COMPARISON OF CAREER AND TECHNICAL EDUCATION STUDENT TEACHER AND SUPERVISING TEACHER RATINGS OF PREPARATION TO TEACH

by

JEANNE ELMORE SYMANOSKIE

(Under the direction of HELEN C. HALL)

ABSTRACT

Federal reform efforts in recent years have caused the educational community to examine teacher education. Teacher education has responded by turning attention to effective teaching and the creation of national standards. Effective teaching is defined as using previous research in common knowledge, skills, and dispositions to improve student achievement.

In Georgia, three universities and partners throughout the state received a grant from the federally-funded standards-based education program (STEP) which resulted in the creation of the Georgia Systemic Teacher Education Program (GSTEP). Research on effective teaching and national standards was used to guide the GSTEP partner's mission and goals. The GSTEP overarching goal was to develop common language to articulate a definition of an accomplished teacher agreed upon by the stakeholders in the community. Focus groups, of over 500 individuals (teachers, teacher educators, parents, students, community members, and business), were conducted to determine statements of what accomplished (effective) teachers know and are able to do. These statements lead to the development of Guiding Principles and Framework Standards in Georgia.

The purpose of this study was to assess student teachers' preparation to teach using the GSTEP Framework Standards for Accomplished Teaching. Preparation to teach was rated by student teachers and their supervising teachers using an instrument based on the GSTEP Framework. Rotter's Internal-External Locus of Control (1966) was used to identify correlations between student teacher ratings of preparation to teach using the GSTEP Framework Standards Scale – Student and his or her locus of control.

Findings from this study indicated a statistically significant difference in ratings of knowledge of students and their learning between student teacher and supervising teacher. The study is important in the reform and administration of teacher education curricula and will help in understanding the principles of effective teaching and the use of standards as a conceptual framework for teacher education. Within the participating career and technical education program, practical significance was illustrated by identification of subscale areas needing more emphasis. Using the framework as a guide to preparation, certification, and assessment provides knowledge on how to accomplish reform in teacher education programs.

INDEX WORDS: Career and Technical Education (CTE), Teacher Education, Vocational-Technical Education, Student Teachers, Student Teacher Supervision, Effective Teaching, Accomplished Teaching, Frameworks, Georgia Systemic Teacher Education Program (GSTEP), Georgia Framework for Teaching,

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JEANNE ELMORE SYMANOSKIE

B.S., Virginia Polytechnic Institute and State University, 1994

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JEANNE ELMORE SYMANOSKIE

Major Professor: Helen Hall

Committee: Elaine Adams
Wanda Stitt-Gohdes
Myra N. Womble

Electronic Version Approval:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
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CHAPTER I

INTRODUCTION

A number of conflicting pressures affect teacher education today; two of these pressures focus on how teachers are prepared and recent federal legislation for educational reform (Cochran-Smith, 2005; Hartley, Mantle-Bromley, & Cobb, 1996; McCaslin & Parks, 2002). Focus on how teachers are prepared began to emerge in the late 1990's; before that time reform efforts were focused on teacher learning and kindergarten through twelfth grade (K-12) reform efforts (Cochran-Smith). Recent reform pressures have brought about changes in teacher education that emphasize effective teaching and national standards (Holmes Group, 1995). Effective teaching standards have been incorporated into teacher education programs; however, few studies have sought to define how these standards have affected the preparation of teachers. Teacher education programs, including career and technical education, have begun to explore and assess initiatives in teacher education (McCaslin & Parks).

Teacher education grew out of a need to educate children in basic subjects, reading, writing, and arithmetic, to be able to function in society (McCaslin & Parks, 2002; Scott & Sarkees-Wircenski, 2001). As society changed from agrarian to industrial, the need for more educated citizens increased the demand for more teachers (Butterfield, 2000; Wyman, 2000). Many years have passed since teacher education began, and changes in teacher education have been gradual and evolutionary (Cochran-Smith, 2005). Research in teaching has changed from creating a teacher-proof curriculum in the 1970's to addressing teacher behaviors in the 1980's. In the 1980's and 1990's, research identified common knowledge, skills, and dispositions that

effective teachers possess (American Association of Colleges for Teacher Education & Council for Basic Education [AACTE & CBE], 2003a; Chickering & Gamson, 1987; Hunter, 1985; Wise, 2001). Today, teacher education is concerned with the preparation of teachers to meet standards of effective teaching (Darling-Hammond & Ball, 1998; Professional Standards Commission [PSC] & National Council for Accreditation of Teacher Education [NCATE], 2001; Wise, 2003; Wise, Leibbrand, & Williams, 1997). The behaviors, attitudes, and methods of teachers have been studied for a number of years, resulting in the basis for national standards (Cochran-Smith; Danielson, 1996).

Teacher education is comprised of many specialty areas, including elementary, middle, secondary, and post-secondary education. Within each area future teachers may focus their studies by grade level and program certification. One such program area is career and technical education. Career and technical teacher education (CTE) was originally funded as a result of federal legislation, the Smith Hughes Act of 1917. This Act established agriculture, industrial arts, and home economics programs. Lynch (1996) stated that throughout the history of "federally-supported vocational education, occupational teachers were employed primarily because they had years of extensive experience in a craft or profession" (p. 4-5; McCaslin & Parks, 2002). On the other hand, teacher preparation for programs such as agriculture and home economics (and later business, marketing, and technology education) relied heavily on college-level teacher preparation (Lynch; McCaslin & Parks). The college-level programs were established to include some practical or project-oriented experiences as part of an undergraduate major. For the most part, career and technical education has continued as a subject-specific model of teacher preparation (Lynch; McCaslin & Parks).

Recent teacher education reform efforts started with recommendations from *A Nation Prepared: Teachers for the 21st Century*, a report (1986) produced in response to *A Nation at Risk* released to congress in 1982 (Cochran-Smith, 2005; Hartley et al., 1996; NBPTS, n.d.a). Numerous reform initiatives, acts/laws, and recommendations have been introduced in the years following 1986 (Cochran-Smith). More recently, in 2001, President Bush signed the *No Child Left Behind Act of 2001* (NCLB) into law. "Under the new law…teachers and paraprofessionals must become highly qualified; and student performance results must be shared with parents and other stakeholders" (Georgia Department of Education [GDOE], n.d.). Since NCLB was signed into law, states and local schools have implemented changes reflecting the requirements set forth in the Act.

Calls for reform in education have encouraged organizations involved in teacher education to identify what teachers should know and be able to do. Organizations such as the American Association of Colleges for Teacher Education (AACTE; American Association of Colleges for Teacher Education [AACTE], 2003), Interstate New Teacher Assessment and Support Consortium (INTASC; Interstate New Teacher Assessment and Support Consortium [INTASC], 1992), and the National Board for Professional Teaching Standards (NBPTS; National Board for Professional Teaching Standards [NBPTS], 2003a) and reports such as National Assessment of Vocational Education (NAVE; Silverberg, Warner, Fong, & Goodwin, 2004), and National Council for Teaching and America's Future (NCTAF; Cross & Wylie, 2002), have provided guidance on reforming teacher education practices. Reform initiatives have led to the development of standards, induction and mentoring programs, and performance-based assessments. On the national level, standards have been created for beginning and experienced teachers. National standards such as the INTASC certification standards for

beginning teachers and the NBPTS for advanced certification are examples of the standards and reforms established (Cochran-Smith, 2005; Cochran-Smith & Fries, 2001).

Reformation of teacher education on the national level has had an impact on state and local levels as well (AACTE, 2003; AACTE & CBE, 2003; Joftus & Maddox-Dolan, 2002; Scribner, 1999). In Georgia, a consortium including the University of Georgia, Valdosta State University, Albany State University, six school districts, and other partners throughout the state developed a description of effective teaching standards. The consortium was funded by a grant by the U.S. Department of Education and titled the Georgia Systemic Teacher Education Program (GSTEP). The consortium focused on creating guiding principles and a framework to guide the preparation of teachers. The goal for developing standards, through the principles and framework, was to establish a common language defining accomplished (effective) teaching agreed upon by the members of the consortium (Danielson, 1996; Georgia Systemic Teacher Education Program [GSTEP], 2003a). The standards for effective teaching were grouped into four areas: curriculum, induction, early community experiences, and program evaluation (GSTEP, 2003c). The statements defining accomplished teaching were developed into a document called the GSTEP Framework Guiding Principles (Appendix A). The principles are considered "what do we believe" statements. They include the principles of process, support, ownership, impact, equity, dispositions, and technology. From the guiding principles, the GSTEP Framework Standards (Appendix B) were written to communicate GSTEP's view of what accomplished teachers should know and be able to do. The framework includes six areas: (a) content and curriculum, (b) knowledge of students and their learning, (c) learning environments, (d) assessment, (e) planning and instruction, and (f) professionalism. Frameworks are used to provide "well-established definitions of expertise and procedures to certify novice

and advanced practitioners" (Danielson, 1996, p. 2). Well-established definitions and procedures give teachers knowledge of what they should know and be able to do and serve as a basis for reflection and assessment (GSTEP, 2003b).

When studying the preparation of teachers, there is evidence that an internal locus of control affects teaching behavior (Radford, Cashion, & Latchford, 1993; Soh, 1988). Internal-external locus of control has been used in many studies relating to teacher effectiveness to identify a teacher's or preservice teacher's perception of control (Kremer & Kurtz, 1983; Radford et al., 1993; Rose & Medway, 1981a; Sadowski, Blackwell, & Willard, 1985; Soh, 1988). Locus of control (LOC) generally refers to the extent an individual believes his or her behavior determines specific life events (Parkay, Greenwood, Olejnik, & Proller, 1988; Rose & Medway, 1981a). Individuals with an internal locus of control would believe their actions and behavior affect their own success or failure. Individuals with an external locus of control do not believe their actions or behavior affect their own success or failure (Rotter, 1966). Information gathered from the GSTEP Framework Standards Scale and I-E Locus of Control was necessary to assess relationships between the student teachers' level of preparation to teach and locus of control.

Problem Statement

Reports from various government agencies and educational associations have cited the need to improve student achievement (Holmes Group, 1990; McCaslin & Parks, 2002). Increased student achievement would result in a greater number of citizens who were better prepared for work and/or further education. Effective teachers or effective teaching has been linked to improving student achievement (Brandt, 1985; Darling-Hammond & Ball, 1998). Pressures to reform education have focused on improving teacher effectiveness through teacher

education (Bruening, Scanlon, Hodes, Dhital, Shao, & Lui, 2001a; Conley & Goldman, 1998; Hartley et al., 1996; Negroni, 1992; Porter & Brophy, 1988). Previous research of effective teaching identified common knowledge, skills, and dispositions that effective teachers possess (AACTE & CBE, 2003a; Chickering & Gamson, 1987; Hunter, 1985; Wise, 2001). This has lead reformers to identify standards of what teachers should know and be able to do. The Georgia Systemic Teacher Education Program (GSTEP) developed a framework based on national standards identifying what Georgia teachers should know and be able to do. There has been no published examination of the extent to which the GSTEP principles and framework are impacting teacher education preparation. Therefore, this study was conducted to determine the extent to which career and technical education student teachers felt prepared to teach using the GSTEP Framework.

Purpose of Study

The purpose of this causal/comparative study was to compare career and technical education student teachers' and supervising teachers' ratings of student teachers' preparation to teach. The GSTEP Framework assessing preparation to teach introduces preservice teachers to teacher expectations. Frameworks help describe the aspects of a teacher's responsibility that have been documented through empirical studies and theoretical research as promoting improved student learning (Danielson, 1996). Six areas of effective teaching comprise this framework and include: content and curriculum, knowledge of students and their learning, learning environments, assessment, planning and instruction, and professionalism (GSTEP, 2003b). Participants (student teachers and supervising teachers) rated each framework area reflecting the student teacher's level of preparation to teach. The ratings were then compared to determine if there was a difference between the student teacher's rating of preparation to teach and the

supervising teacher's rating of preparation to teach. The relationship between locus of control ratings (internal/external) and student teacher's ratings of preparation to teach was also explored. Locus of control (Rotter, 1966) was used to determine if the student teacher's views reflecting an internal/external control of reinforcement correlated with ratings of preparation to teach.

Research Questions

The following research questions were used to address the purpose of the study,

1. Did the CTE student teachers' ratings of preparation to teach differ from the supervising teachers' rating of the student teacher's preparation to teach based on the six GSTEP Framework Standards Scale areas: content and curriculum, knowledge of students and their learning, learning environment, assessment, planning and instruction, and professionalism?
2. Was there a relationship between CTE student teachers locus of control and their ratings of preparation to teach based on the six GSTEP Framework Standards Scale areas: content and curriculum, knowledge of students and their learning, learning environment, assessment, planning and instruction, and professionalism?

Conceptual Framework for the Study

Teaching is the cornerstone to learning. The term 'effective teaching' is often found in research literature on teaching and learning. Examining what is meant by effective teaching leads us to question, what is effective teaching, what do effective teachers know, and what are they able to do? Cruickshank (1990) stated, "An effective teacher is one judged by significant others as meeting their expectations and needs" (p. 66). Significant others include pupils, parents, colleagues, administrators, and the public at large. Cruickshank also asserted, "The never-ending search for effective teachers stems from the strongly held belief that these teachers

have a significant impact on at least the short-term outcomes of schooling, namely pupil learning and satisfaction" (p. 67).

The movement to identify effective teaching has led to national and state standards for teaching (Darling-Hammond & Ball, 1998). Leading education professionals, such as Hunter (1994) and Danielson (1996), have developed models and frameworks to identify the knowledge, skills, behaviors, and dispositions of effective teachers. "A framework for professional practice offers the profession a means of communicating about excellence" (Danielson, p. 5). Danielson also stated, "A uniform framework allows those conversations to guide novices as well as to enhance the performance of veterans" (p. 6). Understanding what is expected of an effective teacher, i.e. what the teachers do in the classroom, has the potential "for affecting and effecting students' achievement" (Hunter, p. 6).

The term 'effective teaching' has been replaced by 'accomplished teaching' in literature published by the National Board for Professional Teaching Standards (NBPTS, 2004) and the Georgia Systemic Teacher Education Program (GSTEP, 2003a). Accomplished teaching standards identified by Hunter (1995) and Danielson (1996) were used in the creation of standards and frameworks by NBPTS and GSTEP. In 1989, NBPTS issued its policy statement, What Teachers Should Know And Be Able To Do, which served as a basis for all of the standards development work NBPTS conducted (NBPTS, n.d.a). The NBPTS policy statement included five core propositions: teachers are committed to students and their learning; teachers know the subjects they teach and how to teach those subjects to students; teachers are responsible for managing and monitoring student learning; teachers think systematically about their practice and learn from experience; and teachers are members of learning communities. In following years NBPTS work used the five core propositions to identify what teachers should

know and be able to do in various fields, such as Early Childhood/Generalist, Early Adolescence/English Language Arts, Adolescence and Young Adulthood/Mathematics, and Early Adolescence through Young Adulthood/Career and Technical Education.

Georgia sought to identify standards of accomplished teaching on the state level by creating its' own framework regarding what teachers should know and be able to do. The Georgia Systemic Teacher Education Program (GSTEP) published guiding principles and framework standards to guide work done in Georgia. The GSTEP framework standards are comprised of six areas of effective teaching and include: content and curriculum, knowledge of students and their learning, learning environments, assessment, planning and instruction, and professionalism (GSTEP, 2003b). The first area, content and curriculum, includes the ability for teachers to demonstrate strong content knowledge of content area(s) and deliver appropriate instruction for their certification levels. Knowledge of students and their learning encourages teachers to support the intellectual, social, physical, and personal development of all students. The next area, learning environments, requires teachers to create learning environments that encourage positive social interaction, active engagement in learning, and self-motivation. Within the assessment area teachers must understand and use a range of formal and informal assessment strategies to evaluate and ensure the continuous development of all learners. Planning and instruction is the fifth area, in this area teachers are required to design and create instructional experiences based on their knowledge of content and curriculum, students, learning environments, and assessment. The last area, professionalism, accomplished teachers recognize, participate in, and contribute to teaching as a profession. Each of the six GSTEP framework areas above are considered statements of effective teaching and echo the same characteristics as past frameworks and effective teaching standards.

Significance

The significance of this study was two-fold, both theoretical and practical. Theoretical significance was demonstrated by contributing to research on teacher preparation and effectiveness. The data obtained from this study was based on the Georgia Systemic Teacher Education Program (GSTEP) Framework Standards and is important in the development and administration of teacher education curricula. Georgia's work toward identifying effective teacher preparation practices and creating a framework can assist any state, researcher, and/or teacher educator in developing their own effective practices. Identifying what an effective teacher should know and be able to do assists preservice and inservice teachers in assessment and self-assessment of their capabilities, so that strengths are built upon and weaknesses addressed (GSTEP, 2003b). McCaslin and Parker (2003) found "there is little in the literature regarding what constitutes an effective career and technical education teacher education program" (p. 2; McCaslin & Parks, 2002).

Practical significance was addressed through the research questions comparison of the student teachers' and supervising teachers' ratings of the student teachers preparation to teach and use of frameworks in assessment of effective teaching. The study contributes to educational knowledge by providing feedback on University of Georgia career and technical student teachers preparation to teach. This data can be used to inform Georgia universities' career and technical teacher education program on strengths and weaknesses identified in the ratings. Bruening et al. (2001) recommended "more investigation to better understand the intricacies and complexities of CTE teacher preparation programs" (p. 53). McCaslin and Parker (2003) also pointed out Perkins III legislation required the National Dissemination Center for Career and Technical

Education to carry out research, dissemination, and professional development that could be used to improve teacher training and learning, including preservice teacher education.

Summary

Years of research have identified knowledge, skills, behaviors, and dispositions needed to teach effectively (Cochran-Smith, 2005). This research has been implemented in different ways in response to calls for reform in teacher education, national, state, and local education organizations. One way to implement reform efforts is to use standards in the form of frameworks based on effective teaching research. Educational partners throughout Georgia have created standards but have little research of how these standards have influenced beginning teachers. Identifying how beginning teachers rate their preparation to teach based on the standards created will contribute to educational theory and research in effective teaching by providing data on standards developed in Georgia. An instrument used to measure perception of control over environment is Rotter's I-E Locus of Control Scale. The Rotter I-E Locus of Control Scale was used to identify any relationship between student teacher's ratings of preparation to teach and control of their environment.

CHAPTER II

REVIEW OF LITERATURE

This chapter summarizes literature related to the preparation of career and technical education teachers. Major topics include the historical development of teacher education, including career and technical education, reform movements in teacher education, effective teaching, national standards for educators, frameworks for teacher education, and locus of control.

Historical Development of Teacher Education

In the late nineteenth century, a greater percentage of the U.S. population gained access to education (Scott & Sarkees-Wircenski, 2001; Wyman, 2000). "Universal educational opportunities were available for most Americans up to at least the eighth grade" (Scott & Sarkees-Wircenski, p. 154). The need for elementary and secondary teachers increased as education became more available (Butterfield, 2000; Wyman). To meet this need, normal schools were established to train teachers (McCaslin & Parks, 2002). The earliest teacher education seminaries were started and run by women such as Emma Willard, Catharine Beecher, and Mary Lyon (Butterfield). The term normal schools came from the French word "norme," "meaning model or rule." The program of a normal school included "the presentation of model teaching for observation, practice teaching for prospective teacher[s], experimentation to evolve new techniques, and the setting of standards for the common school" (Gitlin, 1996, p. 6).

In the earliest years, men were the typical teachers in elementary schools; but as the need for more teachers increased, women were considered appropriate for teaching positions at the

elementary level (Wyman, 2000). Women's colleges were chartered to provide education in "particular types of work" (Gitlin, 1996), i.e. teaching. Teaching was considered a profession suitable for women until they were married. "By the late 1880's, 63% of America's teachers were women in the cities and women held 90% of the teaching positions in rural classrooms" (Wyman, p. 5).

From 1880 to 1920, a variety of pathways developed for the training of teachers, i.e. teacher education, including normal schools, schools of education, and unions. Normal schools emphasized experience and practical methods. Schools of education emphasized liberal arts and the importance of scientific research with the expectation that teachers have a broad liberal (general) education because they were responsible for the broad formal education of youth (Cruickshank, 1985, McCaslin & Parks, 2002). Unions emphasized the political approach to "professionalization that concentrated on relations and structures that would protect and enhance teacher autonomy and authority" (Gitlin, 1996, p. 589). The normal school, schools of education, and unions each viewed the preparation of teachers differently. The views emphasized by schools of education are still ingrained in society and the teacher education community. After 1920, normal schools and unionized teacher education programs declined as four-year college and university programs became the standard.

The goal of teacher education is to prepare teachers to use their skills to help all students learn. "Teaching is an intellectual and physical activity requiring a wide variety of abilities in presenting and transmitting knowledge to students. It includes classroom-management skills, communication skills, organizational skills, and problem-solving skills" (Fereshteh, 1996, para. 2). Teachers use management, communication, organizational and problem-solving skills to help students learn. "What teachers know and can do is the most important influence on what

students can learn. It is increasingly imperative that all teachers be well prepared to teach all students who come to them for learning" (Lynch, 1996, p. 21).

There are three components of a teacher education program: general education, subject matter preparation, and professional education (Cruickshank, 1985). General education encompasses the education common to all college majors, i.e. classes focused on broad areas of humanities and liberal arts. Subject matter preparation includes courses in the specific teaching content. The teaching content of career and technical teacher education includes, among others, business, family and consumer sciences, marketing, and technology. Professional education includes preparation focusing on the "pedagogy or art and science of teaching" (Cruickshank, p. 4).

Certificates and/or licenses to teach are granted to candidates who complete an approved program at an accredited teacher education program or institution. A program or institution becomes accredited through "an evaluation process that determines the quality of an institution or program using predetermined standards" (Oakes, 1999, para. 3). Oakes (1999) defined certification as the "process by which a nongovernmental agency or association bestows professional recognition to an individual who has met certain predetermined qualifications specified by that agency or association" (para. 5). Licensing was defined as the "process by which a governmental agency grants a license – or permission – to an individual who has met specified requirements" (Oakes, para. 4).

In Georgia, Title 20 of the Official Code of Georgia Annotated (O.C.G.A.) outlined legal guidelines which govern the state educational program (Georgia Professional Standards Commission [GPSC], n.d.). Title 20 created the Professional Standards Commission (PSC) with the responsibility for providing a regulatory system for "certifying and classifying" professional

employees in public schools (GPSC, n.d., para. 2). The guidelines are published in *Rules and Procedures For the Certification of Education Personnel* (GPSC, 2004a). Georgia certification "provides a standardized base-level of professional knowledge and skills for the educators working in public schools" (GPSC, n.d., para. 3) and is required of all professional public elementary and secondary school employees. Georgia standards are based on individualized academic and assessment requirements and commonly used standards developed by the National Association of State Directors of Teacher Education and Certification (NASDTEC). NASDTEC represents "professional standards boards and commissions and state departments of education in all 50 states, the District of Columbia, the Department of Defense Activity, and Ontario that are responsible for the preparation, licensure, and discipline of educational personnel" (National Association of State Directors of Teacher Education and Certification [NASDTEC], 2002, para. 1). Along with the standards for certification, all Georgia professional educators must demonstrate good moral character as outlined by the Educator Ethics section (GPSC, n.d.). Individuals must sign an acknowledgement that they read and understood the ethics of education in the state of Georgia as part of the certification application process.

Nationally, common standards for teacher certification and/or licensing include teacher testing. Teacher testing is meant to "ascertain minimum knowledge and skills in subject areas as well as an understanding of pedagogy that would at least propose a basis for minimum competency" (Madaus & Pullin, 1987 as cited in Negroni, 1992). Eighty percent of states that require licensure exams use one or more of the Praxis series of tests (Educational Testing Service [ETS], 2004c). Teacher testing is also supported by the national accreditation agency, National Council for Accreditation of Teacher Education (NCATE). The Praxis series of tests are administered by the Educational Testing Service (ETS). "The Praxis Series: Professional

Assessments for Beginning Teachers is a set of rigorous and carefully validated assessments that provide accurate, reliable information for use by state education agencies in making licensing decisions" (ETS, 2004c, para. 1).

Praxis I tests academic skills and is typically used for screening applicants into teaching (ETS, 2004c). Praxis II tests are known as subject assessments for teacher licensure in specific content areas. "Subject Assessments measure candidates' knowledge of the subjects they will teach, as well as general and subject-specific pedagogical skills and knowledge. The pedagogy assessments, Principles of Learning and Teaching, are included in this group" (ETS, 2004a, para. 1). Praxis II intends to measure the professional judgment of the knowledge of a beginning teacher (Wise, 2003). In fall 2003, NCATE and ETS expanded their collaboration to develop professional "benchmark" scores on the most widely used Praxis II exams (Wise). They stated "a national professional benchmark is a professional judgment of the knowledge to be expected of a beginning teacher as measured by a licensure test" (Wise, p. 1). NCATE and ETS are also working together to align ETS tests used for licensure purposes with professional standards (Wise). Praxis III is used as a classroom performance assessment test; it is used to assess the skills of beginning teachers in classroom settings. It consists of 19 assessment criteria in four interrelated domains, including: (a) organizing content knowledge for student learning, (b) creating an environment for student learning, (c) teaching for student learning, and (d) teacher professionalism (ETS, 2004b). "The process of accreditation, licensing, and certification are intended to complement each other, with a goal of assuring a system of quality in the practice of teaching" (Oakes, 1999, "Conclusion," para. 1).

Career and Technical Teacher Education

Federal support contributed to the development of career and technical education beginning with the passage of the Morrill Act of 1862 and continuing through reauthorization of the Carl D. Perkins Act in 2005. The Morrill Act of 1862 (Land-Grant) established state universities from funds provided by the leasing or sale of land granted to all institutions. Establishment of state universities supported "higher education that prepared teachers and trained leaders for agriculture and the mechanical arts" (Scott & Sarkees-Wircenski, 2001, p. 126). The second passage of the Morrill Act of 1890, also referred to as the Maintenance Act, incorporated funding African-American institutions. To receive funding from the government, each state had to comply with the Act by establishing at least one institution for African-Americans (Scott & Sarkees-Wircenski). Faculty were needed to provide instruction at the agriculture and mechanics institutes established in each state. The Morrill Acts not only established universities in many states but also led the way for the passage of future legislation related to vocational education (now called career and technical education). In 1907 the Morrill Acts were modified by the Nelson Amendments to increase funding for land-grant colleges and designate a portion to be spent to prepare instructors for teaching agriculture and mechanical arts (Scott & Sarkees-Wircenski).

The Smith-Hughes Act of 1917 "provided funds for vocational education and established the federal-state-local cooperative effort of providing vocational education in the public schools of America" (Scott & Sarkees-Wircenski, 2001, p. 114). The act required vocational teachers to have several years of experience in an occupation or skilled trade before teaching. Work experience was considered to be the best preparation for a vocational teacher. While there was emphasis on liberal education for teacher education in the early 1900's, state legislators believed

state colleges, universities, and normal schools could not provide the training necessary to take the place of occupational experience (Lynch, 1996) in the preparation of vocational teachers. Therefore, vocational teachers could be certified to teach based on their work experience in industry. Throughout career and technical education's history of federally-supported vocational education, career and technical teachers were employed primarily because they had years of extensive experience in a craft or profession (Lynch). This method of certifying vocational education teachers "remained the dominant educational psychology guiding vocational education until the passage of the Vocational Education Act of 1963 and subsequent amendments" (Scott & Sarkees-Wircenski, p. 158).

The preparation of vocational education teachers remained an important aspect of federal legislation such as the George-Barden Act (Vocational Education Act of 1946), the Vocational Education Act of 1963, the Vocational Education Act of 1968, Educational Amendments of 1976, and Carl D. Perkins Acts of 1984, 1990, 1998, and 2004. The George-Barden Act allowed for funds to be used for "supervision and teacher training; salaries and necessary travel expenses of teachers, teacher trainers, vocational counselors, supervisors and directors of vocational education and vocational guidance;" and for program development, work experience programs, equipment, and supplies (Scott & Sarkees-Wircenski, 2001, p. 208).

The Vocational Education Act of 1963 "focused on expanding and improving career and technical education programs and building career and technical education capacity to serve the corporate needs of business and industry" (Scott & Sarkees-Wircenski, 2001, p. 201). The act provided for ancillary services such as teacher training, curriculum development, guidance, and leadership to "assure quality in all vocational education programs" (Scott & Sarkees-Wircenski, p. 214).

The Vocational Education Act of 1968 was passed in order to rewrite (consolidate) all previous vocational education legislation with the exception of the Smith-Hughes Act of 1917. The main points of the Vocational Education Act of 1968 were to emphasize training and retraining at postsecondary schools and to rewrite the definition to align closer to general education (Scott & Sarkees-Wircenski, 2001).

Opportunities for vocational educators to enter "full time advanced study" in a vocational field were introduced in the Education Amendments of 1976 (Scott & Sarkees-Wircenski, 2001, p. 226). This act also encouraged teachers certified in other areas to obtain vocational certification with relevant occupational experience. It continued to support persons from "industry with experience in vocational field to become vocational teachers in areas needing additional instructors" (Scott & Sarkees-Wircenski, p. 226).

The Carl D. Perkins Vocational Act of 1984 (Perkins) and the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (Perkins II) addressed certification and teacher education through providing "professional development and technical assistance for teachers, counselors, and administrators" (Association for Career and Technical Education, 2005). The Carl D. Perkins Vocational and Technical Education Act to 1998 (Perkins III) was maintained to "develop more fully the academic, vocational, and technical skills of secondary students and postsecondary students who elect to enroll in vocational and technical education programs" (Stevens, 2001, p. 5). Section 3(29) defined "vocational and technical education" as

> organized educational activities that (a) offer a sequence of courses that provides individuals with the academic and technical knowledge and skills the individuals need to prepare for further education and for careers (other than careers requiring a baccalaureate, master's, or doctoral degree) in current or emerging employment sectors; and (b) include

> competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, of an individual. (Stevens, 2001, p. 41)

Perkins III gives guidelines for federal and state participation for all levels of career and technical education. In relation to CTE teacher education, each state must "describe how comprehensive professional development (including initial teacher preparation) for vocational and technical, academic, guidance, and administrative personnel will be provided" (H.R. Rep. No. 1853, 1998, para. 19). Comprehensive professional development included (a) state-of-the-art inservice and preservice programs and techniques, and effective teaching skills and practices; (b) assist students in meeting state levels of performance; (c) programs for teachers and other public school personnel to stay current with needs, expectations, and methods of industry; and (d) activities integrated with title II of the Elementary and Secondary Education Act of 1965 and Higher Education Act of 1965 (H.R. Rep. No. 1853, 1998).

In 2001, the National Research Center for Career and Technical Education (NRCCTE) conducted a project to describe factors relating to CTE teacher preparation; the report was titled *The Status of Career and Technical Education Teacher Preparation Programs*. It updated information from a study by Lynch conducted in 1990 (Bruening et al., 2001b). Lynch's 1990 study noted that the population of CTE teacher educators has declined since the 1980's and many CTE teachers are near retirement age. "Over all, the number of CTE teacher preparation programs had declined about 11% over the past ten years" (Bruening et al., "Executive Summary," para. 1). The number of career and technical teaching positions "will grow approximately 10-20% through 2008…Furthermore, the profession is concerned about the quality of the training that future teachers may receive" (Bruening et al., "Introduction," para. 1).

The NRCCTE report also highlighted the need for more education programs in career and technical education. Specifically, the report included: (a) demographics related to characteristics of CTE teacher preparation at colleges and universities in the United States; (b) variables important to CTE teacher preparation; (c) program entry and exit requirements; and (d) course delivery models (Bruening et al.).

The National Research Center for Career and Technical Education (NRCCTE) report also identified variables important to CTE teacher preparation including: creating an integrated curriculum, using alternative assessment properly, and developing skills to work with diverse colleagues and stakeholders. It was noted that program entry and exit requirements had changed since the 1980's with an emphasis on higher academic standards for entry, a required GPA of 2.5 or higher in "over half (59.5%) of the reporting institutions," (p. 32) and 22.9% of the institutions raising their entry requirements to 2.7 or higher (Bruening et al., 2001b). Another change in teacher preparation curriculum was an emphasis on academic-technical integration which did not appear in the CTE teacher education curriculum ten years earlier, in the 1990's. When reporting on course delivery, most institutions reported their programs had changed significantly since the "Educational Reform Movement" (starting in the late 1980's with *A Nation At Risk*); these institutions reported significant changes to curriculum (65%) and teaching methods (50%). Other aspects of their programs, namely adult education, remained very traditional in structure and course delivery. However, institutions also noted that they planned to double their distance education course offerings via the World Wide Web in a three-year period (Bruening et al.).

In order to enhance academic achievement in CTE courses at the secondary level, the National Assessment of Vocational Education (NAVE) Report (2004) recommended investment in focused teacher training programs (Silverberg et al., 2004). The report recommended

emphasis on curriculum development, performance standards, technical assessments, and promotion of work experience programs for CTE secondary students. These recommendations were intended to give guidance to future Perkins legislation (Silverberg et al.), but were also key components in teacher education programs.

In 2004, Perkins was introduced for reauthorization. The house and senate education subcommittees each passed their versions of the Perkins bill for reauthorization, however the house and senate versions were not voted on by the full congress because of lack of time before the end of the 2004 session (Association for Career and Technical Education, 2005c). Although Perkins was not reauthorized in 2004, funding did not end. Perkins was re-introduced to the house and senate in January of 2005. As of May 4, 2005, both the house and senate passed the Perkins reauthorization bill; this bill will then go to a "conference committee to work out the differences between to two chambers' respective reauthorization bills (H.R. 366 & S. 250)" (Association for Career and Technical Education, 2005b).

Certification of Georgia Career and Technical Education (CTE) teachers is similar to certification of general education teachers (GPSC, 2004) and CTE teachers nationally (Bruening et al., 2001b; Silverberg et al., 2004). Certification of CTE teachers can be obtained through completing a state-approved program in the field, called a renewable certificate. However, certification in Trade and Industrial Education is usually obtained through other certification methods. For example, the first method for obtaining a teaching certificate in Business, Marketing, Family and Consumer Sciences, and Technology education is the renewable certificate programs. On the other hand, Trade and Industrial certification is based on a combination of occupational experience, industry licensing, and formal study (GPSC, 2004a; 2004c).

Teacher Education Reform

Pressure to reform education comes from sources outside and inside the educational community. Outside pressure (politicians, business leaders) to reform education and teacher education is usually ignited by a need for prepared citizens or workers. Pressures inside the educational community (associations, state departments of education, researchers) center on the need for educating all children and better preparing teachers for their roles in public schools (Hartley et al., 1996). The source of education reform is less important than its impact on education and expectations of teacher education programs. For example, in the late 1800's to early 1900's the industrial revolution increased the demand for an educated worker; during the cold war there was a need for students coming out of high school to be better prepared in science and technology; and in the 1980's students needed to be better prepared for changing technology (Scott & Sarkees-Wircenski, 2001).

Conley and Goldman (1998) suggested three factors affect school reform. First, educational authority is widely disseminated, reducing the power of the reform at educational levels. Second, "external policies create internal conflict" (p. 8); in other words, the reform policies dictated by the government or outside organization are in conflict with how the educational community presently understands education. The reform policy dictated might be different in philosophical view or method to what the teacher believes or has learned. And third, reform policies might be difficult to comply with because of a variety of conditions such as lack of funding, training, resources, or support (Conley & Goldman). These factors are echoed by the Holmes Group which stated some reform policies fail because "they attempt education reform by simply telling teachers and everyone else what to do, rather than by empowering them to do what must be done" (Holmes Group, 1995, p. ii).

Education is thought to be the answer for the changing needs of society. Each time society's needs change, there is a call for educational reform; often, a call to reform teacher education soon follows. Hartley et al. (1996) stated criticisms of teacher preparation "commonly coalesce around the static nature of higher education institutions and their seeming inability to change" (p. 29). Reform of teacher education has been typically addressed by considering research on the behaviors, skills, and practices of effective teachers. Some of the early educational reform reports form within the educational community include the Cardinal Principles of Secondary Education in 1918, the American High School Today in 1959, and The Report to the Committee of Ten in 1983 (Negroni, 1992).

The Cardinal Principles of Secondary Education report, published in 1918, was instrumental in forming goals before reforming schools. This report centered on the need to reform secondary schools to handle increased enrollment. Seven Cardinal Principles were outlined in the report, to include: (a) health, (b) command of fundamental processes, (c) worthy home membership, (d) vocation, (e) civic education, (f) worthy use of leisure, and (g) ethical character (Scherer, n.d.).

"In the 1960s and early 1970s, scholars and policymakers concerned about educational equity and improvement did not see much need for research on teaching or for upgrading the quality of the teaching profession" (Porter & Brophy, 1988, p. 74). Scholars and policymakers were convinced that neither schools nor teachers made a difference in student achievement. In the late 1970's, efforts to create a "teacher proof" curriculum by creating materials that would enhance student achievement without a knowledgeable or skilled teacher were developed (Porter & Brophy).

Many researchers have commented that an alarming and powerful call for teacher education reform started in the mid-1980 with *A Nation At Risk: The Imperative for Educational Reform* report (Bruening et al., 2001a; Cochran-Smith, 2005; Hartley et al., 1996; Scott & Sarkees-Wircenski, 2001). Although *A Nation At Risk* focused on K-12 education, the National Board for Professional Teaching Standards stated "In 1983, public concern about the state of American education was sharply heightened by the issuance of a federal report titled *A Nation at Risk*. The report provoked a wave of reform initiatives that engulfed the education community" (NBPTS, n.d.a, "Introduction," para. 1). Politicians labeled education as a threat to national security, while business leaders viewed public education as a decline in competitive advantage (Hartley et al., 1996). Odden and Odden (1984) stated business leaders viewed education as the key to the America's economic growth. As a result of *A Nation at Risk* increased interest was shown in the early 1980s when many states created a task force to address educational reform (Odden & Odden, 1984). Education reform by states resulted in

> 37 states with school or district planning programs; 47 states…had curriculum development or technical assistance initiatives; 15 had state level effective schools programs; 44 had state-run staff development programs for teachers, and 31 had them for administrators; 29 had new incentive programs for teachers; seven required new kinds of field experiences for teachers; and 16 began requiring beginning teachers to serve supervised internships. (Andringa, Brown, and Burns, 1984 as cited in Odden & Odden, 1984)

A Nation at Risk focused on additional curriculum requirements at all grade levels, rigorous academic standards, more time in school day and year, improved preparation and desirability of teaching, and support from community and government (Negroni, 1992). The

report recommended raising high school graduation requirements, upgrading elementary curriculum, and employing outside experts to improve curricular materials. All educational institutions were expected to raise expectations, using grades and standardized testing as indicators of performance. It was recommended that emphasis be placed on more instructional time in the school day and year, incorporating more homework, attendance incentives, and reduced intrusion on teachers. Recommendations related to teacher preparation included higher standards for incoming teachers, market-sensitive salaries, longer contracts, alternative credentialing, and using master teachers to plan programs for probationary teaching and supervision. Support from the federal, state, and local government and local communities was also recommended (Hartley et al., 1996; Negroni). Further, *A Nation At Risk* suggested the formation of a national board to recommend professional teaching standards (Negroni). This recommendation resulted in the formation of the National Board for Professional Teaching Standards (NBPTS). NBPTS developed statements regarding *What Teachers Should Know and Be Able to Do* which included that students should be able to learn through structured and inductive learning. "While it is useful to teach students about the concepts and principles that scholars have generated, it is also valuable to engage students in learning by discovery" (NBPTS, n.d.b, p. 11).

"In 1986, the Carnegie Task Force on Teaching as a Profession issued a pivotal report, A Nation Prepared: Teachers for the 21st Century" (NBPTS, n.d.b, para. 3). It reported that very little changed in the area of teaching and learning since *A Nation At Risk* report in 1983 (Negroni, 1992). The Carnegie Task Force stated advanced academic standards could only be achieved if teachers "greatly increased" their knowledge and skills (Hartley et al., 1996, p. 26). A Nation Prepared described the teaching force from 1974 to 1982 as dismal and identified

teacher's salaries equal to occupations not requiring a college degree (Hartley et al.). Suggestions on increasing teacher's knowledge and skills were to certify teachers through a national standards board, require a bachelor's degree in arts or sciences (eliminating degrees in education), develop graduate-level teacher preparation programs, and make teacher salaries and opportunities competitive with other professions requiring equal education (Hartley et al.). The Task Force also suggested the following: teachers need to determine how best to help their students achieve state and local goals; recruitment of qualified minority students for teaching careers; creating teacher incentives directly tied to student and school performance; and providing support necessary to achieve student excellence (Hartley et al.).

In 1989, former President George H. Bush gathered the nation's governors at an "Education Summit" to address educational reform. This summit resulted in the creation of The National Education Goals (1989), also referred to as Goals 2000. Goals 2000 included providing programs and professional development for teacher education (Hartley et al., 1996). Another report which focused attention on teacher professionalism was *Tomorrow's Teachers* (1986) by the Holmes Group (Negroni, 1992). The Holmes Group, a consortium of nearly 100 American research universities is committed to making teacher preparation programs more rigorous and connected–to liberal arts education, to research on learning and teaching, and to wise practice in the schools (Holmes Group, 1990). Tomorrow's Teachers stated that teachers must improve their teaching practice if they expect student achievement to improve. Recommendations on improving teaching practice included moving teacher preparation to the graduate level, increased admission standards to teacher preparation programs, and faculty salaries equal to educational achievement (Hartley et al.).

Other reports produced by the Holmes Group *Tomorrow's Schools* (1990) and *Tomorrow's Schools of Education* (1995) made similar recommendations for improving teacher education. *Tomorrow's Schools* (1990) recommended professional development schools through partnerships with public school and university faculty (Hartley et al., 1996). *Tomorrow's Schools of Education* (Holmes Group, 1995) recommended (a) "a wider design for preservice curriculum," (b) college/university faculty working directly with schools, (c) increased diversity of preservice teachers, (d) more work in schools, i.e. practicum and internship experiences, and (e) sharing information through schools of education (Hartley et al., p. 31).

Since 1986, many organizations have provided guidance on how to reform teacher education. According to the National Council for Teaching and America's Future (NCTAF), a system of quality assurance for teacher education programs increases the likelihood that "every child is taught by a caring, competent, and qualified teacher" (Wise, 2001, p. 18). In order to create a quality system, teacher educators must ensure programs integrate seven features: (a) advanced certification, (b) licensing standards, (c) curriculum materials, (d) alignment, (e) accreditation, (f) professional development schools, and (g) state standards boards (Wise).

"In recent years, states have undertaken major reforms in teacher licensure that reflect the seriousness of their commitment to accountability for teacher preparation" (Imig & Schuhmann, 2003, p. 16). Recent legislation, such as Carl D. Perkins in 1998 and No Child Left Behind (NCLB) in 2001, focus on student learning and achievement. These foci have implications for effective teaching instruction in teacher education. No Child Left Behind, federal legislation passed by Congress in 2001 and signed by President George W. Bush in January 2002, view the teacher as someone who "can positively impact student performance." Colleges and universities

are encouraged to work with local school districts to provide high-quality teachers and high-quality professional development (GPSC, 2003, para. 3).

The No Child Left Behind Act defined a high-quality teacher as a teacher who possesses knowledge in "'core academic subjects'—English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography" (Joftus & Maddox-Dolan, 2003, p. 6). Beginning with the 2002-2003 school year, NCLB required that all newly hired teachers: (a) obtain full state certification, (b) certification or licensure cannot be waived for emergency, temporary, or provisional teachers, and (c) hold a bachelor's degree and demonstrate a high level of competency in each subject taught. The high level of competency in each subject taught must be demonstrated by passing the related state subject test or complete coursework equaling an academic major in the subject taught, or advanced certification. Before the start of the 2004-2005 school year, all teachers hired prior to the 2002-2003 school year must have met the NCLB guidelines (Joftus & Maddox-Dolan).

Career and Technical Teacher Education

Starting with agriculture, home economics, and trades and industrial education, career and technical education has evolved to include marketing, business, health occupations, and technology education (McCaslin & Parks, 2002; Scott & Sarkees-Wircenski, 2001). A high-quality teacher in career and technical education must combine the knowledge of a high-quality teacher with knowledge of the workforce. According to Lynch, a quality career and technical education (CTE) teacher program must focus on four broad areas: "workforce education; general education and liberal arts; knowledge of the learner, pedagogy, instructional technology, and professional education; and clinical experiences" (1996, p. 16). From the onset of vocational education, knowledge of the workforce has remained a primary objective of CTE. General

education and liberal arts were not seen as necessary for all vocational teachers in 1917, but have increased in importance as new legislation called for higher academic knowledge. Individualizing education, teaching to the learners' strengths, bringing learning into context, and providing technical knowledge for the future workforce will continue to be areas of concentration in career and technical education. Clinical experiences have gained increased emphasis since the early 1990s. Lynch stated career and technical education must work with colleges of education and national organizations when responding to calls for reform of teacher education. Teachers preparing to obtain initial teacher certification need to have increased clinical experiences. Clinical experiences for career and technical education must focus on the classroom as well as the workplace (Lynch).

Effective Teaching

Effective teaching studies "focused on what teachers did that resulted in increased student learning" (Wolfe, 1998, p. 61). Effective teaching has been the focus of study for many years. Some individuals associated with effective teaching research are John Dewey, Jerome Bruner, Jere Brophy, Barak Rosenshine, Bruce Joyce, and Madeline Hunter (Wolfe).

The writing and research of Dewey and Bruner provided a foundation for understanding effective teaching. Students were the focus of both Dewey and Bruner's research. Dewey, a psychologist and philosopher, was a strong advocate for involving children in being active in their learning by communicating, constructing, investigating, problem-solving, and creating. Dewey's approach to education and teaching was a departure from practices in elementary and collegiate classrooms of that time (Lynch, 1996; Scott & Sarkees-Wircenski, 2001). Bruner researched ways to make content meaningful to students. He felt students must understand the general principles as well as making it meaningful to their lives. By making learning

meaningful, students would be able to develop an attitude toward learning and inquiry to solve problems on their own (Combs, 1965).

Brophy, Rosenshine, and Joyce researched teacher behavior and its' effects on students. Porter and Brophy (1988), who reported research for the Institute for Research on Teaching, noted that research had focused on "roles of teachers and the thoughts and actions involved in carrying out teaching activities;" (p. 76) inherent problems in teaching such as class size and resources; and the planning, thinking, and decision making that lead to teachers' classroom behaviors. Rosenshine also studied teacher behavior and "established a firm connection between traditional teacher behaviors and student achievement in tests" (Brandt, 1985, p. 3). Joyce and Weil (as cited in Brandt) pointed out "teachers have a storehouse of models they can draw upon to teach students to think" (p. 3).

Hunter's work built on previous research and combined her knowledge of brain-based learning and instruction to analyze research on effective teaching. Hunter's view of effective teaching is presented in her publications such as *Elements of Effective Instruction* (1982), *Mastery Teaching* (1982), *Enhancing Teaching* (1994), *Teach for Transfer* (1995), *Improved Instruction* (1995), and *Madeline Hunter's Mastery Teaching*, co-written with Robin Hunter (2004). Hunter's view is that teaching is made up of many decisions. Examples include planning an anticipatory set, paying attention to the learning environment, or performing task analysis (Hunter, 1985; Wolfe, 1998). An important concept that Hunter emphasized was "the more we know about the science of teaching, the better we can artistically apply that knowledge" (Wolfe, p. 64). Teachers are the decision makers in the classroom, they must know when and how to make decisions that affect student learning (Hunter, 1985). One of the most important ideas from research on effective teaching is that student learning was improved by teacher

educators, at the college or university level, modeling actions on "practices proven to be successful in real classrooms and schools" (Elmore, 1992, p. 47). Proven practices include demonstrating behaviors that encourage student success and focusing on student's conceptual understanding rather than covering the material (Elmore).

So, what do effective (accomplished) teachers know and what are they able to do? Cruickshank (1990) stated "An effective teacher is one judged by significant others as meeting their expectations and needs" (p. 66). Significant others include pupils, parents, colleagues, administrators, and the public at large. Cruickshank also asserted that "The never-ending search for effective teachers stems from the strongly held belief that these teachers have a significant impact on at least the short-term outcomes of schooling, namely pupil learning and satisfaction" (1990, p. 67). In order to improve preservice teacher learning, an undergraduate program should incorporate seven good practices. These practices, stated by Chickering and Gamson (1987) included: "(a) Encourage contacts between students and faculty; (b) develop reciprocity and cooperation among students; (c) use active learning techniques; (d) give prompt feedback; (e) emphasize time on task; (f) communicate high expectations; and (g) respect diverse talents and ways of learning" (para. 4). These good practices can be thought of as models of good teaching practices.

Planning and preparation are important in ensuring high quality teacher education programs. Professional teaching boards and organizations, such as INTASC and NBPTS, aim to create a high level of expectation for teacher programs in order to professionalize teacher education, continually trying to negate myths about teaching. Myths such as "anyone can teach" and that "teachers are born and not made" have been contradicted by empirical research, or according to Darling-Hammond and Ball, "Teachers who are fully prepared and certified in both

their discipline and in education are more highly rated and are more successful with students than are teachers without preparation and those with greater training are found to be more effective than those with less" (1998, p. 3).

Research in effective teaching and calls for educational reform led educational organizations to consider standards for the professional preparation of teachers. Professional education organizations offered definitions of teaching and standards of professional behavior to communicate the expectations of teachers. The Interstate New Teacher Assessment and Support Consortium (INTASC), an organization focused on standards for beginning teachers follows one basic premise: "An effective teacher must be able to integrate content knowledge with pedagogical understanding to assure that all students learn and perform at high levels" (AACTE, 2003b, para. 4). Pedagogical knowledge includes "information about typical difficulties that students encounter as they attempt to learn about a set of topics; typical paths students must traverse in order to achieve understanding; and sets of potential strategies for helping students overcome the difficulties that they encounter" (Bransford, Brown, Cocking, Donovan, & Pellegrino, 2000, p. 45). A focus on pedagogical content knowledge is an extremely important part of what teachers need to learn to be more effective.

National Standards for Educators

National standards have been the focus of educational reform for many years. Calls for reform in student learning and achievement have led to continued scrutiny of teacher education.

> Only when preservice preparation, curriculum, student assessment, professional development, and teacher evaluation policies at the state, district, and school levels are aligned with one another, and in support of the same vision of high-quality instruction,

> can we expect to achieve the goal of excellence and equity for all students. (Weiss & Pasley, 2004, p. 28)

In 2003, Imig and Schuhmann identified linking P-12 standards, teacher licensure, and teacher assessment through emerging frameworks as current efforts of reform. Even earlier Odden and Odden (1984) suggested "government intervention must unify standards and objectives but not practices and programs" (p. 19) at the state level.

Numerous organizations have provided standards for teachers to be adopted at the state and national levels, including the Interstate New Teacher Assessment and Support Consortium, National Council for Accreditation of Teacher Education, Teacher Education Accreditation Council, and National Board for Professional Teaching Standards. These organizations important in the standards reform movement will now be discussed.

Interstate New Teacher Assessment and Support Consortium (INTASC)

The Interstate New Teacher Assessment and Support Consortium (INTASC), started in 1987, was established to "enhance collaboration among states interested in rethinking teacher assessment for initial licensing as well as for preparation and induction into the profession" (INTASC, 1992, p. 5). The consortium was started to set standards for beginning teacher certification based on standards-based work by the NBPTS, state agencies, higher education institutions, and national educational organizations. INTASC's mission was to provide new accountability requirements for teacher education programs, new strategies for performance-based licensing and evaluation, and new programs for enhanced professional development (Meyer, 2000). The standards created "articulate the knowledge, skills, and dispositions a new teacher must demonstrate to qualify for licensure" (Meyer, para. 6). The consortium's work is guided by one basic premise: An effective teacher must be able to integrate content knowledge

with pedagogical understanding to assure that all students learn and perform at high levels. The work titled Model Standards for Beginning Teacher Licensing, Assessment and Development: A Resource for State Dialogue (Interstate New Teacher Assessment and Support Consortium, 1992) outlined the knowledge, dispositions, and performances deemed essential for all teachers regardless of the subject or grade level being taught. The difference with previous standards was the emphasis on performance-based "abilities teachers develop" rather than the course work completed (Oakes, 1999). The standards represent a shared view among the states and within the profession of what constitutes competent beginning teaching (Interstate New Teacher Assessment and Support Consortium, 2004). Danielson (1996) reported that INTASC standards were compatible with those of the NBPTS concerning beginning teachers. The standards are in the form of 10 principles known as the INTASC standards framework. These 10 principles are:

> Principle #1: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful to students.
>
> Principle #2: The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social, and personal development.
>
> Principle #3: The teacher understands how students differ in their approaches to learning and created instructional opportunities that are adapted to diverse learners.
>
> Principle #4: The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

Principle #5: The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Principle #6: The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Principle #7: The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Principle #8: The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Principle #9: The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Principle #10: The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being. (Meyer, 2000, para. 11-20)

National Council for Accreditation of Teacher Education (NCATE)

The National Council for Accreditation of Teacher Education (NCATE) provides accreditation for colleges and schools of education. NCATE was founded in 1954 and is considered a voluntary accrediting body recognized by the U.S. Department of Education (Oakes, 1999). Accreditation of professional education units (institution, college, school,

department, or other administrative body) is said to ensure minimum standards for the education of teachers (Imig & Schuhmann, 2003). Five standards for colleges and universities seeking accreditation of teacher education have been identified by NCATE. The standards to accredit an educational unit focused on (a) performance assessment; (b) content and pedagogy; (c) upgrading clinical experience; (d) promote models of diversity and collaboration; and (e) technology as a teaching tool (Wise, Leibbrand, & Williams, 1997). The first standard requires institutions to focus assessment on performance-based methods throughout their program of study. Content and pedagogy are the second standard. NCATE states institutions can no longer treat content and pedagogy as separate concepts; they must by integrated into instruction. The third standard, upgrading clinical experiences, includes creating professional development schools and professional communities. Professional communities need to include professors, deans, teachers, policymakers, administrators, and school specialists. Next, models to promote diversity and collaboration within teacher preparation must be formed. Not only should teacher education candidates receive diverse experiences, but institutions should also focus recruitment and retention of diverse populations (higher education faculty, teachers, and students). The last standard focuses on institutions ensuring graduates can use technology as a teaching tool within their teacher preparation (Wise et al.).

Teacher Education Accreditation Council (TEAC)

The Teacher Education Accreditation Council (TEAC) was established in 1998 out of concern that NCATE was the only national teacher accreditation association (Oakes, 1999). TEAC was formally incorporated in 1997 and is recognized by the U.S. Department of Education (Imig & Schuhmann, 2003; Oakes). TEAC seeks to accredit programs, not educational units like NCATE (Imig & Schuhmann). A program is defined as a "planned

sequence of academic courses and experiences leading to a degree, and/or a state license (or certificate), or some other credential, that entitles the holder to perform professional education services in schools" (Imig & Schuhmann, p. 3-4). Its mission is to promote professional education programs in colleges and universities, emphasizing four principles of quality: (a) student learning, (b) assessment of student learning, (c) institutional learning, and (d) institutional commitment (Oakes). As of 2003, the TEAC had accredited five institutions, had 59 candidates for accreditation decisions and 2 initial accreditation decisions (Imig & Schuhmann).

National Board for Professional Teaching Standards (NBPTS)

Established in 1987, the National Board for Professional Teaching Standards (NBPTS) is dedicated to the promotion of education standards and the advancement of the teaching profession. NBPTS was created as a result of recommendations from *A Nation Prepared: Teachers for the 21st Century*, a report produced in response to *A Nation at Risk* released to congress in 1983 (NBPTS, n.d.a).

The National Board for Professional Teaching Standards sought to elevate teaching and learning by:

> (a) maintaining high and rigorous standards for what accomplished teachers should know and be able to do; (b) providing a national voluntary system certifying teachers who meet these standards; and (c) advocating related education reforms to integrate National Board Certification in American education and to capitalize on the expertise of the National Board Certified Teachers. (NBPTS, n.d.a, para. 4)

In 1989, the national board released a policy statement, *What Teachers Should Know And Be Able To Do*, which served as a basis for standards development conducted by NBPTS

(NBPTS, n.d.a). Since 1989, NBPTS has continued to gain popularity with teachers and the education community. The intent of NBPTS was to provide a standards-based model of accomplished teaching. NBPTS (n.d.a) "seeks to identify and recognize teachers who effectively enhance student learning and demonstrate the high level of knowledge, skills, abilities and commitments reflected in five core propositions" (p. 3, para. 1). These five core propositions are, Teachers: (a) are committed to students and their learning; (b) know the subjects they teach and how to teach those subjects to students; (c) are responsible for managing and monitoring student learning; (d) think systematically about their practice and learn from experience; and (e) are members of learning communities (NBPTS, n.d.a). "Accomplished teachers constantly assess and adjust their practice to maintain fidelity to students and to subjects, to knowledge and to skills, and to basic and advanced functions" (NBPTS, n.d.b, p. 15). Teachers can clearly articulate instructional goals for their students and can adjust instruction to fit students' needs (NBPTS, n.d.b).

NBPTS standards for Career and Technical Education include creating a productive learning environment, advancing student learning, and helping students transition to work and adult roles. Each of the standards listed contain several points within each standard. Creating a productive learning environment includes (a) knowledge of students, (b) knowledge of subject matter, (c) learning environment, and (d) diversity. Advancing student learning includes (a) advancing knowledge of career and technical subject matter and (b) assessment. Helping students transition to work and adult roles include (a) workplace readiness; (b) managing and balancing multiple life roles; (c) social development; (d) reflective practice; (e) collaborative partnerships; (f) contributions to the education profession; and (g) family and community partnerships. Each standard aligns with the five core propositions in each paragraph, and the

CTE standards are similar when compared to other certification disciplines (NBPTS, 2003b). National Board Certification standards for Career and Technical Education are separated into these occupational clusters: (a) Agriculture and Environmental Sciences; (b) Arts and Communications; (c) Business, Marketing, Information Management, and Entrepreneurship; (d) Family and Consumer Sciences; (e) Health Services; (f) Human Services; (g) Manufacturing and Engineering Technology; and (h) Technology Education. Career and Technical Education teachers must specify an occupational cluster when applying for National Board Certification (NBPTS, 2003a).

As stated previously, many states and school systems value National Board Certification. Georgia, in particular, enacted *The A Plus Education Reform Act of 2000* (revised in 2001) to pay a portion of the certification fee for qualified teachers (Board of Regent of the University System of Georgia, 2004a). Monetary assistance is also offered by some local school systems, the Georgia Association of Educators (GAE), and the Professional Association of Georgia Educators (PAGE). Georgia is reported to have the 5th highest number of successful National Board candidates in the United States (Board of Regent of the University System of Georgia, 2004a).

Although many organizations, such as National Governors' Association, National Council for Accreditation of Teacher Education, the American Federation of Teachers, the National Alliance of Black School Educators, and others associated within the educational community see the National Board for Professional Teaching Standards as a way to professionalize education (NBPTS, 2003a), there is still criticism of NBPTS efforts. Thirunarayanan (2004) stated that National Board Certification is a billion dollar hoax and the content standards are no more than entry-level standards. It is Thirunarayanan's opinion that National Board certified teachers should have: (a) an earned doctorate; (b) five years of teaching

experience in which their students have significantly outperformed their peers; (c) developed and empirically tested innovative ways of teaching, learning, assessment, and have published articles in scholarly peer reviewed journals; and (d) performed well on rigorous exams (Thirunarayanan, 2004).

Other criticisms of National Board certification come from articles such as Richards (2004), which stated National Board certification does not rate teaching skill and is a waste of taxpayer money. In this article, Richards noted teachers in Washington receive an annual bonus of $3,500 and other benefits when they earn National Board certification. Richards stated NBPTS shows no evidence National Board certification impacts student achievement positively or that applicants are different from non-applicants. Richards suggested using value-added assessments to measure academic achievement in order to quantify how much value a student received from one year of teaching.

Teacher Education Frameworks

Frameworks are used to provide "well-established definitions of expertise and procedures to certify novice and advanced practitioners" (Danielson, 1996, p. 2). Well-established definitions of expertise and procedures help to professionalize occupations such as doctors, lawyers, and architects. Frameworks describe the teacher's responsibilities for promoting improved student learning that has been documented through empirical studies and theoretical research (Danielson, 1996). Bringing behaviors to the "conscious awareness of every teacher and articulating why they are effective increases the likelihood that the teacher will make deliberate and appropriate use of those principles in the future" (Hunter, 1994, p. 14).

Danielson's Framework

The work done by Danielson in designing assessment systems is recognized as "a very thorough collection of research-based information about the complex process of teaching" (Morgan, 1999, p. 375). Danielson "has worked as a consultant on performance assessment for numerous states, school districts, and schools in the United States and overseas, and for the Educational Testing Service (ETS), designing both assessment systems and training programs for assessors" (Danielson, 1996, p. iii). Danielson worked with the ETS on preparing and validating the criteria for Praxis III: Classroom Performance Assessments, then designed the training program for assessors. This experience with the ETS led to the publication of *Enhancing Professional Practice: A Framework for Teaching* in 1996 (Danielson, 1996).

Danielson (1996) identified teaching as a complex activity. She divided the framework for teaching responsibility into four domains containing a total of 22 components. The four domains are identified as: Domain 1—planning and preparation, Domain 2—classroom environment, Domain 3—instruction, and Domain 4—professional environment. The components are clustered under one of the four domains of teaching responsibility (Danielson).

> Because teaching is complex, it is helpful to have a road map through the territory, structured around a shared understanding of teaching. Novice teachers, of necessity, are concerned with the day-to-day survival; experienced teachers want to improve their effectiveness and help their colleagues do so as well; highly accomplished teachers want to move toward advanced certification and serve as a resource to less-experienced colleagues. (Danielson, 1996, p. 2)

Standards-based Teacher Education Project (STEP)

Standards-based Teacher Education Project (STEP) is a national program established by the Council for Basic Education (CBE) and the American Association of Colleges for Teacher Education (AACTE). It was developed as a "multi-state initiative to help universities redesign their teacher preparation programs to ensure that teacher candidates have the content knowledge and pedagogical skills to support P-12 standards" (CBE, 2001, para. 1). Its basic premise is teacher education programs should encourage strong collaboration among arts and sciences, education, and P-12 faculty members and administrators (AACTE, 2003a). P-12 is defined as pre-kindergarten through the 12th grade of high school. STEP is based on three principles: (a) content knowledge of subject, (b) how to teach learning at high levels, and (c) monitor and assessment of student's learning (AACTE, 2003b; Board of Regent of the University System of Georgia, 2004b).

Since 2001, eight four-year universities, including a consortium of Georgia universities, participated in STEP to redesign their teacher education programs. Each institution that participated in STEP was asked to (a) perform an "institutional analysis" to determine the level of knowledge, understanding, and skills of academic content; (b) redesign courses and experiences for teacher candidates to increase their experience in bringing students to high levels of achievement; and (c) institute an accountability system for content knowledge of subjects they will teach (Board of Regent of the University System of Georgia, 2004b). In the report following year two of implementation, the University of Georgia reported four major accomplishments. The first accomplishment was laying the groundwork for a seamless six-year process from the students first year in college through their second year of teaching (this approach is supported by the Holmes Group in *Tomorrow's Schools of Education*, p. iv). The

second was to develop links between Education and other disciplines, such as Language Arts, Science, Engineering, Business, Family and Consumer Sciences, Mathematics, etc. The third accomplishment was to recognize faculty and staff activities in improvement efforts with the College of Education, activities with P-12 schools, research in educational pedagogy, and involvement in teacher training grants for promotion and tenure requirements. The last accomplishment was to use the grant, renamed in Georgia to GSTEP (Georgia Systemic Teacher Education Program), to focus on P-12 student learning in teacher education programs (Board of Regent of the University System of Georgia, 2004b).

Georgia Systemic Teacher Education Program (GSTEP)

Federal funding and initiatives to strengthen teacher education have taken directions from STEP. Darling-Hammond and Ball (1998) recommended organizing teaching education around standards for students and teachers. During the planning stages of GSTEP four foci were identified, including curriculum, induction, early community experiences, and program evaluation (GSTEP, 2003a). GSTEP's number one goal for teaching and learning - was to bring coherence to teacher preparation and induction. In order to bring coherence to teacher preparation and induction, the participating universities developed guiding principles to address the preparation of teachers in Georgia. A committee of university professors, teachers (P-12), parents, students, and community members developed a draft of guiding principles. The goal was to develop common language to articulate a definition of an accomplished teacher agreed upon by the stakeholders in the community (GSTEP).

The principles are considered as "what do we believe" statements. These statements were based on work previously done by Danielson and NBPTS. Principles outlined were

process, support, ownership, impact, equity, dispositions, and technology. An informational handout outlines the principles as follows (also see Appendix A):

> (a) The process principle implies "learning to teach is a career-long process of growth;" (b) The support principle implies "multi-layered support and continued professional development involves various participants;" (c) The ownership principle implies "each teacher designs his or her own career path;" (d) The impact principle implies "effective teaching yields evidence of student learning and achievement;" (e) The equity principle implies "all students and their teachers deserve high expectations and strong support to achieve their best;" (f) The dispositions principle implies "positive and productive dispositions, attitudes, and temperament have an important impact on student growth, teacher growth, and school climate;" (g) The technology principle implies "technology facilitates teaching, learning, community building, and resource acquisition." (GSTEP, 2003a, para. 1)

From these guiding principles, the GSTEP Framework Standards (Appendix B) were developed by a team of educators to describe the knowledge, skills, behaviors, and dispositions expected of teachers at various career points. The goal of the framework standards was to assist preservice and inservice teachers in self-assessment of their capabilities, so that strengths are built upon and weaknesses addressed (GSTEP, 2003b). Drafts of the standards were refined through a series of focus groups involving over 500 educators. The framework includes the following six subscale areas: content and curriculum, knowledge of students and their learning, learning environments, assessment, planning and instruction, and professionalism. Each subscale area includes six to eight statements of accomplished (effective) teaching, also known

as indicators. For example, under content and curriculum the first indicator reads "Accomplished teachers demonstrate knowledge of content, major concepts, assumptions, debates, processes of inquiry, and ways of knowing that are central to the subject(s) they teach" (GSTEP, 2003b, "Content & Curriculum," para. 2). Another example comes from the professionalism subscale, the first statement under this category reads "Accomplished teachers continually examine and extend their knowledge of the history, ethics, politics, organization, and practices of education" (GSTEP, 2003b, "Professionalism," para. 2). Each indicator begins with "Accomplished teachers" and describes an aspect of the category it is under.

GSTEP Rubric

The guiding principles and framework developed by the GSTEP project are used differently by the participating universities and K-12 schools involved; however, each participant has a common goal for incoming teachers--to bring coherence to teacher preparation and induction (GSTEP, 2003a). A rubric aligned with the GSTEP Framework Standards, the Hertzog-Monetti-Minor or H-M-M Bridge-Rubric, was developed by one of the participating universities. The rubric was a revision of the standards developed by an inter-campus GSTEP team and the initial draft rubric describing the knowledge, skills, behaviors, and dispositions expected of teachers at various career points. The H-M-M Bridge Rubric was re-created as an electronic instrument using the six categories and indicators as the framework described previously (Wiles, 2003). The goal of posting an electronic version of the framework was to allow the preservice and inservice teachers to use the rubric as a self-assessment instrument during various points in their education (Hertzog & O'Donnell, 2003).

Validity. Validity of the GSTEP Framework standards was established by a series of focus groups involving over 500 participants (Valdosta State University, 2002). Validity is the

extent to which the instrument measures what it says it measures (Gall et al., 2003). The instruments for this study were developed from the Georgia Systemic Teacher Education Program (GSTEP) Framework. Frameworks are used to provide "well-established definitions of expertise and procedures to certify novice and advanced practitioners" (Danielson, 1996, p. 2). Content validity is the most important concern to the researcher using the survey method. Content validity is concerned with the questions, format, and scales of the instrument (Creswell, 2003). Content validity of the GSTEP Framework "derives from professional conversations that accompany its introduction into a school or district" and is demonstrated by the participating focus groups agreement on its' contents (Danielson, 1996).

The electronic instrument was tested in a pilot study in the fall of 2002; it included a small sample of the targeted population to test for validity and reliability. It was tested again in spring of 2003, including participants who were "junior and senior teacher candidates in the Departments of Early Childhood and Middle Grades/Secondary Education as well as graduate students enrolled in five off-campus graduate programs" (P. Hertzog, personal communication, April 21, 2003). The online instrument was created with each rubric section placed on a separate page with identical directions on each page. The university used the standards rubric for all College of Education students, resulting in a total of 292 usable electronic responses at the end of the spring 2003 semester. The scores were identified as being "validated in terms of the internal cohesion of the seven sub-areas of Bridge-Rubric" (Wiles, 2003, p. 7). Threats to construct validity "occur when investigators use inadequate definitions and measure of variables" (Creswell, 2003, p. 171). Internal cohesion established the construct validity of the instrument because the ratings discriminated between the levels of participants.

Reliability. Reliability must also be considered in the design of an instrument. The reliability of a "test refers to how much measurement error is present on the scores yielded by the test" (Gall et al., 2003, p. 196). The measurement error is the difference between the true score and the score obtained over a variety of conditions. The true score would equal the score received if no measurement error were present (standard deviation was equal to zero). Internal consistency or homogeneity is important for the framework because of the intent of the study, it is important that the questions assess the same skill, characteristic or quality (Fink, 1995; Gall et al., 2003). The GSTEP rubric instrument assessed a student's preparation to teach based on the indicators of effective teaching. So, analysis of the internal consistency and the GSTEP rubric instrument items dealing with effective teaching will determine the extent to which items on the instrument focus on effective teaching. The statements of effective teaching are reliable because they were established by a team of educators, parents, and community members involved in the GSTEP process. Inter- and intrarater reliability was expected to be an issue in the administration of the framework; the researcher was present during the administration of the student teacher instruments but was not be present to administer the framework instrument to the supervising teachers (Fink, 1995). To control for inter/intrarater reliability error, a cover letter was attached to each instrument explaining the purpose of the instrument, directions, and intended use.

Pilot study. A pilot study was conducted at the end of the student teaching seminar in spring of 2003 to establish validity and determine reliability of the GSTEP rubric questionnaire. There were 23 participants in the pilot study, 20 female and 3 male. The mean age of the participants was 27. Business, marketing, and family and consumer sciences student teachers were represented in the participant group.

To conduct the pilot study a paper version of the GSTEP Framework Standards Rubric was administered instead of an electronic version. Changing the format allowed the researcher to administer the rubric in class instead of online. Instead of including identical directions before each section, the directions were placed once in the front of the rubric. No changes were made in wording of any item.

In the pilot instrument, each section began with a title for one of the six framework areas and included a brief statement of what an accomplished teacher should know and be able to do. Each section had approximately six indicators per section. The indicator corresponds to statements within the GSTEP Framework to "describe the knowledge, skills, behaviors, and dispositions expected of teachers at various career points" (Georgia Systemic Teacher Education Program, 2003, para. 2). Career points are divided into three levels: Level I, Level II, and Level III. "The three levels described are illustrative of teacher prior to entry into professional programs [Level I]; at the point of recommendation for initial certification [Level II}; and at the level described by the National Board for Professional Teaching Standards as 'the accomplished teacher' [Level III]" (Hertzog & O'Donnell, 2003, para. 2). Level II is theoretically where beginning teachers (student teachers at the end of their student teaching experience) should average in their responses (Valdosta State University, 2002). Each indicator was rated on a six-point continuum, with 1 representing the lowest value and 6 representing the highest value. This value was considered ordinal data. Ordinal data "indicates differences in terms of more and less" and can be "placed into rankings" (Charles, 1988, p. 69).

For example, the first section was content and curriculum. The statement that follows the title reads, "Content and Curriculum: Teachers demonstrate a strong knowledge of content area(s) appropriate for their certification levels" (Valdosta State University, 2002). The first row

in the table contains the indicator number in the first column and level titles above each of the following three columns. The second row contains the indicator statement in the first column, the remaining columns in the row contain statements to explain teacher's level of performance upon entry into the program, initial certification, and accomplished teaching, respectively. The third row contains the ratings for the student teacher to circle. The participant reads each indicator statement, followed by each level statement; they decide which statement described their preparation best, then circles the corresponding rating (1-6). If you are just beginning to develop the behaviors/dispositions outlined at the level selected, use the lower rating (i.e., 1, 3, or 5); if all indicators are developed, use the higher rating (i.e., 2, 4, or 6). An example can be found in Table 1, and the full GSTEP Standards rubric is displayed in Appendix C (GSTEP, 2003b, para. 1). The same format was used for all six subscales and 41 indicators in the rubric.

After completing the rubric, the researcher held a focus group to elicit feedback from the participants. The researcher asked "Does anyone have any general comments about the rubric?" Responses to the question were as follows: "putting the questionnaires online would be easier to administer," "18 pages was too long," "might not have wanted to start by telling students they would fall around level II, let them determine themselves," and "give the rubric earlier in the students development to help on reflection of their experience." The responses from the focus group will be considered during planning and approval of the GSTEP Standards Scale administered.

Analysis of the pilot study data show an average of each category ranging from 3.2 to 4.4. These averages fall into between Level I and Level II explained above. Therefore, this follows the logic stating preservice student teachers would fall between Levels I and II (GSTEP, 2003a). Because ratings fell within the Level II category it was decided to limit the instrument to

ratings of Level II of the GSTEP Framework Rubric. This decision was made to determine greater variability in answers. Split-half reliability was run after the administration of the pilot test, results showed a Spearman-Brown reliability coefficient of 0.947. This shows a correlation between two half forms (indicator items) within the GSTEP Framework Standards Scale, meaning the indicator items are correlated (Crocker & Algina, 1986). The rubric was limited to statements in the Level II category and were measured using a Likert-type, 5-point interval scale with 5 = always, 4 = most of the time, 3 = sometimes, 2 = on occasion, 1 = never. The Likert-type scale is used to "ask for the extent of agreement with an attitude item" (Gall et al., 2003, p. 229).

Table 1
GSTEP Standards Rubric (example)

I. CONTENT AND CURRICULUM: Teachers demonstrate a strong knowledge of content area(s) appropriate for their certification levels.

Indicators I-A.	Level I	Level II	Level III
Accomplished teachers demonstrate knowledge of major concepts, assumptions, debates, processes of inquiry, and ways of knowing that are central to the content area(s) they teach.	Teacher makes content errors or does not recognize errors students commit. Teaching does not reflect evidence of knowledge of current issues and debates in the content area(s) in which he/she teaches.	Teaching is free of content errors. Teacher corrects errors students commit. He/She describes to students how different components of the content are organized and integrated.	Teacher displays extensive content knowledge and consistently helps students to recognize and correct their own errors. Differing viewpoints, theories, "ways of knowing", and methods of inquiry are reflected in his/her teaching of subject matter concepts. There is evidence of continuing pursuit of knowledge and pedagogy to improve student achievement.
Rating	1 2	3 4	5 6

Locus of Control

Locus of control (LOC) generally refers to the extent an individual believes his or her behavior determines specific life events (Parkay, Greenwood, Olejnik, & Proller, 1988; Rose & Medway, 1981a; Rotter, 1966). There is evidence that an internal locus of control affects

teaching behavior (Radford, Cashion, & Latchford, 1993). Internal LOC individuals tend to believe they are in control of their destinies and able to cause certain events. Individuals with high external LOC believe that events are caused by factors beyond their control: fate, luck, or powerful others (Parkay et al.; Rotter). Kremer and Kurtz (1983) believed "Since locus of control pertains to the degree to which individuals perceive that they have control over their environment, it is logical to expect that the externally oriented will differ from the internally oriented teacher in several aspects" (p. 246). Rotter stated studies of the hypothesis that individuals with a strong belief in their ability to control their own destiny are likely to

> (a) be more alert to those aspects of the environment which provide useful information for his future behavior; (b) take steps to improve his environmental condition; (c) place greater value on skill or achievement reinforcements and be generally more concerned with his ability, particularly his failures; and (d) be resistive to subtle attempts to influence him. (p. 25)

In a study by Soh (1988), locus of control was used to determine whether internally or externally oriented individuals were viewed as more effective teachers. According to Soh internally oriented individuals should be trained as teachers because more internal teachers believed they were able to affect student performance; had a greater sense of efficacy and felt more responsibility for their students' learning; were seen by their students as encouraging a more origin-like atmosphere and to have higher achievement scores; were more flexible, consultative and student-oriented attitude; held less custodial beliefs about controlling students; and gave fewer disciplinary commands and encouraged greater student-directed behavior. He also found internal teachers held onto positive attitudes toward change and responsibility; were better able to control the impact of stress; and felt a lower degree of emotional exhaustion and

depersonalization (Soh). In the same study, supervisors rated internal student teachers as making use of a variety of resources and materials; using more appropriate motivational techniques; established better rapport; used appropriate reinforcement, and were more able to motivate students (Soh). Another study by Radford et al. (1993) stated individuals with a higher internal LOC might perceive that they can "influence student performance, the classroom environment, and the direction of school policy through the results of their own actions and behaviors" (p. 47). On the opposite end, external LOC, "would be characterized by the perception that student performance, classroom events, and school policy are outside the teacher's control and are determined by significant others or by chance" (p. 47). Radford et al. found a significant change in internal LOC scores in one of their two groups studied. They discussed the difference in scores as the result of preservice teachers in the changed group having had more hours of structured observation, therefore more experience in the classroom (Radford et al.). Findings summarized by Payne and Manning (1988) stated studies have found student achievement was most strongly related to teacher internal LOC orientations and children perceive internally oriented teachers as facilitating personal responsibility and internal control.

A scale used to measure locus of control of teachers was developed by Rose and Medway (1981b) and based on Rotter's original Internal-External Locus of Control Scale. The scale developed was named the Teacher Locus of Control Scale (TLC) and is used to measure teachers' tendencies to attribute student success and failure in the classroom to an internal or external locus of control (Rose & Medway, 1981a). Rotter's Internal-External Locus of Control Scale (1966) is said to not have been "developed to measure expectations that might operate in teaching-learning situations" (Parkay et al., 1988, p. 14). Rose and Medway (1981a) also stated "use of the I-E scale in this type of research may result in reduced correlations between teacher

beliefs, teacher-student interactions and student outcomes" (p. 185). In this study, the use of Rotter's I-E Locus of Control Scale is more appropriate because of the intent to compare LOC with student teachers' perception of being prepared, not student learning or student outcomes.

Summary

Historically teacher education developed through a need to educate students to be literate of societal and work related issues. Career and technical education has responded to societies work related issues by offering instruction in agriculture, business, family and consumer sciences, health care sciences, marketing, technology, and trade and industrial education. Education responds to these needs in waves of educational reform from inside and outside the educational community. Literature on education reform from inside and outside the education community has increasingly influenced what teachers should know and be able to do. The emphasis on what teachers should know and be able to do have been identified through the creation of standards. Leading education professionals in the educational community have stressed the use of standards that articulate knowledge, skills, behaviors, and dispositions of current and future teachers. From the articulation of standards, frameworks to guide teachers have been developed and implemented into teacher education programs in Georgia. Frameworks developed from standards need to be researched and reported.

CHAPTER III

METHOD

This chapter describes the research methodology used to compare career and technical student teachers' and supervising teachers' ratings of student teachers' preparation to teach. A description of the purpose of the study, research design, participants, instruments, data collection procedure, and analysis of data are included.

Purpose of Study

The purpose of this causal/comparative study was to compare career and technical education student teachers' and supervising teachers' ratings of student teachers' preparation to teach. The GSTEP framework assessing preparation to teach introduces preservice teachers to teacher expectations. Frameworks help to describe the aspects of a teacher's responsibility that have been documented through empirical studies and theoretical research as promoting improved student learning (Danielson, 1996). Six areas of effective teaching comprise this framework and include: content and curriculum, knowledge of students and their learning, learning environments, assessment, planning and instruction, and professionalism (GSTEP, 2003b). Participants (student teachers and supervising teachers) rated each framework area reflecting the student teacher's level of preparation to teach. The ratings were then compared to determine if there was a difference between the student teacher's rating of preparation to teach and the supervising teacher's rating of preparation to teach. The relationship between locus of control ratings (internal/external) and student teacher's ratings of preparation to teach was also explored.

Locus of control (Rotter, 1966) was used to determine if the student teacher's views reflecting an internal/external control of reinforcement correlated with ratings of preparation to teach.

Research Questions

The following research questions were used to address the purpose of the study,

1. Did the CTE student teachers' ratings of preparation to teach differ from the supervising teachers' rating of the student teacher's preparation to teach based on the six GSTEP Framework Standards Scale areas: content and curriculum, knowledge of students and their learning, learning environment, assessment, planning and instruction, and professionalism?
2. Was there a relationship between CTE student teacher's locus of control and their ratings of preparation to teach based on the six GSTEP Framework Standards Scale areas: content and curriculum, knowledge of students and their learning, learning environment, assessment, planning and instruction, and professionalism?

Design

Two statistical methods were used in this study, comparative and correlational, to examine Career and Technical Education (CTE) student teachers' ratings of their preparation to teach. Comparative, also referred to as causal-comparative, research explains differences between two or more groups (Gall et al., 2003). Correlational research studies the relationships between variables (Gall et al.). Comparative and correlational are examples of quantitative designs, there are a variety of quantitative designs available to researchers. The purpose of a quantitative design is to "provide a quantitative or numeric description of the trends, attitudes, or opinions of a population by studying a sample of that population" (Creswell, p. 153). The study was conducted after career and technical student teacher's completed their student teaching, i.e.

after the fact; this is also known as ex post facto design (Fraenkel & Wallen, 2003). Another way to refer to the design is cross-sectional research, which means to obtain data at "one point in time" (Fraenkel & Wallen, p. 397; Gall et al.), i.e. during the student teacher's final student teaching seminar. Therefore, a detailed method statement for this study would read, "The following study can be described as a quantitative, cross-sectional, ex-post facto, causal-comparative and correlational."

Causal-comparative research can also be referred to as descriptive research (Cruickshank, 1990). Cruickshank noted, "inquiry in teacher preparation can be descriptive, correlational, and experimental" (p. 18). "Descriptive research is a type of quantitative research that involves making careful descriptions of educational phenomena" (Gall et al., 2003, p. 290). Descriptive studies are "intended to produce statistical information about aspects of education of interest to policy makers and educators" (Gall et al., p. 4). These studies are also concerned with identifying "what is." Looking for "what is" requires the researcher to "obtain facts, figures, and expert opinion for use in making descriptions" (Charles, 1988, p. 70; Cohen, Manion, & Morrison, 2000). "Unless researchers first generate an accurate description of an educational phenomenon as it exists, they lack a firm basis for explaining or changing it" (Gall et al., p. 290). In suggestions for further research, Cruickshank noted we do not know "very much about the specific nature of the teacher preparation curriculum, that is, what precisely is communicated to and learned by preservice teachers" (p. 138).

Causal-comparative research differs from other types of research such as experimental research. In an experimental study the "researcher creates a difference between or among groups and then compares their performance (on one or more dependent variables) to determine the effects of the created difference" (Fraenkel & Wallen, 2003, p. 368). Experimental research

seeks to control one of the groups or factors being studied so that any change in performance between groups can be attributed to the study (Fraenkel & Wallen; Gall et al., 2003).

Because of the lack of a control group in causal-comparative research, there are limitations in interpreting the outcome of the study. Limitations are referred to as threats to internal validity. One limitation that affects internal validity is the lack of random selection to groups studied (Fraenkel & Wallen, 2003). The lack of random selection occurs because the group studied (student teachers) was already formed and was not manipulated in any way.

Participants

The participants for this study included all career and technical education (CTE) students enrolled in student teaching and their supervising teachers during the spring semester of 2004 at a Georgia university. Career and technical education student teachers were defined as students receiving initial teacher certification in business, marketing, family and consumer sciences, and technology education. Student teachers were completing the student teaching course in their professional education curriculum leading to initial teacher certification. Supervising teachers were defined as classroom teachers working directly with the student teachers at the middle or high school levels.

The total number of participants was 58 including, 37 student teachers and 21 supervising teachers. Ages of student teaching participants ranged from 21 to 46, with a median age of 23. Student teaching participants were both undergraduate and graduate students enrolled in their student teaching semester. Of the 38 student teachers that completed the instruments, 4 were males, 32 females, and 1 did not provide an answer. According to the Georgia Professional Standards Commission and the National Council for Accreditation of Teacher Education (2001), the age, gender, and ethnicity of current student teaching participants are similar to all teacher

education programs at the participating university. Supervising teachers for this study were described as practicing/inservice teachers with at least three years teaching experience. Selection of supervising teachers was based on recommendations from CTE administrators and peers in CTE. Supervising teacher ages ranged from 28 to 55, with a median age of 41. The gender of supervising teachers included 4 males and 18 females; teaching experience ranged from 3 to 34 years, with a median of 16 years of experience.

Student teaching participants were required to meet entrance requirements for admission into teacher education and student teaching. The student teaching participants were either enrolled as undergraduate or graduate students. Undergraduate and graduate students had to maintain an overall grade point average of 2.50 on all academic coursework, receive a faculty recommendation from the department, attend the university for one semester preceding acceptance, acknowledge receipt of a copy of program requirements, information relating to teacher certification, and a copy of the states Code of Ethics (UGA College of Education, n.d.). Undergraduate students were also required to complete two courses in English, an Introduction to Education course with a grade of "C" or better, and demonstrate a proficiency (Praxis I) in academic skills. In addition to the requirements stated above graduate students must have an undergraduate degree and demonstrate a proficiency in academic skills (GRE, MAT, or writing sample) (UGA College of Education, n.d.).

Response rate or nonresponse rate for student teachers was not an issue for this study; 36 of 40 (90%) student teachers' responses were useable. Dillman (2000) pointed out that surveys administered in group situations were more likely to receive a higher response rates. The response rate for the mailed questionnaires to supervising teachers was lower, at 57.5% (23 of 40), with 52.5% useable responses (21 of 40). Because the response rate for the first question

included 21 paired cases, this study was considered to have a small sample size; as with most research with small sample size the results should not be generalized to other situations (Gall et al., 2003).

Instruments

This study included three instruments: GSTEP Framework Standards Scale - Student, GSTEP Framework Standards Scale – Supervisor, and Rotter's I-E Locus of Control Scale. The GSTEP Framework Standards Scales were developed through GSTEP (Hertzog & O'Donnell, 2003) and were administered to the student teachers and their supervising teachers. The scales were coded before administration in order to match student teachers' responses with the supervising teacher's responses. Refer to the procedure section for details on the administration of the instruments.

GSTEP Framework Standards Scale - Student

The GSTEP Framework Standards Scale—Student (Appendix F) was given to each student teaching participant. The GSTEP Framework Standards Scale—Student was adapted from the GSTEP Framework Standards (Appendix B) and the GSTEP Bridge Rubric (Appendix C). The scale was adapted for student teachers to reflect personal or "I" statements; this was done to make it easier for the student teacher to relate and respond to the indicator statements. The instrument included six areas (subscales) of effective teaching: content and curriculum, knowledge of students and their learning, learning environments, assessment, planning and instruction, and professionalism (GSTEP, 2003b). The first subscale, content and curriculum, includes six indicator statements relating to the ability for teachers to demonstrate strong content knowledge of content area(s) and deliver appropriate instruction for their certification levels. Knowledge of students and their learning includes six indicator statements covering the support

of intellectual, social, physical, and personal development of all students. The third subscale, learning environments, includes seven indicator statements representing teachers creating learning environments that encourage positive social interaction, active engagement in learning, and self-motivation. Within the forth subscale, assessment, eight indicator statements cover teachers understanding and use a range of formal and informal assessment strategies to evaluate and ensure the continuous development of all learners. Planning and instruction, the fifth subscale, in this area seven indicator statements cover teachers ability to design and create instructional experiences based on their knowledge of content and curriculum, students, learning environments, and assessment. The last area, professionalism, seven indicator statements require teachers to recognize, participate in, and contribute to teaching as a profession. For example, the first indicator reads "I-A. My teaching is free of content errors. I correct errors students commit. I describe to students how different components of the content are organized and integrated" (Appendix F).

The scale includes 41 total indicator statements grouped into 6 subscales, each rated on a five-point, Likert-type scale. The five-point, Likert-type scale was defined as 5 = always, 4 = most of the time, 3 = sometimes, 2 = on occasion, 1 = never. As suggested by Charles (1988), the data needed for this study consisted of ratings in a Likert-type scale that described status or showed differences. After administration of the instrument each subscale was totaled, the range of scores varied by subscale because of the number of indicators within each subscale. For example, subscale 1 (content and curriculum) included six indicator statements; therefore, the subscale 1 total ranged from 6 to 30. Subscale 2 also included six indicator statements (6 to 30); however, subscales 3, 5, and 6 included seven (7 to 35), and subscale 4 included eight (8 to 40) indicator statements. Total instrument score for the scale was also obtained; this score ranged

from 41 to 205. The instrument included demographic questions to identify gender, age, and program of study i.e., major.

GSTEP Framework Standards Scale - Supervisor

The supervising teacher instrument (Appendix H) was similar to the student teacher scale, also comprised of the same 41 indicators grouped into 6 subscales. However, the indicator statements did not reflect personal or "I" statements. An example of the first indicator read "I-A. Teaching is free of content errors. Teacher corrects errors students commit. He/She describes to students how different components of the content are organized and integrated." Supervising teachers responded to these statements using the same five-point Likert-type scale used in the student teacher instrument (5 = always, 4 = most of the time, 3 = sometimes, 2 = on occasion, 1 = never). This instrument was administered to compare responses of supervising teacher's rating of the student teacher's preparation to teach with the student teacher's rating. Scoring for the supervising teacher scale was calculated the same as the student teacher scale described earlier. Each subscale received a subscale total as well as calculating a total instrument score, the same as explained in the student instrument. Additional descriptive questions were added to the instrument to aid in describing the group of supervising teachers who responded. Questions included: gender, age (as of your last birthday), program of study (major), school level, teaching experience (in years, at the end of the 2003-2004 school year), average number of students per class, previous supervision of student teachers, and special certifications.

Measurement of validity and reliability of student and supervising GSTEP Framework Standards Scale. Before administration of the GSTEP Framework Standards Scale to the participant groups, the scale was pilot tested by eight university supervisors. Each university supervisor in the pilot test group had prior experience in supervision and assessment of student

teachers at the university level. No changes were made to the instrument based on the pilot study. Validity is the extent to which the instrument measures what it says it measures (Gall et al., 2003). Validity of the GSTEP Framework Standards Scale – Student was demonstrated through its' method of construction, over 500 individuals providing input into its contents. Reliability "refers to how much measurement error is present in the scores yielded by the test" (Gall et al., p. 196), the test results in a score ranging from .00 to 1.00, where a score of 0.80 or higher is considered reliable. Test reliability was measured using Cronbach's alpha, "a widely used method of computing test score reliability" (Gall et al., p. 198). The reliability score for the GSTEP Framework Standards Scale – Student was 0.8720.

Validity and reliability of the GSTEP Framework Standards Scale – Supervising was obtained using the same testing method used for the student instrument. Validity for this scale was also demonstrated through its method of construction, while test reliability for the GSTEP Framework Standards Scale – Supervising measured 0.9268 using Cronbach's alpha (Gall et al.).

Rotter I-E Locus of Control

The locus of control instrument (Appendix J) was based on Rotter's (1966) research in social learning theory and was administered to the student teachers. Rotter's I-E Locus of Control Scale is a 29-item forced choice questionnaire including 6 filler items (intended to make somewhat more ambiguous the purpose of the test) (Payne & Manning, 1988) that instructed the participant to circle either "a" or "b" depending on which statement most accurately reflected his/her view (Rotter). For example, the first item in the questionnaire stated "1. a) Children get into trouble because their parents punish them too much" or "1. b) The trouble with most children nowadays is that their parents are too easy with them" (Rotter, p. 11). Internal or external locus of control is calculated by adding the number of external beliefs selected (2a, 3b,

4b, 5b, 6a, 7a, 9a, 10b, 11b, 12b, 13b, 15b, 16a, 17a, 18a, 20a, 21a, 22b, 23a, 25a, 26b, 28b, 29a) (Rotter; Lester & Bishop, 2000). The total score was then placed on a continuum with a low score indicating internal locus of control and a high score indicating an external locus of control. In the past, the instrument has been used to identify internal or external locus of control. Individuals with an internal locus of control believe that through their behavior they can control the likelihood of receiving reinforcers (Lester & Bishop). In other words, strong internal locus of control individuals believe success or failure is due to their own efforts (Mearns, 2004). External locus of control individuals do not recognize a link between their behavior and the likelihood of being rewarded (Lester & Bishop, 2000). Persons with a high external locus of control see little impact of their own efforts on the amount of reinforcement they receive (Mearns). Sadowski, Blackwell, and Willard (1985) expected and found "that internal student teachers would perform more effectively in the classroom than the externals" (p. 391, 392). Soh's (1988) research also concluded teachers whose locus of control was more internal were seen as being more effective in the classroom.

The locus of control (LOC) instrument has been used in numerous research studies (Adams, 1999; Norton, 1997; Rose & Medway, 1981a; Rotter, 1966; Sadowski et al., 1985; Soh, 1988). Rotter's instrument is considered one of the most frequently used instruments to measure locus of control and has been used to develop and validate other instruments (Lester & Bishop, 2000). Soh found the locus of control scale was valid and reliable in determining effective teachers. Rotter tested reliability using the Kuder-Richardson formula 20 (KR20), this formula was used because the test is scored dichotomously, the reliability coefficient was 0.70 for a sample of 200 men and 200 women (Gall et al., 2003; Rotter, p. 25). "Test-retest reliability is satisfactory, and the scale correlates satisfactorily with other methods of assessing the same

variable such as questionnaire, Likert scale, interview assessments, and ratings from a story-completion technique" (Rotter, p. 25). After one month test-retest reliability was 0.72 and after two months was 0.55 (Lester & Bishop). "Item analysis and factor analysis show reasonably high internal consistency for an additive scale" (Rotter, p. 25). Discriminant validity is supported by low correlations with intelligence, social desirability, and political liberalness (Lester & Bishop; Rotter). Finally, construct validity "is found in the predicted differences in behavior for people above and below the median of the Internal-External Scale and from correlations with behavioral criteria" (Lester & Bishop; Rotter, p. 25).

Measurement of validity and reliability. Reliability (internal consistency) for the Rotter I-E Locus of Control scores was measured using the Kuder-Richardson 20 (K-R 20) formula, resulting in a score of 0.5441 for N = 30. This score was determined by first eliminating the six filler items in the Rotter scale (numbers 1, 8, 14, 19, 24, and 27). Then any cases with missing values were deleted, leaving a sample of 30 participants. The Kuder-Richardson 20 formula was run using the statistical program SAS (Version 8), resulting in the obtained value. The value obtained is lower than reliability estimates provided by Rotter and Lester and Bishop, these authors provided reliability estimates of 0.70 and 0.72, respectively.

The questionnaire method of collecting data was to determine how student teachers and their supervising teachers rated their preparation to teach. The method of collection had the advantage of rapid turnaround of responses and was an economical method of data collection (Dillman, 2000; Gall et al., 2003).

Procedure

To administer the instruments, a list of students and supervising teachers for the 2004 spring semester was obtained. The list of student teachers was then randomly sorted; sorting

allowed the researcher to administer the instrument without the ability to identify the participants. Each instrument was copied and numbered from 1 to 40. Numbers were placed in the top corner of each instrument to match the responses between the GSTEP Framework Standards Scale – Student, the Rotter's I-E Locus of Control and the GSTEP Framework Standards Scale – Student, and GSTEP Framework Standards Scale – Supervising. Permission to conduct the study was granted from the university's Internal Review Board (IRB) on April 23, 2004, and assigned project number H2004-10700. IRB approval ran through April 22, 2005. Large envelopes were labeled with the student and supervising teacher's name on the front of the envelope. Care was taken not to record the number assigned to any participant; therefore, the instruments are considered anonymous. According to Dillman (2000), anonymity is a key factor in increasing response to questionnaire style instruments. Each of the large envelopes were then filled with corresponding numbered scales and sealed.

For the student teachers, each received an envelope during their last monthly student teaching seminar, April 30, 2004, containing a cover letter which explained the study and asked for their participation (Appendix E). The envelopes also included the GSTEP Framework Standards Scale – Student (Appendix F), the cover letter for the Rotter I-E scale (Appendix I) and Rotter Internal-External Locus of Control scale (Appendix J). Each student teacher was asked to return the instruments before the end of class. Envelopes that identified the student by name were discarded.

On April 23, 2004, the supervising teachers received an email announcement that CTE preservice teacher education research study materials would be mailed to their school address. The materials, mailed on April 24, 2004, included a cover letter (Appendix G) with directions for completing the instrument and thanking them for their participation, the instrument (GSTEP

Framework Standards Scale – Supervising; Appendix H), and a return, self-addressed stamped envelope. To promote a higher response from supervising teachers, a second mailing was sent on May 14, 2004, approximately two weeks following the first mailing. This mailing included a cover letter (Appendix K) and an additional copy of the GSTEP Framework Standards Scale – Supervising (Appendix H) (Creswell, 2003; Dillman, 2000). The cover letter requested supervising teacher's participation, asking them to disregard the second copy if they already filled out the instrument, and thanked them for their participation (Dillman).

Data Analysis

Research Question One

Did the CTE student teachers ratings of their preparation to teach differ from the supervising teachers for the student teachers preparation to teach based on the six GSTEP Framework Standards Scale areas: curriculum and content, knowledge of students and their environments, learning environment, assessment, planning and instruction, and professionalism?

The dependent variables measured included the student teachers' and supervising teachers' ratings of preparation to teach based on the six GSTEP Framework Standards Scale areas (subscales): content and curriculum, knowledge of students and their learning, learning environments, assessment, planning and instruction, and professionalism (GSTEP, 2003a). Differences in ratings between the student teachers and supervising teachers in each framework area were analyzed using independent samples t-test techniques. T-tests are used to compare mean scores of two samples (Gall et al., 2003). The level of significance was set at $p < .05$, the level generally selected in educational research (Gall et al.). A total score for each of the six

subscales was also computed. The ratings were compared to the supervising teacher's subscale total in each of the framework areas (subscales).

Research Question Two

> Was there a relationship between CTE student teacher's LOC and their ratings of preparation to teach based on the six GSTEP Framework Standards Scale areas (subscales): curriculum and content, knowledge of students and their environments, learning environment, assessment, planning and instruction, and professionalism?

The analysis for the second question compared the GSTEP Framework Standards Scale – Student with the Rotter I-E Locus of Control scale and was intended to help explain ratings from the student teacher GSTEP Framework Standards Scale instrument. The analysis method used to test whether internal-external locus of control is correlated with student teacher's ratings of preparation was measured by computing Spearman's correlation coefficient R. Following Rotter's I-E Locus of Control theory, teachers who feel less prepared (lower ratings on GSTEP instrument) to teach would show evidence of an external locus of control, and teachers who feel more prepared (higher ratings on instrument) would show evidence of an internal locus of control (Rose & Medway, 1981a; Sadowski, Blackwell, & Willard, 1986). Conflict in scores between the student teacher and supervising teacher might be a function of high external locus of control or students' feelings of being unprepared.

To assist in validating scores obtained in the study, effect size was reported in addition to tests of statistical significance (Gall et. al., 2003). When a statistically significant difference in findings is found, Lewis (2001) suggested calculating an effect size. Cohen (1988) defined a small effect size to equal 0.20, medium equal to 0.50, and large equal to 0.80. The effect size provides an estimate of the magnitude of difference; in other words, it determines whether a

difference found is of practical use. The larger the effect size is set, the smaller the sample size needed. For this study a large difference between the two groups, student and supervising teachers, was not expected; therefore, a medium effect size will be used.

Summary

The administration of this study sought to determine how student teachers rated their preparation to teach in April of 2004, at the end of their teacher preparation program. Student teacher and supervising teacher ratings of preparation to teach were used to match responses on the GSTEP Framework Standards Scale. Using the student teacher instrument and the locus of control scale, the researcher correlated scores to determine if internal or external locus of control was a factor in a student teacher's preparation. This study provides baseline data for further research relating to national standards, effective teaching frameworks, and the GSTEP Framework Standards.

CHAPTER IV

FINDINGS

Development of teacher education programs based on standards of effective teaching has been the focus of national and state education reform since the late 1990's (Cochran-Smith, 2005). Standards in effective teaching have been expressed through frameworks by Danielson (1996), the National Board for Professional Teaching Standards (NBPTS, n.d.a), and the Georgia Systemic Teacher Education Program (GSTEP, 2003b). Little work has been done to assess student teachers' ratings of framework standards.

The purpose of this causal/comparative study was to compare career and technical education student teachers' and supervising teachers' ratings of student teachers' preparation to teach. The GSTEP Framework assessing preparation to teach introduces preservice teachers to teacher expectations. Frameworks help to describe the aspects of a teacher's responsibility that have been documented through empirical studies and theoretical research as promoting improved student learning (Danielson, 1996). Six areas of effective teaching comprise this framework and include: content and curriculum, knowledge of students and their learning, learning environments, assessment, planning and instruction, and professionalism (GSTEP, 2003b). Participants (student teachers and supervising teachers) rated each framework area reflecting the student teacher's level of preparation to teach. The ratings were then compared to determine if there was a difference between the student teacher's rating of preparation to teach and the supervising teacher's rating of preparation to teach. The relationship between locus of control ratings (internal/external) and student teacher's ratings of preparation to teach was also explored.

Locus of control (Rotter, 1966) was used to determine if the student teacher's views reflecting an internal/external control of reinforcement correlated with ratings of preparation to teach.

Results

This chapter presents the findings of two research questions: one measuring the difference in ratings of preparation of student teachers and the other seeking to identify a relationship between student teachers rating and locus of control.

Research Question 1

The first research question in this study inquired, "Did the CTE student teachers' ratings of preparation to teach differ from the supervising teachers' rating of the student teacher's preparation to teach based on the six GSTEP Framework Standards Scale areas: content and curriculum, knowledge of students and their environments, learning environment, assessment, planning and instruction, and professionalism?"

In order to compare student teacher and supervising teacher ratings of the student teacher's preparation to teach, independent samples t-tests were used. Independent samples t-test required matching, by distribution code, student teacher and supervising teacher ratings. This resulted in 22 matched pairs. To achieve a higher number of useable pairs, instruments having more than 80 percent of the questions answered from both respondents (student and supervising teachers) were used. Therefore, all paired instruments having at least 33 of 41 completed indicators were used in the analyses. This analysis resulted in 21 usable paired responses. All missing data were replaced by median substitution. Median substitution was used in place of mean substitution because ratings are expressed as integers, i.e. whole numbers. After median substitution was completed to fill in missing answers, each indicator rating was added to obtain

totals for each subscale for the student teacher and the supervising teacher. Independent samples *t*-tests were then run to determine any statistically significant differences.

A statistically significant difference between student teacher and supervising teacher subscale total was determined in one subscale, knowledge of students and their learning, with a *t*-test score equal to $t_{(1, 20)} = 2.50$, $p = 0.021$. Although the remaining five subscales did not result in statistically significant differences, three *t*-tests scores are interesting to note, learning environment measured $t_{(1, 20)} = 1.89$ and $p = 0.073$, and planning and instruction measured $t_{(1, 20)} = 1.89$ and $p = 0.074$, and the total instrument score resulted in a $t_{(1, 20)} = 1.86$, $p = 0.078$. A larger sample size may have resulted in statistically significant differences for the total score, as well as learning environment, and planning and instruction. Table 2 reports the GSTEP Framework subscale means, standard deviation, *t*-test score, and level of significance of the 21 paired cases.

Effect size determines practical significance of statistically significant differences and estimates the magnitude of difference (Lewis, 2001). A higher effect size indicates a greater difference between the two groups (Gall et al., 2001). In this study, knowledge of students and their learning measured a medium effect size at 0.571. Learning environment, planning and instruction, and the total instrument score also returned medium effect sizes at 0.587, 0.631, and 0.609, respectively. Because each of the effect sizes is in the medium range, this data supports the *t*-test results above. Effect sizes reinforce the finding that the differences between student and supervising teacher ratings are not the result of chance (Gall et al.).

Table 3 summarizes descriptive statistics for the GSTEP Framework Standards Scale – Student and Table 4 shows descriptive statistics for the GSTEP Framework Standards Scale – Supervising. Overall, these tables provide the range, minimum, maximum, median, mean, and

standard deviation for the six (6) subscale totals and total instrument score. These data illustrate the variation between mean score for the two groups. For example, the student teachers rated themselves higher than the supervisors in all of the six subscales and total instrument score based on the mean and median scores. Additionally, supervising teacher scores show greater variability between the minimum and maximum scores based on standard deviation and range.

Table 2
Independent Samples t-Test of Student Teacher and Supervising Teacher Subscale Ratings

GSTEP Framework Areas	ST[1] N=21 *M* *(SD)*	Sup[2] N=21 *M* *(SD)*	*t*	*p*	*d*
Content & curriculum	24.57 (2.420)	23.76 (3.419)	0.98	0.341	0.273
Knowledge of students & their learning	24.67 (3.692)	22.67 (3.307)	2.50	0.021	0.571
Learning environment	29.38 (3.708)	27.24 (3.590)	1.89	0.073	0.587
Assessment	31.95 (3.584)	30.90 (4.158)	0.83	0.415	0.270
Planning & instruction	30.05 (3.106)	27.71 (4.209)	1.89	0.074	0.631
Professionalism	30.57 (3.234)	28.62 (4.421)	1.46	0.160	0.504
Total instrument score	171.19 (13.714)	160.90 (19.537)	1.86	0.078	0.609

[1] Student teacher, [2] Supervising teacher

Table 3
Descriptive statistics of GSTEP Framework subscales for student teacher (N=21)

GSTEP Framework Subscales	Possible Range	Min	Max	*Mdn*	ST[1] *M*	ST[1] *SD*
Content & curriculum	6-30	21	28	24	24.57	2.420
Knowledge of students & their learning	6-30	17	30	25	24.67	3.692
Learning environment	7-35	21	35	28	29.38	3.708
Assessment	8-40	25	39	32	31.95	3.584
Planning & instruction	7-35	21	35	30	30.05	3.106
Professionalism	7-35	21	35	31	30.57	3.234
Total instrument score	41-205	151	200	173	171.19	13.714

[1] Student teacher

Table 4
Descriptive statistics of GSTEP Framework subscales for supervising teacher (N=21)

GSTEP Framework Subscales	Possible Range	Min	Max	*Mdn*	Sup[2] *M*	Sup[2] *SD*
Content & curriculum	6-30	16	30	24	23.76	3.419
Knowledge of students & their learning	6-30	17	30	22	22.67	3.307
Learning environment	7-35	21	35	26	27.24	3.590
Assessment	8-40	23	37	30	30.90	4.158
Planning & instruction	7-35	19	35	28	27.71	4.209
Professionalism	7-35	17	34	30	28.62	4.421
Total instrument score	41-205	121	198	162	160.90	19.537

[2] Supervising teacher

To compare differences between student and supervising teacher's ratings further, the subscale totals were divided by the number of indicators in each subscale. The adjusted mean score for each subscale was placed in order from highest to lowest (Table 5). Like the previous tables, it is evident the student teachers rated themselves higher on every subscale. Interestingly, the subscale rated fifth of six by the student teachers is higher than any of the supervising teachers ratings. The student and supervising teachers rated professionalism the highest. This implies the student and supervising teachers felt the student teacher abided by laws, Georgia's Ethics code, and professional relationships with students and colleagues. The rest of the subscales fall in similar order except the rankings of content and curriculum between student and supervising teacher. Supervising teachers rated the student teachers preparation in content and curriculum higher (2nd of 6 areas) than the student teachers (5th of 6 areas).

Table 5
Rank Order of Mean Score for Student Teacher and Supervising Teacher Subscale Ratings in the GSTEP Framework Areas

Student Teacher N=21	*M adj.*	Supervising Teacher N=21	*M adj.*
1. Professionalism	4.36	1. Professionalism	4.08
2. Planning & instruction	4.29	2. Content & curriculum	3.96
3. Learning environment	4.19	3. Planning & instruction	3.95
4. Knowledge of students & their learning	4.11	4. Learning environment	3.89
5. Content & curriculum	4.09	5. Assessment	3.86
6. Assessment	3.99	6. Knowledge of students & their learning	3.77

Research Question 2

The second research question asked, "Was there a relationship between CTE student teacher's LOC and his/her ratings of preparation to teach based on the six GSTEP Framework Standards Scale areas: content and curriculum, knowledge of students and their environments, learning environment, assessment, planning and instruction, and professionalism?"

Identifying a relationship between two ratings was accomplished through calculating the Spearman-Brown correlation coefficient R (Gall et al., 2003). Before running the calculation, the GSTEP Framework Standards Scale – Student and the Rotter's I-E Locus of Control scale were paired. This pairing resulted in 36 usable pairs from the 38 possible. Each paired case was then analyzed for missing data; the case was deleted if the instrument had less than 18 of 23 completed questions. The total score was then calculated based on the number of external responses the student teacher chose (2a, 3b, 4b, 5b, 6a, 7a, 9a, 10b, 11b, 12b, 13b, 15b, 16a, 17a, 18a, 20a, 21a, 22b, 23a, 25a, 26b, 28b, 29a). For this research question, missing data could not be accounted for with median substitution. Answers for the locus of control scale are dichotomous which do not allow for calculation of a median; therefore, proportions were calculated based on the total locus of control score and the number of items. For example, if a student teacher completed 21 of the 23 total locus of control questions, their total score was then divided by 21 instead of 23 to obtain their proportion. The Spearman-Brown correlation coefficient R was then run comparing each subscale total with the total proportion from locus of control. Table 6 summarizes the correlation coefficient and probability ($p = 0.05$) that the student teachers ratings in each framework area are dependent on locus of control rating.

There were no significant relationships found between Rotter's I-E Locus of Control rating and the GSTEP Framework Standards Scale – Student ratings. When determining

statistically significant relationships using correlation methods, coefficients closer to +/- 1.00 are considered significant. Table 6 shows no correlations near +/- 1.00. Table 7 summarizes the correlation matrix for the subscales and Rotter's total proportion. A correlation matrix allows the researcher to assess if the subscales are correlated to each other as well as Rotter's total proportion. Table 7 summarizes correlation coefficients for each subscale and Rotter's total proportion; this tells us that no subscale is highly correlated with each other. All subscale totals are going to be a higher correlation with the total score for the GSTEP Framework since their score is a part of the total.

Table 6
Correlation (proportion) between student teacher ratings for GSTEP Framework Scale ratings and locus of control (N=36)

GSTEP Framework Subscales	*r*	*p*
Content & curriculum	0.196	0.251
Knowledge of students & their learning	0.067	0.694
Learning environment	0.088	0.607
Assessment	0.021	0.898
Planning & instruction	0.145	0.397
Professionalism	-0.003	0.985
Total instrument score	0.072	0.673

Table 7
Correlations between student teacher ratings locus of control and GSTEP Framework Standards

	Content & curriculum	Knowledge of stdts & their lrning	Learning environment	Assessment	Planning & instruction	Profession-alism	Total	Rotter's Total Proportion
Content & curriculum	1	0.276	0.348	0.595	0.517	0.430	0.651	0.196
Knowledge of stdts & their lrning		1	0.543	0.350	0.274	0.245	0.581	0.068
Learning environment			1	0.607	0.344	0.402	0.769	0.088
Assessment				1	0.599	0.630	0.861	0.022
Planning & instruction					1	0.650	0.723	0.145
Professionalism						1	0.726	-0.003
Total							1	0.073
Rotter's Total Proportion								1

Summary

Preparation of student (preservice) teachers based on standards of effective teaching has been the focus of national and state education reform since the late 1980's (Cochran-Smith, 2005). Analysis of effective teaching standards by assessing ratings of student teacher preparation through GSTEP Framework Standards was the focus of this study. Findings showed a statistically significant difference between student and supervising teacher's ratings of the student teachers preparation to teach in one area, knowledge of students and their learning. Knowledge of students and their learning emphasizes teachers should "support the intellectual, social, physical, and personal development of all students" (GSTEP, 2003b, p. 1). Effect sizes calculated for knowledge of students and their learning resulted in medium practical significance for this subscale as well as two other subscales, learning environment and planning and instruction, and the total instrument score. The correlation between student teacher ratings of preparation to teach and locus of control did not result in any identified statistically significant relationships. This finding is different from previous research in this area such as studies by Payne and Manning (1988) and Radford, Cashion, and Latchford (1993). Payne and Manning found children perceive internally oriented teachers as facilitating personal responsibility and internal control and Radford et al. found there was evidence that an internal locus of control affects teaching behavior.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Federal reform efforts in recent years have caused the educational community to examine teacher education (Cochran-Smith, 2005; Hartley, Mantle-Bromley, & Cobb, 1996). Teacher education has responded by turning attention to effective teaching and the creation of national standards (Bruening, Scanlon, Hodes, Dhital, Shao, & Liu, 2001a; Cochran-Smith, 2005; Conley & Goldman, 1998; Hartley et al., 1996; Holmes Group, 1995; Negroni, 1992; Porter & Brophy, 1988). Effective teaching is defined as using previous research in identifying common knowledge, skills, and dispositions to improve student achievement (AACTE & CBE, 2003a; Brandt, 1985; Darling-Hammond & Ball, 1998; Wise, 2001).

In Georgia, three universities and partners throughout the state received a grant from the federally-funded standards-based education program (STEP) which resulted in the creation of the Georgia Systemic Teacher Education Program (GSTEP; Board of Regents of the University System of Georgia, 2004b). Research on effective teaching and national standards was used to guide development of the GSTEP partner's mission and goals. The GSTEP overarching goal was to develop common language to articulate a definition of an accomplished teacher agreed upon by the stakeholders in the community (GSTEP, 2003a). Focus groups, of over 500 individuals (teachers, teacher educators, parents, students, community members, and business), were conducted to determine statements of what accomplished (effective) teachers know and are

able to do. These statements lead to the development of Guiding Principles (Appendix A) and Framework Standards (Appendix B) for the state of Georgia (GSTEP, 2003c).

The purpose of this causal/comparative study was to compare career and technical education student teachers' and supervising teachers' ratings of student teachers' preparation to teach. The GSTEP framework assessing preparation to teach introduces preservice teachers to teacher expectations. Frameworks help to describe the aspects of a teacher's responsibility that have been documented through empirical studies and theoretical research as promoting improved student learning (Danielson, 1996). Six areas of effective teaching comprise this framework and include: content and curriculum, knowledge of students and their learning, learning environments, assessment, planning and instruction, and professionalism (GSTEP, 2003b). Participants (student teachers and supervising teachers) rated each framework area reflecting the student teacher's level of preparation to teach. The ratings were then compared to determine if there was a difference between the student teacher's rating of preparation to teach and the supervising teacher's rating of preparation to teach. The relationship between locus of control ratings (internal/external) and student teacher's ratings of preparation to teach was also explored. Locus of control (Rotter, 1966) was used to determine if the student teacher's views reflecting an internal/external control of reinforcement correlated with ratings of preparation to teach.

Research questions that guided this study were:

1. Did the CTE student teachers' ratings of their preparation to teach differ from the supervising teachers' ratings of the student teacher's preparation to teach based on the six GSTEP Framework Standards Scale areas: content and curriculum, knowledge of students and their environments, learning environment, assessment, planning and instruction, and professionalism?

2. Was there a relationship between CTE student teacher's locus of control and their ratings of preparation to teach based on the six GSTEP Framework Standards Scale areas: content and curriculum, knowledge of students and their learning, learning environment, assessment, planning and instruction, and professionalism?

Method

Approval for this study was obtained through the university's Internal Review Board (IRB) on April 23, 2004. The first research question involved measuring ratings of the student teachers preparation to teach from the student teacher and supervising teacher. The second question correlated student teacher ratings of preparation to teach and their locus of control.

This study included two participant groups, student teachers and supervising teachers. Student teachers were defined as undergraduate and graduate students enrolled in student teaching in spring 2004. Ages of the student teaching participants ranged from 21 to 46, with the median age of 23. The student teachers were predominantly female with 4 males and 32 females. Supervising teachers were defined as middle school or high school teachers supervising student teachers during spring 2004. The supervising teachers ages ranged from 28 to 55 (median 44) and included 4 males and 18 females. Years of teaching experience ranged from 3 to 34 years (median 16 years). Participants were matched using an instrument coding system in place before administration of the instruments.

The student packets contained a cover letter for the GSTEP Framework Standards Scale – Student, the GSTEP Framework Standards Scale – Student, a cover letter for the Rotter I-E Locus of Control Scale, and the Rotter Locus of Control Scale. Supervising teacher packets contained a cover letter introducing the study, the GSTEP Framework Standards Scale – Supervising, and a self-addressed stamped envelope. After approval through IRB, an email was

sent (April 23, 2004) to the supervising teachers announcing they would be receiving a packet in the mail shortly concerning a study on the rating of student teachers based on the GSTEP Framework. Supervising teacher packets were mailed on April 24, 2004. The student teacher packets were distributed during the student teachers' final meeting on April 30, 2004. Envelopes were then discarded; therefore, the study was considered anonymous because no identification of students or supervising teachers was possible.

For the first question, ratings of preparation to teach were measured by independent samples *t*-test, a comparative approach to quantitative design. The second question analyzed correlations measured by Spearman-Brown correlation coefficient R.

Results and Conclusions

Based upon findings of this research study, the following conclusions are drawn:

1. There was a statistically significant difference between student and supervising teacher ratings of the student teachers preparation to teach for the GSTEP Framework Standards subscale knowledge of students and their learning.
2. Overall, the combined ratings on GSTEP Framework Standards Scale by the student and supervising teachers were high, indicating student teachers were prepared to teach most of the time to always for each GSTEP subscale.
3. Effect sizes of learning environment, planning and instruction, and the total instrument score indicate differences in ratings were of practical importance, while there was not a statistically significant difference, differences between the student and supervising teacher's ratings indicate they are important in practical terms.

4. The mean score rankings of the subscales of both groups were similar; i.e. professionalism ranked first of six subscales for both the student and supervising teachers.
5. When correlating the student teachers rating of preparation to teach on the GSTEP Framework Standards Scale – Student and Rotter's Locus of Control, a strong correlation was not found.

Discussion

GSTEP Framework Standards Scale

Following the logic of the five-point, Likert-type scale (5 = always, 4 = most of the time, 3 = sometimes, 2 = on occasion, 1 = never), GSTEP areas (i.e. subscales = content and curriculum) student teachers felt more prepared to teach were rated higher than GSTEP areas they did not feel prepared to teach. A statistically significant difference between student and supervising teacher ratings was measured in one area, knowledge of students and their learning. This subscale also resulted in a medium effect size at 0.571, indicating the difference in ratings is of practical importance. Obtaining a medium effect size also supports the conclusion that difference in ratings was not obtained by chance. Supervising teachers' lowest ratings of student teachers came from the knowledge of students and their learning subscale. Perhaps the statistically significant difference was the result of supervising teacher ratings showing greater variability because of their extensive years of experience which ranged from 3 to 34 years. Student teacher's ratings, on the other hand, were more homogeneous because they were all at the beginning point in their career (experience). Concepts identified in knowledge of students and their learning, as shown in Figure 1, are closely aligned with working with special populations. Ruhland and Bremer (2002) suggested more instruction was needed in the area of

working with special populations in teacher education programs. For example, indicator II-D addresses factors that influence student lives, classroom environment, and understanding accommodations.

KNOWLEDGE OF STUDENTS AND THEIR LEARNING: Teachers support the intellectual, social, physical, and personal development of all students.						
	Always	→				Never
II-D. I understand that a variety of factors influence students' lives and learning, and am beginning to adjust the classroom environment, instruction, or curriculum to accommodate these environments. I have an understanding about the type and amount of accommodations that can legally or ethically be made for these different factors and am beginning to make these accommodations.	5	4	3	2	1	

Figure 1. GSTEP Framework, Knowledge of students and their learning, indicator II-D.

Overall, the combined ratings on GSTEP Framework Standards Scale by the student and supervising teachers were high, measuring 4.05 (most of the time) of 5 (always). This measure was favorable for the career and technical teacher education program, high ratings indicated the student and supervising teachers felt the student teachers were prepared to meet effective teaching standards. The three subscales needing reinforcement were knowledge of students and their learning, assessment, and content and curriculum. Although, supervising teachers rated knowledge of students and their learning as a mean score of 3.77 (between 3 = sometimes and 4 = most of the time) out of 5 (always), this score was higher than the mid-point of the scale.

Learning environment, planning and instruction, and the total instrument score resulted in p-values slightly above the one set for the study ($p = .05$), measuring $t_{(1, 20)} = 1.89$ and $p = 0.073$, $t_{(1, 20)} = 1.89$ and $p = 0.074$, and a $t_{(1, 20)} = 1.86$, $p = 0.078$ respectively. Although each of these scores do not result in a statistically significant difference, each of the three subscales measured a medium effect size with learning environment = 0.587, planning and instruction = 0.631, and the total instrument score = 0.609. Meaning the student teachers and supervising teachers rate the student teachers preparation to teach in these areas differently, but they are not statistically

significant. The effect sizes demonstrate that each of these differences is of practical significance and support the findings in this study.

Mean score rankings of the subscales produced similar results; professionalism ranked first of six subscales by the student and supervising teachers. Student teachers rated themselves in the following sequence, first through sixth subscale: professionalism; planning and instruction; learning environment; knowledge of students and their learning; curriculum and content; and assessment. Supervising teachers ranked student teachers preparation in the following sequence, first through sixth subscale: professionalism; content and curriculum; planning and instruction; learning environment; assessment; and knowledge of students and their learning. Interestingly, the content and curriculum subscale mean was ranked 2nd of 6 subscales by supervising teachers and 5th of 6 subscales by student teachers. However, when the student teachers' mean score for content and curriculum was calculated based on the 5-point Likert-type scale, the mean equaled 4.09 (most of the time) out of 5 (always). In a qualitative study conducted fall 2004 and spring 2005 by Adams, Liston, and Hall (2005), one of the GSTEP areas in which student teachers felt most prepared was content and curriculum. It may be that student teachers are more prepared in the area of content and curriculum than their ranking in this study illustrated. Looking further at curriculum and content, as shown in Figure 2, the indicators cover a wide range of material. For example, student teachers must be able to teach free of errors, as well as use state and national standards in their teaching. Student teachers typically feel under pressure to get everything correct in student teaching, this pressure might affect whether the student teacher feels they always teach free of content errors (indicator I-A). This area of effective teaching, content and curriculum, warrants further study in order to fully understand the extent to which student teachers feel prepared to teach.

CONTENT AND CURRICULUM: Teachers demonstrate a strong content knowledge of content area(s) appropriate for their certification levels.						
	Always	→				Never
I-A. My teaching is free of content errors. I correct errors students commit. I describe to students how different components of the content are organized and integrated.	5	4	3	2	1	

Figure 2. GSTEP Framework, Content and curriculum, indicator I-A.

Student teachers rated assessment as the lowest subscale (6th of 6 subscales), supervising teachers also rated assessment low (5th of 6 subscales). Adams et al. (2005) found students felt less prepared in assessment. Currently, assessment is infused in courses throughout the undergraduate program; however, the graduate program requires an assessment course as part of their graduate education curriculum (Adams et al.). Recommendations would include adding a course in assessment at the undergraduate level or concepts in assessment need more emphasis in courses. For example, indicator IV-A asks the student whether they demonstrate and correctly interpret measurement theory. Assessment may be intimidating to a student teacher who has not encountered terms such as content and construct validity. Also, student teachers have had little opportunity to use a variety of assessment measures or relate assessment methods to measurement theory.

ASSESSMENT: Teachers understand and use a range of formal and informal assessment strategies to evaluate and ensure the continuous development of all learners.						
	Always	→				Never
IV-A. I demonstrate knowledge of measurement theory (i.e., test reliability, content validity, construct validity, criterion validity) and correctly interpret test results (e.g., criterion-referenced assessments, norm-referenced-assessments). I utilize assessment results, with varying degrees of success, to inform instruction.	5	4	3	2	1	

Figure 3. GSTEP Framework, Assessment, indicator IV-A.

Instrument. The GSTEP instruments used for this study, GSTEP Framework Standards Scale – Student (Appendix F) and GSTEP Framework Standards Scale – Supervising (Appendix H), were modified to reflect level II statements from the full GSTEP Framework Standards Rubric (Appendix C); however, the instrument could be more concise. Areas for improvement

include limiting indicator statements to one sentence per indicator and reducing the number of indicators used. Other improvements to consider include determining if questions were too complex and whether the task/behavior was able to be observed or measured.

Locus of Control

When correlating the student teachers' rating of preparation to teach on the GSTEP Framework Standards Scale – Student and Rotter's Locus of Control, no statistically significant relationship was found. This conclusion is a contrast to findings from Payne and Manning (1988), Radford, Cashion, and Latchford (1993), and Soh (1988). Findings summarized by Payne and Manning found student achievement was most strongly related to teacher internal LOC orientations and children perceive internally oriented teachers as facilitating personal responsibility and internal control. Radford et al. stated there was evidence that an internal locus of control affects teaching behavior. According to Soh internally oriented individuals should be trained as teachers because more internal teachers believed they were able to affect student performance; had a greater sense of efficacy and felt more responsibility for their students' learning; were seen by their students as encouraging a more origin-like atmosphere and to have higher achievement scores; were more flexible, consultative and student-oriented attitude; held less custodial beliefs about controlling students; and gave fewer disciplinary commands and encouraged greater student-directed behavior. The findings of this study could have been influenced by small sample size or low test reliability.

Significance of Study

This study contributes to understanding the preparation of teachers by providing information to the Georgia Systemic Teacher Education Program (GSTEP) and its' partners in the pilot of the Self-Assessment for Accomplished Teaching Instrument based on the GSTEP

Framework Standards (Ross, 2005). The data obtained from this study was based on the GSTEP Framework Standards and is important in the reform and administration of teacher education curricula. Within the participating career and technical education program, practical significance was illustrated by identification of subscale areas needing more emphasis. GSTEP was adopted in the fall of 2005 as the Georgia state framework, it was renamed Georgia Framework for Teaching. The framework will be expanded to reflect statement of master teachers. "In May 2005, a subcommittee of the state's Committee on Quality Teaching met to approach their shared strategy: 'to develop an integrated set of performance standards for teacher preparation, certification, and teacher renewal'" (Ross, 2005). Partners in education throughout the state of Georgia have endorsed the Georgia Framework for Teaching including the Department of Education, Board of Regents, and Georgia Professional Standards Commission. Georgia plans to use this framework to guide teacher preparation, certification, and renewal. The University of Georgia's Career and Technical Education program has already reorganized its' core teacher preparation courses and assessments based on the GSTEP Framework.

The study contributes to our understanding of principles of effective teaching and the use of standards as a conceptual framework for teacher education. Theoretical significance was illustrated through using frameworks for assessment of effective teaching. The use of frameworks for assessment will contribute to research on teacher preparation and effectiveness. The Georgia Framework for Teaching (formerly the GSTEP Framework Standards) includes statements of effective teaching; therefore, using the framework as a guide to preparation, certification, and assessment provides knowledge on how to conduct reforms in teacher education programs.

Recommendations for Practice

The following recommendations for the future use of the data found in this study are made to the Career and Technical Education program.

1. Reinforce knowledge of students and their learning by providing further instruction in meeting student needs and accommodating student differences, such as instruction in at-risk students and special needs learners.
2. Encourage teacher educators and supervising teachers to help student teachers recognize their knowledge of content and curriculum.
3. Add a course in assessment at the undergraduate level or increase emphasis in assessment concepts in present CTE teacher education courses.
4. Use GSTEP Framework Standards Scale – Student as a self-assessment instrument in the first few years of teaching to allow teachers to assess their strengths and weaknesses.
5. Develop a more concise instrument to eliminate multiple behaviors within subscales indicator and to reduce confusion.
6. Use the revised version of the instrument to assess teachers after three years.

Recommendations for Further Research

The following recommendations in the areas of career and technical education, teacher education, and/or the use of frameworks for assessment should be considered for further research.

1. Replicate study to increase sample size, use other departments within the College of Education or partners throughout the state of Georgia.

2. To increase participation of supervising teachers, notify supervising teachers of the study at the beginning of the student teaching semester.
3. Complete a post-study using the GSTEP Framework Standards Scale – Student after the student teachers 3rd year in teaching to see if there are any changes in rating.
4. Conduct an in-depth study using a modified instrument of the GSTEP subscale knowledge of students and their learning to determine specific needs for improvement or strengthening in the teacher education program.
5. Complete a qualitative analysis to determine areas in knowledge of students and their learning, curriculum and content, and assessment that need more emphasis, separated by program area (business, family and consumer sciences, technology, and marketing).

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APPENDIX A

GSTEP Framework Guiding Principles

GSTEP Framework Guiding Principles

The following principles guided the development of the GSTEP Framework:

The Process Principle: Learning to teach is a career-long process of development and growth.
The Support Principle: All educators share responsibility for supporting their colleagues as professional peers.
The Ownership Principle: Teachers design their own career paths.
The Impact Principle: Effective teaching yields evidence of student learning and achievement.
The Equity Principle: All students and teachers deserve equally high expectations and support.
The Dispositions Principle: Productive dispositions positively affect student learning, teacher growth, and school climate.
The Technology Principle: Teachers use technology to facilitate teaching, learning, community building, and resource acquisition.

The Process Principle

Learning to teach is a career-long process of development and growth.

Learning to teach is an ongoing process that extends across entire careers. It requires a commitment to professionally guided decision-making, to evidence-driven self-reflection, and to honoring different ways of learning. Theories, information, and communities change, and teachers reconceptualize their work throughout their professional lives. Teachers practice what they preach: that education means life-long learning.

The Support Principle

All educators share responsibility for supporting their colleagues as professional peers.

Faculty and administrators in arts and sciences, colleges of education and public schools, along with policy makers, must work together as an educational community. Working together, they provide a coherent, consistent support system for teacher professional development, collaborative work, and professional excellence. All partners support one another's professional goals across intersecting careers, create and guide one another to research-based resources, and provide time and incentives for collaborative professional growth.

The Ownership Principle

Teachers design their own career paths.

As professional educators, teachers accept the challenge to pursue and create their own career opportunities from the day they decide to teach through retirement. Teachers identify their needs based on their students' learning, seek knowledge and support, locate and evaluate resources, and become engaged in professional communities. As confident educational leaders, teachers are committed to their own professional growth as well as to the future of their disciplines and the field of education.

The Impact Principle

Effective teaching yields evidence of student learning and achievement.

Accomplished teachers are aware of the impact of their teaching. They know what students are expected to learn as well as what learning looks like. They use multiple ways of determining students' knowledge and skills in a specific curricular area. Based on this information, teachers organize

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instruction that will lead to higher levels of learning. The premise that all students can learn, though not all in the same way or at the same time, together with the fundamental goal of helping all students achieve their best, guides teachers' instructional decision-making processes.

The Equity Principle

All students and teachers deserve equally high expectations and support.

All students and teachers, regardless of their personal characteristics, backgrounds, or physical challenges, must have opportunities to succeed. Equity does not mean that every student or teacher should be treated identically; instead, it demands that reasonable and appropriate accommodations be made as needed to promote maximum access and attainment for all. The educational community and others must support high expectations of teachers and students.

The Disposition Principle

Productive dispositions positively affect student learning, teacher growth, and school climate.

Dispositions refer to teachers' attitudes toward students, student diversity, colleagues, learning, and other aspects of education and classroom life. Teachers' dispositions are communicated subtly yet unmistakably. Appropriate dispositions enhance teaching and learning for all students, contribute to teachers' growing competence and effectiveness, and nurture a dynamic and supportive school climate.

The Technology Principle

Teachers use technology to facilitate teaching, learning, community building, and resource acquisition.

Technology includes any flexible teaching and learning tools that support learner-centered instructional strategies. Teachers use modern technologies as tools to achieve high academic standards by integrating them into their teaching and their own professional growth. Educational communities must provide teachers with access to resources and mentors, exposure to useful practices, and opportunities to learn new technologies and technology evaluation skills.

APPENDIX B

GSTEP Framework Standards

GSTEP Framework

The GSTEP Framework is a replicable statewide induction tool that identifies the knowledge, skills, dispositions, understandings, and other attributes of accomplished teaching. It provides a structure through which novices and their mentors are able to assess and analyze teaching practice.

Content & Curriculum

Teachers demonstrate a strong knowledge of content area(s) appropriate for their certification levels.

Accomplished teachers:

- demonstrate knowledge of content, major concepts, assumptions, debates, processes of inquiry, and ways of knowing that are central to the subject(s) they teach.
- understand and use subject-specific content and pedagogical content knowledge (how to teach their subjects) that is appropriate for diverse learners they teach.
- stay current in their subject areas as engaged learners and/or performers in their fields.
- relate content area(s) to other subject areas and see connections to everyday life.
- carefully select and use a wide variety of resources, including available technology, to deepen their own knowledge in the content area(s).
- interpret and construct school curriculum that reflects state and national content area standards.

Knowledge of Students & Their Learning

Teachers support the intellectual, social, physical, and personal development of all students.

Accomplished teachers:

- believe that all children can learn at high levels and hold high expectations for all.
- understand how learning occurs in general and in the content areas (e.g., how diverse learners construct knowledge, acquire skills, and develop habits of mind).
- are sensitive, alert, and responsive to all aspects of a child's well-being.
- understand how factors in environments inside and outside of school may influence students' lives and learning.
- are informed about and adapt their work based on students' stages of development, multiple intelligences, learning styles, and areas of exceptionality.
- establish respectful and productive relationships with families and seek to develop cooperative partnerships in support of student learning and well-being.

Learning Environments

Teachers create learning environments that encourage positive social interaction, active engagement in learning, and self-motivation.

Accomplished teachers:

- create a learning community in which students assume responsibility, participate in decision-making, and work both collaboratively and independently.
- organize, allocate, and manage time, space, activities, technology and other resources to provide active and equitable engagement of diverse students in productive tasks.
- understand and implement effective classroom management.

and learning.
• are informed about and adapt their work based on students' stages of development, multiple intelligences, learning styles, and areas of exceptionality.
• establish respectful and productive relationships with families and seek to develop cooperative partnerships in support of student learning and well-being.

Learning Environments

Teachers create learning environments that encourage positive social interaction, active engagement in learning, and self-motivation.

Accomplished teachers:

• create a learning community in which students assume responsibility, participate in decision-making, and work both collaboratively and independently.
• organize, allocate, and manage time, space, activities, technology and other resources to provide active and equitable engagement of diverse students in productive tasks.
• understand and implement effective classroom management.
• recognize the value of and use knowledge about human motivation and behavior to develop strategies for organizing and supporting student learning.
• are sensitive to and use knowledge of students' unique cultures, experiences, and communities to sustain a culturally responsive classroom.
• access school, district, and community resources in order to foster students' learning and well-being.
• use effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Assessment

Teachers understand and use a range of formal and informal assessment strategies to evaluate and ensure the continuous development of all learners.

Accomplished teachers:

• understand measurement theory and the characteristics, uses, and issues of different types of assessment.
• use preassessment data to select or design clear, significant, varied and appropriate student learning goals.
• choose, develop, and use classroom-based assessment methods appropriate for instructional decisions.
• involve learners in self-assessment, helping them become aware of their strengths and needs and encouraging them to set personal goals for learning.
• develop and use valid, equitable grading procedures based on student learning.
• use assessment data to communicate student progress knowledgeably and responsibly to students, parents, and other school personnel.
• use resources, including available technology, to keep accurate and up-to-date records of student work, behavior, and accomplishments.
• are committed to using assessment to identify student strengths and needs and promote student growth.

Planning & Instruction

Teachers design and create instructional experiences based on their knowledge of content and

curriculum, students, learning environments, and assessment.

Accomplished teachers:

• articulate clear and defensible rationales for their choices of curriculum materials and instructional strategies.
• plan and carry out instruction based upon knowledge of content standards, curriculum, students, learning environments, and assessment.
• understand and use a variety of instructional strategies appropriately to maintain student engagement and support the learning of all students.
• monitor and adjust strategies in response to learner feedback.
• vary their roles in the instructional process (e.g. instructor, facilitator, coach, audience) in relation to the content and purposes of instruction and the needs of students.
• use appropriate resources, materials, and technology to enhance instruction for diverse learners.
• value and engage in planning as a collegial activity.

■ Professionalism

Teachers recognize, participate in, and contribute to teaching as a profession.

Accomplished teachers:

• continually examine and extend their knowledge of the history, ethics, politics, knowledge of the history, ethics, politics, organization, and practices of education.
• understand and implement laws related to rights and responsibilities of students, educators, and families.
• follow established codes of professional conduct, including school and district policies.
• systematically reflect on teaching and learning to improve their own practice.
• seek opportunities to learn based upon reflection, input from others, and career goals.
• advocate for curriculum, instruction, learning environments, and opportunities that support the diverse needs of and high expectations for all students.
• assume leadership and support roles as part of a school team.

APPENDIX C

GSTEP Framework Standards Rubric

GSTEP Framework Standards Rubric

How to use

- Reflect on your development thus far.
- Use this rubric to identify strengths and weaknesses and map your development
- Read each standard, indicator, and levels of performance. Think about the descriptors at each level and choose whether you are performing at level I, II, or III at this point. If you are just beginning to develop the behaviors/dispositions outlined at the level selected use the lower rating (i.e., 1, 3, or 5); if all indicators are developed, use the higher rating (i.e., 2, 4, or 6).
- Circle the rating under each stated indicator.
- Keep in mind that some indicators you may have developed, others may be at a beginning stage (e.g., professionalism—opportunities for full development haven't been given).
- What evidence could you show that would concur with your self-assessment?
- Overall results will help us improve our programs, but individual results will help you develop a career plan for future growth as a professional. Level III is aligned to the National Board of Professional Teaching Standards (NBPTS).

I. **CONTENT AND CURRICULUM**: Teachers demonstrate a strong content knowledge of content area(s) and appropriate for their certification levels.

Indicators I-A.	**Level I**		**Level II**		**Level III**	
Accomplished teachers demonstrate knowledge of major concepts, assumptions, debates, processes of inquiry, and ways of knowing that are central to the content area(s) they teach.	Teacher makes content errors or does not recognize errors students commit. Teaching does not reflect evidence of knowledge of current issues and debates in the content area(s) in which he/she teaches.		Teaching is free of content errors. Teacher corrects errors students commit. He/She describes to students how different components of the content are organized and integrated.		Teacher displays extensive content knowledge and consistently helps students to recognize and correct their own errors. Differing viewpoints, theories, "ways of knowing", and methods of inquiry are reflected in his/her teaching of subject matter concepts. There is evidence of continuing pursuit of knowledge and pedagogy to improve student achievement.	
Rating	1	2	3	4	5	6

Indicator I-B.	Level I		Level II		Level III	
Accomplished teachers understand and use subject-specific content and pedagogical content knowledge (how to teach their subjects) that is appropriate for the diverse learners they teach.	Teacher tends to use one pedagogical method to convey content knowledge to students and is uncertain how to make the content appropriate to address the needs of diverse learners.		Teacher displays an understanding of a variety of pedagogical methods needed to convey content knowledge to students and makes the content appropriate to address the needs of diverse learners. But, he/she is sometimes unable to utilize pedagogical content knowledge to anticipate and alleviate students' misconceptions.		Teacher consistently displays an understanding of pedagogy needed to convey content knowledge to students and makes the content appropriate to address the needs of diverse learners he/she teaches. In addition, he/she is able to utilize pedagogical content knowledge to anticipate and alleviate students' misconceptions.	
Rating	1	2	3	4	5	6
Indicator I-C.	**Level I**		**Level II**		**Level III**	
Accomplished teachers stay current in their subject areas as engaged learners and/or performers in their fields.	There is little evidence that the teacher has attempted to stay current in his/her field. For example, outside resources are seldom consulted (e.g., professional journals, web sites, other faculty) and he/she rarely engages in professional development opportunities (e.g., conferences, workshops, membership in professional organizations).		Teacher consults additional resources to extend knowledge and stay current in subject matter. He/She adds some relevant content from outside resources to the curriculum. For example, he/she regularly attends professional workshops and incorporates new ideas gleaned from those experiences into his/her teaching.		Teacher consistently refines content taught and pedagogical strategies utilized based upon current research. He/She provides evidence of regularly consulting outside resources to increase student learning and engagement.	
Rating	1	2	3	4	5	6
Indicator I-D.	**Level I**		**Level II**		**Level III**	
Accomplished teachers relate content area(s) to other subject areas and see connections to everyday life.	Teacher does not discuss connections of the content area to other parts of the subject area or with other subject areas. There is little attempt to place content in the context of everyday life.		Teacher links content area with other parts of the subject area and other subject areas and attempts to make content relevant to students' everyday lives.		Teacher creates interdisciplinary learning experiences that allow students to integrate knowledge and skills and regularly apply them to everyday life situations.	
Rating	1	2	3	4	5	6

Indicator I-E.	Level I		Level II		Level III	
Accomplished teachers carefully select and use a wide variety of resources, including available technology, to deepen their own knowledge in the content area(s).	Teacher minimally uses technology and other resources (e.g., videos, college courses, professional development workshops) to extend his/her knowledge of the content area.		Teacher uses multiple resources and technologies to enhance knowledge of his/her content area(s). He/She makes an effort to evaluate these resources and curriculum materials for comprehensiveness, accuracy, and usefulness.		Teacher effectively uses a wide variety of resources and technologies to enhance knowledge of his/her content area(s). He/She consistently and thoroughly judges the quality of these resources and curriculum materials for comprehensiveness, accuracy, and usefulness and then makes appropriate curriculum decisions based on this review.	
Rating	1	2	3	4	5	6
Indicator I-F	**Level I**		**Level II**		**Level III**	
Accomplished teachers interpret and construct school curriculum that reflects state and national content area standards.	Teacher has a limited awareness of state and national standards. He/She is unable to indicate where the state standards can be found. Curriculum taught is not specifically aligned to state/national standards.		Teacher uses state and national standards to create learning objectives, write lesson plans, select appropriate materials, and to direct teaching. He/She is able to indicate where the state standards can be found, and curriculum taught seems to be specifically aligned to state/national standards.		Teacher uses state and national standards to create learning objectives, write lesson plans, select appropriate materials, and to direct teaching. He/She is able to indicate where the state standards can be found and is able to provide evidence that the curriculum taught is aligned to state/national standards (e.g., by providing a paper or electronic portfolio demonstrating how instruction is aligned to state/national standards).	
Rating	1	2	3	4	5	6

II. **KNOWLEDGE OF STUDENTS AND THEIR LEARNING**: Teachers support the intellectual, social, physical, and personal development of all students.

Indicator II-A.	**Level I**		**Level II**		**Level III**	
Accomplished teachers believe that all children can learn at high levels and hold high expectations for all.	Teacher conveys low or modest expectations for student achievement. He/She is not convinced all children can learn and often attributes the lack of student success to factors outside the classroom or low student ability.		Teacher believes all children can learn and demonstrates this belief by setting appropriate and challenging expectations that are clearly and consistently communicated to the class.		Teacher believes all children can learn. He/She demonstrates this belief by setting appropriate and challenging expectations that are clearly and consistently communicated to class. In addition, there is evidence that he/she clearly communicates expectations for each student and helps diverse learners to reach those challenging expectations.	
Rating	1	2	3	4	5	6
Indicator II-B.	**Level I**		**Level II**		**Level III**	
Accomplished teachers understand how learning occurs in general and in the content areas (e.g., how students construct knowledge, acquire skills, and develop habits of mind).	Teacher communicates little knowledge of general learning theories (e.g., constructivism, information processing, social cognition, operant conditioning) and does not provide evidence of utilizing knowledge of student learning to plan instructional strategies that promote student learning.		Teacher demonstrates broad knowledge of general learning theories (e.g., constructivism, information processing, social cognition, operant conditioning). He/She incorporates knowledge of student learning into the content areas by planning instructional strategies that promote student learning. Some connections are made to students' experiences, and some opportunities for active engagement, manipulation, and testing of ideas and materials are provided.		Teacher demonstrates detailed knowledge of general learning theories (e.g., constructivism, information processing, social cognition, operant conditioning). He/She consistently incorporates knowledge of student learning into the content areas by planning instructional strategies that promote student learning. Connections are consistently made to students' experiences, and significant opportunities for active engagement, manipulation, and testing of ideas and materials are provided.	
Rating	1	2	3	4	5	6
Indicator II-C.	**Level I**		**Level II**		**Level III**	
Accomplished teachers are sensitive, alert, and responsive to all aspects of a child's well-being.	Teacher is focused on instruction and content, however, he/she is often unaware of social, physical, and personal development needs of all students.		Teacher tends to be sensitive, alert, and responsive to the intellectual, social, physical, and personal development needs of the whole class, but tends to be unaware of the special needs of individual children.		Teacher is consistently sensitive, alert, and responsive to the intellectual, social, physical, and personal development needs of each individual learner. When appropriate, he/she works with other professionals (e.g., school counselors, school psychologists, parents, social workers, special education teachers) to improve the overall well-being of each student.	
Rating	1	2	3	4	5	6

Indicator II-D.	Level I		Level II		Level III	
Accomplished teachers understand how factors in environments inside and outside of school may influence students' lives and learning.	Teacher does not recognize the impact of different factors (e.g., environments, social class, family composition, language, values) on lives and learning. He/She may be unsure about type and amount of accommodations that can legally or ethically be made for these different factors.		Teacher understands that a variety of factors influence students' lives and learning, and is beginning to adjust the classroom environment, instruction, or curriculum to accommodate these environments. He/She has an understanding about the type and amount of accommodations that can legally or ethically be made for these different factors and is beginning to make these accommodations.		Teacher understands how students' lives and learning is influenced by individual experiences (e.g., environments, social class, family composition, language, values) and consistently utilizes this information as a basis for connecting instruction directly to students' experiences. He/She is fluent concerning the type and amount of accommodations that can legally or ethically be made to address these factors and regularly makes appropriate accommodations.	
Rating	1	2	3	4	5	6
Indicator II-E.	**Level I**		**Level II**		**Level III**	
Accomplished teachers are informed about and adapt their work based on students' stages of development, multiple intelligences, learning styles, and areas of exceptionality.	Teacher plans instruction for the entire class based on standard strategies and practices. He/She does not accommodate students by incorporating knowledge of stages of development (e.g., Piaget's theory of intellectual development, Kohlberg's theory of moral development, Vygotsky's theory of language and intellectual development) exceptionalities, or other individual differences (e.g., Gardner's MI theory).		Teacher recognizes the students' stages of development (e.g., Piaget's theory of intellectual development, Kohlberg's theory of moral development, Vygotsky's theory of language and intellectual development), multiple intelligences, and learning styles are important characteristics to consider in teaching, and often uses those understandings to plan instruction for the whole group.		Teacher clearly and consistently designs instruction appropriate to students' stages of development (e.g., Piaget's theory of intellectual development, Kohlberg's theory of moral development, Vygotsky's theory of language and intellectual development), multiple intelligences, learning styles, and routinely makes appropriate modifications for individual students who have particular learning differences or needs.	
Rating	1	2	3	4	5	6
Indicator II-F.	**Level I**		**Level II**		**Level III**	
Accomplished teachers establish respectful and productive relationships with families and seek to develop cooperative partnerships in support of student learning and well-being.	Teacher does not communicate directly or work with parents and other caregivers of students. Little attempt is made to respond to family needs and concerns. He/She may be insensitive to the norms of various community and/or cultural groups.		Teacher uses the normal routines of interactions with parents and caregivers such as parent-teacher conferences and PTO meetings. He/She responds to parental concerns but does not take the initiative to actively partner with families (for example, through newsletters, e-mail, web site, frequent phone calls, individual meetings).		In addition to utilizing normal routines of interactions with parents and other caregivers, teacher creates other opportunities (for example, through newsletters, e-mail, web site, frequent phone calls, individual meetings) to provide frequent information on both positive and negative aspects of student progress. He/She actively engages families and caregivers in the instructional program. Concerns are handled with great sensitivity.	
Rating	1	2	3	4	5	6

III. **LEARNING ENVIRONMENTS**: Teachers create learning environments that encourage positive social interaction, active engagement in learning, and self-motivation.

Indicator III-A.	**Level I**		**Level II**		**Level III**	
Accomplished teachers create a learning community in which students assume responsibility, participate in decision-making, and work both collaboratively and independently.	Classroom rules are set with little or no input from students. There is little opportunity for students to communicate and work together in small group settings. There is limited choice in selection of learning tasks.		Teacher values the role of students in promoting each other's learning and recognizes the importance of peer relationships in establishing a learning climate. The teacher creates occasions for the learners to work collaboratively and independently by providing opportunities for individual and group work and allowing students to select learning tasks. However, students occasionally exhibit off-task behavior.		Teacher values the role of students in promoting each other's learning and recognizes the importance of peer relationships in establishing a learning climate. The classroom consistently reflects an environment that actively engages students in learning and involves students in establishing classroom rules. Teacher helps group develop shared values and expectations for student interactions, academic discussions, and individual group responsibility. He/She organizes, prepares students for, and monitors independent and group work that allows for full and varied participation of all individuals.	
Rating	1	2	3	4	5	6
Indicator III-B.	**Level I**		**Level II**		**Level III**	
Accomplished teachers organize, allocate, and manage time, space, activities, technology and other resources to provide active and equitable engagement of diverse students in productive tasks.	Instructional time is lost in performing non-instructional duties, managing materials, and transitioning between subjects. Students are not productively engaged in learning. Technology use is limited and superficially integrated into the curriculum. Furniture arrangement is unsuited to lesson activities. Classroom may be unsafe (e.g., inappropriate storage of chemicals, excessive clutter in walkways).		Most students are actively engaged in productive learning tasks. Routines for handlings non-instructional duties, managing materials and supplies, and transitioning between subjects are established and utilize a minimum amount of instructional time. Furniture arrangement is a resource for learning activities and is equally accessible to all students. Classroom is safe.		Routines for the handling of non-instructional duties, managing materials, and transitioning between subjects are well established, with students assuming some responsibility for operation. There is active and equitable engagement of diverse students in productive tasks. Teacher maintains a safe, engaging, and interesting classroom and is able to adjust the environment to suit the activity and the diverse needs of students.	
Rating	1	2	3	4	5	6

Indicator III-C.	Level I		Level II		Level III	
Accomplished teachers understand and implement effective classroom management.	Teacher has a reactive classroom management plan. He/She does not monitor behavior and responds inconsistently to lapses in student conduct. The responses are sometimes inappropriate (e.g., severe, cruel, or sarcastic with little respect for students' feelings).		Teacher responds to student misbehavior fairly and consistently but classroom disruption still occurs. He/She is generally aware of student behavior but may miss the activities of some students. There is no serious disruptive behavior.		Teacher has a proactive classroom management plan. He/She monitors in a subtle and preventative manner. His/Her response to the occasional classroom disruption is fair, consistently applied to all, and respectful of students' feelings. In addition, students monitor and adjust their own behavior when appropriate.	
Rating	1	2	3	4	5	6
Indicator III-D.	**Level I**		**Level II**		**Level III**	
Accomplished teachers recognize the value of and use knowledge about human motivation and behavior to develop strategies for organizing and supporting student learning.	Teacher can define and discuss issues involving motivation and behavior and values this information. However, he/she is unable to consistently and meaningfully use this knowledge to develop strategies for organizing and supporting student learning.		Teacher can define and discuss issues involving student motivation and behavior and values this information. He/She demonstrates use of intrinsic and extrinsic motivational strategies to organize and support student learning. While praise is employed and attempts are made to build on students' interests, it tends to be general praise as opposed to being contingent.		Teacher can define and discuss issues involving student motivation and behavior and values this information. He/She effectively and consistently demonstrates the use of intrinsic and extrinsic motivational strategies to successfully engage students in learning. Teacher regularly employs contingent praise and models interest and enthusiasm for learning.	
Rating	1	2	3	4	5	6
Indicator III-E.	**Level I**		**Level II**		**Level III**	
Accomplished teachers are sensitive to and use knowledge of students' unique cultures, experiences, and communities to sustain a culturally responsive classroom.	Teacher is insensitive to and displays a superficial understanding of how various cultures, experiences, and communities construct different expectations for students or equip them with varied cultural experiences. He/She conducts classroom activities with little regard for cultural differences and does not model practices that result in equal treatment for all.		Teacher is sensitive to and displays a general grasp of how various cultures, experiences, and communities construct different expectations for students or equip them with varied cultural experiences. He/She has a basic grasp of multicultural education, and uses this information for establishing a culturally responsive classroom where students are treated equitably.		Teacher is sensitive to and displays a clear grasp of how various cultures and communities experience and construct different expectations for students and equip them with varied cultural norms and expectations. He/She skillfully applies an understanding of multicultural education to sustain a culturally sensitive, tolerant classroom where the learners develop empathy and understanding of their unique cultures and experiences.	
Rating	1	2	3	4	5	6

Indicator III-F.	Level I		Level II		Level III	
Accomplished teachers access school, district, and community resources in order to foster students' learning and well-being.	Teacher is unaware of school, district, and community resources available to support students' learning (e.g., free tutoring, library). In addition, he/she cannot identify contact information for community resources that support students' well-being (e.g., mental health services, free medical assistance).		Teacher has contact information and is beginning to utilize resources available through the school and district to support students' learning and well-being. He/She has made limited attempts to access community resources to support students' learning and well-being.		Teacher actively and significantly utilizes resources available through the school, district and community. He/She regularly links with other environments on behalf of the students. He/She regularly consults with parents, counselors, teachers and professionals in community agencies.	
Rating	1	2	3	4	5	6
Indicator III-G.	**Level I**		**Level II**		**Level III**	
Accomplished teachers use effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.	Teacher's spoken and written language contains grammar and syntax errors. Directions to students are unclear. He/She does not utilize effective questioning skills, such as group alerting strategies. There is little use of audio-visual aids and computers to enrich the learning environment.		Teacher's spoken and written language are free of grammatical and syntax errors. Directions are typically clear or quickly clarified after initial student confusion. He/She intermittently utilizes effective questioning and discussion strategies. Audio-visual aids and computers are used superficially to support learning.		Teacher's spoken and written language incorporates well-chosen vocabulary that enriches the lesson and is appropriate to students' ages and interests. He/She knows how to ask questions and stimulate discussion in differing ways for particular purposes (e.g., probing for understanding, helping, promoting problem-solving, encouraging convergent and divergent thinking, stimulating curiosity). Audio-visual aids and computer are consistently used to foster active learning.	
Rating	1	2	3	4	5	6

IV. **ASSESSMENT**: Teachers understand and use a range of formal and informal assessment strategies to evaluate and ensure the continuous development of all learners.

Indicator IV-A.	**Level I**	**Level II**	**Level III**
Accomplished teachers understand measurement theory and characteristics, uses, and issues of different types of assessment.	Teacher has a limited understanding of measurement theory (i.e., test reliability, content validity, construct validity, criterion validity). He/She has difficulty interpreting test results (e.g., criterion-referenced assessments and norm-referenced-assessments) and utilizing assessment results to inform instruction.	Teacher demonstrates knowledge of measurement theory (i.e., test reliability, content validity, construct validity, criterion validity) and correctly interprets test results (e.g., criterion-referenced assessments, norm-referenced-assessments). He/She utilizes assessment results, with varying degrees of success, to inform instruction.	Teacher has a thorough conceptual understanding of measurement theory (i.e., test reliability, content validity, construct validity, criterion validity) and correctly interprets test results (e.g., criterion-referenced assessments, norm-referenced-assessments). He/She consistently and successfully utilizes assessment results to inform instruction.
Rating	1 2	3 4	5 6
Indicator IV-B.	**Level I**	**Level II**	**Level III**
Accomplished teachers use pre-assessment data to select or design, clear, significant, varied, and appropriate student learning goals.	Teacher either does not use pre-assessment data or collects pre-assessment data and is unsure how to use it to select clearly articulated and appropriate learning goals for students.	Teacher collects and uses pre-assessment data to select or design clear student learning goals; however, these goals are usually designed for the class as a whole.	Teacher collects and uses pre-assessment data to select or design clear, significant, and varied student learning goals that are appropriate for meeting the learning needs of each individual learner as well as the overall needs of the whole class.
Rating	1 2	3 4	5 6
Indicator IV-C.	**Level I**	**Level II**	**Level III**
Accomplished teachers choose, develop, and use classroom-based assessment methods appropriate for instructional decisions.	Teacher rarely selects or develops classroom-based assessment methods that are appropriate for the instructional objectives and design. Only one type of assessment tool is incorporated into the instructional design.	Teacher selects or develops classroom-based assessment tools that are appropriate for the instructional objectives and design. He/She uses a variety of assessment tools. However, these assessments are not used by the teacher to modify teaching and learning strategies for individuals and groups of students.	Teacher consistently selects or develops a variety of classroom-based assessment methods (i.e., authentic and traditional assessment tools) that are appropriate for the instructional objectives and design. These assessments are used by the teacher to modify teaching and learning strategies for individuals and groups of students.
Rating	1 2	3 4	5 6

Indicator IV-D.	Level I	Level II	Level III
Accomplished teachers involve learners in self-assessment, helping them become aware of their strengths and needs and encouraging them to set personal goals for learning.	Grades and test scores are the primary tools students have access to in order to assess their own progress. They are not taught and are seldom given the opportunity to engage in self-assessment. Students are not encouraged to utilize self-assessment to establish personal goals for learning.	Teacher involves students in the self-assessment process by having the students evaluate their performance (e.g., having students utilize a rubric to develop and evaluate projects, journals, demonstrations, presentations, portfolios); however, students are not taught how to set personal goals for learning based on the self-assessment.	Teacher regularly involves learners in a variety of self-assessment activities (e.g., having students utilize a rubric to develop and evaluate projects, journals, demonstrations, presentations, portfolios). Students are taught how to utilize self-assessment data to meet established goals for learning and development and take responsibility for their own learning.
Rating	1 2	3 4	5 6
Indicator IV-E.	**Level I**	**Level II**	**Level III**
Accomplished teachers develop and use valid, equitable grading procedures based on student learning.	Teacher utilizes unfair and inequitable scoring procedures. He/She does not adapt assessments to meet the needs of individual learners.	Teacher uses fair and equitable grading procedures and attempts to make appropriate adaptations to assessments that meet the needs of individual learners.	Teacher routinely utilizes fair and equitable grading procedures and regularly and successfully makes appropriate adaptations to assessments that meet the needs of individual learners.
Rating	1 2	3 4	5 6
Indicator IV-F.	**Level I**	**Level II**	**Level III**
Accomplished teachers use assessment data to communicate student progress knowledgeably and responsibly to students, parents and other school personnel.	Teacher provides students, parents, and other school personnel with basic information about student progress through report cards and at regularly scheduled times (e.g., parent-teacher conference).	Teacher provides students, parents, and other school personnel with frequent, substantive, and constructive information about students' progress at regularly scheduled reporting periods and creates some additional opportunities to communicate with families about students' academic and social progress.	Teacher provides students, parents, and other school personnel with frequent, substantive, and constructive information about students' progress at regularly scheduled reporting periods and maintains regular and comprehensive communication with families and students concerning academic and social progress.
Rating	1 2	3 4	5 6

Indicator IV-G.	Level I		Level II		Level III	
Accomplished teachers use resources, including available technology, to keep accurate and up-to-date records of student work, behavior, and accomplishments.	Teacher is unaware of how to use technology (e.g., electronic spreadsheets) to keep accurate and up-to-date records of student work, behavior, and accomplishments; records kept are not always accurate and up-to-date.		Teacher is aware of resources, including available technology (e.g., electronic spreadsheets), for keeping records of student academic work and accomplishments; records are accurate and up-to-date.		Teacher uses available technology and other resources to maintain accurate and up-to-date records of student work and performance. In addition to keeping accurate records of academic performance, he/she maintains accurate and up-to-date records of development, behavior, and disposition.	
Rating	1	2	3	4	5	6
Indicator IV-H.	**Level I**		**Level II**		**Level III**	
IV-H. Accomplished teachers are committed to using assessment to identify student strengths and needs and promote student growth.	Teacher only uses grades and test scores as the primary tools to identify students' academic strengths and needs. Assessment strategies tend to be summative with few formative evaluations. He/She does not attempt to use the assessment process to promote the affective and social development of the students.		Teacher uses a variety of assessment strategies to identify students' academic strengths and needs. Assessment strategies are formative and summative. He/She attempts to utilize assessment strategies to promote the affective and social development of the students.		Teacher frequently uses a variety of assessment strategies to identify students' academic strengths and needs. Assessment strategies are formative, summative, formal, and informal. He/She regularly utilizes assessment strategies to promote the affective and social development of the students.	
Rating	1	2	3	4	5	6

V. **PLANNING AND INSTRUCTION**: Teachers design and create instructional experiences based on their knowledge of content and curriculum, students, learning environments, and assessment.

Indicator V-A.	**Level I**		**Level II**		**Level III**	
Accomplished teachers articulate clear and defensible rationales for their instructional choices.	Teacher has difficulty explaining the rationale for instructional choices. Goals selected are unclear and do not reflect important learning and/or represent low expectations for students. Limited attempt is made to use students' prior knowledge, development, and diverse backgrounds in goal selection. Teacher has difficulty connecting goals and student activities.		Teacher articulates defensible rationales for instructional choices (e.g., students' needs, diverse backgrounds, prior knowledge, and curriculum standards) that reflect high expectations for all students. He/She connects goals and student activities, but sometimes the instructional goals do not represent meaningful learning outcomes.		Teacher consistently articulates defensible rationales for instructional choices (e.g., students' needs, diverse backgrounds, prior knowledge, and curriculum standards) that reflect high expectations for all students. He/She establishes short- and long- term goals for all students that focus on important learning objectives. Instructional activities are related to learning goals, relevant to learners, and based upon principles of effective instruction. Goals established are assessable and lead to student learning.	
Rating	1	2	3	4	5	6
Indicator V-B.	**Level I**		**Level II**		**Level III**	
Accomplished teachers plan and carry out instruction based on knowledge of content and curriculum, students, learning environments, and assessment.	Teacher is unable to integrate knowledge of subject matter, curriculum, students, learning theory, and assessment to plan and carry out instruction. Unit and lesson structures are incoherent or are not clearly defined. When carrying out lessons, he/she does not maintain an efficient pace that interferes with flow of classroom learning.		Teacher can integrate knowledge of subject matter, curriculum, students, learning theory, and assessment to plan and carry out instruction. Unit and lesson structures are logically organized and sequenced; and resources selected extend most students' understanding of concepts and content. Lesson pacing is uneven but does not significantly interfere with the flow of learning.		Teacher consistently integrates knowledge of subject matter, curriculum, students, learning theory, and assessment to plan and carry out instruction. Unit and lesson structures are coherent, producing a unified whole and reflect findings from recent professional research. He/she creates lessons and activities that operate at multiple levels to meet the developmental and individual needs of diverse learners and help each progress. Lesson pacing is such that it serves to facilitate the flow of learning.	
Rating	1	2	3	4	5	6

Indicator V-C.	Level I		Level II		Level III	
Accomplished teachers understand and use a variety of instructional strategies appropriately to maintain students' engagement and support student learning.	Teacher understands principles and techniques, associated with various instructional strategies (e.g., cooperative learning, direct instruction, discovery learning, whole group discussion, mastery learning, computer-based instruction, interdisciplinary instruction), but has difficulty using them in classroom settings to engage and support student learning. There is a heavy reliance on a single instructional method and on the use of textbooks and worksheets.		Teacher understands principles and techniques, associated with various instructional strategies (e.g., cooperative learning, direct instruction, discovery learning, whole group discussion, mastery learning, computer-based instruction, interdisciplinary instruction) to engage and support student learning. He/She constructs and utilizes a repertoire of strategies matched to subject matter that engages and supports most students in learning.		Teacher understands principles and techniques associated with various instructional strategies (e.g., cooperative learning, direct instruction, discovery learning, whole group discussion, mastery learning, computer-based instruction, interdisciplinary instruction) to engage and support student learning. He/She consistently draws on an extensive repertoire of appropriate strategies to create learning experiences that engages and supports the diversity of his/her students in learning and provides each one with multiple perspectives on key concepts, problems, and areas of knowledge.	
Rating	1	2	3	4	5	6
Indicator V-D.	**Level I**		**Level II**		**Level III**	
Accomplished teachers monitor and adjust strategies in response to learner feedback.	Teacher monitors lesson but adheres firmly to instructional plan even when there is evidence that either students do not understand content presented or students have already mastered material.		Teacher monitors lesson and typically makes appropriate modifications to instructional plans during the lesson to address student needs. He/She probes for understanding and uses students' questions to direct instruction.		Teacher is able to anticipate common misconceptions and makes modifications before the lesson to address student needs. He/She monitors lesson by providing students constructive and on-going feedback. Teacher consistently and successfully makes appropriate modifications to instructional plans during the lesson to address student needs (e.g., probes for understanding, accommodates students' questions, provides alternative explanations, and continuously seeks effective approaches for students who have difficulty learning).	
Rating	1	2	3	4	5	6

Indicator V-E.	Level I		Level II		Level III	
Accomplished teachers vary their roles in the instructional process (e.g. instructor, facilitator, coach, audience) in relation to the content and purpose of instruction and the needs of students.	Teacher utilizes a singular role in the instructional process and does not switch between various teacher roles (e.g., instructor, facilitator, coach, audience). The use of a variety of instructional models (e.g., Reciprocal Teaching Model, Group Investigation Model, Direct Instruction, Cooperative Learning, and Discovery Learning Centers) is not evident.		Teacher utilizes multiple roles (e.g., instructor, facilitator, coach, audience) that are appropriate for instruction. He/She periodically switches roles during the instructional process (e.g., during the Reciprocal Teaching Model, Group Investigation Model, Direct Instruction, and Discovery Learning Centers).		Teacher utilizes multiple roles (e.g., instructor, facilitator, coach, audience) that are appropriate for instruction. He/She regularly and successfully switches roles during the instructional process (e.g., during the Reciprocal Teaching Model, Group Investigation Model, Direct Instruction, and Discovery Learning Centers).	
Rating	1	2	3	4	5	6
Indicator V-F.	**Level I**		**Level II**		**Level III**	
Accomplished teachers use appropriate resources, materials and technology to manage and enhance instruction for diverse learners.	Teacher infrequently utilizes instructional materials from sources other than the assigned textbook (e.g., he/she relies heavily on worksheets for classroom activities). He/She uses technology superficially or does not use it at all to enhance instruction.		Teacher attempts to enhance learning through the periodic use of a wide variety of materials such as human and technological resources (e.g., computers, audio-visual technologies, local experts, artifacts, texts, reference books, and literature). He/She is building a repertoire of resources that are appropriately matched to subject matter and individual student needs. He/She meets state technology standards established for educators.		Teacher consistently draws on an extensive repertoire of appropriate resources to enhance instruction for diverse learners and monitor its effectiveness. He/She uses these resources (including available technology) for instruction. In addition, students are taught to utilize appropriate human and technological resources in their learning.	
Rating	1	2	3	4	5	6
Indicator V-G.	**Level I**		**Level II**		**Level III**	
Accomplished teachers value and engage in planning as a collegial activity.	Teacher may value collegial planning but does not know how to draw on co-workers as a resource or himself or herself be a source of support for a colleague. Planning is done individually or, if done as a group, few contributions are offered.		Teacher adheres to school's requirements for team meetings. He/She contributes to school wide events and learning activities and engages with colleagues in dialogue and reflection to support student learning.		Teacher values collegial interactions. He/She meets regularly with colleagues and accomplishes tasks related to student achievement, curriculum inquiries, instructional strategies, and professional development. A leadership role is sometimes taken in these endeavors.	
Rating	1	2	3	4	5	6

VI. **PROFESSIONALISM**: Teachers recognize, participate in, and contribute to teaching as a profession.

Indicator VI-A.	**Level I**	**Level II**	**Level III**
Accomplished teachers continually examine and extend their knowledge of the history, ethics, politics, organization and practices of education.	Teacher has limited knowledge of the history, ethics, politics, organization, and practices of the system within he/she works. He/She makes inadequate attempts to modify teaching based upon school's history, ethical obligations, political nature, and specific organization.	Teacher understands schools as organizations within the framework of the local community and understands the operations of the system within he/she works. His/Her teaching is influenced by the school's history, ethical obligations, political nature, and specific organization. However, he/she is not attuned to state and national educational issues and trends.	Teacher understands schools as organizations within the framework of the local community and understands the operations of the system within he/she works. His/Her teaching is influenced by the school's history, ethical obligations, political nature, and specific organization. He/She is knowledgeable about state and national issues and trends impacting education. He/She actively works to address these issues through his/her professional organizations.
Rating	1 2	3 4	5 6
Indicator VI-B.	**Level I**	**Level II**	**Level III**
Accomplished teachers understand and abide by laws related to rights and the responsibilities of students, educators, and families.	Teacher has limited knowledge of laws related to students' rights and teacher responsibilities (e.g., promotes equal education, provides appropriate education for children with special needs, respects confidentiality and privacy, treats students ethically and appropriately, reports suspected child abuse).	Teacher understands and abides by laws related to students' rights and teacher responsibilities (e.g., promotes equal education, provides appropriate education for children with special needs, respects confidentiality and privacy, treats students ethically and appropriately, reports suspected child abuse).	Teacher is familiar with and complies fully with federal regulations and state and local policies related to students' and family rights and teacher responsibilities. He/She knows other community professionals and school-based professionals have valuable insights into the regulations and policies as well as into needs of students and families served. He/She actively teams with those personnel to ensure that all students experience adequate levels of care.
Rating	1 2	3 4	5 6
Indicator VI-C.	**Level I**	**Level II**	**Level III**
Accomplished teachers follow established codes of professional conduct, including school and district policies.	Teacher is aware of the Georgia's Code of Ethics for Educators but does not completely understand his/her obligations and responsibilities. He/She is unfamiliar with school and district policies on professional conduct.	Teacher is knowledgeable of Georgia's Code of Ethics for Educators and is familiar with school and district policies on professional behavior. He/She conducts himself/herself professionally as described in the codes and policies.	In addition to being knowledgeable about and abiding by local and state codes and policies on professional behavior, teacher serves as a positive adult role model. He/She guides children to learn and live by positive codes of personal deportment.
Rating	1 2	3 4	5 6

Indicator VI-D.	Level I		Level II		Level III	
Accomplished teachers systematically reflect on teaching and learning to improve their own practice.	Teacher examines his/her own personal teaching practices, but is unable to think critically about his/her teaching and cannot detail procedures to improve his/her own performance.		Teacher examines his/her own teaching practices and student performances. After reflection, he/she is able to critically evaluate teaching and make adjustments in practices that lead to improved student achievement.		Teacher routinely and systematically examines performance in the classroom in order to strengthen his/her teaching and promote students' learning. He/She considers himself/herself to be a member of a learning community and therefore seeks input and criticism from others to improve practices and increase student achievement.	
Rating	1	2	3	4	5	6
Indicator VI-E.	**Level I**		**Level II**		**Level III**	
Accomplished teachers seek opportunities to learn based upon reflection, input from others, and career goals.	Teacher engages in professional development activities that are required. However, input received during these activities and/or from other school professionals is largely ignored. He/She has not articulated clear career goals or considered the value of additional educational training to improve classroom practices.		Teacher engages in professional development activities that are required and also seeks additional opportunities to develop professionally based on career goals, self-assessment, and input from others. (Examples of professional development endeavors include, but are not limited to, exploring new resources, studying professional literature, attending workshops and conferences, and membership in professional organizations.)		Teacher seeks opportunities to develop professionally based on self-assessment, input from others and career goals. He/She consistently seeks out opportunities for professional development to enhance content knowledge and pedagogical skill and makes a systematic attempt to conduct action research in his/her classroom. There is evidence of improved student achievement as a result of these endeavors.	
Rating	1	2	3	4	5	6
Indicator VI-F.	**Level I**		**Level II**		**Level III**	
Accomplished teachers advocate for curriculum, instruction, learning environments, and opportunities that support the diverse needs of and high expectations for all students.	Teacher is aware of issues, but does not vocally advocate for curriculum changes, instructional design modifications, and improved learning environments (e.g., assistive technology) that support the diverse needs of students and that reflect challenging and appropriate expectations for all learners.		Teacher vocally advocates for curriculum changes, instructional design modifications, and improved learning environments (e.g., assistive technology) that support the diverse needs of students and that reflect challenging and appropriate expectations for all learners. However, he/she does not take a leadership role in the work.		Teacher takes an active leadership role in advocating for curriculum changes, instructional design modifications, and improved learning environments (e.g., assistive technology) that support the diverse needs of students and that reflect challenging and appropriate expectations for all learners.	
Rating	1	2	3	4	5	6

Indicator VI-G.	Level I		Level II		Level III	
Accomplished teachers assume leadership and support roles as part of a school team.	Teacher avoids becoming involved in school and system projects or participates in tasks superficially.		Teacher participates in school and system projects when specifically asked and makes regular and effective contributions.		Teacher volunteers to participate and makes substantial contributions in school and system projects. He/She assumes the leadership role in a major school or district project.	
Rating	1	2	3	4	5	6

Please answer the following questions. The data obtained will be used for descriptive purposes only.

Gender: _____ Male _____ Female

Age (as of your last birthday): _____

Program of study:

_____ Business

_____ Family and Consumer Sciences

_____ Marketing

_____ Technology

_____ Trade and Industry

_____ Other

APPENDIX D

Letter of Approval to use GSTEP Framework

July 21, 2005

To Whom It May Concern:

This letter grants Jeanne Symanoskie, graduate student in the Occupational Studies Department of the College of Education at The University of Georgia, permission to use the Georgia Systemic Teacher Education Program *Framework for Accomplished Teaching* in her doctoral dissertation study.

The document should be referred to in the study as the GSTEP *Framework for Accomplished Teaching* or the GSTEP *Framework*. A copy of the completed study should be sent to GSTEP at gstep@uga.edu or mailed to 315 Aderhold Hall, Athens, Georgia 30602.

Please contact us at gstep@uga.edu if you have any questions.

Sincerely,

Frances Hensley
Director, Georgia Systemic Teacher Education Program

APPENDIX E

Cover Letter to Student Teacher

April 30, 2004

Dear CTE teacher education candidate:

A research study titled "Comparison of Career and Technical Education Student Teacher and Supervising Teacher Ratings of Preparation to Teach," is being conducted by Jeanne Elmore Symanoskie, from the Department of Occupational Studies at the University of Georgia (542-4472). The study is being conducted under the supervision of Dr. Helen C. Hall, 203 River's Crossing, Athens, Georgia (542-4472).

The intent of this letter is to ask for your participation in this research study. The attached scale will be used in this study to compare student teacher and supervising teacher responses to the scale items. The information collected will be shared with the department upon completion of the study.

Within the Department of Occupational Studies the career and technical teacher education (CTE) program has undergone changes. These changes were the result of participation in the Georgia Systemic Teacher Education Program (GSTEP). The intent of this study is to determine the extent to which CTE student teacher's feel prepared to teach using the GSTEP Framework. Results of this study will be used to compare ratings of CTE student teacher candidates' and their supervising teacher's rating of preparation to teach. In order to compare ratings, the scales have been coded to allow the researcher to match student teacher and supervising teacher scales; however, the researcher or department will have no way of knowing which scales correspond to each participant. Any information the researcher obtains about you will be anonymous.

Your participation is entirely voluntary and you may skip any questions you are uncomfortable answering. It is estimated the completion of the scale will take 10 – 15 minutes. The completion and return of the scale will indicate your willingness to participate in this research study. You will not benefit directly by completing this scale. However, your participation in this research may lead to information that could inform the researcher of any suggestions for teacher education or CTE professional education core of classes, therefore possibly impacting future CTE teacher preparation. Finally, you may request a copy of the final report of the project's findings.

Thank you for your participation in this research study. If you have any questions do not hesitate to contact Jeanne Elmore Symanoskie by email at jmelmore@uga.edu.

Sincerely,

Jeanne Elmore Symanoskie
Graduate Assistant

For questions or problems about your rights please call or write: Chris A. Joseph, Ph.D., Human Subjects Office, University of Georgia, 606A Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu

APPENDIX F

GSTEP Framework Standards Scale – Student

How to use

- Reflect on your development thus far.
- Read each standard (roman numerals) and description of indicator (I/My…).
- Circle the rating beside each stated description of indicator, choose 5 = always, 4 = most of the time, 3 = sometimes, 2 = on occasion, 1 = never.
- If you have trouble with an indicator, please do not leave it blank; try to choose the most appropriate rating.

CONTENT AND CURRICULUM: Teachers demonstrate a strong content knowledge of content area(s) and appropriate for their certification levels.

	Always → Never
I-A. My teaching is free of content errors. I correct errors students commit. I describe to students how different components of the content are organized and integrated.	5 4 3 2 1
I-B. I display an understanding of a variety of pedagogical methods needed to convey content knowledge to students and made the content appropriate to address the needs of diverse learners. But, I am sometimes unable to utilize pedagogical content knowledge to anticipate and alleviate students' misconceptions.	5 4 3 2 1
I-C. I consult additional resources to extend knowledge and stay current in subject matter. I add some relevant content from outside resources to the curriculum. For example, I regularly attend professional workshops and incorporate new ideas gleaned from those experiences into my teaching.	5 4 3 2 1
I-D. I link content areas with other parts of the subject area and other subject areas and attempt to make content relevant to students' everyday lives.	5 4 3 2 1
I-E. I use multiple resources and technologies to enhance knowledge of my content area(s). I make an effort to evaluate these resources and curriculum materials for comprehensiveness, accuracy, and usefulness.	5 4 3 2 1
I-F. I use state and national standards to create learning objectives, write lesson plans, select appropriate materials, and to direct teaching. I am able to indicate where the state standards can be found, and curriculum taught seems to be specifically aligned to state/national standards.	5 4 3 2 1

KNOWLEDGE OF STUDENTS AND THEIR LEARNING: Teachers support the intellectual, social, physical, and personal development of all students.

	Always → Never
II-A. I believe all children can learn and demonstrate this belief by setting appropriate and challenging expectations that are clearly and consistently communicated to the class.	5 4 3 2 1
II-B. I demonstrate a broad knowledge of general learning theories (e.g., constructivism, information processing, social cognition, operant conditioning). I incorporate knowledge of student learning into the content areas by planning instructional strategies that promote student learning. Some connections are made to students' experiences, and some opportunities for active engagement, manipulation, and testing of ideas and materials are provided.	5 4 3 2 1
II-C. I tend to be sensitive, alert, and responsive to the intellectual, social, physical, and personal development needs of the whole class, but tend to be unaware of the special needs of individual children.	5 4 3 2 1

II-D. I understand that a variety of factors influence students' lives and learning, and am beginning to adjust the classroom environment, instruction, or curriculum to accommodate these environments. I have an understanding about the type and amount of accommodations that can legally or ethically be made for these different factors and am beginning to make these accommodations.	5 4 3 2 1
II-E. I recognize the students' stages of development (e.g., Piaget's theory of intellectual development, Kohlberg's theory of moral development, Vygotsky's theory of language and intellectual development), multiple intelligences, and learning styles are important characteristics to consider in teaching, and often use those understandings to plan instruction for the whole group.	5 4 3 2 1
II-F. I use the normal routines of interactions with parents and caregivers such as parent-teacher conferences and PTO meetings. I respond to parental concerns but do not take the initiative to actively partner with families (for example, through newsletters, e-mail, web site, frequent phone calls, individual meetings).	5 4 3 2 1

LEARNING ENVIRONMENTS: Teachers create learning environments that encourage positive social interaction, active engagement in learning, and self-motivation.

	Always → Never
III-A. I value the role of students in promoting each other's learning and recognize the importance of peer relationships in establishing a learning climate. I create occasions for the learners to work collaboratively and independently by providing opportunities for individual and group work and allowing students to select learning tasks. However, students occasionally exhibit off-task behavior.	5 4 3 2 1
III-B. Most students are actively engaged in productive learning tasks. Routines for handling non-instructional duties, managing materials and supplies, and transitioning between subjects are established and utilize a minimum amount of instructional time. Furniture arrangement is a resource for learning activities and is equally accessible to all students. Classroom is safe.	5 4 3 2 1
III-C. I respond to student misbehavior fairly and consistently but classroom disruption still occurs. I am generally aware of student behavior but may miss the activities of some students. There is no serious disruptive behavior.	5 4 3 2 1
III-D. I can define and discuss issues involving student motivation and behavior and value this information. I demonstrate use of intrinsic and extrinsic motivational strategies to organize and support student learning. While praise is employed and attempts are made to build on students' interests, it tends to be general praise as opposed to being contingent.	5 4 3 2 1
III-E. I am sensitive to and display a general grasp of how various cultures, experiences, and communities construct different expectations for students or equip them with varied cultural experiences. I have a basic grasp of multicultural education, and use this information for establishing a culturally responsive classroom where students are treated equitably.	5 4 3 2 1
III-F. I have contact information and am beginning to utilize resources available through the school and district to support students' learning and well-being. I have made limited attempts to access community resources to support students' learning and well-being.	5 4 3 2 1

III-G. My spoken and written language are free of grammatical and syntax errors. Directions are typically clear or quickly clarified after initial student confusion. I intermittently utilize effective questioning and discussion strategies. Audio-visual aids and computers are used superficially to support learning. 5 4 3 2 1

ASSESSMENT: Teachers understand and use a range of formal and informal assessment strategies to evaluate and ensure the continuous development of all learners.

Always → Never

IV-A. I demonstrate knowledge of measurement theory (i.e., test reliability, content validity, construct validity, criterion validity) and correctly interpret test results (e.g., criterion-referenced assessments, norm-referenced-assessments). I utilize assessment results, with varying degrees of success, to inform instruction. 5 4 3 2 1

IV-B. I collect and use pre-assessment data to select or design clear student learning goals; however, these goals are usually designed for the class as a whole. 5 4 3 2 1

IV-C. I select or develop classroom-based assessment tools that are appropriate for the instructional objectives and design. I use a variety of assessment tools. However, I do not use these assessments to modify teaching and learning strategies for individuals and groups of students. 5 4 3 2 1

IV-D. I involve students in the self-assessment process by having the students evaluate their performance (e.g., having students utilize a rubric to develop and evaluate projects, journals, demonstrations, presentations, portfolios); however, students are not taught how to set personal goals for learning based on the self-assessment. 5 4 3 2 1

IV-E. I use fair and equitable grading procedures and attempts to make appropriate adaptations to assessments that meet the needs of individual learners. 5 4 3 2 1

IV-F. I provide students, parents, and other school personnel with frequent, substantive, and constructive information about students' progress at regularly scheduled reporting periods and create some additional opportunities to communicate with families about students' academic and social progress. 5 4 3 2 1

IV-G. I am aware of resources, including available technology (e.g., electronic spreadsheets), for keeping records of student academic work and accomplishments; records are accurate and up-to-date. 5 4 3 2 1

IV-H. I use a variety of assessment strategies to identify students' academic strengths and needs. Assessment strategies are formative and summative. I attempt to utilize assessment strategies to promote the affective and social development of the students. 5 4 3 2 1

PLANNING AND INSTRUCTION: Teachers design and create instructional experiences based on their knowledge of content and curriculum, students, learning environments, and assessment.

Always → Never

V-A. I articulate defensible rationales for instructional choices (e.g., students' needs, diverse backgrounds, prior knowledge, and curriculum standards) that reflect high expectations for all students. I connect goals and student activities, but sometimes the instructional goals do not represent meaningful learning outcomes. 5 4 3 2 1

V-B. I can integrate knowledge of subject matter, curriculum, students, learning theory, and assessment to plan and carry out instruction. Unit and lesson structures are logically organized and sequenced; and resources selected extend most students' understanding of concepts and content. Lesson pacing is uneven but does not significantly interfere with the flow of learning. 5 4 3 2 1

V-C. I understand principles and techniques, associated with various instructional strategies (e.g., cooperative learning, direct instruction, discovery learning, whole group discussion, mastery learning, computer-based instruction, interdisciplinary instruction) to engage and support student learning. I construct and utilize a repertoire of strategies matched to subject matter that engages and supports most students in learning.	5 4 3 2 1
V-D. I monitor lesson and typically makes appropriate modifications to instructional plans during the lesson to address student needs. I probe for understanding and use students' questions to direct instruction.	5 4 3 2 1
V-E. I utilize multiple roles (e.g., instructor, facilitator, coach, audience) that are appropriate for instruction. I periodically switch roles during the instructional process (e.g., during the Reciprocal Teaching Model, Group Investigation Model, Direct Instruction, and Discovery Learning Centers).	5 4 3 2 1
V-F. I attempt to enhance learning through the periodic use of a wide variety of materials such as human and technological resources (e.g., computers, audio-visual technologies, local experts, artifacts, texts, reference books, and literature). I am building a repertoire of resources that are appropriately matched to subject matter and individual student needs. I meet state technology standards established for educators.	5 4 3 2 1
V-G. I adhere to school's requirements for team meetings. I contribute to school wide events and learning activities and engage with colleagues in dialogue and reflection to support student learning.	5 4 3 2 1

PROFESSIONALISM: Teachers recognize, participate in, and contribute to teaching as a profession.

	Always → Never
VI-A. I understand schools as organizations within the framework of the local community and understand the operations of the system within which I work. My teaching is influenced by the school's history, ethical obligations, political nature, and specific organization. However, I am not attuned to state and national educational issues and trends.	5 4 3 2 1
VI-B. I understand and abide by laws related to students' rights and teacher responsibilities (e.g., promotes equal education, provides appropriate education for children with special needs, respects confidentiality and privacy, treats students ethically and appropriately, reports suspected child abuse).	5 4 3 2 1
VI-C. I am knowledgeable of Georgia's Code of Ethics for Educators and am familiar with school and district policies on professional behavior. I conduct myself professionally as described in the codes and policies.	5 4 3 2 1
VI-D. I examine my own teaching practices and student performances. After reflection, I am able to critically evaluate my teaching and make adjustments in practices that lead to improved student achievement.	5 4 3 2 1
VI-E. I engage in professional development activities that are required and also seek additional opportunities to develop professionally based on career goals, self-assessment, and input from others. (Examples of professional development endeavors include, but are not limited to, exploring new resources, studying professional literature, attending workshops and conferences, and membership in professional organizations.)	5 4 3 2 1

VI-F. I vocally advocate for curriculum changes, instructional design modifications, and improved learning environments (e.g., assistive technology) that support the diverse needs of students and that reflect challenging and appropriate expectations for all learners. However, I do not take a leadership role in the work.	5	4	3	2	1
VI-G. I participate in school and system projects when specifically asked and makes regular and effective contributions.	5	4	3	2	1

Please answer the following questions. The data obtained will be used for descriptive purposes only.

Gender:_____ Male _____ Female

Age (as of your last birthday): _____

Program of study: _____ EBUS _____ EFCS _____ EMKT

_____ ETES _____ ETES (T&I) _____ Other

Thank you.

APPENDIX G

Cover Letter to Supervising Teacher

April 30, 2004

Dear CTE supervising teacher:

A research study titled "Comparison of Career and Technical Education Student Teacher and Supervising Teacher Ratings of Preparation to Teach," is being conducted by Jeanne Elmore Symanoskie, from the Department of Occupational Studies at the University of Georgia (542-4472). The study is being conducted under the supervision of Dr. Helen C. Hall, 203 River's Crossing, Athens, Georgia (542-4472).

The intent of this letter is to ask for your participation in this research study. The attached scale will be used in this study to compare student teacher and supervising teacher responses to the scale items. Please return the scale by May 11, 2004. A self-addressed stamped envelope is provided for your convenience. The researcher will follow up on unreturned surveys by resending the survey to all participants. The information collected will be shared with the department upon completion of the study.

Within the Department of Occupational Studies, the career and technical teacher education (CTE) program has undergone changes. These changes were the result of participation in the Georgia Systemic Teacher Education Program (GSTEP). The intent of this study is to determine the extent to which CTE student teachers feel prepared to teach using the GSTEP Framework. Results of this study will be used to compare ratings of CTE student teacher candidates' and their supervising teacher's rating of preparation to teach. In order to compare ratings, the scales have been coded to allow the researcher to match student teacher and supervising teacher scales; however, the researcher or department will have no way of knowing which scales correspond to each participant. Any information the researcher obtains about you will be anonymous.

Your participation is entirely voluntary and you may skip any questions you are uncomfortable answering. It is estimated the completion of the scale will take 10 – 15 minutes. The completion and return of the scale will indicate your willingness to participate in this research study. You will not benefit directly by completing this scale. However, your participation in this research may lead to information that could inform the researcher of any suggestions for teacher education or CTE professional education core of classes, therefore possibly impacting future CTE teacher preparation. Finally, you may request a copy of the final report of the project's findings.

Thank you for your participation in this research study. If you have any questions do not hesitate to contact Jeanne Elmore Symanoskie by email at jmelmore@uga.edu.

Sincerely,

Jeanne Elmore Symanoskie
Graduate Assistant

For questions or problems about your rights please call or write: Chris A. Joseph, Ph.D., Human Subjects Office, University of Georgia, 606A Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu

APPENDIX H

GSTEP Framework Standards Scale – Supervising

How to use

- Reflect on the student teachers development thus far.
- Read each standard (roman numerals), indicator (I-A…), and description of indicator (Teach…).
- Circle the rating beside each stated description of indicator, choose
  5 = always, 4 = most of the time, 3 = sometimes, 2 = on occasion, 1 = never or disagree.
- If you have trouble with an indicator, please do not leave it blank; try to choose the most appropriate rating.

CONTENT AND CURRICULUM: Teachers demonstrate a strong content knowledge of content area(s) and appropriate for their certification levels.

	Always → Never
I-A. Teaching is free of content errors. Teacher corrects errors students commit. He/She describes to students how different components of the content are organized and integrated.	5 4 3 2 1
I-B. Teacher displays an understanding of a variety of pedagogical methods needed to convey content knowledge to students and makes the content appropriate to address the needs of diverse learners. But, he/she is sometimes unable to utilize pedagogical content knowledge to anticipate and alleviate students' misconceptions.	5 4 3 2 1
I-C. Teacher consults additional resources to extend knowledge and stay current in subject matter. He/She adds some relevant content from outside resources to the curriculum. For example, he/she regularly attends professional workshops and incorporates new ideas gleaned from those experiences into his/her teaching.	5 4 3 2 1
I-D. Teacher links content area with other parts of the subject area and other subject areas and attempts to make content relevant to students' everyday lives.	5 4 3 2 1
I-E. Teacher uses multiple resources and technologies to enhance knowledge of his/her content area(s). He/She makes an effort to evaluate these resources and curriculum materials for comprehensiveness, accuracy, and usefulness.	5 4 3 2 1
I-F. Teacher uses state and national standards to create learning objectives, write lesson plans, select appropriate materials, and to direct teaching. He/She is able to indicate where the state standards can be found, and curriculum taught seems to be specifically aligned to state/national standards.	5 4 3 2 1

KNOWLEDGE OF STUDENTS AND THEIR LEARNING: Teachers support the intellectual, social, physical, and personal development of all students.

	Always → Never
II-A. Teacher believes all children can learn and demonstrates this belief by setting appropriate and challenging expectations that are clearly and consistently communicated to the class.	5 4 3 2 1
II-B. Teacher demonstrates broad knowledge of general learning theories (e.g., constructivism, information processing, social cognition, operant conditioning). He/She incorporates knowledge of student learning into the content areas by planning instructional strategies that promote student learning. Some connections are made to students' experiences, and some opportunities for active engagement, manipulation, and testing of ideas and materials are provided.	5 4 3 2 1
II-C. Teacher tends to be sensitive, alert, and responsive to the intellectual, social, physical, and personal development needs of the whole class, but tends to be unaware of the special needs of individual children.	5 4 3 2 1

II-D. Teacher understands that a variety of factors influence students' lives and learning, and is beginning to adjust the classroom environment, instruction, or curriculum to accommodate these environments. He/She has an understanding about the type and amount of accommodations that can legally or ethically be made for these different factors and is beginning to make these accommodations.	5 4 3 2 1
II-E. Teacher recognizes the students' stages of development (e.g., Piaget's theory of intellectual development, Kohlberg's theory of moral development, Vygotsky's theory of language and intellectual development), multiple intelligences, and learning styles are important characteristics to consider in teaching, and often uses those understandings to plan instruction for the whole group.	5 4 3 2 1
II-F. Teacher uses the normal routines of interactions with parents and caregivers such as parent-teacher conferences and PTO meetings. He/She responds to parental concerns but does not take the initiative to actively partner with families (for example, through newsletters, e-mail, web site, frequent phone calls, individual meetings).	5 4 3 2 1

LEARNING ENVIRONMENTS: Teachers create learning environments that encourage positive social interaction, active engagement in learning, and self-motivation.

	Always → Never
III-A. Teacher values the role of students in promoting each other's learning and recognizes the importance of peer relationships in establishing a learning climate. The teacher creates occasions for the learners to work collaboratively and independently by providing opportunities for individual and group work and allowing students to select learning tasks. However, students occasionally exhibit off-task behavior.	5 4 3 2 1
III-B. Most students are actively engaged in productive learning tasks. Routines for handling non-instructional duties, managing materials and supplies, and transitioning between subjects are established and utilize a minimum amount of instructional time. Furniture arrangement is a resource for learning activities and is equally accessible to all students. Classroom is safe.	5 4 3 2 1
III-C. Teacher responds to student misbehavior fairly and consistently but classroom disruption still occurs. He/She is generally aware of student behavior but may miss the activities of some students. There is no serious disruptive behavior.	5 4 3 2 1
III-D. Teacher can define and discuss issues involving student motivation and behavior and values this information. He/She demonstrates use of intrinsic and extrinsic motivational strategies to organize and support student learning. While praise is employed and attempts are made to build on students' interests, it tends to be general praise as opposed to being contingent.	5 4 3 2 1
III-E. Teacher is sensitive to and displays a general grasp of how various cultures, experiences, and communities construct different expectations for students or equip them with varied cultural experiences. He/She has a basic grasp of multicultural education, and uses this information for establishing a culturally responsive classroom where students are treated equitably.	5 4 3 2 1
III-F. Teacher has contact information and is beginning to utilize resources available through the school and district to support students' learning and well-being. He/She has made limited attempts to access community resources to support students' learning and well-being.	5 4 3 2 1

III-G. Teacher's spoken and written language are free of grammatical and syntax errors. Directions are typically clear or quickly clarified after initial student confusion. He/She intermittently utilizes effective questioning and discussion strategies. Audio-visual aids and computers are used superficially to support learning. 5 4 3 2 1

ASSESSMENT: Teachers understand and use a range of formal and informal assessment strategies to evaluate and ensure the continuous development of all learners.

Always → Never

IV-A. Teacher demonstrates knowledge of measurement theory (i.e., test reliability, content validity, construct validity, criterion validity) and correctly interprets test results (e.g., criterion-referenced assessments, norm-referenced-assessments). He/She utilizes assessment results, with varying degrees of success, to inform instruction. 5 4 3 2 1

IV-B. Teacher collects and uses pre-assessment data to select or design clear student learning goals; however, these goals are usually designed for the class as a whole. 5 4 3 2 1

IV-C. Teacher selects or develops classroom-based assessment tools that are appropriate for the instructional objectives and design. He/She uses a variety of assessment tools. However, these assessments are not used by the teacher to modify teaching and learning strategies for individuals and groups of students. 5 4 3 2 1

IV-D. Teacher involves students in the self-assessment process by having the students evaluate their performance (e.g., having students utilize a rubric to develop and evaluate projects, journals, demonstrations, presentations, portfolios); however, students are not taught how to set personal goals for learning based on the self-assessment. 5 4 3 2 1

IV-E. Teacher uses fair and equitable grading procedures and attempts to make appropriate adaptations to assessments that meet the needs of individual learners. 5 4 3 2 1

IV-F. Teacher provides students, parents, and other school personnel with frequent, substantive, and constructive information about students' progress at regularly scheduled reporting periods and creates some additional opportunities to communicate with families about students' academic and social progress. 5 4 3 2 1

IV-G. Teacher is aware of resources, including available technology (e.g., electronic spreadsheets), for keeping records of student academic work and accomplishments; records are accurate and up-to-date. 5 4 3 2 1

IV-H. Teacher uses a variety of assessment strategies to identify students' academic strengths and needs. Assessment strategies are formative and summative. He/She attempts to utilize assessment strategies to promote the affective and social development of the students. 5 4 3 2 1

PLANNING AND INSTRUCTION: Teachers design and create instructional experiences based on their knowledge of content and curriculum, students, learning environments, and assessment.

Always → Never

V-A. Teacher articulates defensible rationales for instructional choices (e.g., students' needs, diverse backgrounds, prior knowledge, and curriculum standards) that reflect high expectations for all students. He/She connects goals and student activities, but sometimes the instructional goals do not represent meaningful learning outcomes. 5 4 3 2 1

V-B. Teacher can integrate knowledge of subject matter, curriculum, students, learning theory, and assessment to plan and carry out instruction. Unit and lesson structures are logically organized and sequenced; and resources selected extend most students' understanding of concepts and content. Lesson pacing is uneven but does not significantly interfere with the flow of learning.	5 4 3 2 1
V-C. Teacher understands principles and techniques, associated with various instructional strategies (e.g., cooperative learning, direct instruction, discovery learning, whole group discussion, mastery learning, computer-based instruction, interdisciplinary instruction) to engage and support student learning. He/She constructs and utilizes a repertoire of strategies matched to subject matter that engages and supports most students in learning.	5 4 3 2 1
V-D. Teacher monitors lesson and typically makes appropriate modifications to instructional plans during the lesson to address student needs. He/She probes for understanding and uses students' questions to direct instruction.	5 4 3 2 1
V-E. Teacher utilizes multiple roles (e.g., instructor, facilitator, coach, audience) that are appropriate for instruction. He/She periodically switches roles during the instructional process (e.g., during the Reciprocal Teaching Model, Group Investigation Model, Direct Instruction, and Discovery Learning Centers).	5 4 3 2 1
V-F. Teacher attempts to enhance learning through the periodic use of a wide variety of materials such as human and technological resources (e.g., computers, audio-visual technologies, local experts, artifacts, texts, reference books, and literature). He/She is building a repertoire of resources that are appropriately matched to subject matter and individual student needs. He/She meets state technology standards established for educators.	5 4 3 2 1
V-G. Teacher adheres to school's requirements for team meetings. He/She contributes to school wide events and learning activities and engages with colleagues in dialogue and reflection to support student learning.	5 4 3 2 1

PROFESSIONALISM: Teachers recognize, participate in, and contribute to teaching as a profession.

	Always → Never
VI-A. Teacher understands schools as organizations within the framework of the local community and understands the operations of the system within he/she works. His/Her teaching is influenced by the school's history, ethical obligations, political nature, and specific organization. However, he/she is not attuned to state and national educational issues and trends.	5 4 3 2 1
VI-B. Teacher understands and abides by laws related to students' rights and teacher responsibilities (e.g., promotes equal education, provides appropriate education for children with special needs, respects confidentiality and privacy, treats students ethically and appropriately, reports suspected child abuse).	5 4 3 2 1
VI-C. Teacher is knowledgeable of Georgia's Code of Ethics for Educators and is familiar with school and district policies on professional behavior. He/She conducts himself/herself professionally as described in the codes and policies.	5 4 3 2 1
VI-D. Teacher examines his/her own teaching practices and student performances. After reflection, he/she is able to critically evaluate teaching and make adjustments in practices that lead to improved student achievement.	5 4 3 2 1

VI-E. Teacher engages in professional development activities that are required and also seeks additional opportunities to develop professionally based on career goals, self-assessment, and input from others. (Examples of professional development endeavors include, but are not limited to, exploring new resources, studying professional literature, attending workshops and conferences, and membership in professional organizations.) 5 4 3 2 1

VI-F. Teacher vocally advocates for curriculum changes, instructional design modifications, and improved learning environments (e.g., assistive technology) that support the diverse needs of students and that reflect challenging and appropriate expectations for all learners. However, he/she does not take a leadership role in the work. 5 4 3 2 1

VI-G. Teacher participates in school and system projects when specifically asked and makes regular and effective contributions. 5 4 3 2 1

Please answer the following questions about yourself. The data obtained will be used for descriptive purposes only.

Gender:_____ Male _____ Female

Age (as of your last birthday): _____

Program of study: _____ EBUS _____ EFCS _____ EMKT
_____ ETES _____ ETES (T&I) _____ Other

Level: _____ middle school _____ high school

Teaching experience, in years (at the end of the 2003-2004 school year): _____

What is your average number of students per class? _____

Have you supervised a student teacher before this semester? _____ Yes _____ No

Do you have any special certifications? _____ Yes _____No If yes, please list
_____

Thank you.

APPENDIX I

Cover Letter to Student Teacher for Rotter Scale

April 30, 2004

Dear CTE teacher education candidate:

A research study titled "Comparison of Career and Technical Education Student Teacher and Supervising Teacher Ratings of Preparation to Teach," is being conducted by Jeanne Elmore Symanoskie (jmelmore@uga.edu), from the Department of Occupational Studies at the University of Georgia (542-4472). The study is being conducted under the supervision of Dr. Helen C. Hall, 203 River's Crossing, Athens, Georgia (542-4472).

The intent of this letter is to ask for your participation in this research study. The attached survey is intended to help the researcher understand ratings obtained from the GSTEP Framework Scale already completed by you. You may skip any questions you do not feel comfortable with or do not understand. This survey will take approximately 10 minutes to complete. In order to compare ratings the scales have been coded to allow the researcher to match scales, however, the researcher or department will have no way of knowing which scale corresponds to each participant. Any information the researcher obtains about you will be anonymous. Your participation is entirely voluntary. The completion and return of the scale will indicate your willingness to participate.

Participation in this research study will not benefit you directly, however, your participation in this research may lead to information that could help inform the researcher of any suggestions for teacher education or CTE professional education core of classes; therefore possibly impacting future CTE teacher preparation.

Finally, you may request a copy of the final report of the project's findings. Thank you for your participation in this survey project. If you have any questions do not hesitate to contact Jeanne Elmore Symanoskie by email at jmelmore@uga.edu.

Sincerely,

Jeanne Elmore Symanoskie
Graduate Assistant

For questions or problems about your rights please call or write: Chris A. Joseph, Ph.D., Human Subjects Office, University of Georgia, 606A Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu

APPENDIX J

Rotter's I-E Locus of Control Scale

Directions:
Each number below has an "a" part and a "b" statement. Please circle either "a" or "b" depending on which one most accurately reflects your view.

1. a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5. a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try some people just don't like you.
   b. People who can't get others to like them don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what they're like.

9. a. I have often found that what is going to happen will happen.
   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In case of the well prepared student there is rarely if ever such a think as an unfair test.
    b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
    b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have an influence in government decisions.
    b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.
    b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. a. There are certain people who are just no good.
    b. There is some good in everybody.

15. a. In my case getting what I want has little or nothing to do with luck.
    b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
    b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
    b. By taking an active part in political and social affairs the people can control world events.

18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
    b. There really is no such thing as "luck."

19. a. One should always be willing to admit mistakes.
    b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
    b. How many friends you have depends upon how nice a person you are.

21. a. In the long run the bad things that happen to us are balanced by the good ones.
    b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.
    b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
    b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.
    b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
    b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
    b. There's not much use in trying too hard to please people, if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.
    b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.
    b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.
    b. In the long run the people are responsible for bad government on a national as well as on a local level.

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Scoring: Add one point for each of the following corresponding answers -- 2a, 3b, 4b, 5b, 6a, 7a, 9a, 10b, 11b, 12b, 13b, 15b, 16a, 17a, 18a, 20a, 21a, 22b, 23a, 25a, 26b, 28b, 29a. Total points for a high of 23, the lower the score the more internal your locus of control and the higher the score the more external your locus of control.

APPENDIX K

Cover Letter to Supervising Teacher (second mailing)

May 14, 2004

Dear CTE supervising teacher:

This is the second mailing for a research study titled "Comparison of Career and Technical Education Student Teacher and Supervising Teacher Ratings of Preparation to Teach," being conducted by Jeanne Elmore Symanoskie, in the Department of Occupational Studies at the University of Georgia (542-4472) under the supervision of Dr. Helen C. Hall, 203 River's Crossing, Athens, Georgia (542-4472). If you have already returned this scale, thank you for your response and please disregard this mailing. This mailing has been sent to all supervising teachers as the returns are completely anonymous. If you have not, I look forward to receiving your response.

The intent of this letter is to ask for your participation in this research study. The attached scale will be used in this study to compare student teacher and supervising teacher responses to the scale items. Please return the scale by May 21, 2004. A self-addressed stamped envelope is provided for your convenience.

Within the Department of Occupational Studies, the career and technical teacher education (CTE) program has undergone changes. These changes were the result of participation in the Georgia Systemic Teacher Education Program (GSTEP). The intent of this study is to determine the extent to which CTE student teachers feel prepared to teach using the GSTEP Framework. Results of this study will be used to compare ratings of CTE student teacher candidates' and their supervising teacher's rating of preparation to teach. In order to compare ratings, the scales have been coded to allow the researcher to match student teacher and supervising teacher scales; however, the researcher or department will have no way of knowing which scales correspond to each participant. Any information the researcher obtains about you will be anonymous.

Your participation is entirely voluntary and you may skip any questions you are uncomfortable answering. It is estimated the completion of the scale will take 10 – 15 minutes. The completion and return of the scale will indicate your willingness to participate in this research study. You will not benefit directly by completing this scale. However, your participation in this research may lead to information that could inform the researcher of any suggestions for teacher education or CTE professional education core of classes, therefore possibly impacting future CTE teacher preparation. Finally, you may request a copy of the final report of the project's findings.

Thank you for your participation in this research study. If you have any questions do not hesitate to contact Jeanne Elmore Symanoskie by email at jmelmore@uga.edu.

Sincerely,

Jeanne Elmore Symanoskie
Graduate Assistant

Helen C. Hall
Professor

For questions or problems about your rights please call or write: Chris A. Joseph, Ph.D., Human Subjects Office, University of Georgia, 606A Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu