needs population (Washburn & Cheek, 1992). More students with disabilities are being taught in career and technical classes, and teachers are realizing the necessity to develop additional skills to work effectively with these students (Wood & Jones, 1994).

> A special needs student may have a physical disability, an academic disability or an economic disadvantage that has created a void in his or her education. But all these students deserve opportunities for education that will help them reach their full potential. Career and technical education can do exactly that. It can fill that void and

help special needs students make the transition through the different levels of education and, ultimately, into successful careers (Cutshall, 2001b, p. 17).

According to the Virginia Department of Education, Office of Career and Technical Education Services (2002), in the 2000-2001 school term, 52,085 (27%) of the 189,491 students enrolled in career and technical education (CTE) classes were from special populations. This included 21,115 (11% of the total of 189,491) students with disabilities who were enrolled in CTE classes. Other categories of special populations reported were displaced homemakers, economically disadvantaged, limited English proficient, and single parents. Career and technical education courses are categorized in career families. The career families that may include business courses are: (a) business and administration, (b) finance, and (c) information technology. These three career families had 78,168 students enrolled, and of these 18,863 (24%) were identified as special populations. Of the 78,168 students enrolled in these career families, 5,633 (7%) were categorized as having disabilities.

Kraska (1996) conducted a study to determine the amount of knowledge that trade and industrial teachers had regarding learners from special populations. The participants were 55 secondary and 18 postsecondary beginning trade and industrial education teachers in Alabama who had taught for at least one quarter but not more than one year and were enrolled in professional education courses at Auburn University. The teachers completed a 36-item survey. The findings were as follows: 40% had inadequate knowledge about the disabled; 70% had inadequate knowledge about the economically disadvantaged; 30% lacked sufficient knowledge about nontraditional students; and 40% had inadequate knowledge about the academically disadvantaged. The researcher recommended that awareness and knowledge of special populations is critical if teachers are to provide effective vocational

education for all students. It was also suggested that more research is needed on the topic (Kraska, 1996).

The purpose of a study conducted by Florida State Council of Vocational Education (1994) was to examine the need for professional development activities for teachers and administrators providing vocational education for students with disabilities in that state. One group of participants was administrators responsible for the direction of vocational education in Florida school districts, community colleges, and area vocational-technical centers, and teachers were also randomly selected to participate in the study. The researcher suggested an implementation of interdisciplinary, interagency professional development activities. The results of the study indicated a clear need for more professional development activities to prepare career and technical education teachers to help students with disabilities. It was recommended that a model of professional development strategies be developed and distributed for school districts and community colleges and continued support of professional development activities at state and regional conferences (Florida State Council on Vocational Education, 1994).

Jenkins, Leigh, and Patton (1997) conducted a 10-year follow-up about states' standards used to certify teachers of students with learning disabilities. The purpose of the study was to gather data from state agencies regarding current standards, given the changes in the field over the course of approximately 10 years. After an initial mailing, and in some cases a phone call, the state teacher certification offices from all 50 states and the District of Columbia responded by sending information in a variety of forms ranging from entire handbooks to information provided over the phone. Overall changes in the paradigm since the earlier study of teacher licensure requirements in the area of learning disability varied

greatly across the country. The researchers found that Virginia requires teachers seeking special education licensure to complete 27 semester hours of specific courses. These courses are designed to provide teachers with the skills and knowledge design, deliver, and evaluate instruction for students with disabilities. The authors cited advantages of greater consistency in licensing teachers of students with learning disabilities (Jenkins, Leigh, & Patton, 1997).

National Standards

Stufflebeam (1998) defined standards as widely shared principles for assessing the value or quality of a profession's service. Stufflebeam also stated that setting and applying professional standards protects the profession from corruption, carelessness, and incompetence.

Several national educational associations have professional standards that state the importance of teaching all children. These organizations are the National Council For Accreditation of Teacher Education (NCATE) (n.d.), National Board for Professional Teaching Standards (NBPTS) (1997), Interstate New Teacher Assessment and Support Consortium (INTASC) (n.d.), Council for Exceptional Children (CEC) (n.d.), and the National Business Education Association (NBEA) (1995).

The standards of NCATE are based on the belief that all children can and should learn. Teachers should apply effective methods of providing instruction for students who are at different stages of development, have different learning styles, and come from diverse backgrounds (National Council for Accreditation of Teacher Education, (n.d.).

Thirteen standards of accomplished practice for career and technical teachers have been developed by the NBPTS. One of the standards of accomplishment is the knowledge of students. It states that accomplished career and technical educators are dedicated to

advancing the learning and well-being of all students. Career and technical educators should also personalize instruction and apply knowledge of human development to best understand and meet the needs of the students (National Board for Professional Teaching Standards, 1997).

Two standards that relate to teaching all students were recommended by INTASC for beginning teachers. One was that the teacher should understand how students differ in their approach to learning and should create instructional opportunities that are adapted to diverse learners. The other was that teachers should understand and use a variety of instructional strategies to encourage the students' development of critical thinking, problem solving, and performance skills (Interstate New Teacher Assessment and Support Consortium Standards, n.d.).

Although, the skills in the CEC common core standards were developed for special educators instead of general education teachers, they relate to skills needed by all teachers working with exceptional children because they pertain to instructional strategies, instructional planning, assessment, learning environments, and social interactions. One of the skills is that teachers should select, adapt, and use instructional strategies and materials according to characteristics of the individual with exceptional learning needs. The CEC standards were approved by the NCATE and correlated to the INTASC principles (Council for Exceptional Children, n.d.).

The standards that the NBEA developed for business educators were based on the conviction that business education is essential for all students because all students will participate in the economic system and all students need to be literate in business and economics. Also, because all students will encounter a business environment that is

characterized by both domestic and international diversity, all students need to practice the interpersonal teamwork and leadership skills that will help them function successfully in that environment (National Business Education Association, 1995).

These professional organizations (NCATE, NBPTS, INTASC, CEC, and NBEA) have stated the need for teachers to be able to work with all students. This study sought to develop consensus regarding the verification of competencies that are essential for business education teachers in working with students who have disabilities.

Competencies of Business Teachers

Competencies needed by secondary business teachers are related to the standards of the national professional organizations. Areas considered in developing the competencies for this study were characteristics of learners, instructional needs and strategies, support services, transition services, and legislation.

Characteristics of Learners

It is challenging for teachers to meet high standards and to be held accountable for the performance of all students, including students with special needs, on standardized tests. Accommodations can be made, however, for the students from special populations. Examples of accommodations include having an orally administered test or an interpreter.

One standard of the NCATE is to apply effective methods of teaching students who are at different developmental stages (National Council for Accreditation of Teacher Education, (n.d.). The INTASC stated that teachers should understand how students differ in their approach to learning (Interstate New Teacher Assessment and Support Consortium Standards, n.d.).

Johnson (2000) conducted a study to examine the effects of providing the accommodation of reading to the students the mathematics items on the fourth-grade version of the Washington Assessment of Student Learning. The participants were 115 fourth-grade students representing all of Washington state. A math test was administered using standard test procedures with one group of students, while the test was read to the other group of students. The author concluded that the accommodations made for students with learning disabilities did not affect their performance on tests. Johnson (2000) recommended that more research on accommodations in other content areas and all grades be conducted.

In order to be effective in the classroom, teachers must first identify the educational characteristics of learners with special needs. This essential task will help teachers design, implement, and evaluate appropriate instruction and be able to respond to the needs of the increasing diverse population. Teachers can obtain information to assess student educational characteristics from school records, parental interviews, and observations in a variety of settings (Lopez-Reyna & Bay, 1997).

Prior to attempting to assess students, teachers must become familiar with those characteristics that will provide an appropriate environment for interpreting information. Critical student characteristics include: (a) enculturation and acculturation–within the context of their native culture and adaptation to a new culture, (b) schooling experiences, (c) sociolinguistic development (such as limited English proficiency), and (d) cognitive functioning–difficulty paying attention and remembering tasks (Lopez-Reyna & Bay, 1997).

Instructional Needs and Strategies

The preparation of teachers to work with students with disabilities should include considering the instructional needs of the students and the strategies to accommodate diverse

learners. Teachers are responsible for abiding by the law and educating students with disabilities. This may include participating in Individual Education Program (IEP) meetings and modifying lesson plans for students with disabilities in regular classes. Teachers have the responsibility of planning instruction to meet the demanding needs of all students in the classroom, including students with disabilities. They must select, develop, or modify materials (including assessment tools) and equipment to accommodate the needs of students with disabilities. Wood and Jones (1994) suggested adapting lesson plans for students with disabilities, using overhead projectors, and outlining and videotaping lectures. For example, teachers can adapt lesson plans and integrate deaf students into a technical class by taking advantage of any residual hearing of the deaf student and by using body and facial expressions (Skobjak, Till, & Raco, 1988).

Fetko, Schuster, and Harley (1999) conducted a study to determine the effectiveness of using the strategy of simultaneous prompting while teaching a vocational task. The participants observed were four young adults with severe intellectual disabilities. The method used involves giving directions for a task and providing the controlling prompt immediately. The research found that the simultaneous prompting method of instruction was effective in teaching young adults with severe intellectual disabilities how to open keyed lockers. The researcher also recommended other methods of instruction can be implemented with the use of a technology for immediate feedback. Fetko, Schuster, and Harley (1999) suggested that more research be conducted on simultaneous prompting and chained vocational tasks because of the recent emphasis on transitioning students to work force.

The objective of an investigation by MacArthur (1998) was to determine the effect of using word processing technology on the writing of students with and without learning

disabilities. The participants were 9 and 10 years old. Five students with learning disabilities and severe writing problems were interviewed about their preference of using the special word processor to write journal entries. It was found that word processors using a speech synthesizer and word predictor increased writing scores from 42-75% to 90-100%. The researcher suggested that the combination of speech synthesis and word prediction had a strong effect on the legibility and spelling of journal entries for four of the five students (MacArthur, 1998).

Individual Education Programs (IEPs). Individual Education Programs (IEPs) were mandated by Public Law 94-142 for students who receive special education services. The purpose of the IEP is to set goals and objectives for students with disabilities. The IEP is a required document for all students with disabilities. The NBPTS stated that teachers should have knowledge about personalizing instruction (National Board for Professional Teaching Standards, 1997). Also, the CEC stated that teachers should collaborate with school personnel and community members about the learning needs of students with disabilities (Council for Exceptional Children, n.d.).

The purpose of an analysis by Giangreco, Dennis, Edelman, and Cloninger (1994) was to identify items that affect IEPs and offer alternatives. The participants were 46 students from nine different states in grades K-12 and who were in general education classes full or part time. A research team member observed the participants in general education classes after receiving permission from parents. As a result of the study, the researchers suggested that IEPs are: (a) frequently broad, inconsistent, and inadequately referenced to the general education context; (b) a list of goals for the staff rather than for students; and (c) discipline referenced.

The Individuals with Disabilities Education Act (IDEA) Amendments of 1990 also mandated that career and technical education teachers participate in the writing of IEPs. Teachers need to work as a team to meet the needs of students with disabilities (Langone, 1998). Career educators should function effectively as collaborative members of a planning team. In addition to the special education teachers, parents, general education teachers, career education teachers, and administrators, and when possible students, should assist in the writing of the goals and objectives of the IEPs. When teachers, in conjunction with counselors and administrators, meet as a team and develop goals and objectives for the student, it will give the team members an opportunity to co-teach (Bauwens & Korinek, 1993).

The cooperation of business educators and general educators enhances the effectiveness of IEPs, as the responsibility of IEPs for special needs students is increasingly shared among other teachers. Bauwens and Korinek (1993) described a process of developing IEPs with the collaboration of cooperative teachers. The researcher suggested that instead of establishing goals and objectives that target special materials, the goals and objectives should be for co-teaching and should target the skills of the student (i.e. study skills, social skills, and learning strategies).

The purposes of a study by Rojewski, Pollard, and Meers (1990) was to: (a) describe the attitudes and practices of secondary industrial education teachers in regards to special needs students, and (b) determine the effects of selected factors on the attitudes of industrial educators who teach students with disabilities. The participants were 245 high school industrial education teachers in midwestern states. The data for the study were collected with a 21-item Likert-type questionnaire. The results of the study indicated that there was no

involvement in IEPs by high school industrial education teachers. In order to examine specific secondary vocational education programs as separate entities, further research was recommended. The authors also recommended that current research on vocational teacher practices and attitudes be expanded to include an examination of possible effects these variables have on the achievement levels of special needs students (Rojewski, Pollard, & Meers, 1990).

Keefe (1992) stated that IEPs lack validity and accuracy and should be more responsive to the needs of the stakeholders (the students, parents, teachers, and community members). Lovitt, Cushing, and Stump (1994) examined how students with mild disabilities perceive their IEPs and how the perception compares to the contents of the documents. The 29 participants who were selected by a systematic process to include different grades, genders, and disabilities were students with mild disabilities from two high schools in the state of Washington. The students were interviewed and the IEPs were examined. The researchers found that most students were not familiar with the IEP process; they consequently suggested involvement of students when writing the IEPs. The examined IEPs met federal guidelines, however they needed improvement of functionality and practicality. They also lacked individualization. The investigators recommended that students be informed of the purpose of IEPs and that the documents cover high school goals instead of yearly goals.

According to Edelen-Smith (1995), students with disabilities should have holistic assessments. Eight elements should be added to IEPs to give them personal value and validity. The elements are that the IEPs should be conceivable, believable, achievable, controllable, measurable, desirable, stated with alternatives, and growth-facilitating (Edelen-

Smith, 1995). Love (1993) suggested that transition services should be included in the goals and objectives of the IEPs. All special needs students are required by federal law to have IEPs, and although they are not required to participate in inclusion, the inclusive classroom is becoming the norm.

Inclusion. Federal legislation does not mention the term "inclusion" and therefore different states use different definitions and terms to refer to this practice (Katsiyannis, Conderman, & Franks, 1995). Inclusion is a term used to describe placing students with disabilities in the typical classroom environment for all or part of the school day. It may also be defined as learning in the least restrictive environment. The form of inclusion can vary from school district to school district (Conderman, 1998). The standards of NBEA were developed on the premise that all students need to be literate in business and economics (National Business Education Association, 1995).

Langone (1998) stated that the most important items necessary for successful inclusion are the collaboration of general and special educators, innovative program options and curriculum, and implementation of instruction to all students. The researcher also identified professional development competencies of special educators, which included proficiency in designing instruction based on student needs, managing instructional personnel in the inclusive setting, time management, assertiveness, and conflict resolution and negotiation skills.

If teachers acquire these competencies, work together with an IEP team, and are held accountable, it will be an asset for inclusion. Walther-Thomas, Bryant, and Land (1996) stated that effective cooperative teaching is what is necessary for successful inclusion.

Conderman (1998) acknowledged a high level of accountability must be in place in order to have successful inclusion.

Van Reusen, Shoho, and Barker (2001) surveyed high school teachers about their attitudes toward inclusion; the results of the survey of 125 teachers suggested that teachers who had higher levels of special education training or experience in teaching students with disabilities had more positive attitudes towards inclusion. The participants were selected from a large suburban high school in San Antonio, Texas and completed an Inclusion Survey. The results of the study also suggested that the amount of training and experience a teacher has could affect the instructional process of the class. The research recommended that all school personnel should be knowledgeable about the purpose and requirements of inclusive education delivery systems, and should be aware of the availability of an entire range of classroom placements (Van Reusen, Shoho, & Barker, 2001).

Adapting Instruction. One NCATE standard stated that teachers should be able to apply effective methods of teaching students from diverse backgrounds (National Council for Accreditation of Teacher Education, (n.d.). Also, a standard of the CEC indicated that teachers should be able to modify instruction (Council for Exceptional Children, n.d.).

Wood and Jones (1994) stated that lesson plan modifications should include: adapting teaching techniques to accommodate different learning styles, outlining material, including media (overhead, videos), and adapting content format (flashcards, bingo, worksheets, audio-taped chapters for non-readers). Lectures can be modified by using the following strategies:

- multi-sensory input: use overhead projector, color pens on overhead, audio and video taped lectures, and any other visual aids to enhance lectures

- structured overview: graphically represent the major and minor lecture topics
- study guide: provide reviews, vocabulary lists, and review questions
- lecture outline: display lecture outline using an overhead projector (Wood and Jones, 1994)

The identification of different learning styles and the degree to which teachers adapt teaching styles to accommodate them will determine the extent of student learning (Stitt-Gohdes, 1999). There are nearly 6 million students with disabilities in America and many enroll in career and technical education classes. Teachers should be made aware of accommodations needed by exceptional students on the first day of class. This can be accomplished by asking the students to complete information forms (French, 1999).

According to *The Agricultural Education Magazine*, the 1994 agriscience teacher of year, Linda Rist, devoted 40% of her course work to hands-on activities. This teaching style is compatible with students who are tactical learners ("Nineteen ninety-four agriscience teacher," 1995).

Perhaps it is not realistic to expect teachers to accommodate all learners. The results of a study by Schumm and Vaughn (1998) indicated that suggestions may be desirable but not feasible to implement. Schumm and Vaughn observed teachers in Dade County Public Schools in Florida to identify the challenges of classroom teachers attempting to meet the needs of all students. The teachers observed typically had classes with more than 30 students. The authors suggested that it is crucial to conduct research to examine the perceptions and practices of teachers of students with disabilities in regular classes.

Assessment. One standard of INTASC stated that teachers should use a variety of instructional strategies to encourage performance skills of students (Interstate New Teacher

Assessment and Support Consortium Standards, n.d.). Teachers must consider students with disabilities when planning and implementing lessons and when evaluating the performance of students in comparison to others or an established standard. Teacher education programs should provide pre-service and in-service education on how performance assessments can be a learning tool and a method for tracking the progress of students (Arter, 1999). Utilizing alternative assessment can be helpful when assessing students with disabilities. Arter (1999) identified the following methods of alternative assessment used in career and technical education:

1. written assessments, including both selected responses types (multiple choice) and constructed responses types
2. performance tasks
3. senior projects including research papers, performance projects and oral presentations
4. portfolios (Arter, 1999)

Authentic assessment allows students to examine their own learning experiences and do a self-evaluation. These authentic assessments may include graphic organizers (such as flowcharts and diagrams), writing samples, journals and learning logs, rubrics, and portfolios (Cutshall, 2001a).

Classroom Management. Several items in the CEC standards indicated the need for teachers to exhibit classroom management skills (Council for Exceptional Children, n.d.). Without the ability to manage a classroom, completing all the professional development courses will not make a teacher successful. It is necessary for a teacher to have a basic understanding of classroom management and child psychology (Wright, 2001). A meta-

analysis of 50 years of research compared factors such as cognitive process, home environment, school culture, curriculum design, and classroom management and found that classroom management had the greatest effect on student learning (Wang, Haertel, & Walberg, 1994).

The strategies for managing the behavior of students with disabilities in an inclusive classroom are not different from those for managing the behavior of students without special needs, except that the teacher must consider the disability and the due process rights of the exceptional students. Daniels (1998) stated that the occurrence of student misbehavior among students with disabilities can be reduced when the teachers identify their instructional needs and the methods of accommodation before class. The support of an administrator may be necessary when managing the behavior in inclusive classrooms (Daniels, 1998).

Support Services

Teachers who lack professional development on how to work with diverse learners and who are not offered support often become frustrated and leave the profession. Relying on the support of parents of diverse learners may reduce frustrations; however, most teacher education programs do not prepare teachers to work with the families of diverse students (Bradley, 1997). The support of administration at the state and local level in providing appropriate and adequate professional development could also help frustrated teachers.

Assistance from the school administration, specifically the principal, is important. The support of the principal of a school influences the teachers' professional commitments directly and indirectly. Principals are instrumental in assisting and providing support services for teachers in their schools (Singh & Billingsley, 1998). Brownell, Yeager, and Rennells (1997) conducted a literature search to determine the fundamental characteristics of

successful collaboration of general education and special education teachers. The researchers also sought to find the barriers and benefits of collaboration. The three databases used to search for literature were ERIC (1968-1997), PsychINFO (1984-1997) and Education Index (1984-1997). The researchers found that collaboration between school professionals has both barriers and benefits. Two barriers were: (a) if a teacher's views are different than others they could lose their individualism, and (b) collaboration can result in groups of teachers who do not work closely with other teachers in the building. The benefits included heightening the sense of efficacy, improving knowledge base and leadership abilities, and benefiting students by offering them more choices. It was recommended that teacher educators promote collaboration by integrating special and general education and by working closely with schools (Brownells, Yeager, & Rennells, 1997).

A study by Knight and Wadsworth (1999) examined teacher preparation programs of 101 institutions in the United States to determine if courses on family issues were include in their programs. The institutions offered graduate, undergraduate, and associate degrees or certification programs in early childhood and areas of disabilities. The result suggested that one or more separate courses were offered for early childhood programs; however, in other content areas, family issues were integrated within the special education curriculum in such a way as to allow only about one to two hours per semester for discussions (Knight & Wadsworth, 1999

Transition Services

"The long-term goal of IDEA is a smooth progression into jobs and independent living, so it is helping prepare students for job placement through improved transition programs. Beginning at age 14, for instance, each child's IEP is required to include

transition plans and procedures for identifying appropriate employment" (Armstrong, 2001, p. 29).

"Career and technical education teachers assist students with disabilities with the transition from secondary education to work or a continued education. Graduating from high school and entering higher education is a time of excitement and change. However, for students with disabilities this time of transition can be confusing and almost overwhelming" (Cutshall, 2001c).

Local school districts have transition specialists to assist graduating students. DeFur and Taymans (1995) surveyed 149 transition specialists in 48 states and the District of Columbia to identify and validate competencies needed for transition specialists in vocational rehabilitation, career and technical education, and special education and found the following competencies ranked as the top three: (a) exhibit effective interpersonal/communication skills; (b) articulate to prospective employers; and (c) match job skills with job interests. Career and technical educators should work closely with transition specialists and provide information that will assist them in evaluating and placing students with disabilities after high school. The researchers recommended that special education, vocational education, and vocational rehabilitation collaborate to develop interdisciplinary skills to improve the post school achievements of youth and young adults with disabilities.

Legislation

A series of laws have been passed by the U.S. Congress to protect the rights of students with unique educational characteristics. The laws were necessary because the needs of individuals with disabilities were ignored by society and they were not given the same rights as others. Lawsuits were filed demanding equal education and employment

opportunities for all people (Sarkees-Wircenski, & Scott, 1995). The lawsuits that challenged the opportunity of all individuals resulted in the passing of the Civil Rights Act of 1964. In 1963, Congress passed the Vocational Education Act, which identified disadvantaged individuals and handicapped individuals as the two distinct categories of special populations.

Several laws were passed in the 1970s to continue to protect the rights of individuals from special populations. In 1973, Congress passed the Rehabilitation Act, which is often referred to as the "The Bill of Rights for the Handicapped." Also in 1973, the Comprehensive Employment and Training Act was passed to provide an opportunity for the disadvantaged, the underemployed, and unemployed to acquire job training. The educational system was challenged again and resulted in the Education of All Handicapped Children Act of 1975. This act stated that a free and appropriate public education is provided for every handicapped person between the ages of 3 and 21. The Vocational Education Act was amended in 1976 (Sarkees-Wircenski, & Scott, 1995).

The Job Training Partnership Act was passed in 1982 to replace and improve the Comprehensive Employment and Training Act of 1973. The laws prior to 1982 provided equity for individuals, however, additional laws were needed to assist states in providing quality vocational education programs. Congress passed the Carl D. Perkins Vocational and Applied Technology Act of 1984 to address this problem. The Education of All Handicapped Act was replaced with the Individuals with Disabilities Education Act of 1990, which expanded the definition of special education services. The Americans with Disabilities Act of 1990 improved rights for individuals with disabilities, and the Workforce Investment Act of 1998 improved employment and rehabilitation programs (Asselin, 2000).

A listing and description of selected federal laws related to students with special needs is provided in Appendix A. The laws have evolved from enhancing educational rights for all students, to providing job training for the disadvantaged, to guaranteeing equal employment for those with disabilities. Teachers have a moral and legal responsibility to prepare students from special needs populations for employment, post-secondary education, and good citizenship. Section 23 of the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1998 (Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1998, 1998) defined special populations as

> … individuals with disabilities; individuals from economically disadvantaged families, including foster children; individuals preparing for nontraditional training and employment; single parents, including single pregnant women; displaced homemakers; and individuals with other barriers to educational achievement, including individuals with limited English proficiency. (pp. 5-6)

The Individuals with Disabilities Education Act (IDEA) Amendments of 1997 (Individuals with Disabilities Education Act Amendments, 1997) defined a student with a disability as a student

> with mental retardation, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbance, orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities and who, by reason thereof, needs special education and related services. (p. 10)

This act also stated:

> Disability is a natural part of the human experience and in no way diminishes the right of individuals to participate in or contribute to society. Improving educational results for children with disabilities is an essential element of our national policy of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities. (p. 5)

Congress also participated in the evaluation of individuals working with special populations by establishing the Joint Committee on Standards for Educational Evaluation in 1975 (Stufflebeam, 1998).

Accountability

Teachers, as other professionals, are held accountable for the outcomes of their work. Cutshall (2001a) defined educational accountability as "a means of developing clear standards for gauging successful student performance and having the ability to affect change in schools if the level of success does not measure up" (p. 40). The passing of the *No Child Left Behind Act of 2001* (No Child Left Behind Act of 2001, 2002) illustrated how the federal government is encouraging higher standards and accountability in education. "The 1999 Virginia General Assembly enacted the *Education Accountability and Quality Enhancement Act (HB 2710 and SB 1145)*, which aimed at supporting educator productivity and accountability" (Virginia Department of Education Division of Teacher Education and Licensure, n.d. p.5).

Accountability at the postsecondary level of the educational system is also becoming more prevalent. Thomas (1998) stated that several examples of the use of a performance

management system in community colleges have emerged and noted that accountability implies responsibility and continuous assessment.

Educational System

The accountability for school performance at the national, state, and local levels of the educational system is often expected by external agencies. These external agencies, such as state departments of education, need to strengthen and stimulate internal accountability, which is more rewarding to the schools.

Newman, King, and Rigdon (1997) examined the nature and extent of accountability in 24 restructured elementary, middle, and high schools. The study was conducted over a five-year period. Each year each school received two, week-long visits by a research team that observed classes and meetings and interviewed teachers and administrators and others active in the restructuring process of each school. The researchers found that: (a) strong accountability systems were present in only one third of the schools, (b) accountability was not related to organizational capacity (which varied), (c) schools with strong accountability had low organizational capacity, and (d) strong internal accountability tended to be associated with organizational capacity. Newman, King, and Rigdon (1997) also found that teachers responded better to receiving internal incentives such as quality professional working conditions, more planning time to work with mentors, and being able to participate in professional development. The researchers concluded that strong external accountability is difficult to implement and can present problems for the organizational capacity of a school (Newman, King, & Rigdon, 1997).

Teachers

Guth (2000) conducted a study to determine teachers' and students' perceptions of how accountability testing influences literacy instruction. Using a comparative case study approach, the study examined the classroom literacy instruction from the perceptions of fifth grade teachers and students. The data were collected in two rounds of in-depth interviews with teachers and students, classroom and school literacy portfolios, and informal observations of teachers and teachers' daily plans. The results indicated that accountability tests influenced everything teachers taught. The researcher recommended that the results of the study be used in the future to inform and assist teachers as they incorporate the strands of accountability (Guth, 2000).

The purpose of a study by Meyers (2000) was to examine the perceptions, opinions, and beliefs of high school teachers in reference to the Virginia Standards of Learning Tests. The data were collected from 110 public high school teachers in Virginia who responded to a 49-item questionnaire. The examiner concluded that the Virginia State Assessment System has had substantial impact on schools, especially the curriculum selection, instructional practices, and teachers' work lives. It was also concluded that teachers are under pressure to work harder to have students perform better on the tests and to help their schools. The researcher recommended that individuals use the information when there is a concern with educational reform or the impact of an accountability system on teachers (Meyers, 2000).

The Delphi and Modified Delphi Techniques

The Delphi Technique

The term "Delphi" was derived from the name of an ancient Greek oracle at Delphi from which prophecies were given (Uhl, 1983). The Delphi technique was originally used to

make predictions in the 1930s. Today's version was developed and first used for the RAND Corporation in the 1950s (Dalkey & Helmer, 1962). The Delphi technique was developed to gain consensus of a group of military experts on atomic warfare, a very sensitive problem (Dalkey, 1972).

By definition, the Delphi technique is a group process that surveys and collects opinions of experts and practitioners on an identified topic. Linstone and Turoff (1975) characterized Delphi as a method for allowing a group of individuals, as a whole, to deal with a complex problem using a group communication process in order to make the process effective. Linstone and Turoff's four phases of the Delphi method were:

1. exploration of the subject under discussion, with each individual contributing additional information he or she feels is pertinent to the issue;
2. reaching an understanding of how the group views the issue; if there is a significant disagreement, then that disagreement is explored;
3. studying the underlying reasons for the differences and evaluating them;
4. final evaluation of the process when ALL previously gathered information has been initially analyzed and the evaluations have been fed back for consideration (Linstone & Turoff, 1975).

A major advantage of using Delphi as a group response is that consensus will emerge with one representative opinion from the experts (Dalkey, 1972; Dobbins, 1999; Helmer, 1983; Linstone & Turoff, 1975). It was documented (Helmer, 1983) that statistically the Delphi technique tends not only to produce convergence but also that convergence is in the direction of the true value. Helmer (1983) pointed to the explicit evidence of the validity of the Delphi technique in producing relatively reliable forecasts.

There are situations in which it is more suitable to use the Delphi technique. Two conditions were identified where Delphi techniques are most appropriate: (a) the problem does not lend itself to processing analytical techniques but can benefit from subjective judgments on a collective basis, or (b) individuals who need to interact cannot be brought together in a face-to-face exchange because of time or cost constraints (Linstone & Turoff, 1975).

The Modified Delphi Technique

The "true" Delphi technique involves three or more rounds with a panel of experts. In round one, the respondents are asked to develop the survey items (Linstone & Turoff, 1975). A Delphi study carried to the extreme degree could be an expensive undertaking in both time and money on the part of the researcher and the respondents. Each round is time consuming, making it increasingly difficult to keep an acceptable response rate (Uhl, 1983).

The modified Delphi is an abbreviated version of the Delphi method consisting of two rounds instead of three or more rounds. There are incidents when the reduction of rounds is necessary to save time and money and to maintain respondents. In these cases, the researcher prepares the Delphi items for the first round or utilizes an existing instrument. In a modified Delphi study the respondents react to the items rather than generating them, in effect eliminating one round (Uhl, 1983). Delphi rounds tend to produce convergence and agreement toward a true value. The majority of the convergence is observed between round one and round two with minimum improvement in later rounds (Helmer, 1983). A reduction of the Delphi technique to two rounds instead of three or more conserves resources and encourages continued participation by the respondents (Uhl, 1983).

Chapter Summary

Chapter 2 provided a review of literature related to the competencies needed by business teachers for working with students with disabilities. The literature review included an overview of the professional development of teachers. The chapter also provides a review of literature in the following areas as related to students with disabilities: career and technical education teachers and students with disabilities, national standards, and competencies for working with students with disabilities. Literature related to the accountability of educational systems and teachers is summarized, and a discussion of the Delphi research technique is included.

CHAPTER 3

METHODOLOGY

This chapter describes the methodology used to determine the competencies necessary for secondary business teachers to work with students who have disabilities. The following areas are included in the chapter: statement of the problem, purpose and research questions, instrumentation, panel of experts, collection of data, and analysis of the data.

Statement of the Problem

The problem that the researcher attempted to address in this study was the apparent absence of a validated list of competencies needed by secondary business teachers to work with the large numbers of students in their classes who have disabilities. According to the standards set by professional organizations such as the National Business Education Association (1995), teachers need to address the needs of all students, including those who have various disabling conditions.

According to the Virginia Department of Education, Office of Career and Technical Education Services (2002), in the 2000-2001 school term, 27% of the students enrolled in career and technical education classes were from special populations and 11% of the students has disabilities. Of the students enrolled in career families that included business courses, 24% were from special populations and 7%had disabilities. Other

categories of special populations reported were displaced homemakers, economically disadvantaged, limited English proficient, and single parents.

Thomas and Kiley (1994) reported that one of the main concerns of first-year teachers under the age of 25 was dealing with individual student differences and working with students with special needs. They recommended more opportunities for inservice activities, peer monitoring, and professional development programs for all teachers.

Purpose and Research Questions

The purpose of this study was to determine the perceptions of an expert group of secondary school business teachers regarding whether previously identified competencies for working with students who have disabilities are important for secondary business teachers. The research questions used as a guide to conduct the study were:

1. From a list of identified competencies compiled from course objectives and literature, to what extent did the members of the expert panel of secondary school business teachers in Virginia and agree on competencies that are essential for business teachers related to working with students who have disabilities?
2. What comparisons can be made among the ratings of competencies by the members of the expert panel?

Instrumentation

The researcher designed the initial instrument for this study. The competencies for the initial instrument were generated based on information in questionnaires used in studies by Cotton (1994) and Custer and Panagos (1995) and from objectives of teacher

preparation courses intended to assist secondary teachers in working with students who have disabilities. The competencies also were based on the skills stated as necessary for special education not general education teachers by the Council for Exceptional Children (n.d.). The researcher reviewed the list of competencies for identical or similar items and removed duplicated statements. This process resulted in the initial instrument that was validated for use in Round I of this Delphi study. A five-point Likert-type scale was incorporated in the instrument to be used by the respondents to rate the extent to which they thought the competencies were important for business education teachers. The five-point scale was coded as follows: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

The researcher formed a validation panel to provide information regarding the validity and appropriateness of the competencies. The validation panel members were selected based on the positions they held and consisted of four state department of education personnel, one from each of the following states: Maryland, North Carolina, Virginia, and West Virginia. As department of education staff members, the panel members have the responsibility of providing leadership for the career and technical education, business education, and special education programs in their states. This leadership includes developing professional development programs for their teachers.

The members of the validation panel were asked to comment on the clarity of the directions, to rate the competencies, to comment on competencies and their wording, to provide input regarding the appropriateness of the items related to demographic information, and to suggest additional areas of competencies. They were asked to indicate whether they thought any of the competencies should be combined or divided into more

than one item. The researcher made changes in the instrument based on suggestions of the validation panel. Competencies 1, 13, 16, and 23 were reworded for clarification. The terminology was changed in competencies 3, 4, 8, and 26. Competency 19 was deleted and replaced with Competency 12.

Panel of Experts

For this modified Delphi study, the panel of experts consisted of Virginia secondary business education teachers who work directly with students with disabilities or teach in schools with large populations of students with disabilities. The Delphi technique does not have a specific criterion for determining panel size (Linstone & Turoff, 1975; Dobbins, 1999), but the size of the panel depends on the specific study. No guidelines exist to indicate the most appropriate number of experts to select for a study using the Delphi technique (Uhl, 1983; Dobbins 1999).

The panel of experts should be large enough to obtain the amount of expertise necessary to conduct the study effectively. The size of the panel should be kept at a minimum to reduce cost or overabundance of data that becomes cumbersome and yields no additional information for the study (Uhl, 1983; Dobbins, 1999).

Panel Selection Process

Individuals who are recognized as experts in the area being studied should be selected for panel membership in Delphi research (Helmer, 1983; Dobbins, 1999). For this study, it was determined that the expert panel would consist of secondary business teachers selected by a nomination panel. The members of the nomination panel were supervisors of business education teachers and represented a local school district in each of the eight “superintendent’s regions” inVirginia.

Collection of Data

Twenty-two teachers were nominated for membership on the Delphi panel, but six of these declined to participate. The initial contact was made with each teacher by mailing a packet of information that consisted of a cover letter stating the purpose and research questions of the study, a participation form to indicate their agreement to serve on the panel, and a self-addressed envelope. This was followed with a letter thanking them for their response, whether positive or negative.

Round I

The sixteen secondary business teachers who agreed to participate as Delphi panel members were mailed a second set of materials that consisted of a cover letter, a copy of the initial instrument, a self-addressed envelope, and a gift as a token of appreciation for participating in the study. The cover letter included a description of the study, the research method, and instructions. The instrument was printed on colored paper to distinguish this as Round I. In addition to the competencies, the instrument also asked about their teaching experience, age, and level of education. The panel members were also asked to suggest additional competencies to be included in Round II. The panel members were asked to return the completed instrument by mail within two weeks. The instrument was coded to aid the researcher in monitoring the responses. If necessary, a follow-up letter was faxed, an e-mail message was sent, or a telephone call was made to non-respondents after two weeks.

The numbers and percentages of "strongly disagree," "disagree," "neutral," "agree," and "strongly agree" responses were calculated for each competency. For a more accurate conclusion and recommendations from the study, a criterion for consensus

was established for the data. An *a priori* decision was made to determine that consensus would be reached on a competency if the standard deviation was equal to or less than 1.0 (Hill & Fowles, 1975; Dobbins, 1999; Kearns, n.d.). The researcher also made an *a priori* decision to include the items on the Round II instrument for which consensus was not established in Round I. It was also determined in advance that only competencies that had a mean of 3.5 or higher on the 5.0 scale (indicating a response nearer to "agree" than "neutral") would be reported as competencies the panel members agreed on as being important for teachers.

Round II

In the second round, the researcher mailed the panel of experts materials that consisted of a cover letter thanking them for their continued participation and support, the Round II instrument, a self-addressed envelope, and a gift to express appreciation for continued participation. The Round II instrument consisted of the four competencies for which there was not consensus among the panel members in Round I. The survey was printed on a different color of paper to help the researcher distinguish between the rounds. The panel of experts were asked to rate their agreement with the competencies on the Round II instrument using the same five-point scale used previously: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The Round II instrument reported the Round I mean of each of the four items and that individual panel member's original rating. The panel members were instructed to rate each item again, and to give a brief explanation if their new rating was more than one point above or below the group mean rating from Round I. The panel members were asked to return the

instrument by mail within 10 days. All panel members responded by the due date, so a follow up was not necessary for Round II.

The results of the Round II instrument were used with the results of the Round I instrument to compile and rank in mean order a list of competencies on which there was consensus among the panel members that those competencies were important for business teachers in working with students who have disabilities. Because consensus was established in Rounds I and II, it was not necessary to conduct a third round.

Analysis of Data

A standard analysis procedure has not been established when using the Delphi method, however most Delphi studies have analyzed data by using a combination of median scores, means, and standard deviations (Dalkey, 1972; Uhl, 1983). For this study, the mean scores and standard deviations were used to analyze the data.

The Delphi panel rated the items on the instrument on a five-point, Likert-type scale from Strongly Disagree to Strongly Agree. The five-point Likert-type scale was converted to a numerical scale for computation. The numerical values were assigned as follows: Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, and Strongly Agree =5.

The levels of agreement or disagreement for each competency were reported as a mean score and standard deviation. The "Neutral" category was reflected in the range of the mean score (Shavelson, 1981; Dobbins, 1999).

Chapter Summary

Chapter 3 described the methodology used to determine the competencies necessary for secondary business teachers to work with students who have disabilities.

This chapter provided a statement of the problem, the purpose and research questions, instrumentation, panel of experts, collection of data, and analysis of the data. Because of the large number of students with disabilities who enroll in business courses, the purpose of the study was to identify the perceptions of an expert group regarding competencies teachers need for working with these students.

The data were collected using the modified Delphi technique with two rounds of surveys. The initial instrument was designed by the researcher and validated by a panel. The mean and standard deviation were calculated for each competency.

CHAPTER 4

FINDINGS

The findings of the study are reported in this chapter. The data were collected using a modified Delphi technique, which involved two rounds of surveys of the 16 panel members. The chapter includes the following: (a) the purpose and research questions, (b) a brief summary of the methodology of the study, and (c) the results of Rounds I and II.

Purpose and Research Questions

The purpose of this study was to determine the perceptions of an expert group of secondary school business teachers regarding whether previously identified competencies for working with students who have disabilities are important for secondary business teachers. The research questions used as a guide to conduct the study were:

1. From a list of identified competencies compiled from course objectives and literature, to what extent did the members of the expert panel of secondary school business teachers in Virginia and agree on competencies that are essential for business teachers related to working with students who have disabilities?
2. What comparisons can be made among the ratings of competencies by the members of the expert panel?

Methodology

This was a modified Delphi study and data were collected in two rounds of questionnaires. The initial instrument used in round I consisted of competencies based on a literature review and objectives of teacher preparation courses intended to assist secondary teachers in working with students with disabilities. The competencies were also based on the skills stated by the Council for Exceptional Children (n.d.) as being needed by special education teachers. The initial instrument asked the participants to suggest additional competencies. The researcher formed a validation panel to assess the instrument for validity and appropriateness of the competencies.

The validation panel members were state department of education personnel from four states whose responsibilities include providing leadership for career and technical education, business education, and special education programs. One of the leadership responsibilities of persons selected for the panel is to provide professional development for teachers. The validation panel members consisted of individuals who provided leadership for programs in special education, business education, career and technical education in the states of Maryland, North Carolina, Virginia, and West Virginia.

A nomination panel, which was composed of eight school division career and technical and business education supervisors from across the state of Virginia, nominated 22 prospective Delphi panel members. The nomination panel members were asked to supply names and contact information for secondary business education teachers who worked directly with students with disabilities or taught in schools with large populations of students with disabilities. Sixteen teachers accepted the nomination and participated in the two rounds of the questionnaires.

The characteristics of the panel are reported in Table 1. The panel members consisted of 2 males and 14 females, which is consistent with the fact that the majority of business teachers in Virginia are female. Twelve of the 16 members had continued their education beyond an undergraduate degree. The average number of years of teaching experience was 16.9. The age group most widely represented on the panel was the 50-59 category, which included six of the panel members. The teachers were dispersed across the state, with more representation from the urban areas.

Table 1

Demographics of Delphi Panel Members

Panel Member #	Education	Experience	Age
1	Masters	14	30-39
2	Bachelors+	25	50-59
3	Masters	1.5	under 30
4	Bachelors	7	30-39
5	Masters	34	50-59
6	Bachelors	5	under 30
7	Masters	16	40-49
8	Masters+	33	50-59
9	Bachelors	7	30-39
10	Masters+	20	over 59
11	Masters	25	50-59
12	Masters	18	40-49
13	Masters	5	40-49
14	Bachelors+	7	50-59
15	Bachelors	24	50-59
16	Masters	16	40-49

Results of Delphi Study

Round I

In Round I, the participants responded to a list of 28 competencies using a five-point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The panel members were asked to suggest additional competencies to be included in Round II, but none of the members listed any competencies in the space provided. The mean and standard deviation were calculated for each competency. The results of Round I for each panel member are illustrated in Appendix B. The results of Round I are also shown in Table 2, with the competencies listed in order from the one for which the panel members had the highest mean rating (4.81) to the lowest mean rating (3.19). In order to meet the criteria previously determined by the researcher to be an important competency, the mean rating of the competency had to be 3.5 or above. Competency 13, with a mean rating of 3.19, was the only item that did not meet this level. Competency 13 stated that business teachers should be able to interpret education, labor, and human service legislation at the federal and state levels that insures equal educational opportunity.

The researcher had also determined in advance that in order to reach consensus, a competency must have a standard deviation equal to or less than 1.0. The results ranged from standard deviations of 1.26 to .40. Consensus was achieved on 24 of the 28 competencies in Round I.

Table 2

Results of Round I in Order by the Mean Ratings

Competency	Item Number	M	SD
Create a safe, equitable, positive, and supportive learning environment in which diversities are valued.	7	4.81	0.40
Exhibit respect for individual differences in learners' abilities and cultural background.	21	4.75	0.45
Arrange the classroom for easy access for learners with physical disabilities.	6	4.73	0.70
Identify and use the resources, support personnel, and services that are available for students with disabilities.	22	4.63	0.50
Demonstrate basic knowledge of instructional needs of students with disabilities.	15	4.50	0.63
Apply basic knowledge, tools, and strategies that enable classroom teachers to successfully promote learning for students with disabilities.	28	4.50	0.63
Use effective and varied behavior management strategies including reinforcement of positive behavior.	16	4.44	0.89
Create an environment that encourages self-advocacy and increased independence.	17	4.44	0.73
*Meet the needs of all students in the class when students with disabilities are included with regular students.	2	4.38	1.02

Note. The Delphi panel members responded to a list of 28 competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.
*Competency did not have consensus in Round I.

(table continues)

Table 2 *(continued)*

Results of Round I in Order by the Mean Ratings

Competency	Item Number	M	SD
Collaborate with IEP team members in the development of appropriate transition goals and objectives using assessment data, student goals, family perspective, and interagency information.	3	4.38	0.81
Select, develop, adapt, and use instructional strategies, material, and equipment (assistive technology) according to characteristics of the students with disabilities.	1	4.33	0.82
Demonstrate an understanding and an appreciation of the range of individual differences that occur in educational settings.	27	4.31	0.87
Use strategies to facilitate integration of students with disabilities into various education and employment settings.	4	4.25	0.68
Demonstrate an understanding of the basic laws and procedures that govern special education assessment, eligibility, and services.	5	4.19	0.66
Assist in the development of goals and objectives for an Individual Education Program for students with disabilities.	11	4.19	0.83
Use appropriate strategies to involve students with disabilities in career and technical education student organizations.	12	4.19	0.75
*Develop alternative methods of measuring the performance of students with disabilities.	14	4.00	1.10
Evaluate student and program outcomes for program improvement decisions.	23	4.00	0.73

Note. The Delphi panel members responded to a list of 28 competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.
* Competency did not have consensus in Round I.

(table continues)

Table 2 *(continued)*

Results of Round I in Order by the Mean Ratings

Competency	Item Number	M	SD
Access information on the foundations of transition planning, career development, and vocational special needs.	8	3.94	0.57
Demonstrate knowledge of appropriate work-based learning strategies for students with disabilities.	19	3.88	0.72
Demonstrate knowledge of local procedures and organization of special education services.	10	3.81	0.83
Use the students' family members to supplement instructional efforts.	18	3.75	0.77
Collaborate effectively with students, their parents, and other professionals and community members to implement transition services.	26	3.75	0.93
Assess the educational, social, and employment characteristics of students with disabilities.	9	3.63	0.89
*Design career-related curriculum that integrates academics and vocational standards to meet the needs of students with disabilities.	20	3.56	1.26
*Demonstrate knowledge of human growth and development in recognizing and assessing students with disabilities.	25	3.56	1.03
Demonstrate knowledge of concepts, theories, and life span characteristics and needs associated with students with disabilities.	24	3.50	0.82

Note. The Delphi panel members responded to a list of 28 competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.
*Competency did not have consensus in Round I.

(table continues)

Table 2 *(continued)*

Results of Round I in Order by the Mean Ratings

Competency	Item Number	M	SD
**Interpret education, labor, and human service legislation at the federal and state levels that insures equal educational opportunity.	13	3.19	0.98

Note. The Delphi panel members responded to a list of 28 competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

** Competency did not have a mean of at least 3.5 as required to be considered an important competency.

Round II

Competencies 2, 14, 20, and 25 did not meet consensus in Round I and were the only items that were included Round II. The results of Round II for each panel member are in Appendix C. The 16 members of the Delphi panel rated their agreement with the importance of the four items using the same Likert-type scale used in Round I. The highest mean rating of the four items in Round II was 4.06 and the lowest mean was 3.75. The standard deviations ranged from 1.00 to .75, thus these remaining items reached the predetermined level of consensus. The results of Round II are reported in Table 3.

Results by Categories

When the competencies were originally developed from the literature review, they were grouped in topical categories to assist in the review by the validation panel. The means and standard deviations for Rounds I and II for the items listed by category are reported in Table 4.

Mean ratings were computed across the items in each category, and the means ranged from 4.61 to 3.88 on the 5.0 scale. The category of Classroom Management had the highest overall mean rating (4.61), followed by the categories of Inclusion (4.29) and Individual Education Programs (4.29). The categories of Characteristics of Learners and Transition Services had the lowest overall mean ratings, with each having 3.88**.**

Chapter Summary

The purpose of this study was to determine the perceptions of an expert group of secondary school business teachers regarding whether previously identified competencies for working with students who have disabilities are important for secondary business teachers. The 16 members of the Delphi panel were business teachers in Virginia who

Table 3

Results of Round II in Order by the Mean Ratings

Competency	Item Number	M	SD
Develop alternative methods of measuring the performance of students with disabilities.	14	4.06	1.00
Meet the needs of all students in the class when students with disabilities are included with regular students.	2	4.06	0.93
Demonstrate knowledge of human growth and development in recognizing and assessing students with disabilities.	25	3.81	0.75
Design career-related curriculum that integrates academics and vocational standards to meet the needs of students with disabilities.	20	3.75	1.00

Note. The Delphi panel members responded to a list of 28 competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

Table 4

Results of Rounds I and II Reported by Categories of Competencies

Category and Competency	Item Number	M	SD
Classroom Management			
Create a safe, equitable, positive, and supportive learning environment in which diversities are valued.	7	4.81	0.40
Arrange the classroom for easy access for learners with physical disabilities.	6	4.73	0.70
Use effective and varied behavior management strategies including reinforcement of positive behavior.	16	4.44	0.89
Create an environment that encourages self-advocacy and increased independence.	17	4.44	0.73
Mean for Classroom Management competencies		4.61	
Individual Education Programs (IEP)			
Collaborate with IEP team members in the development of appropriate transition goals and objectives using assessment data, student goals, family perspective, and interagency information.	3	4.38	0.81
Assist in the development of goals and objectives for an Individual Education Program for students with disabilities.	11	4.19	0.83
Mean for Individual Education Programs competencies		4.29	

Note. The Delphi panel members responded to a list of 28 competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

(table continues)

Table 4 *(continued)*

Rounds I and II Reported by Categories of Competencies

Category and Competency	Item Number	M	SD
Inclusion			
Apply basic knowledge, tools, and strategies that enable classroom teachers to successfully promote learning for students with disabilities.	28	4.50	0.63
Demonstrate an understanding and an appreciation of the range of individual differences that occur in educational settings.	27	4.31	0.87
Meet the needs of all students in the class when students with disabilities are included with regular students.	2	4.38 RII 4.06	1.02 RII .93
Mean for Inclusion competencies		4.29*	
Support Services			
Identify and use the resources, support personnel, and services that are available for students with disabilities.	22	4.63	0.50
Use the students' family members to supplement instructional efforts.	18	3.75	0.77
Mean for Support Services competencies		4.19	

Note. The Delphi panel members responded to a list of 28 competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

* Category mean scores were computed using ratings from Round II.

(table continues)

Table 4 *(continued)*

Rounds I and II Reported by Categories of Competencies

Category and Competency	Item Number	M	SD
Adapting Instruction			
Exhibit respect for individual differences in learners' abilities and cultural background.	21	4.75	0.45
Select, develop, adapt, and use instructional strategies, material, and equipment (assistive technology) according to characteristics of the students with disabilities.	1	4.33	0.82
Use strategies to facilitate integration of students with disabilities into various education and employment settings.	4	4.25	0.68
Use appropriate strategies to involve students with disabilities in career and technical education student organizations.	12	4.19	0.75
Develop alternative methods of measuring the performance of students with disabilities.	14	4.00 RII 4.06	1.10 RII 1.00
Demonstrate knowledge of human growth and development in recognizing and assessing students with disabilities.	25	3.56 RII 3.81	1.03 RII 0.75
Design career-related curriculum that integrates academics and vocational standards to meet the needs of students with disabilities.	20	3.56 RII 3.75	1.26 RII 1.00
Mean for Adapting Instruction competencies		4.16*	

Note. The Delphi panel members responded to a list of 28 competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.
* Category mean scores were computed using ratings from Round II.

(table continues)

Table 4 *(continued)*

Rounds I and II Reported by Categories of Competencies

Category and Competency	Item Number	M	SD
Legislation			
Demonstrate an understanding of the basic laws and procedures that govern special education assessment, eligibility, and services.	5	4.19	0.66
Access information on the foundations of transition planning, career development, and vocational special needs.	8	3.94	0.57
Demonstrate knowledge of local procedures and organization of special education services.	10	3.81	0.83
Mean for Legislation competencies		3.98	
Characteristics of Learners			
Demonstrate basic knowledge of instructional needs of students with disabilities.	15	4.50	0.63
Assess the educational, social, and employment characteristics of students with disabilities.	9	3.63	0.89
Demonstrate knowledge of concepts, theories, and life span characteristics and needs associated with students with disabilities.	24	3.50	0.82
Mean for Characteristics of Learners Competencies		3.88	

Note. The Delphi panel members responded to a list of 28 competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

(table continues)

Table 4 *(continued)*

Rounds I and II Reported by Categories of Competencies

Category and Competency	Item Number	M	SD
Transition Services			
Evaluate student and program outcomes for program improvement decisions.	23	4.00	0.73
Collaborate effectively with students, their parents, and other professionals and community members to implement transition services.	26	3.75	0.93
Mean for Transition Services competencies		3.88	

Note. The Delphi panel members responded to a list of 28 competencies using a five point Likert-type scale in which 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

worked closely with students with disabilities or taught in a school with a large population of students with disabilities.

Data were collected from the panel of experts using two rounds of questionnaires and data were analyzed by calculating means and standard deviations. In Round I, consensus was reached on 24 of the 28 competencies, but one of them had a mean of only 3.19 on a 5.0 scale so was deleted. The four competencies for which consensus was not achieved in Round I were included on the Round II questionnaire, and consensus was reached on all of them.

The competency, "Create a safe, equitable, positive, and supportive learning environment in which diversities are valued" had both the highest mean rating and the lowest standard deviation. This competency is in the category of Classroom Management, which also had the highest overall mean score of the eight categories. The categories of Characteristics of Learners and Transition Services had the lowest overall mean scores among the categories.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter includes the summary, discussion, and recommendations of the study. The major topics are: (a) Overview of the Study, (b) Research Procedure, (c) Summary and Discussion of Findings, and (d) Conclusions and Recommendations.

Overview of the Study

Teachers are being held increasingly accountable for the performance of their students and a large number of students with disabilities are enrolled in business and information technology courses. According to the Virginia Department of Education, Office of Career and Technical Education Services (2002), in the 2000-2001 school term, 52,085 (27%) of the 189,491 students enrolled in career and technical education (CTE) classes were from special populations. This included 21,115 (11% of the total of 189,491) students with disabilities who were enrolled in CTE classes. Other categories of special populations reported were displaced homemakers, economically disadvantaged, limited English proficient, and single parents. Career and technical education courses are categorized in career families. The career families that may include business courses are: (a) business and administration, (b) finance, and (c) information technology. These three career families had 78,168 students enrolled, and of these 18,863 (24%) were identified as special populations. Of the 78,168 students enrolled in these career families, 5,633 (7%) were categorized as having disabilities.

It is a challenge for educational systems and teachers to meet the demands of a more diverse student population and be held to higher standards. High-stake standardized tests are raising the bar of expectations for students, and policymakers are holding schools and teachers accountable for the performance of students on these tests. Because more students with disabilities are being taught in career and technical classes, teachers are realizing the necessity to develop additional skills to work effectively with these students (Wood & Jones, 1994).

Professional development is vital for preservice, beginning, and experienced teachers. Thomas and Kiley (1994) identified the problems and concerns of 68 new middle and high school teachers in a growing school in Maryland. They concluded that primary concerns of first-year teachers under the age of 25 (63% of the respondents) included dealing with individual student differences and working with students who had special needs. Thomas and Kiley also cited statistics that 15% of beginning teachers leave the profession after the first year of teaching, and more than 50% leave within six years.

In recent years, several national educational associations have developed professional standards that emphasize the importance of teaching all children. The following organizations have adopted standards that relate to teaching students with disabilities: (a) the National Council For Accreditation of Teacher Education (NCATE) (n.d.), (b) the Interstate New Teacher Assessment Consortium (INTASC) (n.d.), (c) the National Board for Professional Teaching Standards (NBPTS) (1997), (d) the National Business Education Association (NBEA) (1995), and (e) the Council for Exceptional Children (CEC) (n.d.).

The national standards of professional associations relate to several of the competencies verified in this study, such as those dealing with characteristics of learners.

The ability of teachers to accurately diagnose the educational characteristics of learners is crucial if students are to perform well on standardized tests. Identifying these characteristics makes it possible for teachers to provide accommodations needed for students. Two of the areas of emphasis in the *No Child Left Behind Act of 2001* were to improve the academic performance of disadvantaged students and to enhance the quality of teachers (No Child Left Behind Act, 2001).

Teachers are responsible for implementing legislation related to educating students with disabilities. This may include participating in Individual Education Program (IEP) meetings and modifying lesson plans for students with disabilities who are mainstreamed in regular classes. Teachers have a responsibility for planning instruction to meet the needs of all students in the classroom, including those who have disabilities. To meet these challenges, teachers must select, develop, or modify materials (including assessment tools) and equipment to accommodate the needs of all students. Wood and Jones (1994) suggested using a variety of teaching strategies and audio-visual aids to adapt lesson plans for students with special needs.

In order to provide a learning environment that fosters success, it is necessary for a teacher to have a basic understanding of classroom management and child psychology (Wright, 2001). The occurrence of student misbehavior can be lessened when teachers identify students' instructional needs and appropriate methods of accommodation in advance. Principals are instrumental in assisting and providing support services for teachers in their schools (Singh & Billingsley, 1998). Career and technical educators should work closely with transition specialists for assistance in evaluating and placing students with special needs after high school.

The literature reviewed for this study included professional development of teachers, career and technical education teachers and students with disabilities, national standards, instructional needs and strategies, support services, transition services, legislation, and accountability related to the education of students with disabilities.

Purpose and Research Questions

The purpose of this study was to determine the perceptions of an expert group of secondary school business teachers regarding whether previously identified competencies for working with students who have disabilities are important for secondary business teachers. The research questions used as a guide to conduct the study were:

1. From a list of identified competencies compiled from course objectives and literature, to what extent did the members of the expert panel of secondary school business teachers in Virginia and agree on competencies that are essential for business teachers related to working with students who have disabilities?
2. What comparisons can be made among the ratings of competencies by the members of the expert panel?

Research Procedure

This study was conducted using a modified Delphi technique to compile a list of competencies needed by secondary business education teachers to work with students with disabilities. The original list of competencies used in the initial instrument was generated using information from other studies, objectives of teacher preparation courses, and the skills for special education teachers developed by the Council for Exceptional Children (n.d.). A four-member validation panel composed of department of education personnel from four states authenticated the initial questionnaire.

A nomination panel consisting of local school division administrators of career and technical education and business education suggested participants for this modified Delphi study. They nominated 22 secondary business education teachers who worked directly with students with disabilities or taught in schools with large populations of students with disabilities. Sixteen of these 22 teachers agreed to serve as Delphi panel members and all 16 responded to both Round I and Round II.

Summary and Discussion of the Findings

The Round I questionnaire consisted of 28 competencies and panel members were asked to rate each one using a Likert-type scale in which 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree. The results of Round I in order by the means, which ranged from 4.81 to 3.19, are listed in Table 2. A competency had to have a standard deviation of 1.0 or less to meet the predetermined definition for having reached consensus of the panel. As Table 2 indicates, 24 of the 28 competencies in Round I met this definition. The researcher also decided in advance that a mean score of 3.5 or greater would be required to indicate that the panel agreed that a competency was important for business teachers. One of the 24 competencies had a mean of only 3.19, so it was eliminated from the final list of competencies.

The competencies for this study, as identified from the literature and course objectives, were stated in very general terms. The researcher recognizes that this could make them more acceptable and perceived as more important to the Delphi panel members than might have been true if they were more specific. In addition, some of the competencies, such as those in the Classroom Management category, would be of concern to teachers in working with all students, not only those who have disabilities. As a result, the fact that certain items

and categories had higher means than others might have been predicted based on their content.

The Delphi panel for this study was provided an opportunity to suggest additional competencies, but none were suggested. Round I did produce several comments on the competencies. Generally, the comments can be categorized in the following areas:

- Business teachers should know about the needs of all students.
- Panel members believed that exceptions and accommodations should be made for students with disabilities, but the students without disabilities should not be forgotten.
- Special education teachers and business teachers should act as supportive colleagues for each other.
- Panel members indicated that several of the competencies were more of a responsibility of special education teachers than business teachers.

The Round II questionnaire consisted of four competencies for which the panel did not reach consensus in Round I. The panel members were given the Round I mean of the group on each of these four competencies and their own original rating on each. They were asked to rate each competency again and to provide a brief explanation for the difference if their rating was more than one point from the group mean. As indicated in Table 3, the Delphi panel members reached consensus on the four competencies in Round II, in that the standard deviation on each was less than or equal to 1.0. While several comments made by panel members in Round II were similar to those in Round I, other statements made were:

- "Students are not being prepared for the 'real world' because too many accommodations are made for them in education, and employers will not make these

accommodations. This gives the students an unrealistic expectation of the real world."

- "There are so many types of disabilities that it becomes overwhelming for teachers to keep up with them and the necessary accommodations for each."

When the competencies were originally developed from the literature review, they were grouped in eight topical categories to assist in the review by the validation panel. The means and standard deviations for Rounds I and II, for the items listed by category, are reported in Table 4. The overall mean ratings of the categories ranged from 4.61 to 3.88 on a 5.0 scale. The category of Classroom Management had the highest overall mean rating (4.61), followed by the categories of Inclusion (4.29) and Individual Education Programs (4.29). The categories of Characteristics of Learners and Transition Services had the lowest overall mean ratings, with each having 3.88.

The category of Classroom Management rated the highest of all categories with a 4.61 category mean rating. This indicated that the Delphi panel strongly agreed that having the competencies related to classroom management is essential for business teachers. According to Wright (2001) classroom management skills are needed to be a successful teacher. The categories including competencies related to Individual Education Programs (IEP) and Inclusion were tied for second and third place in the overall mean ratings of categories, with each having a mean of 4.29. The IEP is the only required document for all students with disabilities. The purpose of this document is to set goals and objectives for students with disabilities (Giangreco, Dennis, Edelman, & Cloninger, 1994). Teachers should be involved in setting goals for students with disabilities. The high category mean

rating indicated that the Delphi panel strongly agreed that it is important for business teachers to have competencies related to IEPs.

The other category with a 4.29 mean rating included competencies related to inclusion. Conderman (1998) stated that the form of inclusion can vary from school district to school district. The overall mean rating for this category indicated that the panel strongly agreed on the importance of competencies related to inclusion.

Competencies related to support services had a category mean rating of 4.19. Studies by both Bradley (1997) and Brownell, Yeager, and Rennells (1997) indicated that it is important for teachers to have support from school personnel and family member of students with disabilities in order to be successful in providing instruction.

Teachers should adapt teaching techniques to accommodate a diverse audience of learners (Wood & Jones, 1994). As reported in Table 4, the category mean rating of the competencies related to adapting instruction was 4.16 on a 5.0 scale. This shows that the Delphi panel in this study agreed that competencies pertaining to the adaptation of instruction are needed by business teachers.

Sarkees-Wircenski and Scott (1995) and Asselin (2000) described several laws that Congress has passed to protect the rights of students with disabilities. The category mean rating for competencies related to legislation was 3.98. This indicated that the panel members agreed that knowledge of legislation is important for business teachers.

According to Lopez-Reyna and Bay (1997), it is a priority for teachers to identify the educational characteristics of learners with special needs. The overall mean rating of this category of competencies was 3.88. This illustrated that the panel members agreed that

business teachers should know about the characteristics of learners, but the panel rated this category lower than the other categories.

The other category that had the lowest overall mean (3.88) included competencies related to transition services. According to Cutshall (2001c), career and technical education teachers provide an essential service to students with disabilities when they help with the transition for high school to work or continued education. The participants of this study did not designate that the competencies in this category were as important as others in the instrument.

Conclusions and Recommendations

The researcher proposes the following conclusions based on the results of this study.

1. It was relatively easy for the panel members in this study to reach agreement regarding competencies needed by business teachers related to working with students who have disabilities. The researcher recognizes that the general nature of the statements used in this study may have increased the Delphi panel's level of agreement.
2. The most important competencies for business teachers working with students with disabilities are related to Classroom Management, Individual Education Programs, Inclusion, Support Services, and Adapting Instruction.
3. Competencies related to Legislation, Characteristics of Learners, and Transition Services are somewhat less important for teachers.

Considering the results of this study, the researcher provided recommendations for improved policy and practice. The researcher recognizes that efforts in the areas of many of these recommendations are already occurring, but suggests that they be enhanced.

1. Appropriate federal, state, and local policies should be established and implemented to provide additional resources to support learning environments that are safe, equitable, positive, and supportive to learning for all students.
2. Teacher educators, school and state administrators, and professional organization leaders should provide enhanced pre-service and in-service professional development for teachers that focuses on the development of competencies identified in this study.
3. Local school administrators should make sure that new and current school personnel are familiar with and make appropriate use of the resources, support personnel, and services that are available to assist students with disabilities in having successful educational experiences.
4. Teacher education programs should offer more practical experiences for future teachers, especially pertaining to classroom management.

The following are recommendations for further research based on the results of this study. Research should be conducted to:

1. Determine the extent to which beginning and experienced secondary business teachers perceive that they currently have the competencies identified in this study.
2. Compare the perceptions of these competencies held by principals with those of career and technical education teachers.
3. Compare the perceptions of these competencies held by local business education supervisors with those of business education teachers.
4. Determine to what extent business education teachers from different regions of the country perceive that the competencies identified in this study are important and that they currently have these competencies.

Chapter Summary

This study verified the competencies needed by business teachers who are being held accountable in their work with large numbers of students who have disabilities. The results of this two-round, modified Delphi study indicated that the panel members fairly easily came to a consensus that 27 competencies were important for business teachers to provide instruction for students with disabilities. Recommendations for policy, practice, and further research related to the findings of the study were provided.

References

Anderson, A. (1998, Fall). Syllabus for EDSP 361, *Current trends in education of exceptional individuals.* Radford: Radford University.

Armstrong, R. (2001). Is the new IDEA a good idea? *Techniques*, *76*(3), 29.

Arneson, P. (1999). Strategies for success: A guide for preparing future teachers. In P. A. Gallo Villee & M. G. Curran (Eds.), *National Business Education Association Yearbook, 37, 1999* (pp. 173-184). Reston, VA: National Business Education Association.

Arter, J. (1999). Teaching about performance assessment. *Educational Measurement*, *18*(2), 30-44.

Asselin, S. (2000, Spring). Syllabus for EDVT 5734, *Transition programming for individuals with disabilities.* Blacksburg: Virginia Polytechnic Institute and State University.

Asselin, S. (n.d.). Syllabus for EDVT 5684, *Education and employment preparation for diverse populations.* Blacksburg: Virginia Polytechnic Institute and State University.

Asselin, S. B. (2000). *Teaching strategies for diverse learners*. Richmond, VA: CTE Resource Center.

Bartholome, L. W. (1997). Historical perspectives: Basis for change in business education. In C. P. Brantley & B. J. Davis (Eds.), *National Business Education Yearbook, 35*, *1997* (pp. 1-16). Reston, VA: National Business Education Association.

Bauwens, J., & Korinek, L. A. (1993). IEPs for cooperative teaching: Developing legal and useful documents. *Intervention in School and Clinic, 28*(5), 303-306.

Bradley, A. (1996, August 7). Report urges extra time for teacher training. *Education Week, 15,* 12.

Bradley, A. (1997, November 12). Teacher training ignores students' families, study finds. *Education Week, 17,* 10.

Brownell, M. T., Yeager, E. A., & Rennells, M. S. (1997). Teachers working together: What teacher educators and researchers should know. *Teacher Education and Special Education, 20*(4), 340-359.

Camp, W. G., & Heath-Camp, B. (1989). Structuring the induction process for beginning vocational teachers. *Journal of Vocational and Technical Education, (5)*2, 13-25.

Carl D. Perkins Vocational and Applied Technology Education Amendments of 1998, Pub. L. No. 105-332, § 3, 112 Stat. 3080 (1998).

Carnegie Forum on Education and the Economy. (1986). *A nation prepared: Teachers for the 21st century.* New York: Carnegie Corporation. (ERIC Document Reproduction Service No. ED268120).

Conderman, G. (1998). How are we practicing inclusion? *Kappa Delta Pi Record, 34*(2), 52-55.

Cotton, S. (1994). *Attitudes, knowledge, and skills of Indiana vocational teachers related to special populations.* Muncie, IN: Ball State University Department of Industry and Technology. (ERIC Document Reproduction Service No. ED391075)

Council for Exceptional Children. (n.d.) *CEC performance-based standards.* Retrieved December 5, 2001, from http://www.cec.sped.org/ps/perf_based_stds

Custer, R. L., & Panagos, R. (1996). Effectiveness of vocational educators' perceptions of training needs and barriers for working with students with special needs. *Journal for Vocational Special Needs Educators, 19*(1), 17-25.

Cutshall, S., (2001a). Don't worry, this is only a test: Trends in accountability and assessment. *Techniques. 76*(4), 39-41.

Cutshall, S. (2001b). Filling the void. *Techniques, 76*(3), 17.

Cutshall, S. (2001c). Opening doors. *Techniques, 76*(3), 20-21.

Dalkey, N. C. (1972). *Studies in social and economic process.* Lexington, MA: Lexington Books.

Dalkey, N., & Helmer, O. (1962). An experimental application of the Delphi method to the use of experts (Report No. RM-727-PR)(Abridged). Santa Monica, CA: RAND.

Daniels, V. I. (1998). How to manage disruptive behavior in inclusive classrooms. *Teaching Exceptional Children, 30*(4), 26-31.

Defur S. H., & Taymans, J. M. (1995). Competencies needed for transition specialists in vocational rehabilitation, vocational education, and special education. *Exceptional Children, 62*(1), 38-51.

Dobbins, T. R. (1999). *Clinical experiences for agricultural teacher education programs in North Carolina, South Carolina, and Virginia.* Doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg. Retrieved December 21, 1999 from http://scholar.lib.vt.edu/theses/available/etd-090799-094331

Edelen-Smith, P. J. (1995). Eight elements to guide goal determination for IEPs. *Intervention in School and Clinic, 30*(5), 297-301.

Farnsworth, E. B. (2000, Fall). Syllabus for EDHD 565A, *Survey of special education.* Lynchburg, VA: Lynchburg College.

Fetko, K. S., Schuster, J. W., & Harley, D. A. (1999). Using simultaneous prompting to teach a chained vocational task to young adults with severe intellectual disabilities. *Education and Training in Mental Retardation and Development Disabilties, 34*(3), 318-329.

Florida State Council on Vocational Education. (1994). *In pursuit of empowerment: A survey assessing the need for professional development activities for teacher and administrators providing vocational education for students with disabilities in Florida.* Tallahassee: Author. (ERIC Document Reproduction Service No. ED373180)

French, H. (1999). Enabling the classroom. *Techniques, 74*(3), 36-38.

Ganser, T. (1999). Under their wing: Promises and pitfalls of mentoring. *High School Magazine, 7*(2), 8-13.

Gee, J. B. (1997, November). Curricular changes graduates and undergraduates in education perceive to be necessary in their professional preparation for teaching.

Paper presented at the annual meeting of the Mid-South Educational Research Association, Memphis, TN.

Giangreco, M. F., Dennis, R. E., Edelman, S. W., & Cloninger, C. J. (1994). Dressing your IEPs for the general education climate: Analysis of IEP goals and objectives for students with multiple disabilities. *Remedial and Special Education, 15*(5), 288-296.

Guth, N.P. D. (2000). The influence of state curriculum standards and accountability testing on fifth-grade literacy instruction: The perspectives of three teachers and six students (Doctoral dissertation, George Mason University). *Dissertation Abstracts International, 61*, 3505.

Helmer, O. (1983). *Looking forward: A guide to future research*. Beverly Hills, CA: Sage.

Hill, K. Q., & Fowles, J. (1975). The methodological worth of the Delphi forecasting technique. *Technological Forecasting and Social Change, 7,* 179-192.

Individuals with Disabilities Education Act Amendments of 1997, Pub. L. No. 105-17, § 101, 111 Stat. 37 (1997).

Interstate New Teacher Assessment and Support Consortium Standards. (n.d.). Retrieved January 20, 2002, from http://tera.teralink.com/~shar/Portfolio/INTASC.html

Jenkins, A., Leigh, J. E., & Patton, J. R. (1997). State certification standards for teachers of students with learning disabilities: An update. *Learning Disability Quarterly, 20*, 266-279.

Johnson, E. S. (2000). The effects of accommodations on performance assessments. *Remedial and Special Education, 21(*5), 261-267.

Jones, K.H., & Black, R. S. (1995). Teacher preparation for diversity: A national study of certification requirements. *Journal of Vocational and Technical Education, 12*(1), 42-52.

Katsiyannis, A., Conderman, G., & Franks, D. (1995). State practices on inclusion: A national review. *Remedial and Special Education, 16*(5), 279-287.

Kearns, J., (n.d.). Logic: An empirical study of *a priori* truths. Retrieved January 23, 2002, from State University of New York Web site: http://www.bu.edu/wcp/Papers/Logi/LogiKear.htm

Keefe, C. H. (1992). Developing responsive IEPs through holistic assessment. *Intervention in School and Clinic, 28*(1), 34-40.

Knight, D., & Wadsworth, D. E. (1999). Endorsement of family issues in curriculum offerings of teacher training programs nationwide. *Education, 120*(2), 315-325.

Kraska, M. F. (1996). Trade and industrial teachers' knowledge related to special populations. *Journal of Industrial Teacher Education, 33*(2), 47-59.

Langone, J. (1998). Managing inclusive instructional settings: Technology, cooperative planning, and team-based organization. *Focus on Exceptional Children, 30*(8), 1-15.

Library of Congress. (1999, October). Military Construction Appropriations Act of 2000. Retrieved April 18, 2002, from Library of Congress Online via GPO Access: http://thomas.loc.gov.

Library of Congress. (2001, November). Supplemental Appropriation Act of 2001. Retrieved April 18, 2002, from Library of Congress Online via GPO Access: http://thomas.loc.gov.

Lindstrom, P. (2000, Summer). Syllabus for TEDU 605, S*pecial education for regular educators.* Richmond: Virginia Commonwealth University.

Linstone, H. A., & Turoff, M. (Eds.). (1975). *The Delphi method: Techniques and applications*. Reading, MA: Addison-Wesley.

Litowitz, L. (1998). Technology ed. teacher demand and alternative route licensure. *Technology Teacher, 57,* 23-28.

Lopez-Reyna, N. A., & Bay, M. (1997). Enriching assessment using varied assessments for diverse learners. *Teaching Exceptional Children, 29,* 33-37.

Love, L. L. (1993). Developing and including transition services in the IEP: Transition services program. Phoenix: Arizona State Department of Education. (ERIC Document Reproduction Service No. ED303838)

Lovitt, T. C., Cushing, S. S., & Stump, C. S. (1994). High school students rate their IEPs: Low opinions and lack of ownership. *Intervention in School and Clinic, 30*(1), 34-37.

MacArthur, C. A. (1998). Word processing with speech synthesis and word prediction: Effects on the dialogue journal writing of students with learning disabilities. *Learning Disability Quarterly, 21*(2), 151–164.

McLeskey, J., Henry, D., & Axelrod, M. I. (1999). Inclusion of students with learning disabilities: An examination of data from reports to Congress. *Exceptional Children, 66*(1), 55-66.

Meyers, L. (2000). High school teachers' perception of the Virginia state assessment program and their implications for school reform (Doctoral dissertation, George Washington University, 2000). *Dissertation Abstracts International*, *61,* 1733.

Mick, L. B. (1994). Identification of students with learning disabilities: What beginning teachers need to know about the exclusionary clause. *Contemporary Education, 66,* 36-39.

National Board for Professional Teaching Standards. (1997). *VocationalEducation Standards for National Board Certification.* Washington, DC: Author.

National Business Education Association. (1995). *National standards for business education—What America's students should know and be able to do in business. (1995).* Reston, VA: Author.

National Council for Accreditation of Teacher Education. (n.d.). *Professional standards, Chapter 1: Mission and scope*. Retrieved January 20, 2002, from www.ncate.org/standard/programstds.htm

National Education Goals Panel (NEGP). (1997). *National Education Goals Report*. Washington, DC: Author.

Newman, F. M., King, M. B., & Rigdon, M. (1997). Accountability and school performance: Implications from restructuring schools. *Harvard Educational Review, 67*(1), 41-74.

Nineteen ninety-four agriscience teacher of the year. (1995). *Agricultural Education Magazine, 68,* 21-22.

No Child Left Behind Act of 2001, Pub. L. No. 107-110, § 1001, (2002). Retrieved March 5, 2002, from http://www.ed.gov/legislation/ESEA02/pg1.html

Plosz, G. E. (1993). The articulation of educable and trainable mentally handicapped students from elementary schools to secondary schools in the Regina public school system. (Master's thesis, University of Regina, Canada, 1993). *Masters Abstract International, 32-03,* 765.

Rojewski, J. W., & Schell, J. W. (1995). Developing thoughtfulness in special populations personnel: an application of flexible cognition theory in teacher training programs. *Journal of Instructional Psychology, 22*(4), 354-365.

Rojewski, J. W., Pollard, R. R., & Meers, G. E. (1990). Practices and attitudes of secondary industrial education teachers toward students with special needs. *Journal of Industrial Teacher Education. 27*(3), 17-32.

Roskos, K., & Bain, R. (1998). Professional development as intellectual activity: Features of the learning environment and evidence of teachers' intellectual engagement. *The Teacher Educator, 34*(2), 89-115.

Rust, E. B. Jr. (2000, January 19). Higher standards, stronger tests: There's no turning back. *Education Week, 19*(19), 60.

Sarkees-Wircenski, M., & Scott, J. L. (1995). *Vocational Special Needs.* Homewood, IL: American Technical Publisher.

Schumm, J. S., & Vaughn, S. (1998). Introduction to special issue on teachers' perceptions: Issues related to the instruction of students with learning disabilities. *Learning Disability Quarterly, 21*(1), 3-5.

Shavelson, R. J. (1981). *Statistical reasoning for the behavioral science.* Boston: Allyn and Bacon.

Shen, J., (1998). The impact of alternative certification on the elementary and secondary public teaching force. *Journal of Research and Development in Education, 32*(1), 9-16.

Singh, K., & Billingsley, B. (1998). Professional support and its effect on teachers' commitment. *Journal of Educational Research*, *91*(4), 229-239.

Skobjak, B. L., Till, R. J., & Raco, T. G. (1988). Integrating deaf students into technical classes. *School Shop, 47,* 18-19.

Stitt-Gohdes, W. L. (1999). Teaching and learning styles: Implications for business teacher education. In P. A. Gallo Villee & M. G. Curran (Eds.), *National Business Education Association yearbook, 37, 1999* (pp. 7-15). Reston, VA: National Business Education Association.

Stufflebeam D. L. (1998). The conflicts between standards-based and postmodernist evaluations: Toward rapprochement. *Journal of Personnel Evaluation Education, 12* (3), 287-296.

Thomas, B., & Kiley, M. A. (1994). *Concerns of beginning middle and secondary school teachers.* (University of Maryland). (ERIC Document Reproduction Service No. ED373033)

Thomas, N.M. (1998). The new generation of leadership: Developing leadership effectiveness through performance management (community college, personnel evaluation) (Doctoral dissertation, University of Texas at Austin, 1998). *Dissertation Abstracts International, 59,* 1998.

Uhl, N. P. (Ed). (1983). *Using research for strategic planning.* San Francisco, CA: Jossey-Bass.

Van Reusen, A., Sholo, A. R., & Barker, K. S. (2001). High school teacher attitudes toward inclusion. *The High School Journal, 8*(2), 7-20.

Virginia Department of Education Division of Teacher Education and Licensure. (n.d.). *Guidelines for mentor teacher programs for beginning and experienced teachers*. Retrieved May 3, 2001, from http://www.pen.k12.va.us/VDOE/newvdoe/legislat.PDF

Virginia Department of Education Office of Career and Technical Education Services. (2002). *State level report CTERS 2*. Richmond: Virginia Department of Education Data Management Office.

Virginia Department of Education. (n.d.a). *Licensure regulations for school personnel.* Retrieved August 14, 2001 from http://www.pen.k12.va.us/VDOE/Compliance/TeacherED/nulicur.pdf

Virginia Department of Education. (n.d.b). *Routes to licensure in Virginia.* Retrieved July 10, 2001 from http://www.pen.k12.va.us/VDOE/newvdoe/licroute.html

Walther-Thomas, C., Bryant, M., & Land, S. (1996). Planning for effective co-teaching: The key to successful inclusion. *Remedial and Special Education, 17*(4), 255-264.

Wang, M. C., Haertel, G. D. , & Walberg, H. J. (1994). What helps students learn? *Educational Leadership, 51*(4), 74-79.

Washburn, J. S., & Cheek, C. (1992). *Vocational teacher education: The context for reform.* Paper presented at the Annual Convention of the American Vocational Association. (ERIC Document Reproduction Service No. ED354319)

Weidegreen, S. J. (1994). Professional development: Determining member needs for the Virginia Business Education Association. *Delta Pi Epsilon Journal, 34*(3), 157-163.

Wood, J. W., & Jones, K. H. (1994). Adapting lesson plans for mainstreamed vocational education students. *Journal of Instructional Psychology, 21*(2), 192-200.

Wood, P. R. (1999). *The importance of technical competencies for beginning secondary business teachers in Virginia*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.

Wright, S., (2001). Setting the standards for career and technical educators. *Techniques, 76*(5), 22-23.

Zumwalt, K.K. (1996). Simple answers: Alternative teacher certification. *Educational Researcher,25*, 40-42.

APPENDICES

Appendix A

Selected Laws That Consider Students With Special Needs

Appendix A

Selected Laws That Consider Students With Special Needs

Date	Legislation	PL #	Purpose
1964	**Civil Rights Act**		To ensure educational rights of individuals from special populations
1963	**Vocational Education Act**	**88-210**	To offer financial assistance to states to assess individuals from special populations
1968	**Vocational Education Amendments**	**90-576**	Continued to emphasize the need to provide vocational education opportunities for special learners. It also distinguished between the disadvantaged and handicapped individuals.
1973	**Rehabilitation Act**	**93-112**	• To prohibit discrimination in programs receiving federal funds. • Nicknamed "The Bill of Rights for the Handicapped" • Has Section 503, Section 504 passed in 1977
1993	**Reauthorization of the Rehabilitation Act**	**102-325**	• Governor of each state appoint a State Rehabilitation Advisory Council • Change in terminology from "handicapped" to "disability", and from "employability" to "employment outcomes" •
1973	**Comprehensive Employment and Training Act**	**93-203**	To provide job training opportunities and employment for individuals who were identified as economically disadvantaged, underemployed, and/or unemployed

Appendix A

Date	Legislation	PL #	Purpose
1975	**Education of All Handicapped Children Act**	**94-142**	To provide necessary funding to ensure a free and appropriate public education for every handicapped persons between the ages of 3 and 21
1976	**Vocational Education Amendments**	**94-482**	• To provide funding formulas for special needs programs and services increased • Established cooperative working relationship between U.S. Department of Labor programs and vocational education
1982	**Job Training Partnership Act**	**97-300**	• To replace and improve the CETA • To increase the role of private business and industry in the training and employment of disadvantaged youth and adults.
1984	**Carl D. Perkins Vocational Education Act**	**98-524**	• To make vocational education programs accessible to all persons • To improve the quality of vocational educational programs to provide the workforce of the country with marketable skills and which was needed to improve productivity and promote economic growth
1990	**Carl D. Perkins Vocational and Applied Technology Education Act**	**101-392**	• Integrating vocational and academic education • To provide equal access for special populations • Technical preparation
1990	**Individuals with Disabilities Education Act**	**101-476**	• Renamed the Education of All Handicapped Act (PL 94-142) IDEA • Expanded the definition of special education to include instruction in all settings, including workplace and training sites

Appendix A

Date	Legislation	PL #	Purpose
1990	**Americans with Disabilities Act**	**101-336**	To give an opportunity to eliminate the barriers to independence and productivity for individuals with disabilities
1997	**Individuals with Disabilities Education Act (IDEA) Amendments**		To mandate that students with disabilities have access to general education curriculum
1998	**Carl D. Perkins Vocational and Applied Technology Education Act Amendments**	**105-332**	To provide funding to high-quality vocational and technical education programs To bring uniformity to accountability and assessment systems of all states
1998	**The Workforce Investment Act**	**105-220**	To coordinate, consolidate, and improve employment, training, literacy, and career and technical rehabilitation programs.
2000	**Military Construction Appropriations Act**	**106-52**	To provide special education services to students whose parents are enrolled in the armed forces.
2001	**Supplemental Appropriations Act**	**107-20**	To provide additional funding for the education of disadvantaged.

Sources:

Sarkees-Wircenski, M. & Scott J. L. (1995). *Vocational Special Needs*. American Technical Publishers, Inc.
Asselin, S. B. (2000). *Teaching Strategies for Diverse Learners*. Virginia Department of Education Office of Career , Technical, and Adult Education Services: Richmond, VA.
Library of Congress. (1999, October). Military Construction Appropriations Act of 2000. Retrieved April 18, 2002, from Library of Congress Online via GPO Access: http://thomas.loc.gov.
Library of Congress. (2001, November). Supplemental Appropriation Act of 2001. Retrieved April 18, 2002, from Library of Congress Online via GPO Access: http://thomas.loc.gov.

Appendix B

Results of Round I

RESULTS OF ROUND I																			
N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
Item																	MEAN		SD
1	5	5	4		5	4	5	5	4	2	5	4	4	5	4	4	4.33		0.82
2	5	5	4	4	5	4	5	2	4	2	5	5	5	5	5	5	4.38		1.02
3	4	5	5	4	5	5	5	2	4	4	5	4	4	5	5	4	4.38		0.81
4	3	5	4	4	4	5	5	5	4	3	4	5	4	5	4	4	4.25		0.68
5	5	5	3	4	3	4	5	4	4	4	5	4	4	4	5	4	4.19		0.66
6	5	5		3	5	5	5	5	5	3	5	5	5	5	5	5	4.73		0.70
7	5	5	5	5	4	5	5	5	4	4	5	5	5	5	5	5	4.81		0.40
8	4	5	3	4	4	3	4	4	4	3	4	4	4	5	4	4	3.94		0.57
9	4	5	4	4	4	3	4	2	3	2	3	3	4	5	4	4	3.63		0.89
10	3	5	4	3	2	4	5	4	4	4	3	4	4	3	4	5	3.81		0.83
11	5	5	5	4	4	4	5	3	4	4	5	5	4	2	4	4	4.19		0.83
12	4	5	3	4	4	4	4	5	3	3	4	5	5	5	5	4	4.19		0.75
13	2	5	3	3	2	2	4	2	4	2	3	4	4	3	4	4	3.19		0.98
14	1	5	4	5	4	4	4	4	4	2	5	5	4	5	4	4	4.00		1.10
15	4	5	4	5	5	4	5	4	4	3	5	5	5	5	5	4	4.50		0.63
16	4	5	4	5	4	5	5	3	5	2	5	5	5	5	4	5	4.44		0.89
17	4	5	3	5	4	5	4	5	4	3	5	5	5	5	4	5	4.44		0.73
18	3	5	3	5	3	4	4	4	4	2	4	4	3	4	4	4	3.75		0.77
19	4	5	3	4	4	4	4	4	4	2	4	3	4	5	4	4	3.88		0.72
20	2	5	2	2	4	2	5	5	3	2	3	4	4	5	5	4	3.56		1.26
21	5	5	4	5	4	5	5	5	4	4	5	5	5	5	5	5	4.75		0.45
22	4	5	5	4	4	5	5	5	4	5	5	5	5	5	4	4	4.63		0.50
23	4	5	3	4	5	3	4	4	3	3	5	4	4	5	4	4	4.00		0.73
24	3	5	4	4	2	2	3	4	4	3	4	3	4	3	4	4	3.50		0.82
25	3	5	4	4	2	2	4	3	3	3	5	4	5	2	4	4	3.56		1.03
26	2	5	3	4	4	4	4	2	4	4	3	5	4	3	5	4	3.75		0.93
27	4	5	3	4	4	5	5	5	4	4	5	5	5	2	5	4	4.31		0.87
28	4	5	4	4	5	4	5	4	4	3	5	5	5	5	5	5	4.50		0.63

Appendix C

Results of Round II

RESULTS OF ROUND II																				
N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
Item																			MEAN	SD
2	5		4	4	4	4	4	5	2	4	2	5	4	4	5	5	4		4.063	0.929
14	1		4	4	5	4	4	5	4	4	3	5	5	4	5	4	4		4.063	0.998
20	2		4	3	3	4	4	5	5	3	2	3	4	4	5	5	4		3.750	1.000
25	3		4	4	4	2	4	4	4	3	3	5	4	4	4	5	4		3.813	0.750

Appendix D

Letter to Validation Panel Members

Appendix D

14278 Bethany Church Road
Montpelier, VA 23192
October 17, 2001

«Title» «FirstName» «LastName»
«JobTitle»
«Company»
«Address1»
«City» «State» «PostalCode»

Dear «Title» «LastName»:

I am a graduate student at Virginia Tech pursuing a doctoral degree in Career and Technical Education. For my dissertation, I am examining the competencies needed by business education teachers to enable them to work effectively with students who have disabilities. I am soliciting your help with this study to serve as one of five members of a validation panel.

You were chosen to serve on this panel because of your expertise in the area of «area» and because of your leadership role in «statesp». Your responsibility as a validation panel member is to provide your assessment of whether the items on the enclosed questionnaire are clearly stated, distinctly different from each other, and provide a comprehensive list of competencies related to teaching students with disabilities. After the questionnaire is revised based on the judgments of the validation panel, it will be used in a Delphi study. The participants in the Delphi study will be business education teachers who have been selected because of their experience in working with students who have disabilities.

In addition to the questionnaire, also enclosed are a detailed instruction sheet and a self-addressed self-stamped envelope. Please return the questionnaire with your comments and suggestions by Wednesday, October 31st.

I am looking forward to your valuable input as a member of this validation panel. However, if you are not able to participate, please inform me by indicating that fact on the instruction sheet and returning it and questionnaire to me immediately.

Your assistance with the validation of the questionnaire will require some time and thought and I would like to thank you in advance for your contribution to this research. If you have any questions please do not hesitate to contact me by email (clascott@aol.com) or phone (804-883-7047).

Sincerely,

Clara James Scott

Enclosures

Appendix E

Validation Panel Questionnaire

Appendix E

Instructions for Validation Panel

Please follow these directions to assist with the validation of the attached questionnaire:

1. Read the directions for clarity and mark any suggested changes in the space provided below the directions.
2. Complete the survey, rating your agreement with each item by using the rating scale provided.
3. Review the wording of each competency and indicate in the "Comments" column any clarification needed and any concerns you have regarding its content and appropriateness.
4. Comment on the appropriateness of the demographics section. Mark any suggested changes in the space provided below the section. *(Do not complete this section).*
5. Recommend the separation or combination of competencies on the last page or by marking the competencies themselves.
6. Suggest any additional competencies that you think should be addressed in the questionnaire.
7. Provide any other comments, concerns, or suggestions you have.

Note that on the Delphi panel's questionnaire the competencies will not be categorized and will be in random order. Please return the questionnaire in the self-addressed postage-paid envelope by Wednesday, October 31th. The time you dedicate to this task is greatly appreciated.

Name:_____

State:_____

_____ I regret I am unable to serve as a validation panel member.

Appendix E

Competencies Related to Students with Disabilities Needed by Business Teachers

Directions: *Please rate the following statements concerning your agreement regarding whether these are the competencies secondary school business teachers should have to teach students with disabilities. Please feel free to write any comments, concerns, or, suggestions in the space provided to the right of the statements. Use the following rating scale:*

1=Strongly Disagree; 2 =Disagree; 3 =Neutral; 4 =Agree; 5 =Strongly Agree

Comments about directions:

Rating	**Competencies** ***The business teacher should be able to:***	**Comments**
	Legislation	
	1. Demonstrate an understanding of the basic laws and procedures that govern special education assessment, eligibility, and services.	
	2. Interpret education, labor, and human service legislation at the federal and state levels that insures equal educational opportunity.	
	3. Access information on the foundations of transition planning, career development, and vocational special needs.	
	4. Demonstrate knowledge of local procedures and organization of special education services.	
	Characteristics of Learners	
	5. Assess the educational, social, and employment characteristics of students with disabilities.	
	6. Demonstrate basic knowledge of instructional needs of students with disabilities.	

1=Strongly Disagree; 2 =Disagree; 3 =Undecided; 4 =Agree; 5 =Strongly Agree

Rating	Competencies *The business teacher should be able to:*	Comments
	7. Demonstrate knowledge of concepts, theories, and life span characteristics and needs associated with students with disabilities.	
	Individual Education Program	
	8. Assist in the development of goals and objectives for an Individual Education Program for students with disabilities.	
	9. Collaborate with IEP team members in the development of appropriate transition goals and objectives using assessment data, student goals, family perspective, and interagency information.	
	Inclusion	
	10. Meet the needs of all students in the class when students with disabilities are included with regular students.	
	11. Demonstrate an understanding and an appreciation of the range of individual differences that occur in educational settings.	
	12. Apply basic knowledge, tools, and strategies that enable classroom teachers to successfully promote learning for students with disabilities.	
	Adapting and Delivering Instruction	
	13. Select, develop, adapt, and use instructional strategies, material, and equipment (assistive technology) according to characteristics of the students with disabilities.	
	14. Exhibit respect for individual differences in learners' abilities and cultural background.	
	15. Use strategies to facilitate integration of students with disabilities into various education and employment settings.	

1=Strongly Disagree; 2 =Disagree; 3 =Undecided; 4 =Agree; 5 =Strongly Agree

Rating	Competencies *The business teacher should be able to:*	Comments
	16. Develop alternative methods of measuring the performance of students with disabilities.	
	17. Design career-related curriculum that integrates academics and vocational standards to meet the needs of students with disabilities.	
	18. Demonstrate knowledge of human growth and development in recognizing and assessing students with disabilities.	
	19. Use appropriate strategies to involve students with disabilities in career and technical education student organizations.	
	Classroom Management	
	20. Arrange the classroom for easy access for learners with physical disabilities.	
	21. Create a safe, equitable, positive, and supportive learning environment in which diversities are valued.	
	22. Create an environment that encourages self-advocacy and increased independence.	
	23. Use effective and varied behavior management strategies including reinforcement of positive behavior.	
	Support Services	
	24. Use the students' family members to supplement instructional efforts.	
	25. Identify and use the resources, support personnel, and services that are available for students with disabilities.	
	Transitional Services	
	26. Collaborate effectively with students, their parents, and other professionals and community members to implement transition services.	

1=Strongly Disagree; 2 =Disagree; 3 =Undecided; 4 =Agree; 5 =Strongly Agree

	27. Evaluate student and program outcomes for program improvement decisions.	
	28. Demonstrate knowledge of appropriate work-based learning strategies for students with disabilities.	

Please supply the following information.:
Total years of experience teaching middle and high school business education: _____

Age: under 30 ___30-39___40-49___50-59___ over 59___

Highest level of education completed: _____

Comments on demographic section:

Are there any competencies that you think should be combined or separated into two or more items? If so, please indicate their numbers here with a brief description or mark the competencies themselves to clarify your suggestion.

Additional competencies that should be addressed in the study: (If necessary, please use the back of the page.)

Other comments, concerns, or suggestions: (If necessary, please use the back of this page.)

Thank you.

Your willingness to take the time to assist with this study is appreciated

Appendix F

Letter to Nomination Panel

Appendix F

14278 Bethany Church Road
Montpelier, VA 23192
September 25, 2001

«Title» «FirstName» «LastName»
«JobTitle»
«Company»
«Address1»
«City», «State» «PostalCode»

Dear «Title» «LastName»:

As a doctoral candidate in Career and Technical Education at Virginia Tech, I am conducting a study on business and information technology teachers and students with disabilities. You were recommended by my committee members or by the Office of Career and Technical Education at the state department to serve as a member of a nomination panel.

Your sole responsibility is to nominate business and information technology teachers who have worked directly with a large number of students with disabilities or in schools that are largely populated with students with disabilities. Using the enclosed page, please provide the following information for each business and information technology teacher you nominate to participate in this study: teacher's name, school's name, and teacher's email addresse.

You may respond to my request by email (clascott@aol.com) or return the enclosed page via postal mail in the self-addressed self-stamped envelope. Please respond by Friday, October 12.

The time and effort you spent on this matter is greatly appreciated.

Sincerely,

Clara James Scott
Doctoral Candidate

Appendix F

Business and Information Technology Teachers
to participate in the study

Teacher's Name:	School's Name	Teacher's Email Address
1.		
2.		
3.		
4.		
5.		
6.		
7.		

Your name: _____

Your school district:_____

Thank you.

Appendix G

Delphi Panel Initial Letter

Appendix G

14278 Bethany Church Road
Montpelier, VA 23192
November 5, 2001

«Title» «FirstName» «LastName»
«JobTitle»
«school»
«Address1»
«City», VA«PostalCode»

Dear «Title» «LastName»:

Congratulations!! You have been nominated by «nominated_by» to participate as one member of no more than 20 from the entire state in a Delphi study. This type of study solicits the opinions of experts in their profession and you were nominated to serve as a Delphi panel member because of your experience working with students with disabilities.

I am a graduate student at Virginia Tech pursuing a doctoral degree in Career and Technical Education. For my dissertation, I am examining the competencies needed by business education teachers to enable them to work effectively with students who have disabilities. Because I am also a full-time business teacher at Atlee High School in Hanover County, I know how busy you are and will appreciate your giving consideration to taking time to participate in this study.

This Delphi study will involve your participation by indicating your level of agreement with competencies listed in three or four rounds of questionnaires. «Title» «LastName», your expert opinion of the competencies will be compared with the other members of the panel to determine if there is consensus about whether the competencies stated in the questionnaire are needed by business teachers. For the second round, third round, and if necessary the fourth round, I will report the results of the prior round and you will indicate your level of agreement with those results.

The findings of this study will include information that can be used by teacher education programs, professional organizations, and local and state administrators to provide or improve professional development activities and instructional materials. These efforts will assist business teachers in increasing the success of their students who have disabilities.

I am looking forward to your valuable input as a member of this panel. Please confirm your agreement to participate as a Delphi panel member by returning the enclosed form in the self-addressed postage paid envelope by Monday, November 12

Appendix G

Your assistance with the study will require some time and thought and I would like to thank you in advance for your contribution to this research. If you have any questions please do not hesitate to contact me by email (clascott@aol.com) or phone (804-883-7047).

Sincerely,

Clara James Scott

Enclosures: Participation Form
Envelope

Participation Form

The purpose of this study will be to identify the perceptions of an expert group of secondary school business teachers regarding competencies that are important for working with students with disabilities. The following research questions have been established as a guide to conduct the research:

1. From a list of identified competencies compiled from course objectives and literature, to what extent do the members of the expert panel of secondary school business teachers in Virginia agree on competencies related to working with students with disabilities that are essential for business teachers?

2. Of the competencies for which there was consensus, which had the highest mean scores as rated by the teachers?

_____ I agree to participate this study. I am aware that this Delphi study will require my input in three or four rounds of surveys. However, I am free to withdraw at anytime by informing Clara James Scott in writing.

_____ I cannot participate in this study.

_____
Print Name

_____
Signature

_____ _____
Date Phone

_____
Email

Appendix H

Thank You Letter Nonparticipants

Appendix H

14278 Bethany Church Road
Montpelier, VA 23192
November 30, 2001

«Title» «FirstName» «LastName»
«school»
«Address1»
«City», VA «PostalCode»

Dear «Title» «LastName»:

Thank you for your response to your nomination to participate in a Delphi study. It is unfortunate that you will not be able to participate in the research. Your expert opinion on the competencies that are important for working with students with disabilities will be missed.

Again, thank you for responding and best wishes for a good school year.

Sincerely,

Clara James Scott

Appendix I

Round I Letter and Questionnaire

Appendix I

14278 Bethany Church Road
Montpelier, VA 23192
November 30, 2001

«Title» «FirstName» «LastName»
«JobTitle»
«school»
«Address1»
«City», VA«PostalCode»

Dear «Title» «LastName»:

Thank you for accepting your nomination to participate in the three- or four-round Delphi study on competencies needed by business teachers to work with students who have disabilities. At a time when teachers are being held more accountable for the performance of students and the numbers of students with disabilities enrolled in business classes are increasing, more assistance may be needed by teachers to help these students be successful. I am excited that you have agreed to participate in this study.

I am looking forward to your valuable input as a member of this panel. Please return the enclosed questionnaire in the self-addressed postage-paid envelope by December 17.

I am aware of your demanding schedule and other responsibilities, so I am enclosing a small token of my appreciation for the time and effort you devote to this round of the study.

Sincerely,

Clara James Scott

Enclosures: Round I Questionnaire
Envelope
Appreciation Gift

1=Strongly Disagree; 2 =Disagree; 3 =Undecided; 4 =Agree; 5 =Strongly Agree

Competencies Related to Students with Disabilities Needed by Business Teachers

Directions: *Please rate the following statements concerning your agreement regarding whether these are the competencies secondary school business teachers should have to teach students with disabilities. Please feel free to write any comments, concerns, or, suggestions in the space provided to the right of the statements. Use the following rating scale:*

1=Strongly Disagree; 2 =Disagree; 3 =Neutral; 4 =Agree; 5 =Strongly Agree

Rating	**Competencies** ***The business teacher should be able to:***	**Comments**
	1. Select, develop, adapt, and use instructional strategies, material, and equipment (assistive technology) according to characteristics of the students with disabilities.	
	2. Meet the needs of all students in the class when students with disabilities are included with regular students.	
	3. Collaborate with IEP team members in the development of appropriate transition goals and objectives using assessment data, student goals, family perspective, and interagency information.	
	4. Use strategies to facilitate integration of students with disabilities into various education and employment settings.	
	5. Demonstrate an understanding of the basic laws and procedures that govern special education assessment, eligibility, and services.	
	6. Arrange the classroom for easy access for learners with physical disabilities.	
	7. Create a safe, equitable, positive, and supportive learning environment in which diversities are valued.	

1=Strongly Disagree; 2 =Disagree; 3 =Undecided; 4 =Agree; 5 =Strongly Agree

Rating	**Competencies** ***The business teacher should be able to:***	**Comments**
	8. Access information on the foundations of transition planning, career development, and vocational special needs.	
	9. Assess the educational, social, and employment characteristics of students with disabilities.	
	10. Demonstrate knowledge of local procedures and organization of special education services.	
	11. Assist in the development of goals and objectives for an Individual Education Program for students with disabilities.	
	12. Use appropriate strategies to involve students with disabilities in career and technical education student organizations.	
	13. Interpret education, labor, and human service legislation at the federal and state levels that insures equal educational opportunity.	
	14. Develop alternative methods of measuring the performance of students with disabilities.	
	15. Demonstrate basic knowledge of instructional needs of students with disabilities.	
	16. Use effective and varied behavior management strategies including reinforcement of positive behavior.	
	17. Create an environment that encourages self-advocacy and increased independence.	
	18. Use the students' family members to supplement instructional efforts.	

1=Strongly Disagree; 2 =Disagree; 3 =Undecided; 4 =Agree; 5 =Strongly Agree

Rating	**Competencies** ***The business teacher should be able to:***	**Comments**
	19. Demonstrate knowledge of appropriate work-based learning strategies for students with disabilities.	
	20. Design career-related curriculum that integrates academics and vocational standards to meet the needs of students with disabilities.	
	21. Exhibit respect for individual differences in learners' abilities and cultural background.	
	22. Identify and use the resources, support personnel, and services that are available for students with disabilities.	
	23. Evaluate student and program outcomes for program improvement decisions.	
	24. Demonstrate knowledge of concepts, theories, and life span characteristics and needs associated with students with disabilities.	
	25. Demonstrate knowledge of human growth and development in recognizing and assessing students with disabilities.	
	26. Collaborate effectively with students, their parents, and other professionals and community members to implement transition services.	
	27. Demonstrate an understanding and an appreciation of the range of individual differences that occur in educational settings.	
	28. Apply basic knowledge, tools, and strategies that enable classroom teachers to successfully promote learning for students with disabilities.	

Please supply the following information.:
Total years of experience teaching middle and high school business education:

_____

Age: under 30 ___30-39___40-49___50-59___ over 59___

Highest level of education completed: _____

Additional competencies that should be addressed in the study:

Other comments, concerns, or suggestions:

Thank you.

Your willingness to take the time to assist with this study is appreciated.

Appendix J

Round II Letter and Questionnaire

Appendix J

14278 Bethany Church Road
Montpelier, VA 23192
April 25, 2002

«Title» «FirstName» «LastName»
«JobTitle»
«school»
«Address1»
«City», «State» «PostalCode»

Dear «Title» «LastName»:

Happy New Year! I hope you enjoyed your holiday and your time off from work.

Thank you for promptly completing and returning the questionnaire for round one of the Delphi study. Your swift response was greatly appreciated. I would like to remind you that your input is important and your continued participation in this final round of the study is crucial. Without your help, this type of study would not possible.

Sixteen Delphi panel members participated in round one and the mean and standard deviation was calculated for each item. For 24 of the 28 items there was high level of consensus among the respondents in terms of their level of agreement with the competencies. It was decided in advance that a standard deviation of one or less would be necessary to consider that the panel had reached consensus. The four items that did not meet this level of consensus are included in the round two questionnaire.

Enclosed is a coded round two questionnaire, a self-addressed postage-paid envelope, and a gift as a token of my appreciation. Please complete and return the round two questionnaire by Thursday, January 24, 2002.

«Title» «LastName», I know the beginning of the new year will bring new opportunities and challenges as you prepare for the end of the first semester. However, please take a few minutes to participate in this last round of the study. After the study is complete I will send you a summary of the results.

Sincerely,

Clara James Scott

Enclosures: Round II Questionnaire
Envelope
Appreciation Gift

Competencies Related to Students with Disabilities Needed by Business Teachers

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Directions: Please reconsider and again rate the following statements that did not meet consensus in Round I concerning your agreement regarding whether these are the competencies secondary school business teachers should have to teach students with disabilities. If your new rating is more than one number higher or lower than the mean rating, provide a brief explanation of the reason(s) you disagree with the other panel members.

Examples:
1. If the mean rating of the group was 3.56 and your **new** rating is 3 or 4 (within one number from the mean), an explanation is not needed.

2. If the mean rating of the group was 3.56 and your **new** rating is 1, 2, or 5 (more than one number from the mean), please give a brief explanation of your reason(s).

Use the following rating scale:

1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree

Competencies ***The business teacher should be able to:***	**Mean Rating By Panel**	**Your Previous Rating**	**Your New Rating**	**Explanation**
2. Meet the needs of all students in the class when students with disabilities are included with regular students.	**4.38**			
14. Develop alternative methods of measuring the performance of students with disabilities.	**4.00**			
20. Design career-related curriculum that integrates academics and vocational standards to meet the needs of students with disabilities.	**3.56**			
25. Demonstrate knowledge of human growth and development in recognizing and assessing students with disabilities.	**3.56**			

Thank you again. Your willingness to take time to assist with this study is appreciated.

Appendix K

Letter to Delphi Panel with Results of the Study

Appendix K

14278 Bethany Church Road
Montpelier, VA 23192
April 25, 2002

«Title» «FirstName» «LastName»
«JobTitle»
«school»
«Address1»
«City», «State» «PostalCode»

Dear «Title» «LastName»:

Thank you for your input and prompt responses in the Delphi study. Enclosed is a copy of the results of round I and II.

Best wishes for the remainder of the school year and in your profession.

Sincerely,

Clara James Scott
Doctoral Candidate

Appendix L

Vita

Appendix L

CLARA JAMES SCOTT
Vita

14278 Bethany Church Road
Montpelier, VA 23192

Work(804) 730-3395
Residence (804) 883-7047

EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY:
Doctor of Education, Career and Technical Education,
August 1994 – May 2002

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
***Certificate of Advanced Graduate Studies**, Vocational-Technical Education, 1997*

VIRGINIA STATE UNIVERSITY
***M.S**., Business Education, 1990*

LONGWOOD COLLEGE
***B.S**., Business Administration,1983*

TEACHING EXPERIENCE

HANOVER COUNTY PUBLIC SCHOOLS, Ashland, Virginia:
Business Teacher, August 1999 - present

NEWPORT NEWS PUBLIC SCHOOLS, Newport News, Virginia:
***Business Teacher**, 1991-1999*

CHRISTOPHER NEWPORT UNIVERSITY, Newport News, Virginia:
***Adjunct Instructor**, May 1997 - January 1998*

COMPUTER DYNAMICS INSTITUTE, Virginia Beach, Virginia:
***Instructor**, 1990-1991*

HANOVER COUNTY PUBLIC SCHOOLS, Ashland, Virginia:
***Adult Education Instructor**, 1988*

COMMONWEALTH COLLEGE, Richmond, Virginia:
***Instructor**, 1986-1988*

BUSINESS EXPERIENCE

FOREIGN MISSION BOARD, Southern Baptist Convention,
Richmond, Virginia:
***Income Tax and Medical Clerk**, 1987-1990*
***Payroll Clerk**, 1986*
***Section Secretary**, 1985*

JEROME KAYE, CPA, Richmond, Virginia:
***Accounting Clerk**, 1985*

WESTBROOK PSYCHIATRIC HOSPITAL, Richmond, Virginia:
***Unit Secretary**, 1984*

PART-TIME POSITIONS

ENTERPRISE ACADEMY-NNPS, Newport News, Virginia:
***Internet Administrator**, 1996-1997*

MENCHVILLE HIGH SCHOOL-NNPS, Newport News, Virginia:
***Internet Supervisor**, 1994-1995*

MENCHVILLE HIGH SCHOOL-NNPS, Newport News, Virginia:
***JTPA-Computer Instructor**, 1991-1992*

SERVICES/ WORKSHOPS

Academic Tech Committee 1994
FBLA Summer Leadership Conference July 1994
Nubian Awareness Sponsor 1992-1994
FBLA (Future Business Leaders of America) Advisor 1994-95, 2000-02
Hanover County Public Schools Technology Institute-Instructor,July00
Assisted in obtaining guest speaker for Multicultural Assembly
Parent Information Night - presenter Feb 2001
Coordinator-Career and Technical Education week events- Feb 2001
Hanover County Public Schools (HCPS) - Long Range Planning Team
HCPS– Action Plan Team Feb-May 2001
Atlee High School (AHS) Blue Ribbon Committee 2001
Member of Bethany Baptist Church – Sanctuary Choir
HCPS– Leadership Academy 2001-02
Presenter – VBEA Conference August 2001
HCPS – Teachers' Advisory Council
AHS - School Improvement Plan Team
Aspiring Administrator's Conference – March 2002
AHS – Budget Committee 2001-02
HCPS – Back to School General Convocation Committee
AHS – Support Personnel of the Year Committee
COE coordinator – Business and Information Technology
Virginia Career and Technical Education Administrator Regional Update Meeting – April 2002

PROFESSIONAL AFFILIATIONS

Association for Career and Technical Education
National Association of Vocational Education Special Needs Personnel

National Business Education Association
Southern Business Education Association
Virginia Business Education Association
Virginia Association for Career and Technical Education Administrators
Omicron Tau Theta

CERTIFICATION *Commonwealth of Virginia – Postgraduate Professional License (expires June 2007)*

RESEARCH *Thesis: "The Characteristics of Freshmen Students Enrolled in the School of Business of Virginia State University," 1990.*

Dissertation: "Competencies Needed by Business Teachers to Work with Students Who Have Disabilities," 2002.