ABSTRACT

An Exploratory Study of the Factors That Influence Pre-service Teachers' Instructional Practices with Diverse Students

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The purpose of this study was to examine the complex array of factors in teacher education programs that influence pre-service teachers' instructional practices with diverse students. Participants in the study included eight female 2008 graduates of a teacher education program at a private university. Factors considered were organized around four main themes: (a) campus factors (student demographics, social support, supervision, materials, mentoring, and curriculum), (b) individual characteristics (attitudes and beliefs, cognitive ability, and social support), (c) professional standards (knowledge, skills, and dispositions), and (d) university factors (seminars/courses, social support, supervision, collaboration, and curriculum). In an effort to closely examine variables, the researcher conducted interviews and reviewed archival data, including e-folio entries, observation notes, candidate reflections, and conference summaries. Due to the complex nature of the topic, this study entailed a descriptive, non-experimental cross case-study research design. The Classroom Instructional Practices Scale (Johnsen et al., 2002) was used to determine the degree to which each of the study participants differentiated instruction in the areas of content, rate, preference, and environment. After

close examination of the 17 factors, four emerged as having the greatest influence on instructional practices of pre-service teachers with diverse students: (a) the beliefs of the individual interns, (b) characteristics of mentor teachers to whom the interns were assigned for their culminating field experiences, (c) characteristics of the intern supervisors and other university faculty members who worked with the interns, and (d) the coursework/seminars that the interns participated in during their culminating field experiences.

An Exploratory Study of the Factors That Influence Pre-service Teachers' Instructional Practices with Diverse Students

by

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DEDICATION

To my husband, Roger
the blessing I cherish most in life
whose patience, unconditional love, reassurance, and
encouragement quietly and continuously remind me
that I can accomplish anything

CHAPTER ONE

Multicultural diversity must be considered when preparing pre-service teachers for their profession. Based on data included in *The Condition of Education 2006 in Brief* (USDOE, 2006), the percentage of racially ethnic minority students enrolled in the nation's public schools has increased rapidly. In 1972, 22% of public school students were considered to be members of a racial or ethnic minority group. By 2004, that percentage had increased to 43%. In less than 30 years from now (by 2035) demographers project that students of color will constitute a majority of the student population in the United States (Hodgkinson, 2001; U.S. Bureau of the Census, 2000).

In addition to understanding and effectively addressing ethnic and cultural diversity in the classroom, it is important for pre-service teachers to know how to address learning needs associated with cognitive differences. All teachers must consider the life experiences and academic readiness of a wide range of students as they plan and implement learning opportunities. When teachers have a clear understanding of how to address ethnic, cultural, and cognitive differences, the academic achievement of students also increases (Au, 1980; Gandara, 2002; Garcia, 1993; Lee, 1995; Palinscar & Brown, 1987; Phillips, 1985; Reynolds, Walberg, & Weissberg, 1999).

Diversity Reflected in Laws and Standards

The sense of urgency in educational settings in the United States with regard to student diversity has become increasingly heightened during the past decade as policy makers and educators have focused on meeting the needs of all learners. This climate has

produced such initiatives and mandates as the *Individuals with Disabilities Educational Act* (IDEA) of 2004 and the *No Child Left Behind Act of 2001* (NCLB). With these two mandated programs alone, local education agencies are pressured to use accountability measures that both focus on addressing the needs of a diverse student population and effectively assessing student performance with regard to standards.

The *No Child Left Behind Act of 2001* (NCLB) was signed into law on January 8, 2002. NCLB addresses numerous topics in education; however, central to the law are the requirements for testing, accountability, and school improvement in light of specific subgroups of students including low-income students, students with disabilities, English language learners, and racial and ethnic groups. Pointing to the need for addressing the characteristics of diverse students, the *No Child Left Behind: Standards and Assessments Non-Regulatory Guidance* (2003) document states:

> The cornerstone of any substantive education reform lies in the creation and application of rigorous academic standards. For too long, many children in this country have fallen victim to, in terms of President George W. Bush, "the soft bigotry of low expectations." *The No Child Left Behind Act* . . . has ushered in a new era in American public education, an era that begins with the premise that every child can learn and an era that demands that all children achieve high standards, regardless of race, socioeconomic status or disability. Only by holding all students to high standards and believing that all students can learn, will every child in America excel and be able to live out his or her dreams. (p. i)

Along with the federal law, standards for teachers and teacher preparation entities also provide a clear framework for addressing diversity in the classroom. The National Council for Accreditation of Teacher Education (NCATE) (2001) devotes one of its six overarching standards to addressing the need for teacher preparation programs to thoroughly prepare pre-service teachers to work with diverse student populations. Specialty Program Associations (SPAs) provide standards for content specific knowledge

and skills. Every major SPA, including the National Association for the Education of Young Children (NAEYC), the Association for Childhood Education (ACEI), the National Council of Teachers of English (NCTE), the National Council of Teachers of Mathematics (NCTM), the National Council for Social Studies (NCSS), the National Science Teachers Association (NSTA), the National Association for Gifted Children (NAGC), and the Council for Exceptional Children (CEC) provides specific standards that focus on meeting the needs of diverse student populations. In fact, "fifty-nine percent of the Knowledge (19 of 32) and 39 percent of the Skills (15 of 38) in the new NAGC-CEC Standards overtly address gifted and talented individuals with diverse cultural, linguistic, or exceptional learning needs" (National Association for Gifted Children, 2006, n.p.).

Referring to the hiring of teachers who are prepared to provide effective instruction for increasingly diverse student populations, Darling-Hammond (1997) predicted,

> The United States will need to hire2 million teachers over the next decade to meet the demands of rapidly rising enrollments, growing retirements, and attrition. . . . [All] will need to be prepared to teach an increasingly diverse group of learners to ever-higher standards of academic achievement. (p. 162)

A little more than 10 years later, Darling-Hammond's predictions have not only been surpassed but have highlighted the complexity of issues surrounding the preparation of teachers for the challenging demands they will face upon entrance into the workforce.

Issues Related to Teacher Preparation

A great deal of research has been conducted and published regarding the necessity of preparing teachers to address learner differences that focus on cultural and ethnic

diversity (Gay, 2003; Gutierrez & Rogoff, 2003; Lee, 1995). Many studies have focused on training teachers to work with exceptional students in self-contained classrooms, but few have examined cognitive diversity in general education settings (Palinscar & Brown, 1987; Reynolds, Walberg, & Weissberg, 1999). Range in diversity with regard to academic ability has increased as schools continue to include more students with exceptionalities in the mainstream classroom (Banks et al., 2005). As inclusionary practices grow, teachers must be better prepared to take into account the different experiences and academic needs of a wide range of students. In a study conducted in 1997, Westberg, Archambault, Dobyns, and Salvin examined the instructional practices used with advanced students in elementary classrooms. Results of the study indicated that instructional and curricular practices included very little differentiation for gifted students in the regular classroom. The high ability students experienced no instructional or curricular differentiation in 84% of the instructional activities in which they participated.

Given the increasing numbers of exceptional students in the classroom and the observed lack of differentiation, pre-service and in-service teachers are being asked to teach in ways that are outside their experiential realm (Zeichner, 1993). In fact, many pre-service teachers face the probability of teaching in schools where their cultural and linguistic backgrounds differ from those of their students. In a study conducted by Futrell, Gomez, and Bedden (2003), 80% of teachers polled reported feeling ill-equipped to teach diverse populations.

Hollins and Guzman (2005) conducted a thorough review of research on preparing teachers to work with diverse populations. In a summary of their findings, they

highlighted major gaps in the research, pointing to the fact that studies have not investigated the extent to which candidates are able to enact pedagogy in the classrooms with a positive impact on the learning of diverse students. These researchers explained that none of the studies reviewed investigated candidates' ability to plan or implement effective instruction for diverse students. Moreover, no model of professional development was reported for teachers who provide instruction to advanced and gifted students (Rowley, 2002).

New pedagogical approaches are needed in teacher preparation programs. These programs must put aside the standalone courses that attend to prospective teachers' knowledge, attitudes, and practices. Instead, they must integrate authentic experiences throughout the prospective teachers' professional preparation program, thus providing opportunities for candidates to experience and address the challenges associated with offering meaningful learning experiences to children from a wide range of diverse backgrounds (Bennett, Okinaka, & Xiao-yang, 1988; Grant & Koskella, 1986; McDiarmid & Price, 1990; Sleeter, 2007). Theorists have described this dynamic interaction between an individual's past experiences and the acquisition of new learning within a social setting as situated learning (Lave & Wenger, 1991; Vygotsky, 1978).

Theoretical Framework

Most situated learning models are based on the sociocultural theory of Vygotsky (1978), who maintained that learning and development are processes located in social interaction. As described by Lave and Wenger (1991), the world is made up of communities of practice; individuals are generally involved in a number of communities. In some communities, individuals are the core members; in others, individuals are more

at the margins. Communities of practice are organized around particular areas of knowledge, and participation provides members with a sense of joint enterprise and identity. In order for a community of practice to be productive, its members must generate and communicate a shared collection of ideas, commitments, and memories. Tools, documents, routines, vocabulary, and symbols are developed as resources to represent the accumulated knowledge of the community. Learning in such a community is situated in social relationships of co-participation (Lave & Wenger, 1991).

John-Steiner and Mahn (1996) explain the trajectory new members take as they merge into more substantial roles in communities of practice, "When beginning an activity, learners depend on others with more experience. Over time, they take on increasing responsibility for their own learning and participation in joint activity" (p. 192). The learner participates in various activities that provide the opportunity for synthesizing influences into the learner's individual modes of understanding and participation. By experiencing the effects of working together, the novice acquires useful strategies and crucial knowledge (Lave & Wenger, 1991).

Ball and Cohen (1999) argue the need for teachers to learn in and from practice and recognize the need to conceptualize a pedagogy for professional development that includes

> the sorts of tasks in which teachers would engage around materials of practice and records of practice, the nature of the discourse that would be needed to support learning with and from these tasks and materials, and the role and capabilities of teacher educators and leaders who would provide guidance for this work. (p. 25)

Situated Learning and Pedagogical Approaches that Address Diversity

As teacher preparation programs work to improve the quality of the teachers being prepared for the profession, important questions need to receive attention: How might teachers become engaged in a community of practice? How might they be supported in developing the knowledge of the community, the tools, documents, routines, and vocabulary? Most importantly, how might teachers develop expertise in working with diverse learners?

In addressing these questions, teacher preparation programs focus on a number of dimensions including the context for learning, field-based experiences, mentoring, the substance and academic rigor of the curriculum, and individual factors including beliefs, cognitive abilities, and social support (Zeichner & Conklin, 2005).

Context for Learning

In addition to campus and community demographics, one must consider a variety of influences when exploring the context in which learning occurs. Both internal and external variables may affect the progress and knowledge acquisition of candidates as they participate in a wide array of experiences and become involved as participants in communities of practice.

Schon (1995) suggested that in professions such as teaching, the knowledge and skills needed to make effective decisions emerge in the context of the practice. Information regarding ideas and perceptions students have about particular topics, whether they understand or misunderstand the information they are being taught, and how different students learn best, emerge in the authentic work of teaching and cannot be

fully comprehended ahead of time in the abstract. Context for learning refers to field-based experiences, supervision, university experiences, curriculum, and social support.

Field-based Experiences

An essential element for successful learning is the opportunity to apply what is being learned and refine it through practice (National Research Council, 2000). Field-based experiences are the most effective way to offer candidates such opportunities when the experiences are focused and well structured (Wilson, Floden, & Ferrini-Mundy, 2002).

Issues of coherence may dramatically affect the quality of field experiences that are a part of a teacher preparation program. Field experiences that provide an environment supportive of a program's vision of teaching are the most productive learning sites, as are those where there is a shared understanding among pre-service teachers, mentor teachers, and university faculty about the purposes and learning opportunities of the pre-service teacher field placements (Baumgartner, Koerner, & Rust, 2002; LaBoskey & Richert, 2002; Orland Barak, 2002). In addition, some studies have indicated that programs which include longer student teaching or intern experiences, particularly when the intern experience is concurrent with theoretical coursework, result in superior outcomes for teachers in terms of ability to apply what they have learned to actual practice (Chinn & Russell, 1995; Sumara & Luce-Kapler, 1996). Central to the success of field experiences is the quality and support that candidates receive from their mentor teachers (Hammerness, 2006; Shulman & Shulman, 2004; Wilson, Floden, & Ferrini-Mundy, 2002).

Mentoring

Mentor teachers, or supervising teachers, serve as one of the most significant aspects of field-based experiences in the training of pre-service teachers (Wilson et al., 2002). However, according to Wilder (1992), mentoring differs substantially with regard to influence on pre-service teachers. Spending time with and observing a mentor does not necessarily mean that the skills of novice teachers will be enhanced nor does it guarantee that the young professionals will be more assiduous about their work because they have been mentored. It is the quality of the mentor and the ability of the mentor to communicate with the novice teacher that tends to make a positive difference in the experience.

Darling-Hammond, Hammerness, Grossman, Rust, and Shulman (2005) advised that typically, the ideal placement is one in which student teachers are supported by purposeful coaching from an expert mentor teacher in the same teaching field. This mentor offers modeling, co-planning, frequent feedback, repeated opportunities to practice, and reflection upon practice while the student teacher takes on more responsibility.

Curriculum

One of the ways that teacher preparation programs may increase the success of teacher education candidates in the field is to guide them in implementing learning experiences that differentiate for the vast cultural and cognitive differences they will encounter in the classroom (Tomlinson, 1995). Studies that focus on teaching educators to differentiate instruction effectively to meet the needs of a wide array of learners are scarce. The research that has been conducted on this topic focuses only on instructional

practices of teachers who are already in the field (Johnsen, Haensly, Ryser, & Ford, 2003). No research has been conducted that examines pre-service educators' learning or ability to differentiate instruction as a part of the teacher preparation experience.

Kronberg, Walker, and Zimmerman (2003) addressed the topic of differentiated instruction by stating:

> Differentiated instruction is a way of teaching that compels a teacher to pro-actively respond to a range of diverse learner characteristics. Differentiated instruction embodies a belief system as well as a skillful repertoire of teaching practices. At the core of differentiated instruction is the recognition that every learner has a unique way in which he or she learns best. A teacher who strives to achieve the art and the practice of differentiated instruction embraces the belief that every student comes to school with varying interests, learning styles, experiences, strengths, and needs. With that belief comes a parallel commitment to designing instructional approaches that are respectful of and responsive to students' diversity. As classrooms increase in heterogeneity, the importance and the urgency for differentiation are great. (p. 8)

Juxtaposed with today's diverse student population and the necessity for flexibility to effectively teach all students is the concurrent need for teachers to apply a common set of standards to all students. Kronberg et al. (2003) proposed that

> differentiated instruction, when done thoughtfully and with clarity of purpose, is complex. It involves an intricate dance between holding standards steady for all students while creating multiple pathways for students to achieve those common standards. It changes the role of both teachers and students. (p. 8)

In addition to studying the complex factors related to field experiences, characteristics of mentor teachers, and meeting the need of all students through carefully planned curriculum, factors related to the candidates themselves must be examined. These individual factors may encompass some of the most complex issues of all.

Individual Factors

According to Hollins and Guzman (2005), research substantiates the fact that many candidates hold negative attitudes and beliefs about those different from themselves. This notion must be considered as program planners and instructors work to provide learning experiences for candidates who must have the knowledge and skills to work with diverse student populations.

Attitudes and Beliefs

Every candidate brings to the learning experience a variety of attitudes and beliefs that have been acquired through years of personal experience. Dispelling the myths and providing quality learning opportunities that will enable the individual candidate to plan and implement teaching strategies that effectively deal with realities must be at the core of learning experiences in which the individual participates. According to Hammerness, Grossman, Rust, and Schulman (2005),

> . . . prospective teachers have preconceptions that affect what they learn from teacher educators and in-classroom experiences. These preconceptions come from years and years of observing people who taught them and using this information to draw inferences about what good teaching looks like and what makes it work. (p. 367)

Several misconceptions prevail in the minds of prospective teachers. One is the idea that teaching is easy. Contributing to this misconception is the limited scope that the student possesses, not fully understanding the knowledge, skills, planning, and decision-making involved in providing a learning environment that supports student achievement (Lortie, 1975). Kennedy (1998) highlighted the notion that concepts and ideas presented to candidates in coursework seem familiar to the students. Having firmly established beliefs associated with these concepts and ideas, pre-service teachers tend to assimilate

what they are learning to their preexisting schema, making it difficult for them to develop deeper understandings of the concepts.

Cognitive Ability

Cognitive differences of candidates enrolled in teacher preparation programs must be considered and addressed as instruction and experiences are planned to teach and facilitate the learning process, just as cognitive differences should be considered in the P-12 classroom. Grade point averages, SAT scores, and candidate evaluations completed by faculty members may be included in the assessment of cognitive differences of individual candidates.

Torres (1984) reviewed the literature regarding the cognitive abilities of student teachers, believing that perhaps the most pervading influence for developing thinking skills in students is the teacher. He found no research that attended to cognitive abilities of teaching candidates. Dalzell (1997) argued that "teachers who themselves are effective thinkers and who are worthy models to emulate serve their students well" (p. 5). Supporting this claim, Baumfield (1997) proposed that the classroom teacher must be able to clearly model problem-solving, decision-making, and reasoning if such skills are going to be valued and understood by students. If teachers lack the ability to model effective thinking skills, their students are less likely to learn the skills as well (Gibbs, 1997). Based on this premise, considering the cognitive abilities and thinking skills of pre-service teachers is important when examining the candidates' ability to effectively work with diverse students. Currently, research in the area of cognitive abilities of pre-service educators is lacking (Torres, 1984).

Social Support

Social support is another aspect of the teacher preparation experience that may be explored in an effort to assess individual needs and strengths. Social support may be examined with regard to experiences at the university, at the campus to which the candidate is assigned, and in light of personal relationships outside the academic setting.

In a recent study, Rayle and Chung (2007) revisited Schlossberg, Lynch, and Chickering's (1989) theory of college students' perceptions of the importance of mattering to others. In the study, the researchers defined *mattering* as the experience of others depending on us, being interested in us, and being concerned with our fate. Based on the results of the study, Rayle and Chung (2007) suggested that the social support of college peers is the most powerful predictor of mattering and that mattering to the college student is the most significant predictor of academic stress levels. Consideration of social support may be important in examining the tendency of candidates to implement effective instructional practices with diverse students.

The support that mentor teachers and university supervisors provide for pre-service teachers can make a significant difference in the learning experiences of pre-service teachers. Darling-Hammond et al. (2005) stated, "Novices often attest to the important role that school and university supervisors play in the teaching and learning of practice, although there is little systematic research on exactly what the most effective supervisors do" (p. 412). No research was found that examined the effects of support outside the academic setting.

In summary, a large number of factors may influence the effectiveness of teacher preparation programs. In terms of field-based experiences, programs need to be coherent

and provide opportunities for extended practice with feedback from professionals who share a common understanding of the program's vision. Candidates also need to experience a curriculum that focuses on differentiation and to be placed with mentors who can provide quality support. Individual factors such as attitudes and beliefs, cognitive ability, and perceptions of support may also affect the candidate's performance in a classroom that serves a diverse student population.

Problem Statement

Critics from both inside and outside teacher education have noted that traditional pre-service teacher education programs have not done an adequate job of preparing teachers to teach diverse populations (Ladson-Billings, 1999; Zeichner & Hoeft, 1996). This issue must be addressed by teacher preparation entities if the candidates being prepared to enter the workforce are to experience success and remain in the profession. In order to accomplish such goals, pre-service teachers who are currently being prepared for their profession must learn and practice skills that will enable them to address effectively the needs of populations of students that will grow increasingly diverse in the future (U. S. Bureau of the Census, 2005).

Evidence highlights the notion that the reality of teacher education programs is much more complex than that reported in much of the literature (Kennedy, 1998). Attempting to isolate the effects of particular program dimensions apart from the teacher education program in which the dimensions exist, or from the characteristics of particular candidates in a program, may not provide much useful information. Descriptions and studies of both the components of teacher education programs and the programs themselves must be conducted in a way that acknowledges their complexity. In addition,

a close look must be taken at the interactions of the candidates in the setting in which they are located and with the people who inhabit them (Zeichner & Conklin, 2005).

Zeichner (1993) suggested that the fragmented nature of teacher education programs and differences in substance and context within courses with the same titles, even in the same institutions, points to the importance of researchers fully describing the situations they are studying at levels of both course and program. For this reason, studies that provide a clear and descriptive account of program content and structures that enable teachers to be successful in different settings are needed (Zeichner & Conklin, 2005).

Many studies have been conducted to evaluate characteristics of teacher preparation programs, but no study has examined the complexity of factors that influence the pre-service teacher's instructional practices with diverse student populations.

Purpose of the Study

The purpose of this study was to identify the complex array of factors in teacher education programs that influence the beginning teachers' instructional practices with diverse students. Some of these factors include field-based experiences, mentoring, curriculum, attitudes and beliefs, cognitive ability, and social support. The following research question is the focus in this study:

What factors during the intern experience influence the candidates' instructional practices with diverse students?

CHAPTER TWO

Review of the Literature

The purpose of this study was to identify the complex array of factors in teacher education programs that influence the beginning teachers' instructional practices with diverse students. The following research question was the focus in this study: What factors during the intern experience influence the candidates' instructional practices with diverse students? The literature review for this study therefore includes research related to effective instructional practices for differentiation, and teachers' use of differentiated instructional practices in the classroom and to these factors: professional standards, context for learning (e.g., university and school campus), mentoring and social support, and individual characteristics. This chapter concludes with an examination of the relationship between Lave and Wenger's (1991) theory of situated learning and pre-service teachers' development of instructional practices.

National Context

The sense of urgency in educational settings in the United States with regard to student diversity has become increasingly heightened during the past decade as policy makers and educators focus on meeting the needs of all learners. Federal law, as outlined in the *No Child Left Behind Act of 2001* (NCLB), explicitly sets forth a call for action to effectively meet the needs of diverse learners in today's classrooms. Central to the law are the requirements for testing, accountability, and school improvement in light of

specific subgroups of students including low-income students, students with disabilities, English language learners, and racial and ethnic groups.

Standards

Professional preparation standards documents for each Specialized Professional Association (SPA) clearly address the challenges facing educators today as student populations become more and more diverse. For example, the introduction of the National Association for the Education of Young Children's (NAEYC) *Professional Preparation Standards* document (2010) states:

> Every sector of the early childhood education community, including professional preparation programs, faces new challenges. Among them is the increased *diversity* of children and families in early childhood programs, from infant/toddler child care through the primary grades. That increased diversity is seen in the greater numbers of children from culturally and linguistically diverse communities, as well as in the growing numbers of children with disabilities, children whose development indicates advanced or gifted needs, and other special learning needs of children who are served in early childhood programs. (p. 13)

Further, noted in the NAEYC (2010) *Professional Preparation Standards* document is the importance of field experiences that "expose candidates to settings that include cultural, linguistic, racial, and ethnic diversity in families and communities" (p. 42) and an explanation that diversity is not a separate standard in the document but is, instead, integrated into each standard.

In addition, although the Association for Childhood Education International (ACEI) *Elementary Education Standards and Supporting Explanation* (2007) document specifically includes the need for educators to effectively address the needs of diverse student populations in only 1 of 16 standards, the supporting explanation sections for four of the five standards areas attends to the need for candidates in teacher education

programs to understand and address individual differences, cultural backgrounds, and students with exceptional learning needs.

Changes in Demographics

One of the most significant challenges facing our nation is providing quality education for all students, particularly those student populations that are currently underserved by our educational system, including students of color, students from low socioeconomic backgrounds, English-language learners, and students with special needs (Hollins & Guzman, 2005). According to the National Center for Education Statistics (2010), the population of students attending public school in the United States has changed dramatically during the past several years. From 1988 to 2008, the percentage of White students attending public school in the U.S. decreased from 68% to 55%; the percentage of Hispanic students doubled, increasing from 11% to 22%; and, the percentage of Black students decreasing, from 16.5% in 1988 to 15.5% in 2008. In 2008, the combined enrollment of Asians, Pacific Islanders, American Indians/Alaska natives, and students of two or more races made up approximately 7.4% of the public school population.

Between 1980 and 2009, the number of children enrolled in public schools who spoke a language other than English rose from 4.7 to 11.2 million, representing an increase from 10% of the population to 21% of the population. In 2009, approximately 19% of the children in U.S. schools were in families living in poverty, compared to 15% in 2000. In addition, 6.5 million children between the ages of 3 and 21 received special education services during the 2008 - 2009 academic year, representing approximately 13% of public school enrollment (U.S. Department of Education, 2011).

Thus, teachers must possess the knowledge, skills, and dispositions to create democratic classroom environments with culturally responsive curriculum (Gay, 2000). In addition to addressing cultural diversity, teachers must also know how to respond to learning needs of students with cognitive differences and disabilities (Palinscar & Brown, 1987; Reynolds, Walberg, & Weissberg, 1999). Greater responsibilities have been placed on the classroom teacher as inclusion of exceptional students has become more common (Hallahan & Kaufman, 1994; Maheady & Algozzine, 1991) and the trend to move away from homogeneous grouping has increased the academic diversity of classrooms (George & Rubin, 1992; Lake, 1988). Because of budgetary constraints and high quality teacher requirements in the No Child Left Behind Act of 2001, special education teachers are assuming more collaborative roles with general education teachers (e.g., co-teaching and support) related to services within a response to intervention model and to clusters of gifted students within the general education classroom. As student populations change and classrooms become more diverse, it is imperative that teachers respond to these changes in a way that supports the learning of each and every child they serve.

The Influence of Increasing Diversity on Teacher Preparation Standards

During the past century, diversity has become a part of the discourse related to teacher preparation standards. As early as 1922, the International Council for the Education of Exceptional Children (now the Council for Exceptional Children) began with 12 members and declared establishment of professional standards for special education as a fundamental aim (Council for Exceptional Children, 2004). In 1927, the American Association of Teachers Colleges (AACTE) was organized to develop

standards and accreditation procedures to ensure that graduates of accredited programs could teach (Kraft, 2001). In 1955, the National Council for Accreditation of Teacher Education (NCATE) was founded as an affiliation of professional and public organizations and currently accredits over 600 colleges of education nationwide.

Standards provide a framework that helps educators understand what aspects of teaching are important and how they should be integrated into classroom experiences (Darling-Hammond et al., 2005). The Carnegie Task Force on Teaching as a Profession (1986) provided a description of what students and their teachers need to know to keep up with the rapidly changing world (p. 25). The Task Force called for the creation of a National Board of Professional Teaching Standards "to establish standards for high professional teaching competence" (p. 66). This led the way to a broader development of standards for teachers as well as students. Professional associations such as the National Association for the Education of Young Children (2010), the Association for Childhood Education International (2001), the National Council of Teachers of Mathematics (1991), and the American Association for the Advancement of Science (Rutherford & Ahlgren, 1990) developed standards for both teachers and students.

The majority of these standards addressed issues related to diverse students. For example, AACTE endorsed multicultural education, calling for the profession to respond to the increasingly multicultural society by presenting a paper entitled *No One Model American* (Nieto, 2000). Following AACTE's call for attention to diversity, NCATE challenged its member institutions to focus more on preparing teacher educators to work in schools with diverse student populations. The National Board for Professional Teaching Standards (NBPTS) also included managing diverse groups of students,

differentiating instruction according to individual needs, and monitoring and evaluating student learning (McDiarmid & Clevenger-Bright, 2008, p. 143). NAGC–CEC Teacher Knowledge and Skills Standards for Gifted and Talented Education highlights the need for teachers to possess knowledge and skills that enables them to effectively

> understand the issues, definitions, theories, and identification of gifted and talented students, including those from diverse backgrounds [and] . . . recognize the learning difference, developmental milestones, and cognitive/affective characteristics of gifted and talented students, including those from diverse backgrounds . . . (NACG, 2006, para. 1-3)

In fact, 20 of the 31 elements (20 of 31 knowledge; 16 of 38 skills) listed for the 10 standards specifically address diversity (NAGC, 2006).

More recently, the *InTASC Model Core Teaching Standards* (Council for Chief State School Officers, 2011) devotes an entire section of the document's introduction to the need for teachers to personalize learning for diverse students, stating:

> The explosion of learner diversity means teachers need knowledge and skills to customize learning for learners with a range of individual differences. These differences include students who have learning disabilities and students who perform above grade level and deserve opportunities to accelerate. Differences also include cultural and linguistic diversity and the specific needs of students for whom English is a new language. Teachers need to recognize that all learners bring to their learning varying experiences, abilities, talents, and prior learning, as well as language, culture, and family and community values that are assets that can be used to promote their learning. (p. 3)

In addition, Standard # 2 of the *InTASC Model Core Teaching Standards* (Council for Chief State School Officers, 2011) specifically targets the need for teachers to have a clear understanding of the individual differences and diverse cultures and communities that students bring to the classroom setting, providing "inclusive environments that enable each learner to meet high standards" (p. 11).

Effective Instructional Practices for Differentiation

"John Dewey pointed out many years ago that knowledge and experience are different. We acquire knowledge–we learn–by processing experience" (Caine & Caine, 1994, p. 146). If individuals learn from an experience, each experience is individualized; thus each individual learns differently. Students have multiple and varied experiences, different abilities, diverse learning preferences, and a variety of interests and talents that they bring to the classroom (Bruner, 1985; Darling-Hammond, 1995). Individual differences, therefore, occur in (a) the knowledge and skills that students need and want to learn (e.g., content), (b) the students' preferences in learning (e.g., preference), (c) how quickly they learn (e.g., rate), and (d) the types of environments that enhance their experience (e.g., environment) (Johnsen et al., 2002). Using these areas, the goals for a differentiated classroom are described below along with related research.

Content

The goal for differentiation in the content area is that "the subject matter, processes, and products match each learner's interest and ability" (Johnsen, Haensly, Ryser, & McIntosh, 1994, p. 56).

Subject matter. In differentiating subject matter, the goal is to organize the content around themes or problems, make connections across disciplines, sequence it logically, and attend to both the cognitive and affective development of the learner (Johnsen et al., 1994).

*Processes***.** The goal in differentiating processes is to include "the essential elements, creative and productive thinking skills, critical thinking skills, and research skills" (Johnsen et al., 1994, p. 56).

Critical thinking. Kraak (2000) viewed critical thinking as "an important, perhaps the most important of all present educational tasks" (p. 51). Thinking skills are complex and are used when a person engages in thought (Beyer, 1991; Udall & Daniels, 2005). The research on thinking skills indicates that there is a hierarchy of thinking skills, that thinking skills can be taught and assessed, and that many students are not exposed to higher order thinking skills (Beyer, 1991; Davis, Rimm, & Siegle, 2010; Feldhusen, Van Tassel-Baska & Seeley, 1989; Gallagher & Gallagher, 1994; Renzulli, 1977).

Paul and Elder (2008) defined critical thinking as:

> . . . that mode of thinking-about any subject, content, or problem – in which the thinking impacts the quality of his or her thinking by skillfully analyzing, assessing, and reconstructing it. Critical thinking is self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem-solving abilities, as well as a commitment to overcome our native egocentrism and sociocentrism. (n.p.)

Ennis (1989) defined critical thinking as ". . . reflective and reasonable thinking that is focused on deciding what to believe or do" (p. 6), and designed a taxonomy of thinking skills that included define and clarify, judge information, and infer. Davis, Rimm, and Siegle (2010) proposed that critical thinking also involves evaluating and problem solving.

Critical thinkers have the skills to identify critical questions and problems; gather and evaluate important information and interpret the information effectively; test criteria and standards; consider alternative systems of thought, recognizing assumptions,

implications, and practical consequences; and communicate successfully to identify solutions to complex issues and problems (Paul & Elder, 2008). Further, studies of the effects of teaching critical thinking skills to students in schools indicate gains in the areas of self-reliance, risk-taking, the exploration of problems, awareness of thinking strategies, and organization of ideas (Dellett, Fromm, Karn, & Cricchi,1999; Scanlan, 2006).

Several researchers have provided guidance on critical thinking by creating taxonomies or questioning techniques. Dick (1991) presented *An Empirical Taxonomy of Critical Thinking* that included

1. Identifying arguments – themes, conclusions, reasons, organization;
2. Analyzing arguments – assumptions, vagueness, omissions;
3. Considering external influences – values, authority, emotional language;
4. Scientific analytic reasoning – causality, statistical reasoning, representativity; and
5. Reasoning and logic – analogy, deduction, induction.

Paul (1993) identified six categories of questions in his *Taxonomy of Socratic Questioning* to encourage critical thinking:

1. Questions of clarification – questions that ask for verification, additional information, or clarification of one point or idea.
2. Questions that probe assumptions – questions that center on the concept of assumptions and focus on students being asked for clarification, verification, explanation, or reliability of the assumption.
3. Questions that probe reasons and evidence – questions that ask for additional examples of evidence that has been discovered, rationale for making statements,

explanation of the process that leads to a belief, or anything that might change the mind of the student.

4. Questions about viewpoints or perspectives – questions that ask about various viewpoints in response to an issue or idea, arguments a person might use who disagrees with a viewpoint, or comparisons of two or more viewpoints.

5. Questions that probe implications and consequences – probes for descriptions and discussions about what is being done or said, the effect that might result, alternatives that might be feasible, or causeand effect of actions.

6. Questions about the question – questions that ask about the main point or issue of a question, questions that encourage the student to break the question into single concepts, or questions that help the student determine if evaluation of the question needs to take place.

Research in education shows that critical thinking is included within the curriculum taught in schools today; however, it is not systematically included in daily instruction (Patry, 1996). Teachers do not believe they have the time or the resources to integrate critical thinking into daily instruction (Astleitner, 2000; Petri, 2011).

Dellett, Fromm, Karn, and Cricchi (1999) conducted a study that focused on the effects of teaching critical thinking skills to third and fourth grade students. They found that students who engaged in critical thinking as part of their daily educational experiences demonstrated improvement in the areas of making connections to prior learning, self-reliance, and risk-taking while exploring solutions to problems and awareness of various thinking strategies.

In a study conducted by Scanlan (2006), 38 high school students were taught the skills of critical thinking and completed four carefully designed critical thinking assignment lessons. At the end of the study, students had made significant gains in ". . . clarity of writing, level of analysis, use of supporting information, organization of ideas, and accuracy of grammar and syntax" (p. 42).

Creative thinking. Creative thinking involves a gradation of freedom not found in critical thinking, and many researchers suggest that creative thinking is a compliment to critical thinking (Davis, 1991; Udall & Daniels, 2005). Isakson and Parnes (2008), in a report about development of critical thinking and problem solving skills, shared Treffinger's (1980) idea that creative thinking is an essential type of learning for students to acquire as they adapt to a rapidly changing society. Treffinger (1980) stressed this rationale for creative thinking:

> l. It helps learners be more effective when teachers aren't around.
> 2. It creates possibilities for solving future problems that cannot be anticipated.
> 3. It may lead to powerful consequences in lives.
> 4. It can produce great satisfaction and joy. (Isakson & Parnes, 2008, para. 13)

Theorists have not agreed on an exact definition of creative thinking; however, most emphasize that the focus of creative thinking should be on the process and product rather than on the skill. All theorists have stressed the importance of creative thinking skills being included in the development of curriculum (Davis, Rimm, & Siegle, 2010; Gallagher & Gallagher, 1994; Hunkins, 1995; Treffinger, 1980).

A review of the research presents a common set of creative thinking skills (Cohen & Frydenberg, 2006; Davis, 1991; Feldhusen, Van Tassel-Baska, & Seeley, 1989; Khatena, 1992):

1. Brainstorming – generating a list of possible problem solutions without judgment or evaluation.

2. Elaboration – adding or filling in details, developing ideas, or bringing an abstract concept to life.

3. Flexibility – producing new ideas that deviate from normally expected ideas and that shift categorically during the process of idea production; having the ability to change direction of thinking and adapt to different situations.

4. Fluency – generating or recalling ideas without regard to specific answers or solutions; having the ability to think of many ideas.

5. Imagery – picturing something or building mental images that have organized themselves into some kind of pattern.

6. Originality – creating an idea that is new, unusual, or unique in addition to its being valuable or practical.

Torrance (1972), in a thorough review of the literature, evaluated the results of 142 studies that focused on creative thinking skills. He found that when deliberate, systematic problem solving skills were taught, students attained a 90% success rate in problem solving (Torrance, 1986).

Similar to Torrance, Greca (1980) conducted a study to examine creative thinking strategies commonly used by children in elementary school when taught category and context clues. Creativity tasks were administered and the effects of two tasks were assessed. Results of the study indicated that providing children with cues may facilitate their tendency to engage in creative thinking and improve their academic performance. The study also indicated that the use of such cues in creative thinking instruction "may be

more effectively used when working with highly-creative children, regardless of their age" (p. 572).

Cliatt et al. (1980) studied the effects of teaching young children how to engage in creative thinking. Two groups of kindergarten students were participants in the study. One group of kindergarten children was instructed by teachers who included creative thinking experiences in whole group, small group, and individual instruction; another group of kindergarten students was instructed by teachers who used few creative thinking situations in their instruction. Results of the study showed that children who were given opportunities to think creatively on a regular basis showed significant gains on three measures of verbal creative thinking.

More recently, Hébert (2002) noted specific effects on students when creative thinking is included in the curriculum: improved motivation, alertness, curiosity, concentration, and achievement; the combining of cross-curricular activities; improved self-confidence; a boldness of ideas; a reduction in unproductive behaviors; and an increased enthusiasm about learning and school.

Problem solving. Problem solving involves both critical and creative thinking. According to VanTassel-Baska (1994), "problem solving is a comprehensive and complex set of cognitive operations that probably embrace many aspects of thinking subsumed under other rubrics such as creative thinking, critical thinking, decision making, and so on" (p. 313). Numerous problem-solving models have been developed–each including logical and sequential steps in the process. Beyer (1991) proposed a four-step problem solving process that included identifying the problem, making a plan to solve the problem, carrying out the plan, and checking the answer. Bransford and Stein

(1993) developed a problem solving model that included five steps: identify the problem or potential problems; define, delineate, or clarify the problem; explore options or approaches to solving the problems; act or try out the planned solution activities; and examine the effects and evaluate the solutions. This sequential problem solving process is easily adaptable to teaching because of the distinct steps involved (Udall & Daniels, 2005).

Creative problem solving involves divergent thinking and allows for unique and realistic solutions as opposed to predetermined solutions that are often found in other problem solving models. The creative problem solving process engages students in real-world application to problems and places the teacher in the role of facilitator of learning. According to Johnsen and McIntosh (1993), "CPS (Creative Problem Solving) is a formal approach to applying creative and critical thinking skills of students" (p. 5). Alex Osborn (1963) developed a creative problem solving model that included five steps involving both divergent and convergent phases:

1. Fact finding – generate a list of all know facts; narrow to a smaller number of facts.
2. Problem finding – list problem statements; narrow to a single statement.
3. Idea finding – brainstorm solutions for problems; narrow to a few possibilities.
4. Solution finding – list criteria for idea evaluation; reduce to most relevant criteria.
5. Acceptance finding – generate a plan for implementation of a solution.

Parnes (1981) and Isakson and Treffinger (1985) added mess-finding as a first step in the creative problem solving process, encouraging the simulation of real world problems.

The *mess* is normally ill-defined and requires problem solvers to identify who, what, when, where, and how in a particular problem prior to embarking on the subsequent steps in the process. One nationally recognized problem solving model is *The Future Problem Solving Program*, created by Paul Torrance (Davis, Rimm, & Siegle, 2010; Gallagher & Gallagher, 1994; Johnsen & McIntosh, 1993; McIntosh & Meacham, 1992; Schack, 1993).

Schack (1993) conducted a study that examined the effects of creative problem solving experiences on 267 middle school students. This study showed significant gains in problem-solving ability following the students' participation in a 45-lesson creative problem solving curriculum. In a study conducted by Sewell, Fuller, Murphy, and Funnell (2002), results indicated that high school students in a social studies class who participated in creative problem solving experiences visibly changed their behaviors, assuming leadership roles, and working cooperatively to make decisions when engaging in assignments focused on social action.

Cramond, Martin, and Shaw (1990) studied the effects of training middle school students to use the creative problem solving process. Seventy-five sixth through eighth grade students were included in the study. One group of students was trained in creative problem solving that included transfer strategies; the other group received no training. The researchers found that the group of students trained in the creative problem solving process practiced their newly acquired skills in multiple settings, applying the strategies to problems in contexts outside of the training sessions.

Research skills. "Independent study is an individualized learning experience which allows the student to select a topic, define problems or questions, gather and

analyze information, apply skills, and create a product to show what has been learned" (Kaplan, Kaplan, Madsen, & Gould, 1980, p. 169). Independent study requires the application of prior knowledge and the discovery of new information while individualizing and extending learning (Davis, Rimm, & Siegle, 2010; Kaplan, Kaplan, Madsen, & Gould, 1980). Independent study is a part of many instructional models used in gifted education, including Renzulli's (1977) Type III activities, Johnsen and Johnson's (2007) Independent Study, Feldhusen and Kolloff's (2009) Three-Stage Enrichment Model, Treffinger's (1975) Self-Initiated Learning Model, and Betts and Kercher's (1999) Autonomous Learner Model.

For example, a part of the Enrichment Triad Model (Renzulli, 1977), Type III enrichment "involves students who become interested in pursuing a self-selected area and are willing to commit the time necessary for advanced content acquisition and process training in which they assume the role of a first-hand inquirer" (Renzulli & Reis, 2011, para. 21). The goals of Type III enrichment include:

1. Providing opportunities for applying interests, knowledge, creative ideas and task commitment to a self-selected problem or area of study,
2. Acquiring advanced level understanding of the knowledge (content) and methodology (process) that are used within particular disciplines, artistic areas of expression and interdisciplinary studies,
3. Developing products that are primarily directed toward bringing about a desired impact upon a specifies audience,
4. Developing self-directed learning skills in areas of planning, organization, resource utilization, time management, decision-making, and self-evaluation, and
5. Developing task commitment, self-confidence, and feelings of creative accomplishment. (para. 21)

Johnsen and Johnson (2007) explained that independent study "involves in-depth learning of topics that are of interest to the student . . . although students are usually eager to pursue these interesting areas of study, they lack the skills necessary in achieving their

goals" (p. viii). These researchers offered a framework, tested with thousands of students, for teaching the entire independent study process:

Step 1: Planning the independent study.

Step 2: Selecting the topic.

Step 3: Organizing the topic.

Step 4: Asking questions.

Step 5: Using a study method.

Step 6: Collecting information.

Step 7: Developing a product.

Step 8: Presenting information.

Step 9: Evaluating the study.

Teacher involvement is essential to the success of independent study, and several models stress the importance of intervention and direction from the teacher (Burns, 1993; Johnsen & Johnson, 2007). Winebrenner (2001) outlined the following strategies to help teachers in guiding students through the independent study process: help the student find a topic that is of interest to him/her, provide a place for materials and resources, encourage the student to peruse materials and resources during free time in the classroom, demonstrate for the student ways to record data and ideas, conference with the student during information gathering time, guide the student in selecting one topic for study, and offer ideas to the student for how the information generated from the study might be shared.

According to Johnsen and Ryser (1996), "Independent learning and interest are critical in developing positive attitudes toward learning and in developing creative

products" (p. 396). Positive results were found in a study conducted by Midgett and Olsen (1983) with 454 eight to 17-year-old gifted students. The students were interviewed to determine if learning experiences being offered to them in the school setting were effective and/or related to their sex, age, and grade level. Although the ratings did not change with sex, age, or grade level, three program options were identified as having a significant impact on the positive ratings of the gifted program: use of computer, independent study, and interaction with teachers in small group discussions.

Studies examining Type III learning experiences indicate that students are more likely to complete independent investigations when they receive training in research skills (Newman, 1991). Research has also shown that students who participate in Type III learning experiences are more likely to maintain interests and career aspirations in college (Delcourt, 1993), experience improvement in self-concept and self- efficacy (Olenchak, 1991; Schack, 1986; Schack, Starko, & Bums, 1991), and plan to pursue post-secondary education (Taylor, 1992). Moreover, students who participated in self-selected independent study initiated their own creative products both inside and outside of school (Starko, 1986).

*Products***.** Product formats may vary and include books, diagrams, dioramas, videos, computer programs, games, graphs, posters, puppet shows, reports, tape recordings, timelines, debates, dramatizations, models, newspapers, poems, speeches, and many others. The goal in differentiating products is that they are authentic and relate to the "real world and have specific criteria" (Johnsen et al., 1994, p. 56).

Research has pointed to the importance of providing children with learning opportunities that involve the creation of authentic products beginning at a young age

(Delcourt, 1993). Baum, Renzulli, and Hébert (1999) conducted a study in which teachers guided 17 underachieving gifted students (ages 8-13) in the development of self-selected independent study products. At the end of the intervention, 82% of the students were making positive gains in their school setting, no longer underachieving. Other researchers have reported that students who participated in enrichment groups developed products that were more diverse and sophisticated, maintained interests over time, and continued to pursue creative productive work (Starko, 1986; Westberg, 1999). High levels of creative productive behaviors at an early age, as evidenced by performances and product development of young children, are indicative of high ability that needs to be fostered through accelerated learning experiences, which is the focus of the next section (Delcourt, 1993).

Rate

The goal in differentiating rate is that each learner has the time that he/she needs to learn the subject matter and related skills. Pre-assessments are used to determine current mastery level. Students do and/or create tasks that relate to unlearned content. Assessment is continuous, allowing students to progress to new content or to study content in greater depth. Students who do not learn the content have opportunities to do and/or create additional tasks that relate to the unmastered content (Johnsen et al., 1994).

Acceleration. One way of differentiating rate and using formative and continuous assessment is through acceleration. Acceleration is an instructional practice that is generally associated with gifted children (Feldhusen, 1985; Gallagher & Gallagher, 1994; Shore, Cornell, Robinson, & Ward, 1991). According to Pressey (1949), acceleration is

"progress through an educational program at rates faster or at ages younger than conventional" (p. 2). Acceleration may be accomplished by using pre-assessments to determine mastery of knowledge and skills and by using instructional arrangements that allow students to proceed through the curriculum at a pace that is commensurate with their ability.

In *A Nation Deceived: How Schools Hold Back America's Brightest Students* (Colangelo, Assouline, & Gross, 2004), a list of 18 types of acceleration was presented as a part of the Templeton National Report on Acceleration:

1. Early admission to kindergarten.
2. Early admission to first grade.
3. Grade-skipping.
4. Continuous progress.
5. Self-paced instruction.
6. Subject-matter acceleration/partial acceleration.
7. Combined classes.
8. Curriculum compacting.
9. Telescoping curriculum.
10. Mentoring.
11. Extracurricular programs.
12. Correspondence courses.
13. Early graduation.
14. Concurrent/Dual enrollment.
15. Advanced placement.
16. Credit by examination.
17. Acceleration in college.
18. Early entrance into middle school, high school, or college. (p. 12)

In a review of the research on acceleration, Kulik and Kulik (1991) found that able students who were accelerated performed as well as older students who were in the grade that is traditionally age appropriate for them. In another review of research, Rogers (1992) reported that acceleration produced significant academic gains – particularly when practiced in the forms of ungraded classrooms, curriculum compacting, grade telescoping, subject acceleration, and early admission. Based on results of 314 studies,

Rogers (1991) recommended these acceleration practices that were most beneficial at particular age levels:

1. Elementary children – Early entrance, grade skipping, non-graded classes, and curriculum compacting.

2. Middle school students – Grade skipping, grade telescoping, concurrent enrollment, subject acceleration, and curriculum compacting.

3. Senior high school students – Concurrent enrollment, subject acceleration, AP classes, mentorships, credit by examination, and early admission to college.

Some educators and parents fear that students might be damaged socially and/or emotionally by the practice of acceleration, and this concern must be addressed (Winebrenner, 2001). Robinson (2004), citing her research with Neihart, Reis, Robinson, and Moon (2002), clearly summarized findings related to concerns about acceleration of bright students,

> . . . a comprehensive survey of the research on this topic finds no evidence that gifted students are any more psychologically vulnerable than other students, although boredom, underachievement, perfectionism, and succumbing to the effects of peer pressure are predictable when needs for academic advancement and compatible peers are unmet. (p. 59)

Although supported by research and by many experts in the field of gifted education, many general education educators and some parents perceive acceleration in a negative light; thus, the conflict concerning acceleration continues (Gallagher & Gallagher, 1994; Jones & Southern, 1991; Shore, Cornell, Robinson, & Ward, 1991; Winebrenner, 2001).

Pacing. Juxtaposed to acceleration, decelerating instruction provides more time to interact with content and more time to practice and acquire knowledge and skills. For

students experiencing difficulty in an academic setting, the same content might be extended over a period of time to provide additional reinforcement in the mastery of knowledge and skills (Edgecombe, 2011). Researchers in special education have identified specific practices with special education students that are linked to effective instruction. Some of the practices that involve pacing and have proven to increase achievement with special education students include pre-assessment to guide instruction, direct instruction, and drill and practice.

Bickel and Bickel (1986) shared their findings about rate that appear to be linked to improved academic performance with special education students. These researchers noted that teachers must carefully provide explicit instruction and pay close attention to pacing when introducing new content. Gersten et al. (2008) added that direct instruction and drill and practice are instructional strategies related to pacing that have been found to result in positive learning outcomes for special education students. A commonality in these research findings is the importance of teachers' understanding that learning must be reviewed and monitored continuously, with immediate feedback and correction provided.

Bereiter and Engelmann (1966) are credited with framing the initial approach to direct instruction, a practice used extensively in special education to pace instruction in a way that facilitates the academic achievement of special education students. Although the steps to direct instruction have been modified through the years, the six critical features of direct instruction remain the same:

1. Teaching a skill or concept in an explicit step-by-step fashion.
2. Developing student mastery at each step of the process.
3. Correcting student errors at each step.
4. Gradually fading from teacher-directed activities toward independent work.
5. Giving students adequate, systematic practice with a range of examples.

6. Providing a cumulative review of newly learned concepts. (Gersten, Carmine, & Woodward, 1987, p. 49)

Continuous monitoring of student progress is another important aspect of pacing instruction. The use of ongoing assessment allows the teacher to adjust the pace of learning for individual students, helping to ensure knowledge acquisition and mastery of skills (Fuchs et al., 2008).

Environment

The goal in differentiating environment is to design a classroom where learning is facilitated and the classroom adapts to learner differences in rate, preference, and content. This allows students to self-select the physical setting that best facilitates their learning. Often, the classroom contains learning centers or areas that allow for interaction among students. Additional learning areas may be found outside the school and classroom (Johnsen et al., 1994).

Independent activities in a classroom environment should be challenging, individualized, and address the learning preferences of students (Johnsen & Johnson, 2007; Lopez & MacKenzie, 1993; Smutny, Walker, & Meckstroth, 1997). Students should be responsible for selecting activities and evaluating their own work. The teachers' role is to be a facilitator of learning when students participate in independent activities (Davis, Rimm, & Siegle, 2010; Feldhusen, 1985; Johnsen & Johnson, 2007; Kaplan, Kaplan, Madsen, & Gould, 1980; Lopez & MacKenzie, 1993; Nelson & Frederick, 1994; Winebrenner, 2001).

If teachers decide to organize their classroom in learning centers, they need to be aware of types of learning centers and their important characteristics. Centers may be

subject-directed, for example, focused on “bears” or “seasons”; they may also be subject-oriented, providing learning opportunities that focus on a certain content area such as math or science.

Lopez and MacKenzie (1993) have identified criteria for planning effective learning centers:

1. Focus. Students know what they will learn and what they will be able to do or demonstrate as a result of their work at a center.

2. Assessments. Criteria are established and student input is solicited, evaluation is congruent with stated focus or outcome, assessment provides useful information for the student and the teacher, and assessment includes student self-reflection.

3. Activity selection. Needs of the various levels of learners are addressed, a balance is achieved among the types of activities that are included, activity types address various learning preferences and allow for varied product development, various levels of thinking are included, and activities are sequenced when appropriate.

4. Communication. Center introduction is planned to enhance student interest and understanding and clear written and/or oral directions are provided.

5. Motivation. The center catches the eye as the students walk in the room or approach the learning environment in which the center is located, the center may have an intriguing quality or sense of mystery, learners are invited to sit and ponder possibilities in a comfortable setting, the center is non-threatening, activities change or are added periodically, student choice is provided within the parameters of the center, the center capitalizes on student interests, and thought- provoking questions are asked.

6. Learner involvement. Activities are relevant to the learner and pairings and/or small group work are allowed.

7. Time. Limits are established, yet flexibility is in place; expanded opportunity for student work time is provided; and transition time is short when work time is over.

8. Management. Clear behavioral expectations are communicated, alternative work areas are provided and allowed, space is allowed for students to move in and around the center, and record keeping is clear to the students.

Learning centers provide students with options, the opportunity to guide their own learning, and the chance to pursue areas of interests. Students' creative production increases when they become more attuned to their own learning needs and are allowed to make decisions to address those needs (Olenchak & Renzulli, 1989).

Students who take ownership for their own learning have often been described as self-regulated learners. These learners who exert control over their learning processes and environments are able to proactively develop their skills and strategies, set goals, monitor the progress of their own learning, and modify strategies when they believe they are not effective (Mace, Belfiore, & Hutchinson, 2001; Schunk, 2009; Schunk & Ertmer, 2005; Weinstein, Husman, & Dierking, 2000; Zimmerman, 2000, 2001; Zimmerman & Kitsantas, 1999).

Preference

The goal in differentiating preference is where students "may select the learning resources that best fits their way of learning. The tasks vary in task format and response dimensions. Students may choose to work in small groups, large groups, pairs, or individually" (Johnsen et al., 1994, p. 56).

Depending on the instructional approach in a classroom, different skills are required and different demands are placed on students for them to experience success (Renzulli & Smith, 1984). For example, if lecture is the method chosen as the means for delivering instruction, students are required to sit still while the teacher delivers information to them with communication flowing in one direction, providing no choice for learners. At the other end of the spectrum, independent study requires a completely different set of skills and behaviors on the part of the learner, allowing for choice, individual decision making, and freedom from constant supervision.

According to Renzulli and Smith (1984), ". . . students may become more involved in learning what has to be learned if we offer choices of how information of skills can be acquired" (p. 47). Griggs (1991) proposed that an individual's style or preference for learning, if accommodated, can result in positive attitudes toward learning, increased productivity, academic achievement, and creative production.

In summary, the research supports differentiating practices for individuals in (a) the knowledge and skills that students need and want to learn (e.g., content), (b) the students' preferences in learning (e.g., preference), (c) how quickly they learn (e.g., rate), and (d) the types of environments that enhance their experience (e.g., environment) (Johnsen et al., 2002).

Research Related to Teachers' Use of Differentiated Instructional Practices

For the most part, the literature suggests that the majority of teachers do not differentiate their instructional practices. For example, Westberg et al. (1993) found that instructional and curricular practices included very little differentiation for gifted students

in the regular classroom. The high ability students experienced no instructional or curricular differentiation in 84% of the instructional activities in which they participated.

Brighton and Moon (2007) shared an overview of research conducted as part of Project START, a project that included studies that focused on differentiation in the classroom. Their findings indicated that teachers who are trained in using differentiation strategies in the classroom are able to learn the language of differentiation easily, but have difficulty putting differentiation into practice, have difficulty focusing on individuals because of deeply embedded beliefs they hold, and often think they are differentiating instruction when they are not. The researchers also found that high stakes testing deters changing teacher behavior to focus on differentiation and individual students.

Latz, Speirs Neumeister, Adams, and Pierce (2009) also found in their research review that teachers are resistant to differentiation due to (a) lack of administrative support (Hertberg-Davis & Brighton, 2006), (b) fear of straying from mandated curriculum that might result in lower test scores (Van Tassel-Baska, 2006; Van Tassel-Baska & Stambaugh, 2005), (c) student behavior and classroom management issues and concerns (Hertberg-Davis & Brighton, 2005; Knopper & Fertig, 2005; Westberg, Archambault, Dobyns, & Salvin, 1993), (d) resistance to changing teaching style (Tieso, 2004); (e) lack of time for planning differentiated instruction (Hertberg-Davis & Brighton, 2004; Knopper & Fertig, 2005; Westberg, Archambault, Dobyns, & Salvin, 1993), and (f) fear that parents may not approve of the practice (Knopper & Fertig, 2005).

Latz et al. (2009) reported the findings from a three-year study that included 55 participants (9 mentors and 46 mentored teachers) and assessed the effectiveness of using

mentors to teach and support general education teachers in an effort to encourage differentiation in the classroom setting. Results of the study indicated that differentiation seldom occurs in the regular classroom, even when teachers know what differentiation is, have received training in how to differentiate instruction, and are provided with support from a mentor.

On the other hand, Johnsen et al. (2002) investigated change in classroom practices and factors that influence change over a period of two years. The sample included six sites (one urban and five rural sites), eight principals, 74 teachers, 17 mentor teachers, and 18 community members. Results indicated that the majority of the teachers made changes in classroom practices, and teachers participating in the project identified staff-development, leadership, mentoring, resources, and project support as factors that most influenced their change in instructional practice.

In the previously mentioned study by Johnsen et al. (2002), researchers identified several characteristics of the change process that appeared to support and encourage teachers in engaging in change of instructional practice. They mentioned the importance of (a) involving all stakeholders who will be affected by the change, (b) offering professional development opportunities that "simulate the desired practices so that participants will identify with the innovation and be stimulated to make changes" (p. 45), (c) clearly defining practices to ensure transfer of the practices to the classroom, (d) allowing teachers to be involved in the decision-making with regard to the type and degree of change that will be made, and (e) the provision for ongoing material and human support to implement the changes.

Johnsen discussed the intricacy of implemented change in the educational setting, stating, "The process of educational change is complex, with each school presenting a unique culture that must be addressed. Indeed, when humans attempt new innovations, a multiplicity of factors must work in concert for change to occur" (Johnsen et al., 2002, p. 61). The work of Fullan (1993), a scholar of educational change, clearly authenticated Johnsen's idea that implementing systemic change in schools is an arduous task that takes a lot of time and is dependent upon many factors. Fullan (2007) noted, "So far, schools are much more a conservative agency for the status quo than a revolutionary force for transformation" (p. 10). Although the need for change is clear, schools have failed to implement and sustain meaningful change (Evans, 2001; Fullan, 2007).

Darling Hammond and McLaughlin (1995) concisely captured the challenges confronting educators in light of change needed in education:

> The vision of practice that underlies the nation's reform agenda requires most teachers to rethink their own practice, to construct new classroom roles and expectations for student outcomes, and to teach in ways they have never taught before – and probably never experienced as students. The success of this agenda ultimately turns on teachers' success in accomplishing the serious and difficult tasks of learning the skills and perspectives assumed by new visions of practice and unlearning the practices and beliefs about students and instruction that have dominated their professional lives to date. (p. 597)

Given the difficulty of changing teachers' classroom practices and beliefs, it is important to teach pre-service teachers how to differentiate. Unfortunately, the research related to the development of pre-service teachers' skills in this area is scant. Hollins and Guzman (2006) conducted a thorough review of research on preparing teachers to work with diverse populations. They found that studies have not investigated the extent to which candidates are taught pedagogical knowledge that would have a positive impact on the learning of diverse students. These researchers explain that none of the studies reviewed

investigated candidates' ability to plan or implement effective instruction for diverse students. Moreover, no model of professional development was reported for teachers who provide instruction to advanced and gifted students (Rowley, 2002).

Factors Influencing Teachers' Differentiation of Instructional Practices

Professional Standards

Perhaps the single most significant development in raising the profile of standards related to content and teacher preparation in the United States has been the implementation of student assessment and accountability systems in every state in the country (Linn, 2000). States are required to report a variety of data focusing on student performance and the teachers' acquisition of knowledge and skills related to standards in the Higher Education Act of 1965 (reauthorized in 1968, 1971, 1972, 1976, 1980, 1986, 1992, 1998, and 2008.). A great deal of money has been spent on professional development for teachers at the state and local district levels to help them implement practices that would raise students' performance on basic skills, which includes specific subject-related pedagogy (Darling-Hammond, 1999). While states have reported increases in student performance on high stakes tests, international comparisons have indicated that the U.S. is still lagging behind other countries (National Center for Educational Statistics, 2007). Therefore, nationally, there has been an increasing emphasis on standardizing basic skill standards with concomitant pressure on the individual classroom teacher to improve test scores (e.g., common core) (Council for Chief State School Officers, 2011).

The standards' influence on classroom practices for diverse learners has been mixed. On the positive side, Bates and Burbank (2008) reported that university supervisors were able to use the diverse needs of students as a catalyst for his/her approach to feedback provided to candidates placed in diverse classrooms, challenging the candidates to reflect on classroom practices and the relevancy of content presented. In addition, the standards have provided criteria that are designed to specify and enumerate performance as opposed to the anecdotal note taking that was the normal practice of providing feedback and judging performance of student teachers prior to the standards movement. University supervisors are more prescriptive in their feedback to student teachers, concentrating more on the language of the standards than on the student teacher's performance or on the context. Universities are more likely to develop measures that identify successful performance in relation to classroom instruction, classroom climate, professionalism, and curriculum development (Raths & Lyman, 2003).

Although the focus on diversity in standards shows a definite attempt to address the needs of diverse learners, the changes necessitated by the standards have not been all positive. Bates and Burbank (2008) noted in their findings that the standards movement has put pressure on supervisors to focus on student teacher performance in light of the standards rather than on student learning and achievement. Moreover, the standards-based approach that is prevalent today may take away from the personal interactions that supervisors have with student teachers, forcing supervisors to concentrate on fixed evaluation criteria rather than on getting to know the candidates, attending to the cultures of the students in the classroom, and paying attention to the context of the classroom.

They also express their concern about the messages teacher preparation programs are sending to teacher education candidates when feedback is so closely tied to standards as opposed to focusing more on nuances and needs of students in the classroom.

Context for Learning: University and Campus

Teacher education candidates are placed in a variety of settings (e.g., general education vs. special education, urban vs. suburban, low income vs. high income, heterogeneous student population vs. homogeneous student population). These settings influence the candidate's future instructional practices, particularly with diverse students. Ladson-Billings (2001) provided a vivid description of the diversity teachers may encounter in P-12 classrooms:

> Not only [will teachers encounter] . . . multicultural or multiethnic [students] but they [students] are also likely to be diverse along linguistic, religious, ability and economic lies . . . Today teachers walk into urban classrooms with children who represent an incredible range of diversity. (p. 14)

Researchers in teacher education have argued that carefully designed courses and classroom experiences can help novice teachers move from simply having experiences to helping them learn from their experiences. In these carefully designed settings, pre-service teachers can develop their abilities to assess situations in the classroom, make sound judgments, formulate goals, select courses of action, and reflect on their experiences (Dewey, 1904/2007; Kennedy, 1987, 1999; Kessels & Korthagen, 1996; Schon, 1990, 1995).

McDiarmid and Clevenger-Bright (2008) purported that ideal classrooms should be

> flexible, innovative, even adventuresome [where] practice is supported and encouraged – or, at the very least, not punished. This speaks to the importance of

> the school context and communities of practice as well as policy contexts in which teachers are, at the very least, comfortable trying out, evaluating, and refining innovative practices. (p. 147)

Campus/field-based experiences. According to the National Research Council (2000), a key element in successful learning is the opportunity to apply what is being learned and refine it. Cognitive psychologists have also noted that deliberate practice is extremely important in the development of expertise (Ericsson, Krampe, & Tesch-Romer, 1993). Candidates describe their field experiences as a key to their learning instructional practices. For example, Rosaen and Florio-Ruane (2008) found, "new teachers are apt to report that they learned little from their university courses, but a great deal from their 'field experiences'" (p. 711). Ellenburg (1981) recognized the student teaching experience as "the heart of the professional preparation of teachers" (p. 202), while Hattie, Olphert, & Cole (1982) proposed that student teaching remains the closest approximation of the realities and responsibilities of the profession. In fact, student teaching is a good predictor of the possible performance level of a beginning teacher (Briggs, Richardson, & Sefzik, 2001).

In traditional teacher education programs, student teaching has most often occurred at the very end of the educational experience, as a culminating experience; however, many programs are now including carefully designed clinical experiences early and throughout programs. Research on outcomes of teacher education supports the idea that carefully constructed field experiences enable novice teachers to apply, reinforce, and synthesize concepts they are learning in their coursework (Baumgartner, Koerner, & Rust, 2002; Denton, 1982; Denton, Morris, & Tooke, 1982; Henry, 1983; Ross, Hughes & Hill, 1981). Fischetti and Larson (2002) also found that even more benefits have been

reported from year-long student teaching experiences, reporting that when candidates participated in a year-long experience, they felt more at ease with their classrooms and more comfortable with their teacher's planning and teaching responsibilities. Study participants also reported developing meaningful relationships with their supervising teachers and feeling comfortable talking to their supervising teachers about instructional issues and challenges.

Researchers are finding that novices who have had some experience with teaching when they enter their coursework are more likely to make sense of the ideas, theories, and concepts that are broached in their academic coursework. Denton (1982) conducted a study of 139 undergraduate teacher education candidates (61 who had 30 hours of field experience early in their teacher education training and 78 who had no field experience early in their teacher education training). He found that the students who had participated in early field experiences performed significantly better in their methods courses than those without the early experiences.

Numerous researchers have found that student teaching placements that are consistent with a program's vision of teaching can provide powerful learning experiences, as are those in which there is a shared understanding among pre-service teachers, supervising teachers, and university supervisors about the purposes and activities of student teaching (Koerner, Rust, & Baumgartner, 2002; Laboskey & Richert, 2002).

Social support. In the research literature, different forms of field-based social support have been described: supervision, co-teaching, coaching, and mentoring. Cochran-Smith (2003) and Zeichner (2005) argued that exemplary teacher education

programs provide training and ongoing support for the teacher educators who work with pre-service teachers. Social support in the schools that has desired influences on teacher candidates appears to have these characteristics (Hammerness, 2006; Shulman & Shulman, 2004).

Mentoring/Supervision. The ideal mentoring situation for student teachers is a placement in which the pre-service teachers are supported with purposeful coaching by expert supervising teachers in the same teaching field. These mentors provide modeling, frequent feedback, co-planning, numerous opportunities to practice, ongoing opportunities to relate classroom work to university coursework, and reflection upon practice while the student teacher gradually takes on more and more responsibility (Darling-Hammond, Hammerness, Grossman, Rust, & Shulman, 2005; Collins, Brown, & Holum, 1991). Strong mentoring helps new teachers identify themselves within the profession and establish their own visions of good teaching (Hammerness, 2006; Lasley, 1996; Shulman & Shulman, 2004).

Rowley (1999) identified the characteristics of what he referred to as a good mentor—committed to the role of mentoring, explaining:

1. Committed to the role of mentoring – Committed mentors understand that persistence is as important in mentoring as it is in classroom teaching. . . . [M]entoring can be a challenging endeavor requiring significant investments of time and energy.
2. Accepting of the beginning teacher – Accepting mentors do not judge or reject mentees as being poorly prepared, overconfident, naïve, or defensive. Rather, should new teachers exhibit such characteristics, good mentors simply view these traits as challenges to overcome in their efforts to deliver meaningful support.
3. Skilled at providing instructional support – Good mentors are willing to coach beginning teachers to improve their performance wherever their skill level.
4. Effective in different interpersonal contexts – Good mentor teachers recognize that each mentoring relationship occurs in a unique, interpersonal context.

5. Model of a continuous learner – Good mentor teachers are transparent about their own search for better answers and more effective solutions to their problems. They model this through their openness to learn from colleagues, including beginning teachers, and their willingness to pursue professional growth through various means.
6. Communicates hope and optimism – Good mentors capitalize on opportunities to affirm the human potential in beginning teachers. (p. 20-22)

A great deal of research has been conducted on the effects of professional collaboration and exchange between mentor teachers and novice teachers. When practiced in a strong professional community, mentoring can have a positive impact on teacher retention, teacher learning, and pedagogical innovation (Feiman-Nemser, & Katz, 2004; Gold, 1996; Ingersoll & Smith, 2004; Lasley, 1996; Strong & St. John, 2001). According to Humphrey and Wechsler (2005), mentors who worked most effectively with prospective teachers knew how to work and communicate with adults and had received training in specific mentoring strategies.

Callahan and Tomlinson (1999) shared their findings from a study that focused on how pre-service teachers develop an awareness of the needs of academically diverse learners and how they modify instruction to meet those needs. The study involved a three-year project that examined the instructional practices of pre-service teachers from seven universities. The results of the study highlighted the importance of specific characteristics of environments that support beginning teachers in effectively addressing the needs of academically diverse student populations, including: (a) mentoring novice teachers as they adjust to the complexities of academically diverse classrooms, (b) ensuring that new teachers receive curricula with suggestions for differentiating instruction, and (c) assigning mentors who can guide them in becoming reflective practitioners. With these support mechanisms in place, novice teachers can develop the

skills necessary to establish a classroom environment that is flexible enough to respond to academically diverse student populations (Callahan & Tomlinson, 1999).

Student teacher supervision. In a review of the research on the supervision of student teachers, Bates and Burbank (2008) pointed to varying perspectives regarding the effectiveness of the role played by student teacher supervisors from teacher preparation programs. Traditionally, student teacher supervision has been viewed as a peripheral position, usually assigned to adjunct faculty or graduate students who is often viewed as an outsider interfering in the public school classroom and serving only an evaluator role in the relationship with cooperating and student teachers (Slick, 1998). Debate regarding the effectiveness of university supervisors and the relative value of the role in student teacher learning has been a topic of discussion for years (Bowman, 1979; Boydell, 1986).

Researchers have described some effective supervisory practices. For example, Grant and Zozakiewicz (1995) suggested the need for university supervisors to familiarize themselves with the cultural, academic, and background knowledge of their student teachers just like teachers must do with the students in their classrooms. They advocated for a supervisor who will, ". . . listen and support their [student teachers'] work, while challenging students to think, grow, and act as multicultural educators (pp. 271-272). The university supervisor also has a unique opportunity for elevating the discourse of feedback offered to student teachers (Richardson-Koehler, 1988). For example, when candidates are required by their supervisors to critique and justify their teaching practices, they tend to develop into more thoughtful, independent decision makers (Zeichner & Liston, 1985).

Peer support. In teacher preparation programs, student teachers often go to their peers for support and help. In one study, the researcher found that although most student teachers had university supervisors as well as a supervising teacher, student teachers chose to go to their peers 41% of the time when encountering a problem related to teaching and instruction (Hsu, 2005). Based on the findings of the study, Hsu (2005) proposed, "peer support should be cultivated in teacher training programs because peer student teachers' help was most frequently sought" (p. 313). The findings of this study supported the argument of McNalley, Cope, Inglis, and Stronach (1997) that student teachers learn about teaching from both professional and informal encounters with people around them.

Pre-service teachers routinely adopt an approach to learning that draws on the knowledge, experience, backgrounds, and identities of others, relying heavily on informal peer support networks to compensate for the lack of attention to their needs and interests in class (Hockings, Cooke, Bowl, Yamashita, & McGinty, 2008). College students, in general, identified student supportiveness towards one another as a major factor in determining their level of learning and engagement (Anderson et al., 2007).

Teacher educators have provided a range of options for increasing peer support. For example, Britton and Anderson (2010) examined the effects of student teacher collaboration in a peer-coaching situation. The results of their study showed that peer coaching helped pre-service teachers develop their pedagogical skills and knowledge, improving their practice. Using videotaped lessons to prepare pre-service teachers prior to their going into actual classrooms, Wilson and I'Anson (2006) found that pre-service teachers viewed the experiences of working with their peers helpful, particularly with

regard to reducing the complexity of the actual teaching practice. Finally, Liaw (2009) explored the effects of group discussions among pre-service teachers and their supervising teachers during the student teaching experience and found that pre-service teachers who participated in the dialogue had more opportunities for learning and experienced an increase in self-efficacy.

*Coursework***.** Courses, which address key concepts and topics in depth, influence pre-service teachers' overall achievement (Gamoran & Berands, 1987; Gamoran & Weinstein, 1995; Lee, 1995; McKnight et al., 1987; Pelavin & Kane, 1990).

Grossman (2005) explained that it is crucial for teachers to possess knowledge of subject matter in ways that can be communicated to diverse learners. This includes depth and breadth of critical concepts, themes, and skills most germane to the subject and possession of knowledge and skills to present the content in various ways. Each of the core content areas – English/language arts, mathematics, social studies, and science – have content standards that embody the essential concepts of the discipline, and each stresses content and process as part of the mastery of the discipline content (Howard & Aleman, 2008). Research has indicated that although teachers' major field of study is an important predictor of student achievement (Monk, 1994; Monk & King, 1994), perhaps more important is the teachers' acquisition of a deep and organizationally clear concept of the subject matter in a manner suitable for communicating the content to the students with whom they work (Ball & Bass, 2000; Ma, 2010), thus the vital need for pedagogical content knowledge.

Floden and Meniketti (2005) presented a thorough review of the correlation between the study of subject matter and teacher effectiveness, and argued that exposure

to subject matter alone does not ensure that a teacher will be effective in the classroom. Howey and Zimpher (1989) suggested that model programs offer candidates a good balance between course work in pedagogical knowledge and general knowledge, ensuring that they do not leave their teacher preparation experience with ideas that are too narrow or technical. Exemplary teacher education programs include extensive course work in child development as well as in theories of learning, cognition, motivation and subject matter pedagogy (Darling-Hammond et al., 2006; Darling-Hammond & MacDonald, 2000).

Coursework and field experiences must provide pre-service teachers with knowledge and experiences that enable them to create classrooms that are responsive to the needs of diverse learners by developing curriculum that takes into account the perspectives, understandings, and prior experiences of various groups while also developing higher-level cognitive skills in their students (Banks, 1991, 2008; Ellis, 2009; Lee, 1993; McDiarmid, 1994).

It is also important to closely align coursework with field experiences. Richardson (1996) noted that teachers are more apt to consider and implement alternative practices when faced with dilemmas while teaching as opposed to coming to such realizations and making such decisions as a result of coursework alone.

To summarize, Howard and Aleman (2008) suggested

> . . . that subject matter knowledge continues to be an essential component of teacher capacity, [however], it is clear that additional research is needed to assess the relationship between teachers' content knowledge, practice, and student learning. Additional investigations are needed to assess not simply the quantity of subject matter content pre-service teachers receive, but also the quality and type of exposure. (p. 155)

Individual Characteristics

Attitudes and beliefs. Parker and Brindley (2008) described teacher beliefs as "a complex construct that is difficult to identify, define, and describe" (para. 5). As Pajares (1992) noted, a review of the literature provides numerous terms used synonymously for teacher beliefs, including *attitudes*, *dispositions*, and *knowledge*. Adding to the complexity of the construct and the myriad terms used synonymously with teacher beliefs, diverse philosophical perspectives make defining teacher beliefs even more challenging. For example, Rokeach (1968) described beliefs as having multiple components, including elements in the cognitive, affective, and behavioral domains and involving knowledge, emotion, and action. Brown and Cooney (1982) defined beliefs as "dispositions in action and major determinants of behavior" and described beliefs as being specific to the context in which they occur (p. 13). Nespor (1987) explained that beliefs are evaluative, stored in the affect, and episodic in nature. The broad array of definitions highlights the complexity of this construct (Parker & Brindley, 2008).

In a review of the literature, Wideen, Mayer-Smith, and Moon (1998) discovered that prospective teachers hold a wide variety of beliefs and understandings about teaching and learning, depending on their individual experiences. These findings indicated that teacher educators have different work to do with different students when it comes to beliefs the young educators hold and warn against a *one size fits all* approach.

According to Hammerness, Darling-Hammond, Bransford, Berliner, Cochran-Smith, McDonald, & Zeichner (2005), prospective teachers come to their career preparation experiences with preconceived beliefs that affect what they learn from teacher educators and field experiences. These beliefs come from many years of

"observing people who taught them and using this information to draw inferences about what good teaching looks like and what makes it work" (p. 367). Sociologist, Lortie (1975) coined the term *apprenticeship of observation* to describe the processes by which pre-service teachers acquire conceptions of teaching based on their own experiences as students. The good news about the apprenticeship of observation is that pre-service teachers enter their teacher preparation experience with a long history of personal experiences in classrooms; the bad news is that these same experiences can result in serious misconceptions about teaching (Hammerness et al., 2005). Pugh (2006) contended that in addition to personal experiences in school, pre-service teachers' preconceived notions about teaching come from representations of teaching in the media. Kennedy (1998) presented yet another example of preconceptions that make learning difficult for novice teachers, noting that these young educators often have clear beliefs associated with content presented to them through coursework (i.e., grouping for learning, assessment, and diversity) and tend to assimilate the concepts being taught in their pre-existing schemas. This can make it very difficult to develop deeper understandings of the concepts. Based on various experiences, teacher education candidates oftentimes perceive teaching as the classroom teachers imparting knowledge and the students taking in the subject matter (Doyle, 1997; Richardson, 1996). They tend to have what Weinstein (1988) described as *unrealistic optimism* about their teaching and their careers as educators.

Researchers highlight the importance of studying pre-existing beliefs held by pre-service teachers claiming that failure to do so may result in hindrance of their ability to develop and acquire new knowledge about what it means to be a teacher (Borg, 2005;

DaSilva, 2005; Morton, Williams, & Brindley, 2006; Pajares, 1996; Warford & Reeves, 2003). Pajares (1992) wrote that studying the beliefs of pre-service teachers is imperative because "unexplored entering beliefs may be responsible for the perpetuation of antiquated and ineffectual teaching" (p. 328).

A recent study showed that teacher education candidates can change their beliefs and adopt new ideas about teaching during their student teaching experiences (Buitink, 2009). This investigator examined the beliefs of eight students enrolled in a teacher preparation program before and after a student teaching experience. The researcher found that when university and supervising teachers shared common goals for what pre-service teachers needed to learn from their field experiences, student teachers "developed a new practical theory in which they pay attention to pupils' learning" (p. 125).

Cognitive ability. Although limited research was found that specifically addressed whether or not candidates' cognitive ability influenced their instructional practices, researchers have stressed the importance of teachers being able to think critically and creatively, reflecting accurately on their practices, make decisions, and possessing the intellectual abilities that they are expected to develop in their students (Association of Childhood Education International, 2007; National Association for Gifted Children, 2006; National Association for the Education of Young Children, 2010; National Council of Teachers of Mathematics, 1991; National Council of Social Studies, 2002; National Science Teachers Association, 2006; Ryan & Kuhs, 1993; Shavelson, 1983). Conceptualizations such as these imply that intellectual ability is important to teacher effectiveness.

For example, Moon (2005) pointed to the importance of decision making on the part of teachers in diverse classroom settings explaining, "With the increasing diversity in classrooms, teachers are faced with a broad range of students representing a wide variety of educational needs. To effectively address students' diverse education needs, teachers must engage in good decision making" (p. 226). Shavelson (1973) stressed the importance of decision making in teaching and emphasized that decision making occurs following complex cognitive processing of accessible information, stating, "Any teaching act is the result of a decision, whether conscious or unconscious, that the teacher makes after the complex cognitive processing of available information" (p. 144).

In addition, current trends in the curriculum that teachers are expected to teach call for higher order thinking. Professional organizations including the National Council of Teachers of Mathematics (1991), the National Council of Social Studies (2002), the National Science Teachers Association (2006), the National Association for Gifted Children (2006), and various laws, including No Child Left Behind Act of 2001 (2007), call for dramatic changes in the depth and complexity of content and processes taught in schools.

Technological advances and the voluminous amount of new content that is being generated in all disciplines (sometimes described as a *knowledge explosion*) requires teachers to be able to problem solve, engage in higher order thinking, and use modern technology. To guide and engage their students in appropriate learning experiences, teachers must have the intellectual abilities that are expected to be developed in their students. Plans of unit instruction, content outlines, and instructional resources used by

pre-service teachers could serve as important indicators for insight into this area of critical competency (Ryan & Kuhs, 1993).

Family support. Foley (2008) explained that family involvement and support can be key to a students' success in college, providing insight, encouragement, financial advice, help with career planning, "a place of safety and rest" (para. 2), and guidance as the student becomes more and more independent. Research conducted by Chamberlain (2005) indicated that family influence and support is extremely important with regard to keeping students engaged in the university experience, particularly when students experience difficult times, find themselves in a crisis, or need information about how to deal with problems. Moreover, early support from spouses of nontraditional students empowered both partners to achieve and realize their goals (Speirs Neumeister, 2002).

For ethnically and racially diverse students, family support is even more important (Kenny & Stryker, 1996). Hurtado, Carter, and Spuler (1996) conducted a study on the effects of family support for Latino students during transition from high school to college and found, through qualitative analysis of open-ended questions, that family was the support system mentioned second only to college peers. Family/parental support also played a significant role in the success of gifted Black males in urban high school and university settings (Hébert, 1998, 2002)

London (1989) examined the issues faced by first-generation college students. His research pointed to the fact that these students oftentimes experience a clashing of two cultures, that of their family and friends and that of the university community. At times, such students feel like they have betrayed their heritage and are severing important

ties as they concurrently try to adjust to the pressures of succeeding academically (London, 1989; Nunez & Cuccaro-Alamin, 1998).

On the other hand, lack of family support or conflict within the family can be detrimental, particularly for students from diverse ethnic backgrounds who have strong cultural identities and whose parents have negative perceptions of American schooling (Kao & Hébert, 2006; Kitano, 1998). Gifted underachieving college students who experienced depression and family conflict were also less likely to be successful in their developmental task-accomplishment and academic motivation (Peterson, 2001, 2002). In addition, approaches to parenting can play a significant role in the development of perfectionism in gifted college students (Speirs Neumeister, 2004).

Theoretical Framework

Related to Vygotsky's (1978) theory of learning through social development, Lave and Wenger's (1991) theory of situated learning emphasized that learning is, to a substantial degree, a function of the environment in which it takes place – embedded within activity, context, and culture. Wenger (1998) further developed the model, postulating that there are four main components of social theory of learning: (a) meaning – learning as experience, (b) practice – learning as doing, (c) community – learning as belonging, and (d) identity – learning as becoming. The four components are closely interconnected and mutually defining, any one of which might be the center of an organizational map with the other three components contributing to the meaning of the whole.

Learning as Experience

Lave and Wenger (1991) claimed that learning and identity cannot be separated, and that both are essentially social constructs. Furthermore, Wenger (1998) pointed out that "Our institutions . . . are largely based on the assumption that learning is an individual process, that it has a beginning and an end, that it is best separated from the rest of our activities, and that it is a result of teaching" (p. 3). For this reason, learning environments are designed so that students can attend to the teacher or learning activities, away from distractions of the outside world. Wenger (1998) argued that, instead, learning should be in the context of life experiences allowing learners to actively derive meaning from engagement in everyday involvement in activity and decision-making. Lave and Wenger's (1991) theory emphasizes the notion that learning is not isolated and internal, but is dependent upon interaction in the environment as one establishes meaning and knowledge within a social context. Situated learning theory suggests that the learner does not acquire knowledge in a decontextualized manner; instead, the learner collaborates with peers to construct knowledge that is specific to the environment and contributes to defining the scope of the larger community.

In describing learning as experience, Wenger (1998) highlighted the role that competence plays in becoming even a novice in a community of practice. To be accepted into the community, an individual must engage in learning along three dimensions of competence:

1. Mutuality of engagement – the ability to engage with other members and respond in kind to their actions, and thus the ability to establish relationships in which this mutuality is the basis for an identity of participation;
2. Accountability to the enterprise – the ability to understand the enterprise of a community of practice deeply enough to take some responsibility for it and contribute to its pursuit and to its on-going negotiation by the community;

3. Negotiability of the repertoire – the ability to make use of the participation (personal or vicarious) in the history of a practice to recognize it in the elements of its repertoire. Then it requires the ability – both the capability and the legitimacy – to make this history newly meaningful. (p. 137)

Moreover, practice is the criteria that a community uses to determine what it means to be a competent participant, and a community of practice "acts as a locally negotiated regime of competence" (Wenger, 1998, p. 137). Wenger (1998) further explained that, for learning in practice to occur, experience and competence cannot be mutually exclusive; a two-way interaction of the two is critical. At times, the experience of the individual must align itself with competence as defined and established by the community. Particularly for newcomers to a community of practice, it is important that they be able to transform their experience so that it aligns with the existing regime. On the other hand, sometimes experience can drive competence and new members of a community may try to assert membership by attempting to change the regime so that it accepts and includes their experience, inviting others in the community to participate in their experience and adding new components to the repertoire of their practice.

Learning as experience in education. Particular situations and challenges are better understood by a pre-service teacher when encountered in the classroom setting than when encountered in the university classroom (Cochran-Smith, 1991; Cochran-Smith & Lytle, 1993; Darling-Hammond, Hammerness, Grossman, Rust, & Shulman, 2005; Feiman-Nemser & Buchmann, 1983; McDiarmid & Clevenger-Bright, 2008; Schon, 1995). For years, teacher education candidates have found themselves caught between university expectations and the realities of the public education classroom (Feiman-Nemser & Buchmann, 1983). According to McDiarmid and Clevenger-Bright (2008),

this understanding of learning has implications for teacher preparation and for professional development, pointing to the notion of practice being socially mediated and suggesting that "changing the social contexts in which teachers learn and develop may be necessary for real changes in their understanding of their role, the purposes of schooling, and core educational concepts" (p. 145).

Schon (1995) suggested that there are some professions (teaching being a prime example) in which the information needed to make effective professional decisions emerges in the context of practice. For example, how students understand or misunderstand information being taught, how different students prefer to learn, and how different instructional practices work with different individuals or groups of students all emerges from the actual work of being in the classroom and teaching and cannot be imparted ahead of time in the abstract.

Bransford and Darling-Hammond (2005) concurred with Schon (1995) contending that:

> Emerging evidence suggests that teachers benefit from participating in the culture of teaching – by working with the materials and tools of teaching practice; examining teaching plans and student learning while immersed in theory about learning, development, and subject matter. They also benefit from participating in practice as they observe teaching, work closely with experienced teachers, and work with students to use what they are learning. And this learning is strengthened when it is embedded within a broad community of practitioners. . . (p. 405-406)

Research has shown that communities of practice and inquiry play a significant role in the learning of pre-service teachers (Cochran-Smith, 1991; Cochran-Smith & Lytle, 1993). In a study conducted at the University of Pennsylvania, student teachers were invited to join a group of practicing teachers who took on the role of helping the pre-service teachers experience framing questions and participating in inquiry in a

community of practice rather than acting as experts to be imitated. Results of the study indicated that the pre-service teachers learned dispositions and strategies that they used when they entered the profession as certified educators (Cochran-Smith & Lytle, 1993).

Learning as Doing: Legitimate Peripheral Participation

Lave and Wenger's (1991) theory evolved from prior research that examined the acquisition of knowledge and skills in the workplace environment, and illustrated their theory by accounting observations of various apprenticeships (e.g., midwives, tailors, quartermasters, meat-cutters). Within the framework of situated learning, Lave and Wenger (1991) developed the concept of legitimate peripheral participation, describing the learner's journey from being an apprentice on the periphery of a community of practice to participating fully in the community environment. This metaphor begins as the learner enters a community of practice with very little knowledge or experience in the area of the domain. As the learner is accepted into the community, he/she begins to work with a master, gradually learning vocabulary, knowledge, and skills of the practice, and eventually reaching the position of journeyman. The learner continues to study with the master until he/she had acquired enough knowledge and skill to contribute to the problem solving practices within the community, finally possessing the critical competencies necessary to reach the level of expert. As the learner further matures in the community of practice, he/she has the status and expertise to directly contribute to the policy and knowledge creation within the domain, becoming a master in the community and working with young journeymen to acclimate them into the community of practice. Finally, the expert leaves the community, entrusting it to those who have followed in the journey and have become experts in the domain. This example of the journey of

becoming an accepted and respected member of a learning community is a metaphor for how a learner interacts in a community of practice to become an expert in a field.

For members new to a community of practice, legitimate peripheral participation involves more than simply the learning process. It is "a reciprocal relation between persons and practice" (Lave & Wenger, 1991, p. 34). Consequently, the movement of the learner toward full participation in the community does not occur in a static context; instead, the practice itself is in motion (Lave & Wenger, 1991). As new members merge into the more integral aspects of a community of practice, they oftentimes find themselves in a dilemma:

> On one hand, they need to engage in the existing practice, which has been developed over time: to understand it, to participate in it, and to become full members of the community in which it exists. On the other hand, they have a stake in its development as they begin to establish their own identity in its future. (Lave & Wenger, 1991, p. 33)

In considering how claims to knowledge and innovations might be evaluated or validated within communities of practice, Edwards, Gilroy, & Hartley (2002) explained that the learner can be conceptualized as "both a user and producer of knowledge within a set of social practices" as they establish themselves as full members of the community (p. 109).

Legitimate peripheral participation in education. In communities of practice in education, novice teachers learn from the decisions of expert teachers, watching and interacting with the experts as they make decisions. As novices merge into becoming full participants in the educational community of practice, they observe the expert teachers evaluate student needs, reflect on their practice in light of student learning, assess curriculum, and implement plans in the classroom – gradually acquiring the knowledge

and skills that move them further toward the center of the community, learning to think and act like a teacher (Hammerness et al., 2005).

As novice teachers become a more integral part of the community, they work alongside expert teachers to contribute to the community as a whole. Cochran-Smith and Lytle (1999) explained,

> Working together in communities, both new and more experienced teachers pose problems, identify discrepancies between theories and practices, challenge common routines, draw on the work of others for generative frameworks, and attempt to make visible much of that which is taken for granted about teaching and learning. (p. 293)

Berliner (1994) proposed that teachers go through stages as they develop expertise in communities of practice. Similar to the stages of development described by Lave and Wenger (1991), Berliner (1994) included the following stages to describe the trajectory to becoming an expert teacher: novice (Stage-1), advanced beginner (Stage-2), competent (Stage-3), proficient (Stage-4), and ultimately, expert (Stage-5). In the beginning, those new to the profession learn the basic elements of the tasks to be performed. Over time, they move into the competent stage at which time they accrue knowledge about learning, teaching, and students that they use to make conscious decisions about actions they will take, reflecting accurately about what is and is not effective with students based on prior experience. Ultimately, they reach the level of expert, the stage at which they are able to sense the appropriate responses and actions to be taken in any given situation.

Learning as Belonging: Communities of Practice

A community of practice involves much more than the knowledge or skills associated with learning a particular task. Communities develop around the interests and

ideas that are of value to their members (Wenger, 1998) and involve a set of relationships that are developed over time (Lave & Wenger, 1991). According to Lave and Wenger (1991), communities of practice are everywhere and people are usually involved in numerous communities of practice at one time (e.g., school, work, home, civic organizations, churches). In some of these groups an individual might be a core member, having established a reputation for knowledge, expertise, and leadership. In other groups, the same individual may participate in a more marginal way. Human beings are constantly in pursuit of all kinds of enterprises, and as those enterprises are defined, people interact with one another and with the world. As relationships are established, learning takes place. Over time, these relationships result in collective learning, reflecting both the pursuit of enterprises and the associated social relations. Thus, practices become the property of a kind of community created by the sustained quest for shared enterprise. This, Wenger (1998) explains, is the reason that such environments are referred to as communities of practice.

Learning involves active participation, and that participation "refers not just to local events of engagement in certain activities with certain people, but to a more encompassing process of being active participants in the practices of social communities and constructing identities in relation to these communities" (Wenger, 1998, p. 4).

Wenger (1998) explains that a community of practice defines itself along three dimensions:

1. What it is about – its joint enterprise as understood and continually renegotiated by its members.
2. How it functions – mutual engagement that binds members together into a social entity.

3. What capability it has to produce – the shared repertoire of communal resources (routines, sensibilities, artifacts, vocabulary, styles, etc.) that members have developed over time. (pp. 73-84)

Communities of practice being organized around a particular area of knowledge or discipline provides members with a sense of joint enterprise and identity.

Lave and Wenger (1991) claimed that, due to the fact that learning involves the whole person, relationships that exist and learning that takes place in communities of practice help to define the individual members of the community.

Communities of practice in education. Brown, Collins, and Duguid (1989) present the idea of cognitive apprenticeship, stating, "Cognitive apprenticeship supports learning in a domain by enabling students to acquire, develop, and use cognitive tools in authentic domain activity. Learning, both outside and inside school, advances through collaborative social interaction and the social construction of knowledge" (p. 32).

Many of the tasks in which teachers engage involve planning together to create learning opportunities through selecting, using, and assessing curricular materials, instructional and assessment methods, and classroom management plans. Through this planning, they undergo change and contribute to a shared understanding of practice. Based on this premise, Brown and Duguid (1991) describe the purpose of transforming schools into learning communities:

> Workplace learning is best understood, then, in terms of the communities being formed or joined and personal identities being changed. The central issue in learning is *becoming* a practitioner not learning *about* practice. This approach draws attention away from abstract knowledge and cranial processes and situates it in the practices and communities in which knowledge takes on significance. (p. 48)

Research supports the idea that professional communities of practice in which teachers share perceptions about the nature and characteristics of quality teaching and collaborate to enact them provide ideal environments for learning to teach (Darling-Hammond et al., 2005). The positive effects of learning to teach in a community of practice have been noted in studies by numerous researchers (Cohen & Hill, 2000; Evertson, Emmer, Sanford, & Clements, 1983). For example, recent studies of teacher education candidates who have participated in *lesson study* (involving groups of teachers engaging in collaborative observation, analysis, and assessment of lessons) show the promising results of establishing professional learning cultures where teachers engage in learning together (Fernandez, 2002; Lewis & Tsuchida, 1998; Stigler & Hiebert, 2009).

In one study of teacher learning, Desimone, Porter, Garet, Yoon, and Birman (2002) found that several components of teachers' learning experiences had cumulative effects on instructional practices. Results of the study showed that a focus on certain practices and the implementation of active learning strategies in teacher training increased the use of the practices in the classroom. In addition, effects were even more significant when teachers who worked together on a daily basis participated as a group in the learning experiences.

Learning as Becoming: Identity

Lave and Wenger (1991) proposed that when people work together in a community of practice learning and the construction of identities are inseparable:

> As an aspect of social practice, learning involves the whole person and implies becoming able to be involved in new activities, to perform new tasks, and to master new understanding. [Member of communities of practice] are part of broader systems of relations in which they have meaning. . . . Learning thus implies becoming a different person with respect to the possibilities enabled by

> these systems of relations. To ignore this aspect of learning is to overlook the fact that learning involves the construction of new identities. (p. 53)

Lave and Wenger (1991) argued that because the whole person is involved in the learning process, the relationships that are established and the new knowledge that is acquired as the person navigates through the community help to define the person's identity. Thus, learning is not just a change in practice, it is also a change in identity (Lupu, 2010), and shaping individuals' identities becomes the *fundamental project* in a community of practice (Lave & Wenger, 1991).

Wenger (1998) purported that participation in a community of practice can lead to inclusion and full membership or to exclusion and the sense that one does not belong. He referred to the movement through communities of practice as *trajectories*, or conduits that lead members through practices, identities, and a set of relationships that are continuously changing. Navigating the trajectories, members construct personal, professional, and participation identities. Wenger (1998) further developed this concept, proposing that learners negotiate meaning and construct personal identities within both formal and informal communities of practice. This involves assimilating social practices and relationships, assessing what is and is not significant, and interpreting how the new learning might best be applied in new contexts. Wenger (1998) noted that, "negotiability allows us to make meanings applicable to new circumstances, to enlist the collaboration of others, to make sense of events, or to assert our membership" (p. 197). Participants in the community who are able to negotiate personally significant meanings will most likely attain full membership, while participants who do not have the ability or understanding of how to contribute to the mutual knowledge of the community will likely be relegated.

In addition, Wenger (1998) argued that a major task of communities of practice is to strengthen the identities of the members in two significant ways, (a) by integrating their prior learning and existing knowledge into the practices of the community, and (b) by "opening trajectories of participation that place engagement in its practice in the context of a valued future" (p. 215).

Developing identity in education. If, as Wenger (1998) argues, novice teachers are to construct new professional identities, then engagement in practices and the development of supportive relationships in the community are essential to the novice teacher's professional growth and learning. Although relatively few studies exist that specifically focus on the construction of pre-service teacher's identity in a community of practice, certain themes emerge from the literature that address the notion of what it really means to become a teacher.

Research points to the idea that teaching is not simply a cognitive or technical procedure; instead, teaching is "a complex, personal, social, often elusive, set of embedded processes and practices that concern the whole person" (Olsen, 2008, p. 5) (Britzman, 2003; Cochran-Smith, 2003; Hamachek, 1999; Oakes & Lipton, 2006). Hammerness et al. (2005) provided an overview of the dimensions of development that teachers experience as they hone their practice. In addition to developing knowledge and skills, teachers develop *as professionals* (Feiman-Nemser, 2001), as scholars, and practitioners within a subject matter context (Grossman & Stadolsky, 1995; Shulman, 1986); as change agents (Ayers, 1995; Darling-Hammond, French, & Garcia-Lopez, 2002); as nurturers and child advocates (Cummins, 1986); and as moral agents (Fullan, 1993). On the path to developing an understanding of what teachers do, the

characteristics of good teaching, and goals for what they want to accomplish as a teacher, teachers in practice form an identity that will direct their work (Hammerness, 2006).

Studies of the process of becoming a teacher indicate that formation of teacher identity occurs as experiences are interpreted and re-interpreted by the teacher (Beijaard, Verloop, & Vemunt, 2000; Day, Fernandez, Hauge, & Moller, 2000; Flores & Day, 2006). As has been previously mentioned, this process of acquiring identity does not take place in isolation, nor is it a totally personal process. The acquisition of identity in the teaching profession takes place within the socially and culturally constructed context of the world of education (McKoen & Harrison, 2010). Coldron and Smith (1999) described the professional identity of the individual teacher as being determined to an extent biographically, through personal choices, and determined in part by social interaction and acceptance. Moreover, this includes being viewed as a teacher by both self and others, as well as attaining and subsequently redefining a socially legitimate identity. Novice teachers, in the process of establishing identities in the profession, make decisions and invest time and energy to achieve socialization into the school culture (McKoen & Harrison, 2010).

Summary

The examination of pre-service teachers' instructional practices with diverse students is complex due to the array of factors that may contribute to the propensity of pre-service teachers to effectively address the educational needs of each and every child in the classroom. Student populations are becoming exponentially diverse, necessitating an adjustment in instructional practice that calls for teachers to possess knowledge, skills, and dispositions to create culturally responsive learning environments. No studies have

been conducted that examine the multiplicity of factors that contribute to the development of pre-service teachers in light of their instructional practices with diverse students. Cochran-Smith and Zeichner (2005) highlight the need for such studies, challenging teacher education researchers to examine the myriad of factors in teacher preparation programs that contribute to the growth of teacher education candidates -- particularly studies that explore the "knowledge", "beliefs", and "professional practices" of pre-service teachers in classroom and school settings (p. 32). It is the intent of this research to explore the array of factors that influence pre-service teachers' instructional practices with students, providing results that might be generalized to other studies and, in turn, contributing to research in the field of teacher education.

CHAPTER THREE

Method

The changing societal demographics, which are reflected in new teacher education standards, yield clear evidence that future educators need to address diversity in the classroom (Gay, 2003; Gutierrez & Rogoff, 2003; Hodgkinson, 2001; Lee, 1995). This study therefore examined the complex array of variables that may affect the pre-service teachers' knowledge, skills, and dispositions to deal effectively with diversity in the educational setting. Specifically, what factors during the culminating field experience (internship) influence pre-service teachers' instructional practices with diverse students? This question guided this study as the researcher investigated internal and external factors that may encourage the interns' implementation of best practice with regard to addressing the needs of diverse students in the classroom.

Research Design

A qualitative research design was selected because the factors within the study's research question are complex in nature and require an approach that provides a richer, more descriptive analysis of the intern's learning experience. Zeichner and Conklin (2005) suggested, "close examination of teacher education programs will help to identify critical program features that make a significant difference in producing desirable outcomes" (p. 700). These authors referred to studies that have attempted to identify particular structural models of teacher education programs that are most effective by stating that such studies are narrow in scope and do not closely examine the complexities

that must be considered. For example, Grossman (2005) reported, in her overview of research on pedagogical approaches in teacher education, that studies conducted in the 1990s looked almost exclusively at cognitive outcomes, such as reasoning and knowledge, and "avoided the issue of how the pedagogies of teacher education might influence prospective teachers' classroom practice" (p. 450).

In exploring factors that influence the pre-service teachers' instructional practices with diverse students, the researcher examined four main themes (Table 1). First, the knowledge, skills, and dispositions that have been identified by the teacher education faculty as essential for best practice in the field of education were considered. These elements from the benchmarks (Appendix A) and framework (Appendix B) for instruction in the School of Education were based on state and national standards. Second, the researcher gathered information about experiences at the university including coursework, seminars, social support, supervision, and collaboration. Third, the campus environment was explored with a focus on school-based faculty supervision, characteristics of mentor teachers, campus student demographics, social support, curriculum, and the availability of materials and resources. Finally, the individual's intra and interpersonal experiences were examined including social support, cognitive ability, and attitudes and beliefs.

The outcome, instructional practices with diverse students, was measured using The Classroom Instructional Practices Scale (CIPS) (Johnsen et al., 2002) to determine interns' implementation of instructional practices that addressed individual differences in four areas: (a) the knowledge and skills that students need and want to learn (e.g., content), (b) the students' preferences in learning (e.g., preference), (c) how quickly they

learn (e.g., rate), and (d) the types of environments that enhance their experience (e.g., environment) (Table 1).

Table 1

Classroom Instructional Practices Scale

		Content
____	C1	book or curriculum guide organizes content
____	C2	includes creative and critical thinking skills
____	C3	integration of multiple disciplines; single discipline-based topics; not authentic methods
____	C4	interdisciplinary; broad-based themes; authentic methods
____	C5	specified attributes of generalizations, concepts
____	C6	student performance determines sequence
____	C7	student interest guides content
		Rate
____	R1	have same/varied amount of time for tasks; early finishers do no tasks
____	R2	have same/varied amount of time for tasks; early finishers do an unrelated task
____	R3	have same/varied time for completion of task; early finishers do a related task
		Rate with Assessment
____	R4	post-assessment at set times with no recycling
____	R5	post-assessment at varied times with no recycling
____	R6	post-assessment at set times with recycling and/or in-depth study/enrichment/acceleration
____	R7	post-assessment at varied times with recycling and/or in-depth study/enrichment/acceleration
____	R8	pre/ post-assessment at set times with recycling and/or in-depth study/enrichment/acceleration
____	R9	pre/post-assessment at varied times with recycling and/or in-depth study/enrichment/acceleration

(continued)

		Environment
____	E1	arrangement with limited student interaction; no interest or learning centers present
____	E2	arrangement with limited student interaction; interest or learning centers present
____	E3	arrangement with student interaction
____	E4	arrangement with student interaction; interest centers present
____	E5	arrangement with student interaction; learning centers present
____	E6	use of school and/or community as learning centers
		Preference
____	P1	no variation in tasks and/or response dimensions; not correlated
____	P2	variation in tasks and/or response dimensions; not correlated
____	P3	no variation in tasks and/or response dimensions; correlated
____	P4	variation in tasks and/or response dimensions; correlated
____	P5	student choice of varied tasks and/or response dimensions

Following the observation of approximately 200 teachers in a study examining instructional practices, the researchers developed descriptors and a hierarchy of steps for the four areas assessed (content, rate, environment, and preference) (Johnsen et al., 2002). An interrater reliability of .92 was established through training sessions that prepared observers to record performance data using the CIPS (Johnsen & Ryser, 1996).

Explaining the structure of the CIPS, Johnsen et al. (2002) wrote, “The description of each area [of the Classroom Instructional Practices Scale] is hierarchical, beginning with the least adaptive classroom practice for individual differences and

progressing to the most adaptive classroom practice" (p. 48). The four areas assessed by the instrument include:

> Content – describes the way the teacher organizes and sequences skills, concepts, strategies, and generalizations within and across disciplines. For example, the lowest rating (C1, describes a content that is organized around the book's scope and sequence, while C7 describes content organized around individual student interest.
> Rate – describes how the teacher uses assessment to vary the amount of time needed by students in learning new content. For example, a teacher who receives an R1 rating provides the same amount of time for every student in the classroom, while a teacher receiving an R9 uses a pre-assessment to identify student who may need or may choose in-depth study, enrichment, or acceleration.
> Environment – describes the way the teacher arranges the physical environment to facilitate interaction and learning among students. For example, the lowest rating (E1) describes a classroom in which the teacher limits interaction between students and with learning materials. Whereas an E6 rating describes a classroom where students learn from one another and use the community and the school as learning centers.
> Preference – describes how the teacher aligns activities with the content and provides for individual student choice. For example, at the lowest rating (P1), the student has no choice of learning materials and uses materials that have a similar format such as paper-pencil; at P5, the student may select of create learning activities. At the highest level, these activities also vary the task (e.g., visual, auditory, kinesthetic) and the response (e.g., written, oral, physical). (Johnsen et al., 2002, pp. 48-50).

Using these areas and performance descriptors, the instructional practices of study participants were examined to determine the extent to which each of them differentiated instruction to meet the needs of diverse students in their classrooms during their internships/culminating field experiences.

Figure 1 provides an illustration of the framework from which the study was derived, showing factors that were considered along with the outcome that would be measured. In order to closely examine factors that influence the pre-service teachers' instructional practices with diverse students, this study used a descriptive, non-

experimental cross case-study approach. This approach was necessary due to the complex nature of the topic being studied.

Specific Research Design

According to Yin (1994),

> Case study research excels at bringing us to an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. (p. 23)

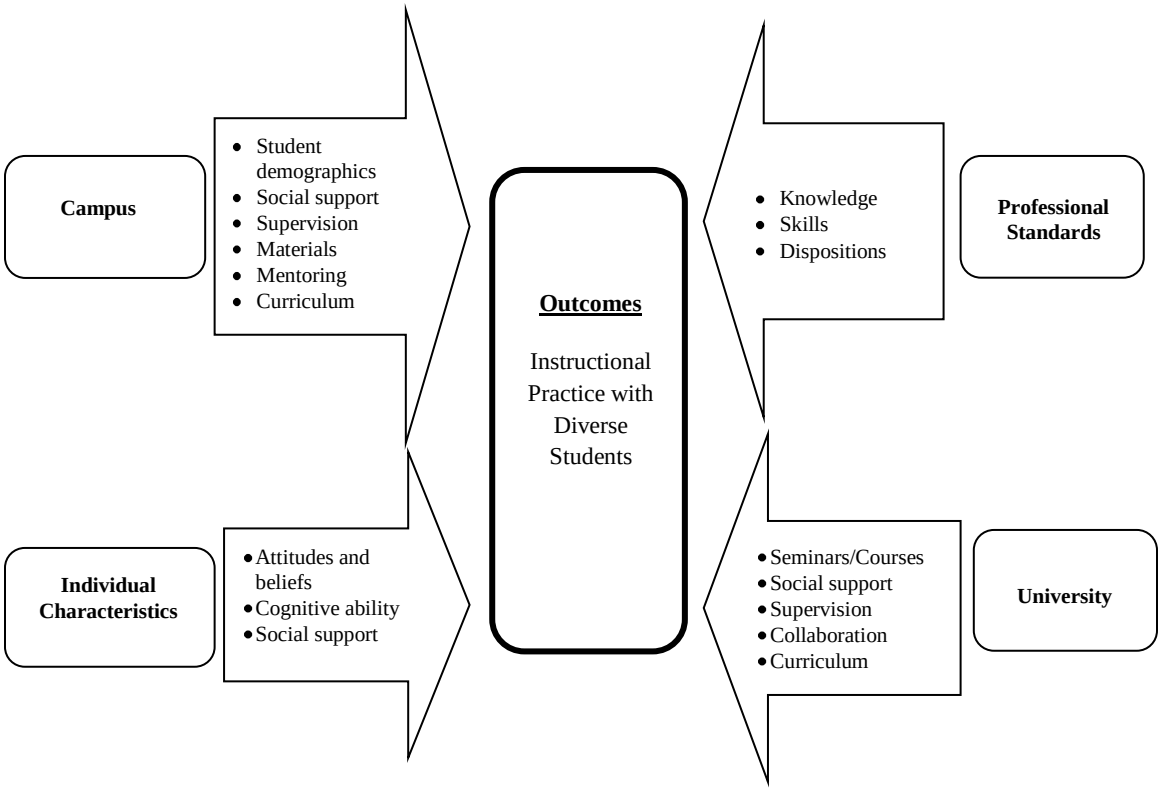

Figure 1. Factors influencing instructional practices with diverse students

Researchers have used the case study research method for many years across a variety of disciplines. Social scientists, in particular, have used the qualitative research method

extensively "to study contemporary real-life situations and provide the basis for the application of ideas and extension of methods" (Soy, 1997, para. 1). Yin (1994) defined the case study research method as an empirical inquiry that "investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (p. 89).

Miles and Huberman (1994) explained that the boundaries of the case study are determined by the "context in which one is studying events, processes, and outcomes" (p. 27). Merriam (1998) highlighted the strengths of case study research in education by stating,

> A researcher selects a case study design because of the nature of the research problem and the questions being asked. . . . [The case study] offers insights and illuminates meanings that expand its readers' experiences. These insights can be construed as tentative hypotheses that help structure future research; hence, case study plays an important role in advancing a field's knowledge base. Because of its strengths, case study is a particularly appealing design for applied fields of study such as education. Educational processes, problems, and programs can be examined to bring about understanding that in turn can affect and perhaps even improve practice. Case study has proven particularly useful for studying educational innovations, for evaluating programs and for informing policy. (p. 41)

Weaknesses in the case study approach include the bias and credibility of the researcher, lack of clearly defined understanding among multiple field workers, and reluctance of participants to provide true, accurate, and retrospective responses (Denzin & Lincoln, 2011; Miles & Huberman, 1994; Mykut & Morehouse, 1994; Patton, 2002). Merriam (1998) suggested that dilemmas involving ethics are likely to emerge at two distinct points in a case study: during data collection and during information dissemination. At these two points in the study, the researcher should pay close attention to the variables that might compromise the integrity of the study.

Other weakness in the case study method may involve the researcher becoming too vested in the issues, data confidentiality concerns, interest groups competing for data access and control, issues concerning publication (for example, the need to protect the identity of the participants), and problems resulting in the inability of those discerning the data to distinguish between the data and the interpretation of the researcher (Walker, 1980).

Strategies may be used to maximize the strengths and minimize the limitations of the case study approach. Internal validity is one way to achieve this goal and may be addressed in several ways, including triangulation of the data, member checks, peer examination, participatory modes of research, and researcher biases. Reliability is another important aspect of data collection that must be considered. Measures taken to ensure reliability may include the background and position of the investigator, triangulation of the data, and the establishment of an audit trail. External validity may be addressed through rich, thick descriptions of observations, impressions, and interactions as well as the establishment of the typicality of the cases being studied (Merriam, 1998, 2009).

Using cross-case analysis is another way to maximize the effects and limit the liabilities in the case study approach to research (Goetz & LeCompte, 1984; Lincoln & Guba, 1986; Merriam, 1991, 1998, 2009). Such analyses can lead to the conceptualization of the data from all cases and provide an integrated framework for closely examining results (Merriam, 1998).

In this study, the researcher used triangulation of data and cross-case analysis to examine factors during the intern experience that influence candidates' instructional

practices with diverse students. In an effort to closely examine variables, the researcher conducted interviews and reviewed archival data, including efolio entries, observation notes, candidate reflections, and conference summaries. Each case was first treated as a comprehensive case in and of itself. Data were gathered so the researcher could learn as much as possible about the contextual variables that might have had an effect on the outcomes. Then, the researcher began a cross-case analysis, looking for abstractions across cases, "to build a general explanation that fits each of the individual cases, even though the cases will vary in their details" (Yin, 1994, p. 112).

Role of the Researcher

In qualitative research, the researcher is the primary instrument for data collection and analysis. Data were mediated through this researcher, rather than through records, surveys, technologies, or machinery. Qualitative researchers are interested in how people make sense of their lives, experiences, relationships, and their structures of the world (Creswell, 1994, 2007; Merriam, 1991, 1998, 2009; Siegle, 2003).

In this particular study, the researcher brought to this experience a 29-year background in education as coordinator, education specialist at an education service center, senior editor for an educational publication, elementary school principal, education consultant, primary investigator of several educational grants, and director of field experiences and certification for teacher education candidates at a university.

Over the past 24 years, the majority of the investigator's research involved areas of exceptionality in the field of education. This background, particularly extensive work in gifted education, may have been a bias that must be considered in the study. In addition, working with pre-service teachers and novice teachers had been a focus of

experience and study. Having been the Director of Professional Practice in the School of Education for eight years, the researcher had various experiences with the program that may have influenced feelings with regard to program strengths and weaknesses.

The researcher also served as the director of the Texas Beginning Educator Support System (TxBESS) grant in one of the 20 regions in the state of Texas for two years and worked with a team of educators from across the state to update the program in content and delivery. The researcher had conducted the TxBESS training numerous times and was a trainer of trainers. Experience in the area of mentoring and familiarity with TxBESS documents may have been valuable in the study. However, the researcher may have had a bias with regard to the effectiveness of the TxBESS process and may have focused on some information more than others. To reduce these biases, the researcher triangulated data, used member checks, observations, peer examination, and audit trails.

Context

For teacher education candidates seeking an EC-4 certificate in the teacher education program at the southwestern university where this study took place, two program options were available: the EC-4 generalist program (EC-4) and the EC-4 generalist, gifted and talented education dual-certificate program (EC-4/GT) (Table 1).

EC-4 Program

The teacher education program at this university was a four-year program. During the first two years of the program, all EC-4 candidates took a class during at least one semester in which they received university faculty instruction and spent three to six

hours per week at public school campuses working with students one-on-one or in a small group setting. During the third year or junior year of the program, candidates were assigned to an elementary classroom at a Professional Development School and worked with students in kindergarten, first, second, third, or fourth grade. The candidates' assigned classroom teacher was referred to as a Clinical Instructor (CI). Each week, Monday through Thursday, the candidates received instruction from university and CI faculty and spent approximately one hour a day working with small groups of students in their assigned classrooms. In addition to the on-campus experience, candidates attended education classes. During one semester, the coursework focused on literacy and was offered in a six-hour course; during the other semester, the coursework focused on mathematics and was offered in a three-hour course. During the senior or intern year, the EC-4 pre-service teachers worked with a mentor teacher at an assigned campus for 15 weeks each semester. They began their semester at least one day before the students reported for the school year and concluded 15 weeks into the semester. Both university faculty and the mentor teacher supervised the interns. In addition, each week the interns attended a three-hour seminar conducted by a university faculty member.

EC-4/GT Dual-certificate Program

Candidates seeking dual-certification in EC-4 and gifted education took three classes in addition to the above mentioned coursework and field experiences. During the sophomore year, they took a course that focused on working one-on-one with a gifted elementary student, conducting in-depth research on a topic chosen by the student. Instructors who were trained in gifted education provided content and pedagogical instruction as part of the course. During the intern year, dual-certificate candidates spent

one semester in a regular education classroom in which identified gifted students were clustered. During the other semester, they worked in a GT pull-out classroom with a mentor teacher who was trained to work with gifted children. In addition, the interns in the dual-certificate program took two courses in the evenings during their senior year, one each semester. One of these courses focused on exceptionalities. The other highlighted differentiation of learning experiences based on characteristics of individual students. Table 2 outlines coursework included in the degree plans for EC-4 generalist pre-service teachers and EC-4/GT dual certificate pre-service teachers.

Table 2

Comparison of Program Options for EC-4 Candidates

Teacher Education Courses	Credit hours	Year in program	Field exp. hours	EC-4	EC-4/ GT
Intro to Teaching 1	3	Fr.	2/week	x	x
Teaching EC-4	3	Soph.	0/week	x	x
Intro to Gifted Child	3	Soph.	1½/week		x
Teaching Associate EC-4, Part 1	6	Jr.	4/week	x	x
Teaching Associate EC-4, Part 2	6	Jr.	4/week	x	x
Math in the Early Grades	3	Jr.	0/week	x	x
Literacy Instruction in the Early Grades	3	Jr.	0/week	x	x
Educational Thought/Social Issues	3	Jr.	0/week	x	x
Early Literacy	3	Jr.	0/week	x	x
Teaching Geography	3	Jr.	0/week	x	x
*Internship, Part 1	12	Sr.	520/semester	x	x

(continued)

Teacher Education Courses	Credit hours	Year in program	Field exp. hours	EC-4	EC-4/ GT
*Internship, Part 2	12	Sr.	520/semester	x	x
Differentiation	3	Sr.	0/week		x
Exceptionalities	3	Sr.	0/week		x

Note: *EC-4/GT dual certificate candidates were assigned to a GT pull-out classroom for one semester and to regular education classrooms the other semester

Sites

Mentor teachers working with interns were employed at four school districts that were in close proximity to the university. One of the districts was an urban district; the other three districts were suburban districts that were contiguous with the larger urban district. Table 3 provides information about the student demographics at each campus where participants were assigned for their intern/culminating field experience.

Table 3

Campus Demographics (2007-2008 Academic Year)

District	Campus	# of Students	% African American	% Hispanic	% White	% Other	% At Risk	% LEP	% GT	% Low SES
D-1	C-1	435	30.8	23.2	44.1	1.8	58.4	7.6	4.6	72.0
D-2	C-2	523	4.6	14.9	75.7	4.8	15.3	7.5	0.6	13.5
D-3	C-3	317	5.7	19.9	73.8	0.6	27.4	1.6	0.0	29.3
D-2	C-4	639	15.5	21	54.6	8.9	21.8	9.4	0.5	46.3
D-1	C-5	590	27.8	27.1	44.1	1.0	26.8	8.3	2.0	74.4
D-4	C-6	457	45.3	34.6	19.0	1.2	71.6	8.3	3.7	83.2
D-4	C-7	428	22.7	34.3	42.8	0.2	63.1	6.1	8.9	59.1

Participants

Participants included candidates who were interns (or senior level students) in the EC-4 generalist and EC-4/GT dual-certificate programs. Mentor teachers and campus administrators who worked with the candidates were interviewed as part of the data collection process.

Interns

Interns selected by the researcher for the study included eight female 2008 graduates of the teacher education program. Four participants were chosen from the EC-4 general education program, and four participants were chosen from the EC-4/GT dual-certificate gifted and talented program. All participants had successfully completed the teacher education program, had passed all required state assessments, and had been certified to teach in the State of Texas upon completion of the program.

Purposeful, strategic sampling was used to identify cases that yielded the most descriptive and complete information. For the 54 EC-4 interns, folders containing archival data recorded during their intern year were examined initially to determine completeness (e.g., they contained field observation notes, end-of-semester conference feedback, TxBESS documents). Next, complete folders were examined to identify documents and observations that contained the most description, including specific examples and clear feedback (e.g., specific examples of classroom instruction, feedback that provides observable behavior, direction for future instructional practices).

From the complete folders of the general education EC-4 interns, four folders were purposefully selected. Using the same procedure as the EC-4 program, four EC-4/GT dual-certificate interns were selected for the study.

Once the sample was collected, the eight former teacher education candidates were contacted to ensure that they were willing to participate in the study. In addition, the mentor teachers of the eight participants were contacted to ensure that they were willing to be interviewed as part of the study. In one case, the researcher was unable to contact the potential EC-4 certificate study participant so another folder was purposefully selected for the study.

Mentor Teachers

Mentor teachers working with interns had to have at least three years of teaching experience and must have been assigned to the campus and grade level that they were teaching for at least one year. All mentor teachers were required to participate in Texas Beginning Educator Support System (TxBESS) training. Mentor teachers were selected based on campus administrator recommendation, university faculty recommendation, and candidate feedback from previous years. Each mentor teacher was interviewed regarding factors that might influence instructional practices with diverse students. Table 4 provides demographic information about mentor teachers who supervised study participants during their internship or culminating field experience.

Table 4

Mentor Teacher Demographics

Mentor teacher	Campus	Ethnicity	Age range	Years in education	Years at campus	Highest degree
M-1	C-1	White	50-60	31	19	Masters
M-2	C-1	White	30-40	17	14	Bachelors

(continued)

Mentor teacher	Campus	Ethnicity	Age range	Years in education	Years at campus	Highest degree
M-3	C-5	White	50-60	25	17	Bachelors
M-4	C-2	White	30-40	25	3	Bachelors
M-5	C-4	White	40-50	21	13	Masters
M-6	C-3	White	50-60	26	20	Bachelors
M-7	C-6	White	50-60	32	9	Bachelors
M-8	C-7	White	40-50	6	2	Bachelors
M-9	C-2	White	50-60	23	16	Bachelors
M-10	C-2	White	20-30	5	5	Bachelors
M-11	C-7	White	50-60	7	3	Bachelors

Campus Principals

Principals, or campus instructional leaders, can influence the campus climate and student learning by developing a clear mission that provides an instructional focus for teachers in the school. Principals play an important role in supporting teachers on a campus, leading instruction, interacting with faculty, and determining materials and resources that may be purchased (Geske, 1981; Hallinger, 1992). As part of this study, campus principals were interviewed to determine what role, if any, they played in supporting interns in providing differentiated instruction for diverse populations. Table 5 provides demographic information about principals who were assigned to each campus where pre-service teachers participated in intern or culminating field experience.

Table 5

Principal Demographics

Principal	Site	Ethnicity	Gender	Years in Publ. Educ.	Years in Administration	Highest Degree
P-1	C-1	African American	Male	28	3	Masters
P-2	C-2	White	Female	15	7	Masters
P-3	C-3	White	Female	20	6	Masters
P-4	C-4	White	Female	23	11	Masters
P-5	C-5	White	Female	18	8	Masters
P-6	C-6	White	Female	9	3	Masters
P-7	C-7	White	Male	14	8	Doctorate

Data Collection Methods

In planning this study with the intent to understand the complexity of factors that influence teaching practices of pre-service teachers, the researcher closely examined archival data that included: (a) observation notes (Appendix C), (b) reflections of candidates, (c) TxBESS documents (Appendix D), (d) professional development and communication forms (Appendix E), (e) interaction data forms (Appendix F), (f) engagement data forms (Appendix G), and (g) efolios created by candidates during their intern experience (Table 6). Standards including knowledge, skills, and dispositions; attitudes, beliefs, and experiences of the individual intern; characteristics of the campus to which the intern was assigned for the internship; and, coursework, supervision, and collaborative experiences at the university were studied to identify variables that may have affected the interns' instructional practices with diverse students. Table 6 lists (a) the factors that were considered in the study as those that might influence the

instructional practices of interns with diverse students, (b) the instruments that were used to collect the data for each factor, and (c) the sources from which the data were collected.

Table 6

Methods for Gathering Information on Factors Influencing Teaching Practices with Diverse Students

Factors	Instrument	Data Source
Standards		
Knowledge	efolios, observations, reflections	participant, mentor, supervisor
Skills	efolios, observations, reflections	participant, mentor, supervisor
Dispositions	efolios, observations, TxBESS documents, reflections, professional development form	participant, mentor, supervisor
Individual		
Social support	Interview, reflections	participant, mentor, peers, supervisor
Attitudes/Beliefs	Interviews, reflections, efolios	participant, mentor, supervisor
Cognitive abilities	SAT scores, ACT scores, university grade point averages	university records
University		
Seminars/Courses	syllabi, interviews	participant, mentor, supervisor
Social Support	frequency of contact, reflections	participant, mentor, supervisor
Supervision	efolios, observations, interviews, reflections	participant, mentor, supervisor
Collaboration	interviews, reflections	participant, mentor, supervisor
Curriculum	efolios, interviews, observations, TxBESS documents	participant, mentor, supervisor
Campus		
Student demographics	demographic form	district and TEA records
Social support	interviews	participant, mentor, supervisor
Supervision	efolios, interviews, observations, TxBESS documents, reflections	participant, mentor, supervisor
Materials/ Resources	efolios, interviews, observations, TxBESS documents, reflections	participant, mentor, supervisor

(continued)

Factors	Instrument	Data Source
Mentor characteristics	efolios, interviews, observations, reflections	participant, mentor, supervisor
Curriculum	efolios, interviews, observations, TxBESS documents, reflections	participant, mentor, supervisor
Instructional Practice	efolios, interviews, observations, TxBESS documents	participant, mentor, supervisor

To examine the factors related to standards, campus environment, university experiences and individual candidates, archival information collected while candidates were enrolled in coursework in the teacher education program were used as a source of data in this study. Archival data included: (a) observation forms completed by mentor teachers and intern supervisors, (b) reflections written by interns, (c) efolio entries, and (d) performance assessments. In addition to the archival data, interviews with mentor teachers to whom the interns were assigned and campus principals were conducted to gather demographics and information about instructional practices with diverse learners. By including data from a variety of sources, the investigator was able to consider various perspectives and plan paths of inquiry based on information retrieved throughout the study.

Archival Documents

Archival documents or artifacts, as described by LeCompte and Preissle (1993), are "symbolic materials such as writing and signs and nonsymbolic materials such as tools and furnishings" (p. 216). Merriam stated (1998),

> The presence of documents does not intrude upon or alter the setting in ways that the presence of the investigator often does. Nor are documents dependent upon the whims of human beings whose cooperation is essential for collecting good

> date through interviews and observations. Documents are, in fact, a ready-made source of data easily accessible to the imaginative and resourceful investigator. (p. 112)

Patton (2002) explained that archival documents provide the researcher with valuable information that cannot always be observed, "private interchanges to which the investigator would not otherwise be privy" (p. 293), and goals or decisions that the researcher would never know about without such documentation.

Archival documents also provide information that may help to identify important questions to pursue in researching the phenomenon being studied. Patton (2002) suggested that "documents prove valuable not only because of what can be learned directly from them but also as stimulus for paths of inquiry that can be pursued only through direct observation and interviewing" (p. 294). According to Merriam (1998),

> One of the greatest advantages in using documentary material is its stability. Unlike interviewing and observation, the presence of the investigator does not alter what is being studied. Documentary data are "objective" sources of data compared to other forms. Such data have been called "unobtrusive." . . . Documentary data are particularly good sources for qualitative case studies because they can ground an investigation in the context of the problem being investigated. (p. 126)

Lincoln and Guba (1986) stated that analysis of archival data "lends contextual richness and helps to ground an inquiry in the milieu of the writer. This grounding in real-world issues and day-to-day concerns is ultimately what the naturalistic inquiry is working toward" (p. 234).

Observations

Participants were observed in the context of a natural scene during the intern year. Observational data were used for the purpose of description—of settings, activities, people, and the meanings of what was observed from the perspective of the participants.

Observations lead to more in-depth understandings than interviews alone because they provide information about the context in which events occur and aids the researcher in seeing things that study participants themselves may not be aware of (Patton, 2002).

Formal observations of interns were conducted a minimum of two times during both the fall and spring semesters. During the fall semester, one observation was documented on the TxBESS Activity Profile (Appendix D) and one was documented on the Candidate Observation Form (Appendix C). During the spring semester, both observations were documented using the Professional Practice Evaluation Form (Appendix H).

Efolios

All EC-4 candidates were required to construct an efolio as part of the teacher education program. In the efolio, the candidates selected artifacts that addressed the 18 Teacher Education Benchmarks (Appendix A) and provided narrative reflections for each artifact. Artifacts included formal and informal observation documents, candidate reflections, pre- and post-assessment data, student engagement data, student interaction data, notes from supervisors, photographs, and video clips. Within the narrative reflections, candidates evaluated their experiences and provided information regarding how they had grown in their teaching or how they might address a situation differently in the future. In a study conducted by Richert (1990), the researcher determined that pre-service teachers who constructed efolios as part of their preparation to teach found that the experience helped them "remember teaching events more accurately and that the process of constructing the portfolio provoked them to think more specifically about their teaching" (p. 523).

Reflections

According to Bransford, Derry, Berliner, Hammerness, and Beckett (2005), "Learning will be more effective if candidates in teacher education programs are encouraged to think about and reflect upon their own learning in their coursework and field experiences" (p. 85). Several aspects of the teacher education program in this study allowed for reflective practice by candidates. Candidates were encouraged to reflect on a regular basis as part of their coursework. Reflections written by candidates in efolios and following lessons that were observed and documented by supervisors were closely examined as part of this study.

Performance Assessments

Half-way through each semester, and as a culminating experience at the end of each semester, candidates participated in a conference with their mentor teacher and intern supervisor to assess their performance in the classroom. The Professional Practice Evaluation Form (Appendix H) was used to guide the participants in their discussion during the conferences. Each benchmark was addressed and all in attendance provided perspective on how the candidate was performing in light of each benchmark descriptor. These documents were used in the study to identify comments and ratings that might provide information about the candidates' instructional practices with diverse students.

Interviews

Participants, mentor teachers, and principals were interviewed to determine factors during the intern experience that influence the candidates' instructional practices with diverse students. The researcher was looking for indicators showing that candidates

addressed differences among individuals based on race, ethnicity, socioeconomic status, gender, language, exceptionalities, religion, sexual orientation, and geographic region in which they lived.

Patton (2002) clearly described the purpose of the interview as finding out what is *in and on someone else's mind*:

> We interview people to find out from them those things we cannot directly observe. . . . We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organized the world and the meanings they attach to what goes on in the world. We have to ask people questions about those things. The purpose of interviewing, then, is to allow us to enter into the other person's perspective. (p.196)

Patton (2002) proposed three types of qualitative interviewing: (a) informal, conversational interviews; (b) semi-structured interviews; and (c) standardized, open-ended interviews. Semi-structured interviews were used in this study in conjunction with observation, document analysis, or other techniques (Bogdan & Biklen, 2006).

An interview guide (a list of questions or general topics that the interviewer wanted to explore during each interview) was used. Although the guide was prepared to ensure that basically the same information was obtained from each person, in semi-structured interviews the interviewer is free to probe and explore within predetermined inquiry areas with no predetermined response. Interview guides were used to ensure good use of limited interview time, make interviewing multiple subjects more systematic and comprehensive, and help to keep interactions focused (Lofland & Lofland, 1984).

As a guide to probing during interviews of novice teachers, mentor teachers, and administrators, the following questions were raised for discussion and impressions:

1. What is your educational background?
2. What particular skills and/or topics in professional development have you focused on during/since undergraduate studies?
3. How do you/teachers at your campus feel about students with exceptionalities?
4. What types of support do you/novice teachers at your campus (in your district) receive?
5. What types of field experiences encourage you/teachers at the campus to differentiate instruction?
6. In what ways does/did the curriculum influence differentiated instruction?
7. In what ways do you think you were prepared to meet the needs of diverse student populations?
8. What are your beliefs about differentiation of instruction?
9. What are the ways (if any) in which you/novice teachers have used differentiation strategies in the classroom?
10. In what ways do you work with others in providing differentiated instruction?
11. How do you define “differentiated instruction”?

The following table (Table 7) describes the relationship of the interview questions to factors that were considered in the study.

Table 7

Specifications Related to Interview Questions

	Campus Factors					Individual Characteristics		Professional Standards			University Factors			
Question	Social support	Supervision	Mentoring	Resources	Curriculum	Social support	Attitudes and beliefs	Knowledge	Skills	Dispositions	Collaboration	Seminars/ Courses	Social Support	Supervision
1.	X	X	X		X			X	X			X	X	X
2.	X	X	X	X	X	X	X	X	X	X		X	X	X
3.	X					X	X			X	X		X	
4.	X					X					X		X	
5.	X	X	X	X	X	X							X	X
6.				X	X			X	X			X		
7.		X	X	X	X	X							X	X
8.		X	X	X	X		X			X		X		X
9.		X	X	X	X			X	X			X		X
10.	X	X	X	X	X		X	X	X		X		X	X
11.			X	X	X	X	X	X	X	X		X		X

Candidates, mentor teachers, and campus principals were interviewed as part of the study. Certain questions were asked in a specific order; however, if the interviewer felt the need to ask a follow-up question, the question was asked in an effort to gather data and clarify statements made by subjects. All interviews were tape recorded; however, the researcher also took notes during interviews, including impressions and adding reflections. Tape recordings were listened to immediately following interviews so the researcher could make sure that all pertinent information had been included in the interview notes.

Procedure

First, approval from IRB was obtained, ensuring that the rights of the participants were protected. The researcher then purposefully selected candidates whose folders were complete and descriptive and who might be included as participants in the study. Potential participants, including novice teachers, mentor teachers, and administrators were then contacted and asked to participate in the study. Interviews were conducted and archival data were reviewed as the researcher began to code and interpret archival and new data. Finally, every effort was made to ensure the confidentiality of information gathered as a part of the study.

Data Analysis

Bogdan and Biklen (2006) define qualitative data analysis as "working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (p. 145). In analyzing the data, the goal of the researcher was to organize the raw data into logical, significant categories; to study them in a holistic way; and to identify a means to communicate the findings in a meaningful fashion (Hoepfl, 1997).

The researcher used the constant comparison data analysis method as data were analyzed throughout the study. Glaser and Strauss (cited in Lincoln & Guba,1991) described the constant comparison method as following "four distinct stages: (a) comparing incidents applicable to each category, (b) integrating categories and their properties, (c) delimiting the theory, and (d) writing the theory" (p. 339). As data were recorded and classified, they were also compared across categories. Thus, the generation of hypotheses and the discovery of relationships began with the analysis of initial data.

This process underwent continuous refinement throughout the data collection and analysis process, continuously feeding back into the process of category coding (Goetz & LeCompte, 1981). "As events are constantly compared with previous events, new topological dimension, as well as new relationships, may be discovered" (p. 58).

The researcher carefully examined the data in various ways, looking for cross-case patterns in order to avoid premature or inaccurate conclusions. The data were divided by type across all cases investigated and were coded accordingly. When a pattern from one data type was confirmed by evidence from another, such findings were noted. When evidence conflicted, deeper probing of the differences ensued and an effort was intentionally made to identify the cause or source of conflict. In all cases, the researcher treated the evidence as fairly as possible in an effort to produce reliable conclusions.

Open-coding was used to identify themes emerging from the raw data (Strauss & Corbin, 2009). During this process, the researcher identified and tentatively named the conceptual categories, grouping the data to create descriptive, multi-dimensional classifications in an effort to form a preliminary framework for analysis of the data. Words, phrases, or events that appeared to be analogous were grouped categorically. The researcher revised or replaced these categories as needed during the subsequent stages of data analysis (Hoepfl, 1997).

As the raw data were broken down into manageable categories, the researcher devised an *audit trail* or a plan for identifying data chunks according to the participant, theme, and context (Brown, 1996; Duffee & Aikenhead, 1992). Participant quotes were included to illustrate the themes and ideas being described.

Next, axial coding was used for re-examination of the categories identified to determine how they were related (Strauss & Corbin, 2009)) The specific categories were compared, contrasted and, then, combined in new ways as the researcher assembled the overarching themes and ideas that emerged (Simpson & Tuson, 1995).

Trustworthiness/Verification of Interpretation

"In conventional research, external validity refers to the ability to generalize findings across different settings. Making generalizations involves a trade-off between internal and external validity" (Hoepfl, 1997, p. 59). Therefore, in order to generalize to other contexts, a researcher can only present limited aspects of each local context ((Lincoln & Guba, 1991). "In the naturalistic paradigm, the transferability of a working hypothesis to other situations depends on the degree of similarity between the original situation and the situation to which it is transferred" (Hoepfl, 1997, p. 59). The researcher cannot specify transferability of findings from a study; instead, the researcher can share study results and others can determine the relevance of the findings to new situations (Lincoln & Guba, 1985).

The researcher in this study demonstrated the neutrality of the research interpretations through a *confirmability audit*, as defined by Lincoln and Guba (1985). The audit trail consisted of (a) raw data, (b) analysis notes, (c) reconstruction and synthesis products, (d) process notes, (e) personal notes, and (f) preliminary developmental information (Lincoln & Guba, 1985; Schwandt & Halpen, 1988). This ensured that "proceedings and developments in the process of the research [were] revealed and assessed" (Flick, 2009). To address reliability issues, an *inquiry audit* was

performed in which an external auditor examined both the process and the product of the research for consistency (Lincoln & Guba, 1991).

Data were triangulated through examination of archival data sources and interview responses. At the end of the data gathering process, the researcher offered participants the opportunity to review the data collected that were specific to that particular participant in an effort to verify the collected information.

Once the data were thoroughly analyzed and conclusions of the research reached, the investigator looked at the data in light of relevant research that had recently been conducted. Subsequent inquiries and examinations of the data were conducted when the research reviewed was determined to possibly contradict findings.

Definition of Terms

1. *Adapting or Differentiating* – Changing activities and instructional models so that student differences are addressed—what is learned, how the content is organized, how it is learned, how quickly it is learned, how the new learning is shared.

2. *Attitudes* – manners of acting, feeling, or thinking that show ones dispositions or opinions.

3. *Beliefs* – Convictions or acceptance that certain things are true or real.

4. *Benchmark* – A description or example of candidate or institutional performance that serves as a standard of comparison for evaluation or judging quality.*

5. *Candidate* – Individual admitted to, or enrolled in, programs for the initial preparation of teachers. Candidates are distinguished from “students” in P-12 schools.*

6. *Cultural Background* – The context of one's life experience as shaped by membership in groups based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographical area.*

7. *Curriculum* – Content, courses, experiences, and assessments necessary to prepare candidates to teach or work with students at a specific age level and/or to teach a specific subject area*; content, courses, experiences, and assessments necessary to prepare Pre-K – grade 12 students for mastery of standards for a specific age level, subject area, and/or readiness level.

8. *Dispositions* – The values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and communities and affect student learning, motivation, and development as well as the educator's own professional growth. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice. For example, they might include a belief that all students can learn, a vision of high and challenging standards, or a commitment to a safe and supportive learning environment.*

9. *Diversity* – Differences among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographical area.*

10. *Electronic portfolio (Efolio)* – An accumulation of evidence about individual proficiencies, especially in relation to explicit standards and rubrics, used in evaluation of competency as a teacher. Contents might include end-of-course evaluations and tasks used for instructional or clinical experience purposes such as projects, journals, and observations

by faculty; videos; comments by cooperating teachers or internship supervisors; and samples of student work.*

11. *Exceptionalities* – A physical, mental, or emotional condition, including gifted/talented abilities, that requires individualized instruction and/or other educational support or services.*

12. *Field Experiences* – A variety of early and ongoing field-based opportunities in which candidates may observe, assist, tutor, instruct, and/or conduct research.*

13. *Instructional Practices* – Ways or methods that a teacher uses to address learner differences.

14. *Intern* - A candidate participating in a pre-service clinical experience designed to provide an intensive and extensive culminating activity during the senior year.

15. *Mentor Teacher* – The school-based teacher who supervises an Intern. The Mentor Teacher models classroom practices that support the benchmark expectations for Interns. Responsibilities include co-planning, co-teaching, and observing/conferencing with the Intern. The Mentor Teacher works with university faculty in deciding the Intern's readiness for increased responsibilities and on the Intern's evaluations and final grades.

16. *Pedagogical Content Knowledge* – The interaction of the subject matter and effective teaching strategies to help students learn the subject matter. It requires a thorough understanding of the content to teach it in multiple ways, drawing on the cultural backgrounds and prior knowledge and experiences of students.*

17. *Professional Development Schools* (PDS) – Specially structured schools in which the P-12 school and higher education faculty collaborate to (a) provide practicum, student teaching, and internship experiences; (b) support and enable the professional

development of school and higher education faculty; (c) support and enable inquiry directed at the improvement of practice; and (d) support and enhance student achievement. PDSs require the institutional commitment of colleges and universities, school districts, and teachers' organizations.*

18. *Pedagogical Knowledge* – The general concepts, theories, and research about effective teaching, regardless of content areas.*

19. *Pre-service teacher* – Individual admitted to, or enrolled in, programs for the initial preparation of teachers. Candidates are distinguished from "students" in P-12 schools.*

20. *Professional Knowledge* – The historical, economic, sociological, philosophical, and psychological understandings of schooling and education. It also includes knowledge about learning, diversity, technology, professional ethics, legal and policy issues, pedagogy, and the roles and responsibilities of the profession of teaching.*

21. *Professional Standards* – Candidate knowledge, skills, and dispositions set by the specialized professional associations (SPA program standards) and adopted by NCATE for use in its accreditation review. Professional standards also refer to standards set by other recognized state and national organizations/accrediting agencies that evaluate professional education programs.*

22. *Proficiencies* – Required knowledge, skills, and professional dispositions identified in the professional, state, or institutional standards. *

23. *Resources* – Materials, technology, and professionals available to interns that are ready for use and can be drawn upon for aid or to take care of a need.

24. *Skills* – The ability to use content, professional, and pedagogical knowledge effectively and readily in diverse teaching settings in a manner that ensures that all students are learning.*

25. *Seminars/courses* – Classroom and field-based learning experiences that are part of the teacher education program, a planned sequence of courses and experiences for preparing P-12 teachers. These courses and experiences are designed to lead to a recommendation for a state certification/license to serve as an educator or administrator in schools.

26. *Social support* – Active support available to strengthen the individual or give them confidence.

27. *Student demographics* – Characteristics of the student population at a campus including ethnicity and socioeconomic status.

28. *Students* – Children and youth attending P-12 schools as distinguished from teacher candidates.*

29. *Supervision* – The act of overseeing, directing, or managing the field experiences of the intern/pre-service teacher.

Note. * Definitions from the NCATE Glossary of Professional Development Schools (NCATE, 2011)

CHAPTER FOUR

Results

The findings of eight cases that comprise this study are discussed below followed by a cross-case analysis. According to Creswell (2007), "Case study research involves the study of an issue explored through one or more cases within a bounded system" (p. 73). The analysis below is a discussion on data collected from the following two primary sources: archival information and interviews. Archival data included efolios, observations, reflections, and performance assessments.

The primary question guiding the study related to the factors during the intern experience that influenced the candidates' instructional practices with diverse students. A model was proposed that included these possible factors: individual characteristics (demographics and background, cognitive ability, beliefs), campus and university (school and classroom context; relationships with the school, faculty, and peers), and professional standards (creating a positive learning environment, assessment, curriculum planning, and professional development and communication). This model helped organize each of the cases and provided a framework for examining the data.

Method for Analysis

The initial analysis of the data was conducted by reading through all gathered information to establish a basic comprehension of the scope of accumulated data. This process provided the researcher with an opportunity to preview the data and extrapolate any potential themes that could be useful at a later point in the data analysis. This

process was replicated through all eight cases in their entirety. Using the four-category model, all relevant data points from the interviews and archival data were coded for each participant in the study. Because of the field-based nature of the program and the blurring of social interactions and relationships, the university and campus factors were combined into a single category. These data points were then compared within and across cases. After all of the factors for each case were examined, evidence was used to determine the degree to which each candidate differentiated their instructional practices using the Classroom Instructional Practices Scale (Johnsen, 1992). Factors were then reexamined to identify those that had the most influence on the differentiation rating.

Context

All of the candidates attended a private, nationally ranked liberal arts university. Approximately 14,000 students, who are predominantly White and middle class, work toward degrees in 151 areas of study. The mean SAT score is 1218. According to its website, it is the oldest, continually operating university in the state. During their freshman year, most students live on campus. Throughout the remainder of their time at the university, they live in apartments or other types of housing with other students. The teacher education program is housed within the School of Education. Applicants to the program must have a minimum GPA of 2.6 for 12-semester credit hours in a subject-specific content area. While most candidates begin their field-based work in the first semester of their freshman year, they do not formally apply to the teacher education program until the first semester of their junior year. The program is heavily field-based with placements in the schools beginning in the freshman year and continuing through their senior or intern year.

During their intern year, the eight participants were placed in seven schools located in four schools districts that were in close proximity to the university. One of the districts is urban (Campuses C-6 and C-7), the remainder suburban (Campuses C-1, C-2, C-3, C-4, C-5). All three suburban districts are contiguous to the urban district. Individual campus characteristics are described below and listed in Table 8.

Table 8

Campus Demographics (2007-2008 Academic Year)

Campus	Number of Students	African American	Hispanic	White	Other	At Risk	LEP	GT	Low SES
		Percentage							
C-1	435	30.8	23.2	44.1	1.8	58.4	7.6	4.6	72.0
C-2	523	4.6	14.9	75.7	4.8	15.3	7.5	0.6	13.5
C-3	317	5.7	19.9	73.8	0.6	27.4	1.6	0.0	29.3
C-4	639	15.5	21.0	54.6	8.9	21.8	9.4	0.5	46.3
C-5	590	27.8	27.1	44.1	1.0	26.8	8.3	2.0	74.4
C-6	457	45.3	34.6	19.0	1.2	71.6	8.3	3.7	83.2
C-7	428	22.7	34.3	42.8	0.2	63.1	6.1	8.9	59.1

Campus 1 (C-1)

C-1 was built in the 1940s and had been added onto numerous times; various grade levels had been housed in C-1 throughout the years. During the 2007-2008 academic year, C-1 served grades 2 and 3 and supported a student population of 435. Of the 435 students who attended C-1, 44.1% were White, 30.8% were African American, and 23.2% were Hispanic. Seventy-two percent of the children who attended school at

C-1 participated in the free and reduced lunch program, falling into the Economically Disadvantaged category.

C-1 was the only elementary school in the suburban school district and is located just off of a major interstate highway. Two of the other campuses in the district, the intermediate school and the high school, were located on the same property. Although the campus was situated in the middle of a neighborhood, the feel of the campus was more like that of an urban school. It was surrounded by concrete with the parking lot located directly across the street from the campus. Upon entering the campus, one walked into a large reception area. There was a desk to the right where visitors were asked to check in at the school. Someone was always at the desk to greet people entering the building. The reception area was closed off from the school hallways by large glass windows and doors. The person at the desk scanned each person's driver's license and personally walked to the hallway door with the visitor, swiping a card at the door entrance to let the visitor into the classroom areas. Children greeted visitors as they walked down the hallway and oftentimes welcomed them to the school as they passed.

Principal 1 (P-1). P-1, principal at C-1, was a tall, thin, athletic-looking, African American gentleman who was a former college basketball player and high school coach and teacher. He was rather quiet in nature and very polite. He dressed very professionally--always in a suit and tie. He had been the principal at the campus for five years. He was well respected at the campus; the teachers spoke highly of him. He had a presence that communicated confidence and high expectations for him, the students, and the staff at his campus. When asked in an interview to share his definition of differentiated instruction, P-1 stated,

> You cannot teach all kids the same way with differentiated instruction. You have to learn the experience of all of our kids separate [sic], and teach to that experience even the weak students. You have to find their strength, separate [sic] and teach to their strengths. Sometimes I think teachers are afraid to find the strengths. Most of these kids bring something to the table and you need to bring those strengths out and you will have success from what I see. (I-3)

Mentor 1 (M-1). M-1 was a white female in her 50s who had been teaching at C-1 for 19 years; she had been in the teaching profession for a total of 31 years. In addition to certification in elementary education, she had a master's degree in speech pathology and audiology. While teaching at C-1, M-1 had taken the state examinations to receive certification in English as a second language (ESL) and gifted and talented (GT). In addition to her classroom teaching experience, M-1 had served in the role of a learning center director prior to joining the teaching faculty at C-1.

M-1 served in several leadership roles in her school district (D-1) and on the elementary campus to which she was assigned. She had been the district coordinator for gifted and talented programs for six years, was the third grade team leader, and had helped lead the district in its efforts to improve technology instruction. She team-taught with M-2, who was a fourth grade teacher at C-1. M-1 was the teacher of record for the third grade class of gifted and advanced students; M-2 was the teacher of record for the fourth grade class of gifted and advanced students. They shared teaching responsibilities by M-1 teaching all of the math and science to students in both classes and M-2 teaching all of the reading/English language arts and social studies to students in both classes. M-1 and M-2 planned, reflected, and assessed student performance as a team. The interns who were assigned to either M-1 or M-2 worked with both teachers.

M-1 talked about the curriculum provided by the school district, "I see the curriculum as being just a resource and I use it as such, and I certainly go beyond that to provide a curriculum that the students need" (I-10). M-1 noted a variety of ways that she differentiated curriculum to meet academic and affective needs of the students in her classroom. She gave examples of accelerating children so that they were learning objectives two grades ahead of the grade she taught, setting up learning centers in her classroom that were tailored to the academic needs of students, using pre-assessment to plan learning experiences, planning units that targeted the interests of her students (e.g., interactive internet sessions with NASA representatives, reenactments of historical events), and allowing students to research independently. When asked to define differentiated instruction, M-1 replied,

> . . . differentiation is meeting every one of [the students'] needs, where they are, and making sure that I'm providing them with what they need as opposed to, "We're all going to do exactly the same thing on exactly the same day, and at exactly the same time." . . . I think that every child deserves to have their [sic] needs met, and that the curriculum that is provided to them needs to be appropriate to where they are and what they need to be learning. (I-9)

Mentor 2 (M-2). M-2 was a white female in her late 30s who had been teaching at C-1 for 14 years; she had been in the teaching profession for a total of 17 years. During her time at C-1, M-2 had served as the instructor in the technology lab for five years. She had returned to the regular classroom to teach fourth grade three years prior to mentoring Mary, the intern assigned to her during the 2007-2008 academic year. She was the district technology coordinator in addition to her teaching and she used technology extensively in her classroom.

As mentioned in the description of M-1, M-2 team-taught with M-1, teaching reading/English language arts and social studies to students in both the third and fourth grade classes of gifted and advanced students. The two teachers worked closely to plan lessons, to reflect on their teaching and the progress of students in both classrooms, and to support the interns who were assigned to either of them.

When asked to define differentiated instructions, M-2 stated, "You've got to take [the instruction] and just meet the kids' needs – what they need is what you do" (I-8). M-2 gave examples of ways she differentiated instruction for students in her classroom that included: setting up centers tied to content she was teaching, varying assignments for individual students, integrating technology into learning experiences, and addressing the strengths and interests of students through differentiated learning experiences.

Campus 2 (C-2)

C-2 was one of six elementary schools in the suburban school district, which was growing rapidly. The C-2 campus served children in early childhood through grade 4. In data tables reported by the Texas Education Agency for the 2007-2008 academic year, the student population at C-2 consisted of 523 students: 75.7% White, 14.9% Hispanic; 4.6% African American; and 4.8% other. Thirteen and a half percent of the student population at C-2 was identified as economically disadvantaged during the same academic year. Twenty-six full-time teachers were employed at the campus with a student-teacher ratio of 15.8 to 1.

The campus was approximately 15 years old and was located right off of a major highway, nestled under a huge collection of electrical high wires and conductor boxes. A new neighborhood was being developed directly behind the campus. Most of the

children who attended school at C-2 came from neighborhoods adjacent to the campus or were bused from neighborhoods directly across the highway.

A large parking lot was located in front of the campus building. As one approached the campus from the parking lot, there was a large playground to the left of the building with an entrance sign that pronounced that the playground area was dedicated to a former principal who served at the campus for many years. When people entered the building, they walked into a very small area that was closed off on all sides by glass. There was a window to the left that remained closed and, to the left of the window was a computer set up to screen and make name tags for visitors as their drivers' licenses were scanned. Once they received their visitors' nametags, they tapped on the window and someone in the front office electronically unlocked the door so that the visitor could enter the building.

Upon entrance into the building, there was a feel of congeniality. Student artwork and pictures of students in the educational setting were displayed to the right, across from the office area to the left. Often times, groups of parents were gathered in the cafeteria area, which was the first large area on the right, behind the pictures and artwork.

There was a great deal of parent involvement and support at C-2. Parents were volunteering all over the school most every day. A visitor could see them working with individual students in the hallways, creating bulletin boards, and setting up for elaborate teacher appreciation lunches. At the beginning and end of the school day, one had to wait in long lines to enter the parking lot because there were so many parents to personally drop off or pick up their children at school.

Principal 2 (P-2). P-2, the elementary school principal at C-2, was a white female who was serving as principal for the third year at the campus during the 2007-2008 academic year. She had served as an assistant principal at the same school prior to her appointment as principal. She was easily accessible and showed a sincere dedication to the students at the campus. She checked regularly on the pre-service teachers assigned to her campus, included them in weekly grade-level team meetings, and was very supportive of candidate participation in professional development both inside and outside of the school district. She hired several candidates to work as teachers at C-2 upon completion of the teacher education program. When asked to define differentiated instruction, P-2 responded,

> It is modifying the curriculum to meet each child's needs, so I think you've got to pre-assess to see where those kids are, and then you've got to be able to tier your lessons to meet the child's needs and then post-assess to see if they've learned. (P-2; I-4).

Mentor 4 (M-4). M-4 was a white female in her early 30s who had been teaching at C-2 for two years; she had been in the teaching profession for a total of six and a half years. She was young and enthusiastic in a rather quiet way. M-4 had not yet served in formal leadership roles during her teaching career.

When asked to define differentiated instruction, M-4 admitted that until Lynn was assigned to her as an intern she had not known much about differentiated instruction and gave credit to Lynn for teaching her,

> I really didn't know what [differentiation] was . . . I was very blessed because [the year that Lynn was assigned to me as an intern] was my first year to do gifted, and it would have been a horrendous experience had I not learned [about differentiated instruction] from her. . . . There was no way that I would have been successful without her -- just her body and her knowledge and her willingness to do everything. I guess I just learned differentiation as planning based on the

> levels of almost every child. . . . We pretty much had to modify and change the curriculum and the lessons and the skill – everything for each individual [student]. (I-2)

Mentor 9 (M-9). M-9 was a white female in her 50s who had been teaching at C-2 for 16 years; she had been in the teaching profession for a total of 23 years. She was certified to teach grades K-8 and gifted education. At the time of the interview, M-9 was working on a master's degree in curriculum and instruction with a content focus in the area of reading.

As M-9 discussed differentiation, she alluded to asynchronous development of students, seeking help outside of the classroom when children struggled, and made adjustments to curriculum when needed. When asked to define differentiated instruction, M-9 replied,

> I think differentiation is looking at your students and seeing where they are and it has to be in all different subjects. Because they could be on-level in math but not on-level in reading, so you can't just say, "This is a low student; this is a high student." They can be all over the place. You have to adjust the lessons and provide support where they need it. Sometimes you'll be able to do that in the classroom; sometimes they are going to need extra help outside of the classroom. But, I think it's our job as teachers to make sure all of our students are successful, so we have to make sure they're understanding. So, we have to work with their understanding of where they are, and where they're learning, and adjust as they need it. (I-4)

Mentor 10 (M-10). M-10 was a white female in her late 20s who had been teaching at C-2 for five years--all five years at the C-2 campus. M-10 had attended the university where the interns were students, had completed her student teaching at C-2, and was hired to stay at the campus as a certified teacher of record following her graduation. She, like M-4, gave a great deal of credit to Anne for teaching her how to differentiate instruction. In fact, M-4 commented, "[Lynn and Anne] really knew what

they were doing and more taught us (M-4 and M-10) how to differentiate than we taught them" (I-2).

As M-10 spoke about meeting the needs of diverse learners, she noted that the curriculum provided by the schools is not always helpful to teachers when they try to meet the needs of individual learners, "The curriculum does not lend itself to differentiation at all. It is up to the teacher to come up with how to differentiate the whole curriculum for the whole year" (I-3). She also spoke to the difficulties she had experienced trying to differentiate instruction as a new teacher entering the profession, ". . . they gave me the lesson and told me what to teach and said, 'Go for it!' Everyone learned the same thing in the same way and that was really hard to have ELL students or any dyslexia [sic] students. It just won't work. They will miss the whole boat" (I-3).

M-10 focused on student ability levels, acceleration, pre-assessment, and product variation when reflecting on her beliefs about differentiation. When asked to define differentiated instruction, M-10 responded,

> I would define it as teaching in a way that meets a particular student's level and not [sic]. . . if they already know it, move on and expand from there. We did a lot of pre-testing, seeing what prior knowledge they had, and focusing the lesson from there . . .I think it is the only way to teach. It saves a lot of time as well because you can pre-assess and move them on. Kids get bored. . . with the basics. They want to move on and use that knowledge in some way, whether it is a project or a real-world experience. Without differentiation, you have kids that slip through the cracks. You can't just teach things in one way and hope they get it. (I-2-3)

Campus 3 (C-3)

C-3 was the only primary campus in a mid-sized suburban school district, serving Pre-K, Kindergarten, and first grade students. In data tables reported by the Texas Education Agency for the 2007-2008 academic year, the student population at C-3

consisted of 317 students: 73.8% White, 19.9% Hispanic, 5.7% African American, and 0.6% other. Approximately 29% of the student population at C-3 was identified as economically disadvantaged during the same academic year. The student-teacher ratio at the campus was 14.5 to 1.

C-3 was only a few years old and was located on a large plot of vacant land right across from the elementary campus that had been there for about 20 years. Although the front of the campus was lined with mostly parking lots and concrete, along the sidewalks there were some grassy areas, benches to sit on, colorful flags, and welcome signs. Holiday decorations were set out on the front porch-type entrance to celebrate special occasions, and there was a very "kid-friendly feeling" as a visitor approached the front door.

As visitors entered the building, they walked into a large open area. The office was on their left and the door to the office was always open. There was a table just inside the office at which visitors were asked to check in. They filled out nametags and were free to go to any area of the building. Different wings of the school contained different grade levels. Intricate and colorful professional paintings were on the walls throughout the school accompanied by children's art and schoolwork. Doors to the classrooms were always locked and visitors had to knock and identify themselves before the teacher would open the door.

Principal 3 (P-3). P-3 was a 54-year-old White female who had been in the field of education for 28 years. She was married to a high school teacher and coach and explained that her husband's career had taken them to several locations during their married life. P-2 had been a teacher for 20 years, including two years instructing at a

junior college and two years instructing at a four-year university. She had been a campus administrator for seven years, serving as principal at two different elementary campuses.

P-3 was often in the office area and was quick to welcome and greet visitors. She was very energetic and enthusiastic in her communication. She dressed for special occasions, donning Halloween costumes, Christmas sweaters, or overalls decorated for special holidays such as Easter. She spoke to the children and teachers as she walked down the hallways, setting the stage for positive interaction and open communication. Her presence added warmth and hospitality to the campus environment. P-3 defined differentiated instruction as, "Totally finding what ways a child learns", and went on to explain,

> I found that all of my teachers [are] very eager to do that, to find what method that they learn [sic] and to accommodate that learning. They feel like that is their job, they aren't like 'I'm not going to do that'. They are very good teachers. (I-3)

Mentor 6 (M-6). M-6 was a white female in her 50s who had been teaching at C-3 for 20 years; she had been in the teaching profession for a total of 26 years. Before joining the teaching staff at C-3, M-6 taught in a variety of campus/classroom settings, including a K/1 class in which there were 48 students, a Title1 school that served mostly Spanish speaking students, and a private Baptist school. M-6 spoke highly of the support teachers at C-3 received from grade level team members, administrators, and other teachers.

M-6 viewed differentiated instruction as addressing learning styles of children and making sure that children are attending to learning tasks. When asked to define differentiated instruction, M-6 replied,

> I would say working at the child's individual level – their learning skills, the learning models that they take on – that they know how to do. Some learn by vision, some learn by hearing, some learn by doing – just taking those into consideration. If you see one way is not working then you try another one. . . . One way is not going to work all of the time. You are going to have to do something different to keep their attention. (I-3)

Campus 4 (C-4)

C-4 was one of six elementary schools in a suburban school district (D-2), which was growing rapidly. The C-4 campus served children in early childhood through grade 4. In data tables reported by the Texas Education Agency for the 2007-2008 academic year, the student population at C-4 consisted of 639 students: 54.6% White, 21% Hispanic, 15.5% African American, and 8.9% other. Approximately 46% of the student population at C-4 was identified as economically disadvantaged during the same academic year. The campus had a student-teacher ratio of 14.2:1.

C-4 was located in a neighborhood in a suburban school district (D-2). The residential structures in the neighborhood varied a great deal. Some of the homes in the area served by C-4 were mid-sized, relatively new, and very well kept. Numerous apartment complexes and small homes, some of which were restricted to low-income residents, were interspaced throughout the neighborhood. The student population at C-4 had changed a great deal over the past decade; in fact, the student population at C-4 was the most diverse of all of the campuses in the district (D-2) with 46.3% of the students representing families of low socioeconomic status.

The building structure of C-4 was quite unusual. Upon entering the campus, one walked into a large room that served as the school cafeteria; the ceiling of this area was two-stories high with the hallway to classrooms on the second floor open to the large

area. One could stand in the hallways on the second floor and, looking over a railing, see down on the cafeteria area. The building was rectangular in shape, the cafeteria in the middle with offices and classrooms on the perimeter of the structure. A ramp ran up one side of the cafeteria area, providing access to the second floor.

The administrative offices were located immediately to the right as one entered the campus. In the reception area of the administrative suite, there was a counter at which visitors signed in and were given name badges. The staff members in the office at C-4 were very friendly and always offered to help in any way possible. The office area and hallways at the entrance of the school did not contain a lot of decorations (e.g., welcome signs, plants, benches) like some of the other campuses; the layout of the building was not conducive to such décor.

Principal 4 (P-4). P-4 was a white female who was 57 years of age at the end of the 2008 academic year. She was small in stature; her personality was outgoing, and she made everyone feel special and welcome at the campus. P-4's career as an educator had included 11 years as a classroom teacher, three years as a school counselor, and nine years as a principal. She was very proud of C-4 and the special district programs that were housed there. She explained,

> It is the most wonderful campus. We are the most diverse campus in our district (D-2). We have all of the ESL kids . . . except for one section. . . . We have four classes of PPCD (Preschool Programs for Children with Disabilities) . . . so, our campus is very diverse. It is the most economically diverse campus in the district . . . so that makes for a lot of diversity. Our teachers embrace that and celebrate that. (I-2)

P-4 seemed to have strong feelings about the need to differentiate instruction for individual learners. When asked in her interview to define differentiated instruction, P-4 responded,

> Differentiation, I believe, is finding the right tool or the right way to teach an individual, not teaching the whole class, but actually finding a way to reach kids in whatever way possible. I don't think you can teach without it? . . . No two kids are the same. They might be on the same level, but they are not necessarily with the same interests. . . . You've got to make sure that [the learning experience is] engaging, that it is motivating, that it's innovative, that it has the authenticity that it needs to have. (I-5; I-6)

P-4 had led her campus to exceptional ratings on the state assessments for several years in a row and was well respected in the district and community for the work she had done.

Mentor 5 (M-5). M-5 was a white male in his late 50s who had been teaching at C-4 for 13 years; he had been in the teaching profession for a total of 21 years. M-5 had worked in the retail business for 20 years prior to deciding that he wanted to be a teacher. He explained that he chose to become an educator because, "Retail had changed so much and it was time to find something that put a little more emphasis on fun" (I-1). After teaching in a very small rural school district for seven years, M-5 went back to school to earn his master's degree in curriculum and instruction. At the same time, he took a job in a larger school district where he taught first grade and Reading Recovery. He then took a position at D-2 where he had been teaching for 13 years.

M-5 viewed differentiation as peer tutoring, providing help for students when they needed it, and explaining content on a level that the students would understand. When asked to define differentiated instruction, M-5 responded,

> I think good teachers differentiate without saying they are doing it. . . . If we have a struggling student, we don't just leave them alone to sink . . . I allow kids extra time to work on stuff. We do a lot of peer work in our classroom . . . I think that the fact that we are giving them the time they need, we are trying to explain it on a level that they understand, and we are giving them tools to work through a problem instead of just telling them the answer. We are trying to show them how to find the answers, whether they are below or above grade level. The expectation is that all kids will learn. It is up to [the teachers] to make sure that we do that. (I-4)

Campus 5 (C-5)

C-5 was the only primary campus in a suburban district. In data tables reported by the Texas Education Agency for the 2007-2008 academic year, the student population at C-5 consisted of 590 students: 44.1% White, 27.1% Hispanic, 27.8% African American, and 1% other. Approximately 74% of the student population at C-5 was identified as economically disadvantaged during the same academic year. Thirty-three full-time teachers were employed at the campus with a student-teacher ratio of 15:1.

The primary campus, serving grades one and two, was about eight years old and was located on a large plot of vacant land. Directly across from C-5 was the district's middle school that was built at the same time the primary campus was constructed. The two campuses were located out in the middle of nowhere. There were no buildings or homes on the perimeters of the campus sites, just fields with a few trees and small homes in the far distance. In front of the building there is a large parking lot and several grassy areas.

As visitors entered the building, they walked into a large open area. The office was on the left. There was a counter just inside the office where visitors checked in and had their drivers' licenses scanned. The office attendant printed nametags for visitors. The doors to the other parts of the building were locked until someone in the office

opened them from the office area. Although on the wall facing visitors upon entrance into the building words were painted that said "Welcome to [C-5]" and kid-friendly type paintings decorated the entire office area, there was a rather "sterile feeling" about the school. The office attendant was very businesslike. Juxtaposed to the feeling upon entry into the campus, once visitors walked through the doors that lead to the classrooms the feeling was warm and welcoming. Children walking down the halls greeted visitors and asked if they could help, soft music played in the hallways, and plants and decorations sat along the edges of the halls. For example, in one hallway, antique student desks with plants on them were sitting outside several classrooms, giving the environment a homey and welcome feeling.

Principal 5 (P-5). P-5, principal of the C-5 campus, was a white female who had been the campus leader at C-5 for three years as of the 2007-2008 academic year. She had earned two master's degrees, one in educational psychology and one in educational leadership. She had been in the field of education for 18 years: five years as a teacher, five years as a school counselor, five years as an assistant principal, and three years as a principal. She was extremely energetic, "bouncy", and outgoing. She proudly showed visitors around the school campus, taking them in and out of classrooms and casually visiting with the teachers and children. It appeared as though she went into the classrooms frequently as the teachers and children went on with their regular activities upon her entrance into the classrooms.

When asked to define differentiated instruction, P-5 responded, "First [you look] at your students' needs, and studying their strengths and weaknesses, and gathering information strategies, tactics, and knowledge, you take each student and, hopefully,

move them up the scale" (P-5; I-8). She seemed proud to explain that every week, the students in her school were assessed to determine level of mastery in both math and reading.

Mentor 3 (M-3). M-3 was a white female in her 50s who had been teaching at C-5 for 17 years; she had been in the teaching profession for a total of 25 years. In addition to certification in elementary education, M-3 was certified in ESL. She had served as "grade-level chair" several times, and explained that the teachers on the grade level team rotated that responsibility. She taught Kindergarten at C-5 and shared her sentiments that the teachers on her grade-level team worked well together and experienced a closeness that she did not think was shared by many teams of teachers. She explained,

> We open our [grade-level] meetings with prayer, which means a lot to me, and we've always done that, and we remember each other. For me, I don't think I could teach anywhere else . . . Where one [team member] is weak, the other is strong. Our [team's] teachers' talents are so diverse, but yet we work so well together." (I-3)

She also spoke about the support the teachers at C-5 received from campus administrators, instructional aides, and fellow teachers – particularly in the areas of instruction and classroom discipline.

When asked to define differentiated instruction, M-3 responded,

> To me, that's putting the kids in groups, in their ability learning groups. We do it based on testing for the most part – sometimes it's for behavior, sometimes these two little boys can't be in the same group together –it doesn't matter what their academic things are. (I-10)

Campus 6 (C-6)

C-6 was one of 20 elementary school campuses in an urban school district and served grades Pre-K through 5. In data tables reported by the Texas Education Agency for the 2007-2008 academic year, the student population at C-6 consisted of 457 students: 19% White, 34.6% Hispanic, 45.3% African American, and 1.2% other. Approximately 83% of the student population at C-6 was identified as economically disadvantaged during the same academic year. Thirty-three full-time teachers were employed at the campus with a student-teacher ratio of 14.8:1.

C-6 was an older campus, built in the 1950s. It was located right in the middle of a neighborhood just off of one of the major streets in a mid-sized urban city. Although the homes in the surrounding neighborhood were small, they were well kept. The student population at C-6 had changed a great deal over the past two decades. Once a school that served a practically "all-White" middle class student population, during the 2007-2008 school year, the student population at C-6 included more ethnically diverse, low SES, and at-risk students than any other campus in this study.

C-6 was one of five fully staffed elementary professional development schools (PDSs) that were a part of the partnership between the university and the local school district. A fully staffed PDS site is one to which a university liaison (UL), a university faculty member, is assigned to spend approximately four mornings per week on the campus. In addition, a part-time site-based coordinator (SBC), whose salary is jointly funded by the school district and the university, is assigned to the campus and also spends four to five mornings a week on the campus. Both the UL and SBC positions are designed to provide support to the junior and senior level candidates who are

participating in field experiences at the site and to work closely with the teachers and administrators at the campus to build a community of practice in which all members of the learning community grow together.

C-6 looked as though it had not been updated in many years. The parking lot was right in front of the school. Visitors walked up a short sidewalk to enter the school from the parking lot. Upon entrance to the campus, the administrative office area was directly to the right. The entire office area was decorated in purple, sporting the school colors. The receptionist was very welcoming, although she sat at a desk a few feet away from the counter where visitors sign in and never got up.

Directly across from the office area was the campus library. The wall of the library that was on the side of the entrance hallway was made of glass, so visitors could see into the room and view students interacting with the librarian. Immediately after the office area, there were hallways going to the right and to the left. These hallways led to most of the classrooms on the campus. There were few decorations and very little student work displayed. Behind the main campus building, there were numerous portable buildings on each side of a children's play area. These portable buildings housed some regular education classrooms, but most of them housed special education, GT, music, and other "specials" classrooms. Once a visitor went out the main doors at the back of the campus to the areas where portable buildings were set up, he or she was locked out of the main building and had to find a school employee in one of the portables to let him/her back in.

Principal 6 (P-6). P-6 was a white middle-aged female. She had been in the field of education for nine years, five of which she had served in administrative positions; one

year as an assistant principal, and four years as campus principal. All of her administrative experience had been at the C-6 campus. P-6 was very serious and businesslike. She stressed the importance of students scoring high on the state assessment and took pride in her school being rated at the highest level in the state ratings. In her interview, she described herself as being supportive of the teachers on her campus and promoting an environment of collaboration (I-2). When asked about her definition of differentiated instruction, she responded, "It's finding a way to meet the needs of all of the students in your class. Not only for those students who are struggling, but those students who are done [sic] and successful in just a short time . . ." (P-6 I-4).

Mentor 7 (M-7). M-7 was a white female in her 50s who had been teaching at C-6 for nine years; she had been in the teaching profession for a total of 32 years. M-7 did not have a master's degree, but viewed the years she had spent in the classroom as valuable learning; she explained, "I like to count my years of experience in the rearview mirror as my credentials" (I-1). M-7 began her career as an educator by teaching in two private schools and reported enjoying the flexibility with curriculum that she was afforded in the private school setting. Following her private school experience, M-7 took a teaching position in the urban district (D-4) where she was still teaching. She described her commitment to working in the urban setting, "I feel like God has put me here because these are the children that I need to be working with. They need me and I need them" (I-2).

M-7 viewed differentiated instruction in terms of student learning styles, focusing on student interests, product choices, and attending to individual differences through planned learning experiences. When asked to define differentiated instruction, M-7 said,

> I would say to meet the needs of each individual by allowing them to have the freedom to explore what they want to learn about. You can differentiate it by the curriculum . . . the different interventions, the different learning styles, the different multiple intelligences. I think differentiation means like, if I've got a student and music is her passion, then if she were doing something with the Dust Bowl, she might research songs and artists from the Dust Bowl era. . . . In other words, it is like opening up a [closet] and there are a million choices as to what you want to do with it. But yet, we know there is an end to the road and everybody has got to share and show what they have learned. I think the biggest thing is that it is not a "one size fits all world". To me, that is what differentiation is. There are a lot of sizes in the closet. (I-4)

Campus 7 (C-7)

C-7 was one of 20 elementary campuses in an urban school district. It served grades Pre-K through 5. In data tables reported by the Texas Education Agency for the 2007-2008 academic year, the student population at C-7 consisted of approximately 428 students: 42.8% White, 34.3% Hispanic, 22.7% African American, and 0.2% other. Approximately 59% of the student population at C-7 was identified as economically disadvantaged during the same academic year. Thirty-three full-time teachers were employed at the campus with a student-teacher ratio of 15:1.

C-7 was about 50 years old and was nestled in the middle of a very well kept neighborhood. There was a Baptist church right across the street from the campus. Although C-7 was part of an urban school district, this particular school served students from some of the most affluent neighborhoods in the city. Many were children of doctors, attorneys, professors, and other professionals. In fact, with regard to socio-economic status and parental involvement, the student population more closely resembled that of a middle class suburban campus than one in an urban school setting.

C-7, like C-6, was one of five fully staffed elementary professional development schools (PDS) that are a part of the partnership between the university and the local

school district. The campus was very open; there was no fence around the perimeter. The site was comprised of "pods" of classrooms in separate buildings with covered sidewalks connecting the structures. With the exception of the building that housed the office, teacher's lounge, nurse's area, and library, each structure housed six classrooms. In the center of the campus was an outside classroom that was filled with gardens crafted by the teachers, parents, and children. Several rabbits were housed in a cage in the outside classroom. Plants and shrubs adorned the outside walkways and a large tile wall stood on the outskirts of the garden area, spelling out the character traits highlighted monthly in the district.

The office building was at the front of the campus, looking onto the outside classroom. When visitors entered the campus building that housed the administration offices, the restrooms and nurse's office were on the right. As visitors walked further into the open area, there was a large counter area on the right. The office attendant was seated behind a counter. Along the counter top were sign-in/sign-out books for parents, students, and visitors. The principal's office was directly behind the counter area. Past the counter was a well-decorated area with couches, chairs, a coffee table, and bookshelves housing numerous books and other resources for parents and visitors. This area had a very "homey" and inviting feel to it.

Principal 7 (P-7). P-7 was a white male who had been the principal at C-7 for two years. As a professional, he had served in numerous roles in area school districts including R.O.T. C. teacher, high school principal, and school superintendent in a small central Texas school. Prior to entering the field of education, P-7 served as an officer in the armed forces. He had been in the field of education for 26 years. P-7 was very

personable and always quick to share one of his recent, favorite stories about one of the students at C-7. He dressed very casually, wearing golf shirts and slip-on leather shoes. In person, P-7 was always congenial and ready to help. For example, when the researcher mentioned to him that she would like to interview him for a study, he smiled and responded, "I can visit with you for the interview right now, if you like. Come on into my office!" When trying to contact P-7 via telephone or email, it usually took several days for him to respond; however, once he responded, he gave his full attention to the matter discussed and made sure that issues were addressed.

When asked in an interview to share his definition of differentiated instruction, P-7 responded,

> I would think it's meeting the needs of every kid. So that if you're struggling and you need extra help then you bring in a subject matter expert for a small group, and your goal is to get them on grade level. And, if you're GT and you've already done that and thought about it, and you're bored to tears, then the experience you've had in your classroom is something different, and you're engaged. So that range and meeting the needs of every kid. (I-5)

P-7 was very supportive of the PDS partnership and the candidates from the university. In fact, he hired Kay to teach at his school the year after her internship.

Mentor (M-8). M-8 was a white female in her late 40s who had been teaching at C-7 for two years; she had been in the teaching profession for a total of 23 years. She reported having taught in numerous school districts and other educational settings during her career as a teacher: rural schools, urban schools, a private school, and a private pre-school she owned. In addition to being certified to teach in grades K-8, M-8 had her teaching certificate in gifted and talented (I-1). M-8 shared that she had decided to become a teacher at a very early age,

> I had a brother who was dyslexic, and I saw him struggle, and I used to love to sit and help him and read with him and get him through it, and that's when I decided [that I wanted to be a teacher] – when he was in second grade and I was in fourth. (I-1)

M-8 spoke to the need for grouping, student choice, attending to learning styles, providing for individual differences, and assessment to guide instruction as she explained her thoughts about differentiation. When asked to define differentiated instruction, M-8 answered,

> I think differentiating means, you know, whether you're doing pair-share or grouping or student choice or doing projects and things, that you have to let the child take his own, unique, individual learning style and make it what it is. You have to help them, sometimes guide them, those who struggle with what you're asking, but I think there's such a broad criteria for differentiating with kids. I see it in the GT classroom. Just because they've been identified GT doesn't mean they are always going to grasp everything we throw at them and do, and I think you definitely have to use assessment to build on prior knowledge with kids to differentiate. (I-8)

Mentor 11 (M-11). M-11 was a white female in her 50s who had been teaching at C-7 for three years; she had been in the teaching profession for a total of seven years. During an interview session, M-11 explained that she began her career in education as a substitute teacher. She then worked as an aide in a Kindergarten classroom. When she was in her 40s, she sought teacher certification through an alternative certification program at one of the regional education service centers in the state. During her six years in the classroom, she had taught Pre-K for four years and Kindergarten for two years.

Although M-11 provided a very brief definition when asked to define differentiated instruction, she added information as the interview progressed, sharing practices that indicated she used several methods to determine the learning needs of her students. When asked to define differentiated instruction, M-11 replied,

> I determine it is finding either where children are lacking and gearing things down so that they are more successful so you can scaffold it better versus those that are more advanced that you can make things a little more difficult [sic] so that they are more challenged and not bored. That's the way I determine differentiation. (I-2)

Later in the interview, M-11 mentioned that she used pre-assessments and post-assessments so that she would know if she needed to "speed up" or "slow down" the learning experiences for children in her classroom. She also talked about using leveled readers, providing learning centers that she set up in the classroom, and explained that, for brighter students, she "usually [made] whatever it [was] a little more difficult so that those children who have it are using those skills in a different way possibly" (I-3).

Participants

There were eight participants in the study. Four of the participants were seeking a general education EC-4 certificate (Amy, Bev, Jan, Kay). The other four were seeking a dual certificate in gifted education and EC-4 (Lynn, Anne, Emma, Mary). All of the candidates participated in a year long, two-semester intern experience. The general education EC-4 (G) candidates were placed in one classroom for the entire year whereas the dual certificate candidates spent one semester in a general education classroom where identified gifted and talented children were served in a cluster group along with other children who were not identified as gifted and the other semester in a gifted education pull-out classroom. Table 9 provides information about the intern assignments of each pre-service teacher in the study.

Case Study: Pre-service Teacher Amy

Individual Characteristics

Demographics and background. Amy was an African American female who spent her younger years (through grade 4) going to a small school in a rural part of central Texas. In the fifth grade, her family moved to an urban community in the same area of the state and Amy went to public schools. She was valedictorian of her graduating class at an urban technology/science magnet high school. Amy reported that she received scholarship money, which helped her to realize her dream of attending a prestigious university in her hometown. She stated in her interview that the university ". . . gave me a great amount of money for my college and also I am a Coca-Cola Scholar, so they supplied quite a bit as well."

Table 9

Study Participant Campus Assignments during the 2007-2008 School Year

Pre-service teacher	Campus/district assignment - 1st semester of internship	Mentor teacher	Grade level(s)	Campus/district assignment - 2nd semester of internship	Mentor teacher	Grade level(s)
Amy	C-3/D-3	M-6	K	C-3/D-3	M-6	K
Bev	C-4/D-2	M-5	4	C-4/D-2	M-5	4
Jan	C-5/D-1	M-3	K	C-5/D-1	M-3	K
Kay	C-7/D-4	M-11	K	C-7/D-4	M-11	K
Lynn	C-1/D-1	M-1	3, 4	C-2/D-2	M-4	2
Anne	C-7/D-4	M-8	K-5	C-2/D-2	M-10	2
Emma	C-2/D-2	M-9	2	C-6/D-2	M-7	K-5
Mary	C-6/D-2	M-7	K-5	C-1/D-1	M-2	3, 4

Cognitive ability. She scored 1060 on the SAT. In the undergraduate program, Amy maintained an overall GPA of 3.5; her GPA in education courses was a 3.62. Amy was identified as a gifted and talented student at a very young age and attended a summer program for young gifted children for several years at the university she eventually chose to attend. When asked why she chose the teacher education program at the university, she responded,

> Well, I looked at this program because my high school counselor had known someone who had gone through the program and she said you get hands-on experience all throughout each year . . . Also, I knew people in the educational [sic] department because I attended the University for Young People, so I had people that I knew that were here and also got information from others.

Both her mentor and university supervisor viewed Amy as bright. IS-3 noticed,

> When we would talk in seminar, I could see that she was understanding and thinking deeper than others. She would ask very good questions and then clam up really fast . . . She learned to tolerate diversity because she really was smarter than many of the girls in seminar. (I-6)

Regarding Amy's intellectual ability and creativity, M-6 also noted, "[Amy] is a brilliant, brilliant girl. She is very smart, so creative! She came up with some of the most creative lessons I've ever seen on her own" (I-6).

Beliefs. Most of Amy's beliefs were identified within her efolio and her TxBESS Activity Profile and were quite limited. These beliefs were generally restatements of the benchmarks. Examples from her efolio included these:

- "Being consistent with the rules is very important for our classroom" (E-1).
- "With this particular grade, Kindergarten, routines are very important" (E-3).

- “In my lessons, I try to connect with prior knowledge . . . whenever they make a connection, they instantly become more excited about learning the concept” (E-11).

She also added in her TxBESS Activity Profile (TAP), “It is important for me to learn about the background of my students so that I can make some sort of connection with them” (TCBS 2).

Campus and University

School (C-3) and classroom context. According to information recorded in Amy’s TxBESS Class Background Study, the student population in her kindergarten classroom consisted of 16 students, seven females and nine males, all of who were proficient in English. Amy noted that one of the students had multiple impairments and one student had a speech impairment. Of the 16 children in the classroom, 13 were White, one was African American, and three were Hispanic (TCBS 1-6).

Relationships with the school (C-3), faculty, and peers. The candidate reported that resource persons available to her included administrators, the counselor, the department grade-level chair, her mentor teacher, educator preparation faculty, and members of her grade-level team. She reported that she became familiar with her students through content-based pre-tests and by using strategies to assess prior knowledge (TCBS).

Although perceptions differed about the relationship and communication between Amy and M-6 during the first semester, rapport between the two appeared to improve during the yearlong internship. From the beginning of the experience, Amy seemed to

think that she was communicating effectively with her mentor. Amy reported, "My mentor and I collaborate to form different learning activities" (TCBS 15). She also stated in an efolio entry, "I discuss my [assessment] findings with the classroom teacher so that the lines are open to her . . ." (E-5). Even later, during her interview, she reflected, "My mentor was very supportive and helpful" (I-6). She elaborated the ways her mentor was helpful, by saying,

> Giving me feedback, telling me when I'm doing something wrong, learning how to work with me – I think that was the most important thing. Our personalities were so different, and she had been teaching for a long time. I like structured learning, but I like for the kids to get their hands on stuff, and she was more of a sit-at-the table and write. And, I'm like, I want to get them up, and I want to get them moving so we met each other in the middle. So she was very, very supportive. (I-6)

Disputing Amy's statements that were made during her intern year, the Intern Supervisor (IS-3) noted on the TxBESS Data Summary that Amy was at the lowest level, "developing," in the area of relationships with colleagues (T DS 4). Both M-6 and IS-3 rated Amy as needing assistance in the areas of "seeks and uses feedback to improve" and "is positive with peers and other professionals" (FPDN-10). At the bottom of the progress form, M-6 wrote, "Amy needs to work on sharing with other teachers" (FPDC-10). In fact at the beginning of the semester, M-6 observed Amy's difficulty in getting along with other teachers at the campus. She noted,

> . . . she didn't want to listen to any suggestions at all. She didn't want to see my stuff, she kept to herself, didn't go to any of the teachers, and she wouldn't cooperate with any of them. She really just wanted to do it herself and that was it. (I-6)

M-6 went on to say,

> She was the only African American on campus, and that could have had something to do with it. It was like we talked, and I kind of expressed my

> opinions to her about how she wasn't coming to me, and she wasn't asking me questions. And I was here to help her, and I wasn't here to hurt her. (I-6)

IS-3 corroborated M-6's observations,

> The teachers [at C-3] complained about [Amy] because they said that during grade level meetings she was either very quiet or she acted like she knew everything. I had trouble with her rolling her eyes . . . The more I talked with her, the more I realized that she was not aware of the things she was doing. (I-6)

IS-3 worked with Amy, encouraging her to examine her practices and interact in a more positive way with the teachers at C-3. IS-3 explained,

> Her first assignment was to find another teacher in her hall and compliment something they were doing in their room . . . The next week, she had to ask a teacher for an idea . . . then teachers began to come to her for things because she was great about building things and bringing them into the classroom or designing centers. She began to develop a give and take attitude . . . She learned to share, to give compliments, and to accept compliments without having to hand out her resume. (I-6)

M-6 also noted that Amy's attitude changed as she went through the year, stating,

> And then I guess over Christmas she thought about it, and she came back a totally different girl! She was collaborating with teachers, she was talking to her peers, she was working with me [and] asking questions . . . She would go above and beyond. She would stay after school late. She really did good. She just had a little bit of that attitude problem at the first . . . She was brilliant, she was excellent, and the kids loved her. And the parents did, too. I mean they absolutely loved her. It was just that one little hurdle we had to get over. (I-7)

Progress was also noted during March of the second semester during a three-way conference when M-6 wrote on the conference form, "Amy has been sharing with other kindergarten teachers" (PPEF 3/6). At the end of the year, IS-6 wrote on the final evaluation form, "Amy has worked hard this semester to become a part of the teaching team at C-4" (PPEF 4/16). The intern supervisor reflected later during her interview,

> [Amy] realized she liked the setting more than she thought - that the parents were a lot like hers, as far as being involved. She had never been in an all-White school. She said that several times. Everything she had done in Waco felt more comfortable because she said, "Everyone looked like me." (I-6)

During her interview, Amy agreed with her intern supervisor and mentor:

> Actually, my intern year really taught me a lot about working well with people, because sometimes what I'm thinking, it doesn't come off with what I actually say. So learning how to get my point across with my intern supervisor or with my mentor teacher or other professors. . . saying the right things, using my tact as well as my professionalism . . . and getting my point across. That was something they really taught me, as well as working with the other interns and other colleagues because you're going to have to do that when you go into your own classroom. So they taught me how to communicate my thoughts and how to communicate my ideas. I felt like I received a lot of that my intern year. (I-4)

Professional Standards

In the archival data reviewed, Amy provided examples of how she addressed the SOE benchmarks; however, the examples she provided were very brief and not descriptive. TxBESS was the strongest piece of evidence in documenting her performance; however, it addressed only one of her lessons. Efolio narrative entries were very short and the artifact evidence was limited to no more than three pieces of evidence per benchmark.

Strand one: Creating a positive learning environment. With regard to establishing a positive learning environment, Amy referred several times to the way she interacted with the children. For example, in her TxBESS Data Collection Notes she wrote, "I praise them whenever I can . . ." (T DCN 8), and "If they need correction, I do it in a respectful way" (T DCN 9). She did not, however, provide descriptive examples or evidence to indicate how she praised or corrected the children.

Efolio narrative and artifact evidence tended to focus on the negative characteristics of the students with whom Amy worked. For example, Amy included the following observations in her narrative:

> This particular grade level has difficulty listening and following directions . . . ; They have problems working cooperatively and keeping their body parts to themselves; working quietly is sometimes very difficult for them. They like to chat and visit with their neighbors when they are not supposed to. Also, this group is very egocentric, so they don't always consider others feelings. So being respectful and kind is difficult for them at times. (E-1)

Amy's intern supervisor (IS-3) expressed concerns about Amy's negative approach and the environment in the classroom during several observations. During one observation she wrote, "I'm glad you finally did 'open shut them' – otherwise you were so negative in your management and expectations" (CVR 9/11). On another observation document, IS-3 noted a student comment, "I didn't look at my story board." Followed by a comment from Amy, "Well, you should'a [sic] done that when you came in." IS-3's question to the candidate on the observation form was "How can you give her a positive response?" (CVR 9/27). Amy did grow in this area.

During the second semester, IS-3 commended the performance of the candidate in the area of establishing a positive learning environment on several occasions. For example, comments written by IS-3 during one observation included, ". . . you manage to keep control by always having them put hands in lap upon finishing" and "That was so cute when Tabitha counted 19 instead of 20 and she said, very confidently, 'I guess I made a mistake.' It's okay to take risks in this class!" (CVR 2/5). On the final evaluation form, IS-3 wrote, "Amy has been very positive with the kindergarten students" (PPEF 4/16).

In her efolio, Amy focused on the importance of establishing routines in a kindergarten classroom. She stated, "We follow the same schedule every week, and the students know exactly what we do over the course of the day. If it in any way goes out of order, they immediately question it" (E-3).

Amy also noted the importance of having materials organized and ready for her lessons. She provided examples of how, for each lesson, she had the materials "out on my desk and ready to go" (E 4). Amy's mentor teacher (M-6) corroborated Amy's strengths in organization. In notes from one observation, M-6 wrote, "Amy is a very organized teacher. She has everything ready each day for all her activities. The children know where everything is and it is always in their reach" (CVR 2/27).

When addressing *Benchmark 7: Paces lessons and activities to engage students*, Amy referred to "[allocating] a time frame for each portion of the lesson – introduction, guided practice, independent practice and closure." Amy also stated that the children worked much more efficiently when she used a timer, helping both Amy and the students keep track of the amount of time they have to complete a task. Amy seemed to define pacing as "staying on schedule." She wrote, "The journal entry is an example of a paced activity. The students are given a topic. They have 15 minutes to write about their topic, then an additional 5 minutes to illustrate" (E-7).

Amy addressed engagement apart from pacing, giving only one example of keeping students engaged. She referred to allowing the perfect amount of "wait time" to keep students engaged, allowing them enough time to think but not so much time that they do not stay on task.

Strand two: Assessment. In the area of formative and summative assessment, Amy provided more examples to support her knowledge and skills. In her TxBESS documents she stated, "I keep anecdotal notes on the students to monitor for progress. This helps me in my planning of activities for future lessons" (T DCN 10). In her efolio,

Amy provided artifact evidence to show that she kept progress records and "Kidwatching Notes." In an efolio entry, Amy explained,

> I document on the progress summary sheet the status of students that are struggling and those who mastered the concept on the lessons . . . I document if they understood the lesson, what they didn't understand during the lesson, and what points I may need to reiterate the next class day. This helps me keep track of what I need to work on with the kids. This also helps me identify their weak and strong points . . . Using these records, I adapt my lessons to fit the needs of the students. (E-5)

M-6 did not comment on Amy's assessment practices during the first semester. During a second semester observation, M-6 noted that Amy

> . . . watches each student and writes down what they need to work on. She then works with the students in Discovery Lab or class. She has helped me do assessments for report cards as well as keeping her own "Kidwatching notes. (CVR 2/27)

Other than these comments, there is no archival data recorded by the mentor teacher to assess Amy's skills in the area of assessment.

During the first semester, IS-3 questioned the assessment strategies of AMY when, in observation notes, she wrote, "<u>Read</u> to the kids – they don't remember how many straws in the bundles . . . so <u>count</u> them!", and ". . . is not engaged and answering your question – stay <u>with</u> him until he does!" (CVR 9/27). In notes at the end of the year conference IS-3 noted improvement in assessment practices of Amy when she wrote, "She has designed assessment indicators beyond paper/pencil tests" and rated Amy "proficient" on all three indicators in the "assessment strand" on the Professional Practice Evaluation Form (PPEV 4/16).

Strand three: Curriculum planning. Amy noted the importance of focusing the students' attention on the information she was teaching and shared several strategies that she used to ensure that students were engaged. She noted,

> [Kindergarten children] have a very short attention span. Therefore, I have to have multiple ways to keep them actively engaged. Whether that be use [sic] a famous character in a story problem or have a song that related to the activity. I let the students know what they will be learning beforehand . . . I also try to connect to prior knowledge. I try to pull in that background knowledge from anywhere. (E-11)

Her mentor teacher also described the activities in Amy's lessons as "very creative" and designed to make "learning fun for the children" (FP DC 9/27).

Amy seemed to define organization of knowledge as the order in which her lesson plans were written and the instruction presented to the students. In her efolio, she wrote,

> When planning a lesson, I organize the lesson in a logical format that's identical in every activity. The lesson is divided into segments of TEKS, objectives, materials, procedures, and assessment. Each lesson follows this order and students know and become accustomed to this routine. (E-12)

Although Amy's efolio evidence for presenting information that is related to assessment was scant, she did mention using assessment to drive instruction, stating, "If after assessment, I see that the students' [sic] didn't master the concept, then I adapt the lessons to re-teach or go more in-depth on the concept. I adapt my lessons each week depending on the assessment." Her mentor also noticed about Amy's adaptations, "She organizes her learning center plans for positive learning for slower children and she has activities to challenge the higher learners" (CVR 11/12).

She claimed to use a variety of assessments, some of which were formative and others that were summative; however, no artifact evidence was provided to substantiate her use of different types of knowledge (E-12), varied assessment strategies (E-13),

authentic methods of the discipline (E-14), or developing and implementing activities that the children might use independently (E-15).

Strand four: Professional development and communication. Although Amy seemed to struggle with professional communication at the beginning of her internship, she improved greatly through the year as mentioned previously. For example, on a Professional Practice Feedback form, both M-6 and IS-3 rated Amy check minus (√-) on three professional characteristics: "Seeks assistance and resources from CI/Mentor as needed," "Seeks and uses feedback to improve," and "Is positive with peers and other professionals" (FPDC-10/07).

Shortly after the middle of the year, Amy received the highest marks possible in all areas of the same form and the mentor teacher wrote, "Amy is becoming a superior teacher . . ." (FPDC-3/7). She appeared to interact more with the staff, school, and parents. On one of the observation forms at the beginning of the second semester, M-6 wrote, "Amy attends staff meetings and participates in grade level meetings. She came to open house and visited with the parents. She always greets the parents by name and she has positive things to say about each child" (CVR 2/27). Moreover, she communicated with the parents on a regular basis, "We communicate the student's behavior to the parents in their take home folders using a communication log. There is also a letter sent out explaining to the parents the activities, letter study, and important events" (T SOPR 12).

Her communication with the students also became more positive. Her mentor teacher found her feedback to be "particularly varied and instructive with comments like, 'You were thinking hard. I saw those wheels turning . . . Is it hard? That's why we're

practicing! We're building our skills up . . . You're doing great. Let's try again . . . You have the first battle won'" (CVR 1/30). Her mentor also noted that she advocated for special needs students, "I asked her to check on the home language survey of a new transfer student which led to her subsequent identification as ESL" (CVR 1/30).

She pursued professional development by joining several professional organizations − Phi Delta Kappa, ATPE, and TCTA (T SOPR 12) and attending professional meetings such as TAIR and Phi Delta Kappa.

In summary, Amy grew professionally during her internship experience. Both her university supervisor and mentor rated Amy's overall performance on each benchmark as proficient on her mid-semester and final three-way evaluations. While information in her efolio was scant, it appeared that her relative strengths were in the areas of organizing curriculum, preparing lessons, varying her activities, and providing hands-on learning experiences. She did not provide enough evidence to support her use of varied assessment strategies, authentic methods, or independent activities. She grew in the areas of professional and personal relationships. Moreover, she passed the required state test for an EC-4 certificate—both content and Professional Pedagogy and Responsibility.

Outcomes

Rate. For the most part, Amy attempted to keep the students together as a whole group. For example, one of her pacing strategies was to "group them in pairs so that the independent portion would go more quickly" (T LR 6). She also would provide more examples by "repeat[ing] reading and phrasing for the special needs [to] . . . focus the students back in [to the lesson] . . ." (T PfL 4). While she did make notes of students who

needed “one-on-one help” (T DCN 7), this help was offered primarily during scheduled discovery lab time (T DCN 10).

Amy refers to placing students in small group and large group settings for instruction; however, she does not say anything about grouping based on pre-assessment (E-2).

> During my internship there were children that were low - didn’t know their letters, this is mid-year. And there were some kids who knew their letters and were right there at the beginning stage of blending, and then there were students who were reading. So, you had to meet each individual level in your lessons, and in small groups, with the readers as well as with math. (I-3)

However, this comment from her interview was not corroborated with evidence provided during her intern year. With the exception of one reference to the use of pre-assessment in her interview, Amy used assessments primarily to plan instruction for the whole group. After she post tested, the students responded to the next set of knowledge and skills (e.g., the fourth level of Rate) (Johnsen et al., 2002).

Content. Amy considered student differences in content by incorporating critical thinking in her questions, “I try to use higher level questions and questions for my lower level students to understand as well . . . [and] that are developmentally appropriate . . .” (T DCN 9); “I also try to do more higher level thinking with those who are advanced in the class.. . . .” (T DCN 10).

Although Amy reported that the district curriculum did not provide differentiation for individual students, she did describe how she differentiated the learning experiences for the children in her interview. In describing the curriculum during her intern year, Amy stated, “Every child was learning the same thing. You were coming up with your own plans, so with your plans that’s when you were able to differentiate. The curriculum

didn't differentiate at all though" (I-4). Amy added, "I'd make sure everything was learner-centered. The kids had tasks and activities they worked on according to their level. I did ability grouping. We did 'performance tasks' to see what they could do" (I-4). Her efolio and her IS and mentor, however, did not corroborate her use of differentiating for small groups. Therefore, Amy would be rated at the C-2 level of the classroom instructional practices scale—she incorporated critical thinking into her lessons (Johnsen et al., 2002).

Preference. Amy varied her learning activities based on the students' developmental levels, preferences, and interests. She mentioned, "I chose these materials because they are colorful and the children enjoy using them" (T PFL), and ". . . plan[ned] activities that are centered around their interests as well as their needs" (T DCN 7). She also noted that she developed lessons so that "learning styles were also accommodated" (T PfL 4; T DCN 7). Her mentor also observed, "She knows her students and she knows what they like to do. She plans around their likes" (T MQ 11). While Amy did not provide choices for her students, she did vary her activities and aligned them to what she was teaching. These examples would place her at the fourth level out of five levels within the preference strand (Johnsen et al., 2002).

Environment. Amy used interest centers. She described them in her interview, ". . . we did centers every week. So a lot of the things that we needed for them to learn were based on the centers. All of the individual work that they were learning for that week they did most of it through centers" (I-5). In reviewing her lesson plans within the efolio, all of the students used the same materials as they rotated through the interest

centers. This arrangement would indicate that Amy was operating at an E4 level on the Classroom Instructional Practices Scale (Johnsen et al., 2002).

Summary of outcomes. Amy provided examples in her data to support some differentiation in the areas of preference and environment. In preference, she varied the activities for the classroom, but not for individual children. In environment, she allowed students to work in independent interest centers, but all of the students used the same materials. Her weakest areas of differentiation were in content and rate. In content, she incorporated critical thinking into her lessons but organized her curriculum primarily around the TEKS. For rate, she paced her instruction for the whole class, but not for individual students. In conclusion, Amy did not provide sufficient evidence to indicate that she implemented more differentiated strategies in the classroom.

Case Study: Pre-service Teacher Bev

Individual Characteristics

Demographics and background. Bev was a white female who was 22 years old at the beginning of her internship experience. As she grew up, she attended school in three urban school districts (Arlington ISD and Birdville ISD in TX and St. Louis Public Schools in MO). When she first began her undergraduate studies, Bev majored in music. She soon realized that she would be happier if she pursued a degree in elementary education. She stated,

> After being involved in the music program, I didn't care if I taught music, I just wanted to teach. So, I went into elementary education because I remember a lot of my teachers from school and remembered how I wanted to be like them. (I-1)

Bev's mentor described her as being "just an all-around good kid" (I-5). He went on to say that she was willing to share ideas and that she got along well with others. Bev's intern supervisor described Bev as being "creative, committed, tender, a light. . . ." IS-4 noted Bev's independent nature and desire to find what worked for her. IS-4 said in her interview,

> [BEV] was inspiring to me. . . . It was so fun to see her be everything she could be. She doesn't fit the mold. You have to turn and let her find her own way to do it; but, if you just turn her loose, she has so much to give to the children. (I-8)

Cognitive ability. Bev scored 1150 on the SAT and maintained an overall GPA of 3.45; her GPA in education courses was a 3.88. She was the recipient of the Provost scholarship during all four years of her undergraduate studies. She also received a music scholarship from her high school and a scholarship from Southwestern Bell, where her father was employed. Bev mentioned that she did receive some additional financial aid, which paid for approximately half of her tuition for the first four years (I-1).

Beliefs. In her efolio, Bev communicated her beliefs about expectations, managing the learning environment, and professionalism. Bev believed that it was important to have routines and procedures in place to help children achieve. She wrote, "Routines are a dire [sic] part of helping children grow up in a strong and secure learning environment. As an educator it is our responsibility to be consistent and set daily routines for our students to follow" (E-3). Bev also highlighted her belief that planning and feedback are integral parts of teaching. She stated, "Managing materials can make or break a good lesson" (E 4), and "Reinforcement and feedback are vital parts of teaching" (E-6). She also noted her belief that professionalism is an important ingredient in being a

successful educator. She specifically addressed the need to enhance one's knowledge and skills, stating, "Participating in professional development is an important part of teaching because that's how we, as teachers, grow" (E-15). Bev also noted the importance of establishing meaningful relationships with parents in the education of their children, when in her efolio, she wrote, "In communicating with parents, it's important to establish a trusting relationship. To establish that trust, it's necessary to maintain confidentiality" (E-18).

Campus and University

School and classroom context. Bev began her year-long internship at C-1. She had extensive back surgery the summer prior to her internship and was instructed by her physician to be careful physically in an effort to ensure that her back would heal. The third grade classroom to which Bev was initially assigned included three special education students who were identified with severe behavior disorders. The mentor teacher had a great deal of difficulty managing them. On one occasion, a student purposefully knocked the overhead projector down; on another occasion, a student threw a desk. The student behavior in the classroom was so dismal that the principal expressed concern about Bev taking over the instruction. In addition, Bev expressed concern that if one of the students knocked into her, her back could be injured. After lengthy conversation, it was agreed that it would be in the best interest of all involved if Bev were moved to a different placement. So, after six weeks in the classroom at C-1, Bev was assigned to a fourth grade classroom at C-4. Bev's new mentor (M-5) was impressed with her attitude and work ethic upon her arrival at her new assignment, stating, "I am

very impressed with [Bev's] transition to our district. She has come in and become involved without my asking . . . [she] has come in ready and eager to continue her internship, and I appreciate her willingness to learn" (FPDC-10/07).

According to information recorded in the TxBESS Class Background Study by Bev, the student population in her fourth grade classroom at C-4 consisted of 22 students, 10 females and 12 males, all of who were proficient in English. Bev noted that two of the students had been identified as having learning disabilities, and seven had been identified as gifted and talented. Of the 22 children in the classroom, 10 were White, five were African American, four were Hispanic, and three were Asian (T CBS 1-6).

Relationships with the school (C4), faculty, and peers. Bev reported that human resources available to her at C-4 included administrators, the counselor, the grade-level chair, the diagnostician, Education Service Center Region 12 staff, the librarian, her mentor teacher, special education/inclusion teachers, educator preparation faculty, and members of the fourth grade team. Bev interacted with faculty and staff at her assigned campus and was well accepted. M-5 reported that Bev ate lunch with the fourth grade team daily (T MQ 3). In addition, he shared, "[Bev] worked really well with the kids, and she worked really well with the adults. . . . She wanted to learn everything she could . . . she came in and jumped right in!" (I-6). Bev appeared to have a very positive relationship with her mentor teacher. She addressed her relationship with her mentor by stating, "I speak daily with my mentor about problems I see and certain students that I think are mastering the concept and trying hard" (E-10). She added, "I am able to collaborate weekly with my mentor teacher when we sit down and plan lessons (E-16). She did notice that her mentor did not differentiate instruction.

> When I walked into the classroom, it was basically a whole class instruction type of method that he was using. Not that I didn't think that it was working for him, but I felt like that some of the kids were at a disadvantage because that might not have been a way that they were learning. (I-8)

However, the mentor did not interfere with Bev's attempts to differentiate (I-8). In fact, Bev viewed her mentor as the most helpful of all of the people she collaborated with during her intern year, "I think I got a lot of support from everybody I worked with at Baylor but especially from him" (I-9).

Bev also referred to working closely with the resource teacher on campus, requesting IEPs and discussing characteristics of her students so that she could implement modifications in the regular classroom (E-16). In her interview, Bev mentioned that her university supervisor (IS-4) had facilitated these interactions with the special education teacher and herself. She also appreciated the support of IS-4 by saying,

> She always had a great thing to say about what I was doing and something of constructive criticism. It was nice to know that even though she thought I was doing a great job, I could always improve in some way or another. Whether it be her telling me . . ."If your mentor is not telling you how to differentiate instruction, go to another teacher that will help you or go to the special education teacher and have her sit down with you and talk to you about it." (I-7)

In her interview, Bev mentioned the importance of peer support. She reflected,

> I feel like I learned more from peers and how they had done things in their TA year and intern year than I did from one of the classes we had . . . I know that a lot of the education majors would collaborate and talk about things and that was great. . . . I feel like I came to accept the diverse classrooms because of advice I had gotten from other education majors. (I-6)

She concluded from these interactions,

> It really depends on your support as to whether you are going to be successful. . . . I heard stories about really sweet mentors that didn't give a lot of support but were just really nice. And I heard a lot of stories about mentors that really pushed the students to do above and beyond and they got a lot out of that. It was really helpful to see the different schools they came from and how, based on economic

> status of the school or how involved the mentor was, that it really affected their intern year and how they taught. (I-7)

Professional Standards

In the archival data reviewed, Bev provided fairly thorough narrative and artifact examples in her efolio of how she addressed the SOE benchmarks. In fact, of all the EC-4 interns, Bev's efolio included the most artifacts and the most comprehensive narrative entries. The TxBESS documents Bev completed were also fairly thorough, including enough detail to present a good overview of the characteristics of children in her classroom, the lesson she planned, her reflections on the observed lesson, and the areas of professional growth on which she planned to concentrate to improve her teaching.

Strand one: Creating a positive learning environment. To highlight the positive environment in her classroom, Bev stated,

> We greet the students in the morning outside the door and we model courtesy by treating the students with the respect we wish to get back. There is openess [sic] and trust in this room because M-5 talks about his kids, family, and can joke with the students. (T CBS 13)

At the beginning of her internship, Bev had difficulty managing the classroom during group work. M-5 referred to Bev's classroom management during a TxBESS lesson at the beginning of the school year by writing, "1 group required 53 attempts to help with conflict resolution . . . 5 instances of 'give me 5'" (T DCN 2d). In response, Bev noted in her TxBESS Learning Reflection, "We had problems with students being able to work in groups so we had a conference at the end of our lesson to talk about how to work in groups and what teamwork looks like" (T LR A). Although Bev had difficulty with classroom management at the beginning of the year, she showed numerous signs of

acquiring skills in this area as she progressed through her intern year. Bev credited part of her success to a reward system she implemented as part of a classroom management plan. She wrote, "I have begun to see improvements in the students' behavior, because if they decide to follow our reasonable expectations, they will be rewarded." She also noted the importance of reminding students of expectations for behavior prior to each lesson and reviewed classroom rules once each morning (E-1). Bev mentioned, in her efolio, several strategies that she used to keep students engaged including providing them with the opportunity to interact with other students, "proximity to the off-task child," and "involving students in learning activities that are fun and challenging" (E-2). M-5 stated that Bev improved a great deal in the area of behavior management throughout her internship, describing her as ". . . being empathetic to the children while holding each to a personal standard of respect and excellence" (PPEF 2/08).

Strand two: Assessment. Bev varied assessment practices based on content and student needs. She cited numerous examples of involving her students in self-assessment. For example, in her TxBESS Plan for Learning, she wrote, "My students are working on learning as a group and working as a team and their [sic] learning to be more responsible for their own work so a self-assessment seemed appropriate for them to monitor their own progress" (T PfL A). In addition, Bev designed rubrics to assess the work of her students and gave them the opportunity to produce products including posters, story maps, models, graphic organizers, scientific experiments, brochures, advertisements, and reports on topics they chose to research (E-8; E-9). In describing Bev's assessment practices, M-5 stated, "She utilizes hands-on projects much more than paper-driven assessment" (PPEF 11/07). Although Bev included an example of pre- and

post-assessment for a unit she taught, the data did not show that all students learned new knowledge. While her pre-assessment did discriminate for all students, several students scored lower on the post-assessment than on the pre-assessment (E-13).

Strand three: Curriculum planning. Bev addressed the state standards in various lesson plan examples that she included in her efolio. M-5 noted, "The clarity of her plan is apparent. She has done a wonderful job in organizing the activities" (T DCN 1c). Throughout the school year as well as during the year-end conference, M-5 noted the talents and strengths of Bev in the area of curriculum planning and implementation (PPEF 4/07). IS-4 credited Bev during a formal observation for addressing the three types of knowledge in her lesson on including details in writing (CVR 4/07). In addition, Bev referred to teaching the three types of knowledge in a lesson on using technology for research (E-10). Bev used technology frequently, "Technology really helped my students engage in the lesson" (E-11) and varied her activities, "I created lessons that were varied and worked with different students' strengths and learning styles . . . I made most of my lessons focus on visual, hands-on, or technology" (E-14). Moreover, she allowed students to conduct independent research when they finished their work by using the computer and within an ecosystem unit (E-15).

Strand four: Professional development and communication. Bev attended faculty, grade-level, and ARD meetings at her assigned campus. M-5 reported that Bev worked well with other professional staff members (T DCN 4d). She also participated in professional development including the TAIR Conference, unit workshops, and substitute teacher training (T SPR PG).

Bev communicated with parents/caregivers by keeping the class website updated, informing parents of topics of study, happenings in the classroom, and upcoming events. She sent home folders each Tuesday that contained student work so that parents would be apprised of their students' performance. She visited with parents when she saw them on campus; she attended parent conferences; she sat in on ARD meetings; and she attended sporting events in which her students participated. She also kept a log documenting all contacts with parents (E-17).

Both Bev and M-5 noted that Bev did not have the opportunity to serve as an advocate for students; however, M-5 wrote, ". . . her daily showing of empathy and compassion for her students leaves me no doubt her students will be her top priority" (T DCN 4f, T MQ 3). As previously noted, she also communicated with the special education teacher about the IEPs of specific students.

In summary, at the beginning of her intern year, Bev noted that she needed to improve two standards: "Managing Classroom Procedures" and "Communicating with Families and Caregivers." She was rated as "competent" or "proficient" on all standards of the TxBESS Activity Profile by her mentor teacher (T DS). On her PPEF, her mentor and her university supervisor rated her as "developing" or "no evidence" on all of the benchmarks. By the time she completed her internship, she was rated competent on five of the 18 benchmarks and proficient on the other eight. Her weaknesses were in the areas of creating a positive learning environment, formative assessment, and professional development and communication. These weaknesses were similar to those that Bev had noted at the beginning of the year. At the end of the intern year, Bev scored in the "proficient" range on all 18 of the benchmarks in her efolio.

Outcomes

Rate. Although Bev seemed to understand that all children do not work at the same pace, she viewed "pacing" as implementing lessons in a way that enabled all children to finish at the same time. For example, she stated,

> I took into account my different learners and their needs and abilities when pacing the lesson. One of my classes has below level students with ELL students so I had to reconfigure the time allocations in order for them to be successful, remain engaged, and on an instructional level. (E-7)

When describing a lesson in which she tried to keep all the students on the timeframe as she had been asked to note in her lesson plans, Bev stated, "Allocating the necessary time to complete a lesson is a very helpful tool, although sometimes it is necessary to deviate from that general sketch of pacing based on students' characteristics" (E-7). To ensure that the small groups were paced similarly, she grouped them heterogeneously, "I have already put them into five groups of four with a GT student in each group. We need a GT student in each group to be a foundation and other students were put in accordingly because of attributes . . ." (T PfL ID). Her mentor teacher supported whole group and small group pacing by commenting, "Within one hour and thirty minutes all 5 groups produced expected products" (T DCN 3c). If students finished before others, Bev provided additional activities that were related to the content she was teaching,

> Transitions were hard in this class because students finished their work at different times and lines between lessons were blurred. Because I knew that my students needed extra practice with grammar elements, I decided to create a packet of anchor activities that they could work on when they finished their work. This worked well to help give students that extra time that they needed while challenging those who had completed their work with some skill practice. (E-3)

Overall, Bev demonstrated a lower level in the area of rate on the Classroom Instructional Practices Scale (e.g., Rate, Level 4) (Johnsen et al., 2002). Students

who finished early were provided with tasks related to the same topic or discipline area. In this case, Bev provided "anchor tasks." She also used her post assessments to redesign her lesson for the next day; however, all of the students participated in the redesigned lesson. She did not use pre-assessment information to group students for instruction, but rather to form heterogeneous groups.

Content. For the most part, Bev organized her lessons around the TEKS. They were logically sequenced according to the three types of knowledge (E-12). Bev also organized some of her lessons around student interest and science topics. For example, "[Bev] let them choose an animal and then do independent research on their animal all week and present a poster at the end of the week" (E 4). She also allowed students who finished early to conduct independent research during an ecosystems unit: "Even though they were all asked to research an ecosystem, they are making learning decisions as to which ecosystem they will research what websites to look at and what search engines to use" (E-15). On the other hand, while Bev had students complete interest inventories to determine her novel selection, the entire class ultimately read the same novel (E-8).

Overall, Bev demonstrated a low level in the area of content on the Classroom Instructional Practices Scale (e.g., Content, Level 2). The majority of the curriculum was organized around specific knowledge and skills—the TEKS. She did not integrate multiple disciplines or teach to broader concepts or themes. Sometimes students who finished early were able to pursue topics of interest to them, but this organizational approach was not used for all students or in the majority of her lessons.

Preference. Bev provided varied activities for the students in her classroom. She noted in her efolio, "I based a lot of what I taught on my students; they don't all learn the same way and I tried to vary the lessons based on the students [sic] learning styles" (E-14). She clarified in her interview,

> None of my lessons were the same. I didn't teach them the same way any day in a row. One lesson might be more of a discussion. One might be reading by ourselves [sic]. One might be we are working in groups. One might be working with partners to create something. One might be we are in the computer lab doing interactive labs. (I-8)

She also offered independent study to her fourth grade students who finished early,

> The majority of my class, at some point, finish the work early and search for something to occupy time. I have an abundant amount of students that love to fill that spare time with independent research. Usually this research happens on the computer. (E-14)

In summary, Bev demonstrated a relatively much higher level in the area of preference on the Classroom Instructional Practices Scale (e.g., Preference, Level 4) (Johnsen et al., 2002). While all of the class did the same activities, she did vary the formats and response dimensions. Students did not choose different activities to learn the same content.

Environment. In Bev's classroom students were able to work together and, at times, select where they wanted to work. For example, she noted in her TxBESS plan, "This assignment calls for groups made up of different level learners to work together. They will be up and moving, working hands on, talking to each other, and visually finding the answers" (T PfL I). Her university supervisor also noted during a formal observation that students were given choices of where they might learn in the room when they were constructing posters--at their desks or on the floor (CVR 11/07). Bev also used

other areas in the school for learning: "For students who needed alternative testing I sent them to the learning lab where they could have the test read out loud to them" (E-7).

Overall, Bev allowed students to interact with one another when they are learning but did not have any established interest or learning centers. This room arrangement would place her at Level 3 of the Classroom Instructional Practices Scale (Johnsen et al., 2002).

Summary of outcomes. Bev achieved her relatively highest level of differentiation in the area of preference − P4. She varied her activities within her lessons from day to day. However, she did not differentiate in the areas of content and rate because she did not use pre-assessments to determine her curriculum, and her lessons were paced for the entire class, not individual learners. Because of the whole class focus, she might not have felt the need to establish any independent learning areas to manage materials or ability groups.

Case Study: Pre-service Teacher Jan

Individual Characteristics

Demographics and background. Jan was a white female who was 21 years old at the beginning of her internship. She grew up in the Dallas-Fort Worth metroplex, attending a small private school through the 10th grade and a large public school the last two years of her K-12 experience.

She began her university studies as a history major; however, after working with young children in a camp during the summer after her freshman year, she knew she

wanted to become a teacher. Jan's mentor teacher, intern supervisor, and campus principal noted Jan's ability to study children and engage them in the learning process by using the state standards as a framework for content while designing creative lessons. M-3 highlighted Jan's growth and ability to provide an inviting learning environment, stating,

> at the beginning, she would really just follow the curriculum or the book and then she would just really put that book down and just go with it . . . She really knew the TEKS and she really seemed to strive on a challenge – to figure out some way to teach it. (I-15)

Jan's intern supervisor described Jan as "Independent, driven, not hard but not soft, committed to learning – she wants learning to take place." She elaborated by stating, "She was a teacher that could do marvelous things. She had that special something. She is very artistic and I would watch her lead the children and think, 'I could never do that'!" (I-8). P-5 described Jan as having a "very pleasant personality" and being "structured with her teaching." P-5 went on to say that Jan "took initiative" and "made the effort to basically study the students in [M-3's] class" (I-2).

Cognitive ability. Jan scored a 1040 on her SAT. She entered university as a provisional student, which meant she had to attend classes on campus during the summer before her freshman year. She did well academically during the summer and, as a result, was taken out of provisional status. Jan received no scholarships during her undergraduate studies, but she did receive financial aid (I-1). During her undergraduate studies, Jan maintained an overall GPA of 3.09; her GPA in education courses was a 3.39.

Beliefs. In both her TxBESS Activity Profile and her efolio entries, Jan shared her belief that it is important to establish high expectations, provide a positive, interactive learning environment within a broader learning community, and attend to developmental differences. Jan noted, "The beginning of school is the most imperative time for teachers to establish and teach expectations. After the first several weeks of school, students start adapting to what is expected of them" (E-1). She also noted, "Students in kindergarten work best through hands-on activities" (T PFL ID) and "[when they are] able to talk and share while they are learning" (TPFL ID). She observed, ". . . [when] I am positive and build up students then their acceptable behavior will increase" (E-6). Jan shared her belief that the school, as a community, influences the learning environment for children. For example, she wrote, "Every part of the school contributes to my students' learning" (E-6). Jan felt that a teacher should consider the developmental levels of children when designing effective lessons, stating, "When planning my lessons, it is important for me to take into consideration my students [sic] developmental stage" (E-7).

Campus and University

School and classroom context. According to information recorded in Jan's TxBESS Class Background Study, the student population in her kindergarten classroom consisted of 19 students, nine females and 10 males, 17 of who were proficient in English. Jan noted that one of the students had a speech impairment. No other students were identified as having special needs. Of the 19 children in the classroom, eight were White, six were African American, and five were Hispanic (T CBS 1-6).

The candidate reported that resource persons available to her included administrators, the counselor, the department grade-level chair, the librarian, her mentor teacher, and members of her grade-level team. She became familiar with her students through content-based pre-tests, reviewing permanent records, observing performance on the TPRI, and using strategies to assess prior knowledge (T CBS 7).

Relationships with the school (C-5), faculty, and peers. Jan indicated that she and her mentor teacher worked closely together. Throughout her efolio entries she referenced herself and her mentor teacher working together, using words including "we" and "us" as she described their collaboration in the classroom (E). Jan also seemed to feel a part of the team of kindergarten teachers, even at the beginning of the year. In her TxBESS Class Background Study, completed just one week after school started she wrote,

> We meet with our grade level every Monday. This is a time where we share ideas and updates with our colleagues. [M-6] and I also plan with our partner teacher every week so we can bounce ideas off each other and share activities. We coordinate activities every week. (T CBS 15)

M-6 verified Jan's involvement and planning with fellow teachers, stating "[Jan] attends and participates in Monday grade level meetings with other kindergarten teachers" (T DCN 4d), and "Jan has participated in grade level meetings each Monday and faculty meetings on Wednesdays. She has had the opportunity to interact not only with the other K [sic] teachers, but reading intervention teacher and instructional aide" (T MQ 1). However, when she reflected on her experience during her interview,

> [M-3] was a little bit older and kind of the older traditional way of teaching, and so I felt like I didn't want to do too many things . . . I was limited because of the way that her classroom was set up there wasn't room for me to do differentiation. And, it wasn't just her too; it was the school district, their standards that they had put. So, I worked with her as much as I could but my real creative ideas came from working with interns and Baylor people. (I-5)

Jan's intern supervisor (IS 4) corroborated Jan's observation, "She got along all right with [M-3], but I felt sorry for her because she had so much of a reservoir that she never got a chance to use" (I-8).

In her interview, Jan mentioned the support she received from Baylor faculty, her intern supervisor, and her peers. She said, "[A university faculty member] was hard on us but still gave us leeway about ideas. . . . she expected a lot out of us but she still instructed us" (I-7). "I also felt I had a lot of support from my intern supervisor. She was very supportive of me" (I-5). While she felt more isolated from her peers during her intern as opposed to her teaching associate year, she did note that one of her TA peers was also in her intern seminar group. This particular peer was one that she "got so many good ideas from" (I-7). Jan also found other peer support during her intern year, "There was another intern in kindergarten which I was so thankful for, because we could work together because we were in the same boat" (I-5).

Professional Standards

In the archival data reviewed, this candidate provided examples of ways that she addressed knowledge, skills and dispositions as outlined in the School of Education standards (benchmarks) while participating in the internship during her assignment at C-5. Performance on professional standards was documented in TxBESS, mentor and supervisor observation notes, interviews, mid-semester and end-of-semester conferences and other evidence in her efolio.

Strand one: Creating a positive learning environment. Jan provided numerous examples in her efolio of how she was committed to establishing a positive learning

environment. She stressed the importance of establishing routines and procedures and expressed her understanding that the teacher must establish expectations from the beginning and reinforce them on a regular basis,

> In my classroom, we started teaching expectations on the very first day of school. When the students came to us, they were unsure what they were supposed to do. . . . Some of the students needed to be reminded now and then, but overall they knew what was expected of them and followed the expectations. (E-1)

Both Jan's mentor (C-5) and university supervisor (IS 4) noted her ability to maintain a positive learning environment. M-3 referred often to Jan's positive interactions with the students. For example, she noted that "[Jan] corrected students calmly and gently by calling their name if they needed attention" (T DCN 2d). She also wrote, "[Jan] was very positive if answer needed correction" (T DCN 2b), and "[Jan] was aware of the struggling students and gave words of encouragement and guidance" (T DCN 3c). IS-4 observed, "Reinforcement for correct academic behavior increased for all as success built on success" (CVR 10/18).

Strand two: Assessment. In the narrative section of her entry for benchmarks five and eight in her portfolio, Jan referred to keeping both qualitative and quantitative records and using them to guide instruction for her students. For quantitative assessments, she noted in her TxBESS,

> I chose written test [sic] so I can see if students can individually identify each shape on their own. I have chosen the performance assessment because students will be completing their activities and I need to judge their performance to see if they will do well on their written assessment. (T PFL AS)

She also varied her quantitative assessments: "Tests were given orally and as well as written . . . some students tested better in small groups than in large so I made the provision to test them independently" (E-8). In addition, she used her quantitative

assessments to plan instruction: “All of these assessments are important for us as teachers because they allow us to modify our instruction accordingly” (E-10). She stated, “. . .this checklist . . . involved nine words, and the checklist showed how many needed reteaching.” Qualitatively, Jan would “sit down with each student and review each question showing them what they missed so they can improve next time” (E-10). Jan also noted that she shared information about each student’s progress with their parents on a regular basis and at set times: “We have many ways of communicating student’s progress throughout the semester . . . folders that students take home [and] . . . parent/teacher conferences” (E-10). “We have two [conferences] throughout the year; one in the fall and one in the spring. During these times we went over specific assessment information regarding each child (E-10). Jan did not mention that she had been involved in assessing students for placement in special education.

The primary assessment area that the mentor and intern supervisor noted was in her use of questioning and her conferences with students (PPEF 2/25; PPEF 4/21). No other information was provided regarding Jan’s use of assessment.

Strand three: Curriculum planning. Jan stated the objective, related the objective to prior learning, and created interesting lessons to gain the students’ attention (E-11): “Every day we would start acting out the poems. . . . It gave them a chance to move around and talk but still learn the material” (E-11). Jan organized her knowledge around the state standards, TEKS (Texas Essential Knowledge and Skills), the types of knowledge, and her students. For example, “If I were to start with procedural knowledge without frontloading the students first, they would be lost. Therefore, it is very important to organize your lessons and match them to the content and state standards” (E-12). She

also described in her efolio how she adapted her activities to different groups of students using different activities in a living vs. non-living unit of study based on assessment (E-12; E-13). Her records indicated that all of the students learned new information. She did use the scientific method in lessons on plants (E-14). While the students worked independently in centers and at their desks, Jan did not provide opportunities for students to conduct independent research. She also did not provide any evidence to show that she knew all of the types of knowledge (e. g., declarative, strategic).

Jan's mentor and intern supervisor commented on her ability to organize curriculum for different students. For example, on the midterm evaluation during her spring semester, both the mentor and the intern supervisor noted that she worked with students on various levels. M-3 also mention on the TxBESS, "Jan is following the district curriculum . . . along with the state standards . . . She is allowing for the different abilities of the students and exposure they may have with shapes" (T DCN 1c). Moreover, M-3 mentioned that she used the materials as resources when she was teaching a specific standard, "She amazed me of how she didn't need the basal reader, she would just read a TEK and would work around the TEK and could separate herself from a basal" (I-14).

Strand four: Professional development and communication. As mentioned previously, Jan communicated daily with parents using student folders,

> After I finish the folder with the student, they take it home and have the parents initial it every night. If the parents have a question or comment, they are free to write it in the corresponding day. The next day when I check folders I see their comments and respond in a timely manner. (E-18)

She added, that she was available to the parents "by phone, email, or their students' folders" (E-18). However, there was no evidence to indicate that Jan collaborated with parents.

Jan communicated with her mentor on a regular basis, "The first semester my mentor and I kept an interactive journal. In this journal she or I would reflect on how I was teaching. I would then use her feedback to change my instructional ways" (E-16).

Jan also attended professional development activities and even drove to another city to observe a presenter's classroom to learn more about differentiation and establishing centers. M-3 mentioned that Jan implemented strategies learned at the TAIR Conference in the classroom (T DCN 4e) and noted that Jan attended all faculty meetings at her campus.

In summary, Jan met the majority of the professional standards at the competent level as described in the benchmarks. She did not include evidence that showed she had participated in program planning meetings for special needs students nor did she describe different types of knowledge or her use of independent research with students. Given her classroom practices, she also failed to provide sufficient evidence to demonstrate her ability to adapt the curriculum to individual student's characteristics. Her university supervisors rated each of the benchmark areas as showing proficiency. Moreover, she passed the required state test for an EC-4 certificate—both content and Professional Pedagogy and Responsibility.

Outcomes

Rate. For the most part, Jan attempted to pace her lessons so that the group would stay together. For example, "I . . . walked around and looked for any students that had

completed their work. This was beneficial for the students and for me because it helped me pace the lesson and not leave any students behind" (E-2).

If some students finished early, they were provided with more work in the same subject area or extensions so that the class would progress to the next lesson together,

> The students that work faster than others can complete the worksheet. The students that need reteaching will have needs met through monitoring. Students who finish early can move on to their next activity (extensions). I have chosen these accommodations so students will stay engaged and complete their activity in the time allotted. (T PFL ID)

She gave assessments at set times,

> The first type of assessment I have administered is a weekly McGraw Hill test . . . Another assessment I administer is designed by another corporation. . . . This assessment is administered orally . . . I use these results to either revisit objectives or move on. The second type of assessment I give in the classroom IS-3 and 6-week assessments. I use this information to plan what I will [do with] . . . different groups of students. (E-8)

She then used her assessments to form small groups,

> . . . I knew that the students do not learn well in large group settings because of their age so I had four small, mini-lessons. I then had the students apply their knowledge in centers. . . . After all the students had been through every center, I post assessed. (E-14)

The way that she used the knowledge from her assessments varied across subjects and was inconsistent from day to day. For example, ". . . for reading groups students are grouped by ability, so in Math the mixed grouping allows the students to work with different level students" (PFL ID). Moreover, in her unit on living vs. non-living things, she noted that "I had different activities for different groups of students based on different needs" (E-12).

Her inconsistency may have resulted from her placement or a lack of models or knowledge. In one of her reflections, she said,

> Most of my students are far past what they have in the book to teach. So in turn I was boring students. I had one student even go up to M-3 and say "I'm bored." I know that if students are bored they are not engaged. So I then had to come up with activities for the rest of the week that would engage every student in large group. This in itself is hard because there are some [sic] many levels represented (which is why I support centers for every subject!). So I did end up coming up with activities for students to do in large group. (E-7)

M-3 corroborated how Jan used centers to manage rate differences: "She would figure out who got it and who could go to math centers" (I-11). Math centers were available for students who had shown that they had mastered the content and were used as extensions and reinforcement.

With the exception of one unit, Jan used assessments primarily to plan instruction for the whole group. After she post tested, the students responded to the next set of knowledge and skills (e.g., the fourth level of Rate) (Johnsen et al., 2002). Since Jan expressed her frustration in her reflection, this inadequate provision for rate differences may have related to the mentor teacher's instructional practices or to Jan's lack of knowledge of how to manage individual differences.

Content. Jan organized her content around the state standards and the school curriculum, ". . . it is very important to organize your lessons and match them to the content and state standards" (E-12). Her mentor and her intern supervisor also mentioned her use of the standards. She did design a topic-based plant unit. Jan's examples indicate she provided some differentiation in the area of content (e.g., the third level of the content strand, C3) but did not identify major generalizations and themes or base the content on student performance and interests (Johnsen et al., 2002). For the most part, the developed curriculum was based on standards and the district's scope and sequence, not on individual student performance.

Preference. Jan aligned her activities with the standards and varied their response and format dimensions. "For example, in literacy centers I provide students with different types of activities to accommodate their learning styles. Sometimes they have different writing, letter matching, reading, or game activities to help them learn their letters" (E-14). She also attempted to make her lessons more interesting "by playing educational games and designing hands-on activities" (E-7). Her intern supervisor and her mentor also noted her variation in activities in their observations. While Jan did not provide choices for her students, she did vary her activities and aligned them to what she was teaching. These examples would place her at the fourth level out of five levels within the preference strand (Johnsen et al., 2002).

Environment. Jan referred to the use of instructional centers throughout her efolio. The centers appeared to be organized around the knowledge and skills that the students were learning, "When students were at a center they knew that work would be for them. The work that was for them was at their instructional level so they were always engaged." Her mentor observed her using centers—primarily as reinforcement of a particular content area (I-11). These examples, would therefore place Jan at the fifth level out of six levels within the environment strand (Johnsen et al., 2002)

Summary of outcomes. Jan provided examples in her data to support some differentiation in the areas of preference and environment. In preference, she varied the activities for the classroom, but not for individual children. In environment, she allowed students to work in independent learning centers. Her weakest areas of differentiation were in content and rate. In content, she organized her curriculum around the TEKS and

the school district's curriculum, not around individual students or their interests. For rate, she paced her instruction for the whole class, but not for individual students. In conclusion, Jan noted her frustration in not providing for individual differences but was either not able to implement more differentiated strategies in her assigned classroom or was not knowledgeable about how to manage more individualized instructional approaches.

Case Study: Pre-service Teacher Kay

Individual Characteristics

Demographics and background. Kay was a white female who was 21 years old at the beginning of her internship experience. She grew up in a middle-class suburb in Nashville, Tennessee.

Kay attended a private Christian School and struggled academically, particularly in the area of mathematics although her overall high school GPA was 3.0. Kay came to Baylor because her boyfriend received a golf scholarship to attend Baylor and she wanted to be close to him. She reported, "I wasn't looking at Baylor for the actual education program from the beginning. I just wanted to be close to Wes, and it worked out perfectly that I was able to come to Baylor and the education program . . . I couldn't speak highly enough of" (I-2).

Kay was a high achiever, a thinker, and a problem solver. She loved teaching, was very student-centered, and was a calming influence in her school. Her mentor teacher (M-11) described Kay in this way: "[Kay] is a high achiever and wants everything well done. She does an excellent job, too. She is very enthusiastic and loves

what she does" (M11 I). Her intern supervisor also said, "She is a natural-born teacher and she has a huge heart for children" (IS-5 I). Her principal noted,

> She has that ability, that laid back attitude . . . there is never an emergency in her whole life; at least, if there is, she doesn't show it . . . She is a thinker and a problem solver . . . The sweetest person, but what I like about her is that she's not a brown-nose, goody two-shoes person. (P-7 I)

Cognitive ability. Kay scored 15 on the ACT, the lowest score of any of the interns. She received a $2000 scholarship from her high school and four different scholarships from Baylor; the remainder of her tuition and expenses were paid with student loans. In the undergraduate program, Kay maintained an overall GPA of 3.48; her GPA in education courses was a 3.63.

Beliefs. Throughout her efolio, Kay communicated her beliefs about expectations, the learning environment, the quality of activities, and differentiation. For example, she described the importance of setting expectations for student behavior several times in the first benchmark entries of her efolio. She wrote, "When expectations have been well established and explained, we can avoid any misunderstandings and confusions about what is being expected from the students" (E-1). She also believed that the learning environment extended beyond the classroom, "Safe and effective learning is a process that should involve the entire school community" (E-2). Kay understood the importance of the quality of the materials. In teaching kindergarten children, she noted that it was important "to keep them busy and provide lots of hands-on learning experiences" (E-4). She also believed, "When preparing and managing materials for effective learning, one must first have adequate resources" (E-4). In terms of differentiation, she noted,

> Progress records are vitally important to a teacher because it [sic] will allow one to group students appropriately, inform you of when to go back and re-teach something, or if a lesson needs to be geared up or down for individual students. (E-5)

She also believed that it was important "to gear up or gear down for individual students to prevent boredom" (E-4), and that "it is imperative to allow students to take ownership of their work" (E-5).

Kay believed, due to personal experiences, that some children need more help and repetition to master content than others. In her interview, Kay candidly recalled how she, herself, struggled in school,

> I was one that needed things to be repeated. And, I needed a teacher who was patient, and that's one thing that having that experience from growing up [sic] . . . when you got to math you had to tell me over and over and over for me to get it . . . It took me a lot of practice so I am a little more aware of that in some of my students. And I can see now how my teachers got frustrated with me. I have students like that and so I really try and remind myself, "Okay, [Kay] you were one of these students that needed a lot of extra practice/repetition", and, so, I think differentiation is very important. (I-7)

She went on to explain that she sometimes groups by ability and sometimes uses mixed-ability grouping, "Most of the time I group [students] by ability for literacy, but in math I mix them up because the lower students learn so form the higher students. . . . I think the higher students do benefit form re-teaching and teaching . . . the ones that are lower" (I-7).

Campus and University

School and classroom context. According to information recorded in the TxBESS Class Background Study by Kay, the student population in her Kindergarten classroom consisted of 22 students, 10 females, and 12 males. Two of the students were English

Language Learners, one of which refused services. Kay noted that one of the students had multiple impairments. Other than this one child, no special needs students were identified. When describing the general instructional levels represented by the students in the class, Kay wrote, "mixed, mainly advanced" (T CBS 3). Of the 22 children in the classroom, 13 were white, four were African American, and five were Hispanic (T CBS 1-6).

Relationships with the school (C-3), faculty, and peers. Data indicated that Kay and M-9 met on a regular basis to plan and reflect on Kay's growth as a teacher. In her TxBESS Class Background Study, Kay explained, "I constantly seek assistance/guidance from mentor which helps me be a better teacher" (T CBS 4e). In the TxBESS Action Plan, Kay noted that her mentor teacher oversaw her lesson planning, gave her access to resources and materials to plan her lessons, helped her evaluate student abilities, supported her in behavior management and "walks around and re-explains if/when needed" while Kay is teaching (TAP). In efolio entries, Kay referred several times to planning with her mentor teacher.

The candidate reported that resource persons available to her included administrators, diagnosticians, special education teachers, her mentor teacher, educator preparation faculty, and members of her grade-level team. Resource persons available to help students needing assistance included administrators, counselors, special education teachers, the librarian, the school nurse, and social workers. Kay became familiar with her students through getting-acquainted activities, interest inventories, and student writing/journals (T CBS).

Kay recounted having a very positive relationship with her mentor teacher. Kay and M-11 met regularly to plan and reflect on Kay's teaching (E-16). Kay noted in her interview,

> It was more my mentor teacher that I received all of the support from. My mentor teacher was very supportive, very encouraging. She really made sure that I understood, you know, and we spent a lot of time outside of the school day working, and she really wanted me to be the best teacher I could be. I would ask her questions all along . . . and she never once got frustrated. She was very patient, and she was awesome. (I-4)

M-11 described Kay as being very social and getting along well with others. She noted that Kay was "easy to work with – a real positive person" (I-6).

Kay also interacted with other teachers on her campus. She noted that she found it helpful to attend weekly meetings with other teachers on her team because she felt that collaboration among teachers helped to meet the needs of the students, "Teachers must work together to foster student success and sitting in on meetings allows me better opportunities to achieve that task" (E-16). She did mention in her interview, when asked about support she received from others at the campus, that the teachers at the school were not extremely helpful during her internship, she explained "I mean the grade level that I worked with . . . I wouldn't say at the time of my internship that it was outstanding or anything" (I-4).

Kay interacted on a regular basis with her intern supervisor (I-5), a fulltime university faculty member who served at C-7 as the University Liaison and was on the campus daily. Kay described IS-5 as being helpful, encouraging, and supportive. She also gave specific examples of the types of support that IS-5 gave her. Kay explained that IS-5 provided help and support by providing honest feedback on her lessons, listening before making suggestions, offering strategies that might be helpful,

encouraging Kay to reflect on her practice, and following up to ensure that Kay was experiencing success with the strategies they had discussed (I-3).

IS-5 corroborated Kay's description of the positive relationship they shared and their interactions that Kay described as helping her grow as a professional. IS-5 explained,

> What [Kay] needed in the beginning more than anything was a sounding board from [M-11] and me to run ideas past us. She looked for suggestions. She really looked at her teaching. Every time she taught a lesson, her children's actions gave her the information that she needed to know about the success of her lesson . . . She was amazing. (I-6)

Kay reported that she did not interact with or receive a great deal of support from her peers. She explained that, although there was another intern assigned to a first grade classroom at her campus, she had very little interaction with her. During the second semester of the 2007-2008 school year, an EC-4 dual certificate candidate was assigned to an internship at C-7. Kay did indicate that she got some valuable teaching ideas from that particular peer and described her, "She was like a little brain walking around. She's awesome." Overall, these were the only two interns that Kay mentioned interacting with. Kay was married and seemed to feel like her marital status affected her interactions with peers. She explained, "I'm not very outgoing, and you know, I was married, too. So when I left school, I went home" (I-12).

In summary, Kay interacted on a regular basis with her mentor teacher and her intern supervisor. She appreciated their honest feedback and felt as though she grew as a professional as a result of their support. She socialized very little with other teachers or with her peers.

Professional Standards

Although Kay provided information in her TxBESS documents and her efolio to support her knowing the teacher education program standards, there was not much evidence to support her understanding or implementing the standards. Archival data included the restating of the standards over and over with very limited narrative and artifact evidence. For example, for nine of the 18 benchmarks, a few pictures were the only artifact evidence presented to substantiate Kay's attending to the particular benchmark during her entire year-long internship. Most narrative evidence presented in efolio entries was stated in the form of attitudes and beliefs. Very few descriptive examples were included in the evidence. Kay received the lowest overall score on her efolio of all the study participants (overall score of 7 out of a possible 9). Her relative areas of strength were in the areas of creating a positive learning environment (7.3 out of 9) and curriculum planning (7.1 out of 9); her weakness was in assessment (6.6 out of 9) and professional development and communication (5.6 out of 9). Strengths and weaknesses within each of the strand areas are noted below.

Strand one: Creating a positive learning environment. In the creating a positive environment benchmark strand, Kay described behavior management strategies and how she tried to adapt these for individual students. In addressing methods she used to increase desired behaviors, she reported that she would, ". . . give a thumbs-up, a high five or tell them what an awesome job they were doing." She also reported giving the children stickers or writing compliments on their written work, such as "excellent work, well done, wonderful!" When describing methods used to decrease undesired behaviors, Kay stated that she put the students' "symbol" on the octagon shaped drawing on the

white board after two warnings to indicate that they needed to "stop" what they were doing. She also took away privileges such as outside time or free center time. She explained, "Taking something away from them that they value has proven to be very effective." She went on to say, ". . . they have realized that they cannot and will not get away with their poor decisions made within the classroom" (E-6).

Kay indicated that she understood the importance of tailoring responses to address the needs of individual students. She wrote, "Since children do not all respond in the same way, it is important that I vary responses and take notice of what would get the students motivated." She also spoke to the importance of being consistent with behavior management (E-6).

M-5 corroborated Kay's use of positive statements to increase desired behaviors. She wrote in the TxBESS observation, "Uses praise – kind words when dealing with children – 'great job'." She also noted that Kay "Responded appropriately to various situations. Praise when earned – Consequences when necessary" (T DCN 2a). Her faculty supervisor noted, "She got a handle on her management system and was able to manage the kids well. In the end, she was proficient" (I-3).

Strand two: Assessment. Kay did not provide specific efolio examples of using pre-assessment or student performance to determine prior knowledge or to plan learning experiences for individual children. She did note in her narrative,

> I have to first look at their achievement and assessment scores in order to see what level they are on. I then took that information and tried to adapt to each student's learning modality and personality. I have sometimes picked books or unit students according to their interest level. (E-8)

In the TxBESS Plan for Learning, Kay stated that students would participate in self-assessment as part of the lesson; however, a self-assessment was never mentioned in her reflection or in the notes of the observer (T PFL 15). In fact, in her reflection of assessment used in the TxBESS lesson, Kay did not reference student self-assessment at all. She stated, "I kept a checklist as I monitored and observed. I would provide feedback on the spot for the students" (T LR).

Kay's mentor, intern supervisor, or principal provided no information about Kay's use of assessments. Given the presented data, it is unclear to what degree Kay used assessment data in planning and implementing lessons.

Strand three: Curriculum planning. Kay's perception of organizing knowledge was to match the content to the local and state standards. She organized her lessons around the TEKS (state standards) and D-4's scope and sequence. For example, she wrote in her efolio, "Both the scope and sequence and the TEKS serve as a teachers [sic] backbone, it [sic] guides all curriculum instruction" and "When possible, lessons should be applicable to students' age and grade level. For example, read a book during literacy about a students' [sic] favorite animal or focus a unit on an overall classroom interest" (E-12). She designed a unit around the topic of "weather."

Kay never mentioned planning instruction based on the ability of students or designing units around overarching themes. She did use assessments to identify students who needed one-on-one assistance and to develop additional activities for student who had the knowledge or who finished quickly (E-13). Her mentor corroborated Kay's curricular organization by noting on an observation form, "used nine-weeks' scope and sequence when planning" (T DCN 1c).

Kay did mention that she had one student in her class who was visually impaired and that she followed an IEP to adapt his lessons. She explained that the student's IEP indicated that he needed to sit at the front of the classroom, have 14 point type on reading material, and have help with tasks that involved fine motor skills. She also stated,

> . . . it is vitally important that adaptations be met for each student regardless of any proven or documented needs. Some students need extra guidance or visual examples, some need hands-on, especially at the Kindergarten level. Each student has a learning modality and it has become my responsibility to adapt lessons according to their modality and ability level. (E-13)

In one lesson plan example, Kay had written that students who finished the lesson early would be given a file folder game, so there was some evidence that she may have extended learning with additional work.

M-11 noted on the TxBESS Activity Profile observation form that Kay was always prepared for the lessons she taught, used the nine-weeks district scope and sequence when planning instruction, and offered hands-on learning experiences for the children in her classroom. M-11 also mentioned that Kay used math learning centers and conscientiously demonstrated how to use materials in the centers for the children prior to children using the centers themselves (T DCN 13-14).

When addressing the benchmark regarding the inclusion of methods of the discipline in her instruction, Kay responded by stating, "Discipline has always been part of the learning process, but various methods must be applied when discipline occurs as well. Not all students need the same method of correction." She went on to explain the behavior management system she had implemented in the classroom (E-14). Based on the way Kay described teaching "methods of the discipline" she clearly viewed the task as teaching students how to behave appropriately in the classroom.

Strand four: Professional development and communication. Kay described herself as being able to reflect accurately on her teaching. She explained that her mentor teacher met with her regularly to help her reflect and to give her feedback on the lessons she taught (E-16). Although Kay's mentor teacher (M-11) noted that Kay "learned a great deal about dealing with colleagues! . . . [and] handle[d] herself very well in difficult situations" (T MQ 1), the only evidence that Kay provided in her efolio or reflections about communicating with others was a copy of the letter she sent home to parents at the beginning of the year to introduce herself. She did state in her narrative that she had also communicated with parents through notes and comments written in folders that were sent home with students. Kay provided no artifact or narrative evidence in her efolio about communicating with students or other professionals when she addressed benchmark 17: Is proficient in communication with students, parents, and other professionals (E-17).

The only professional development that Kay mentioned in her efolio was the interaction she had with other teachers at her assigned campus (C-7). There was no evidence to show that she attended professional development outside the campus to which she was assigned and she presented no evidence to show that she improved her instruction as a result of interactions with other professionals.

In summary, Kay did not provide a great deal of evidence, in either artifact or narrative form, when addressing benchmarks in her efolio. Her entries were short and did not include many descriptive examples. While information in her efolio was lacking, it did support her strength in the area of establishing a positive classroom environment. She did not provide evidence to support her use of varied assessment strategies, authentic methods, independent activities, or professionalism. She grew in the area of curriculum

planning and implementation. Moreover, she passed the required state test for an EC-4 certificate—both content and Professional Pedagogy and Responsibility.

Outcomes

Rate. Kay attended to individual differences in rate by varying her pacing with the whole class, providing extra activities, and attending to special needs students. Kay seemed to define pacing as slowing down or speeding up a lesson. In her introduction to *Benchmark 7*, Kay stated,

> There are two important factors that need to be incorporated into lesson writing: planning and pacing . . . pacing is another important aspect that must be considered in order to keep student engagement strong. There have been times that I had introduced a new topic and was starring [sic] at twenty-two blank faces; therefore, I have had to slow down and either re-explain or provide more modeled examples. On the other hand, there have been times where I have had to speed up a lesson because students already had prior knowledge and I was loosing [sic] their attention due to boredom. (E-7)

In the TxBESS Learning Reflection, Kay explained, "I didn't have an extra activity planned for fast finishers, but I was able to get them a math game to play – I just didn't have it planned in my lesson plan." She further stated that, in future lessons, she would "Provide a little more activities [sic], for example those counting to 20, make them write numbers too! Have backup plan or materials for those fast achievers" (T LR 17). During the TxBESS lesson, her mentor also mentioned her use of additional materials by stating, "She extended for more advanced students."

Interestingly, Kay allowed students to read at their own levels at home, "Another method used is tracking their individual reading levels. We have ability level books A-Z that students are allowed to take home and read once a week" (E-5).

In reference to the one special needs child in the classroom, Kay reported in her TxBESS Plan for Learning that she would provide more guidance and reduce the amount of work to be completed by the child during the observed lesson (T PFL 11). These examples indicate that Kay provided for some individual differences in rate (e.g., the third level of Rate) (Johnsen et al., 2002). With the exception of one special needs student, Kay tended to pace the same lesson for the entire class and provided "more" activities for fast finishers. Although children were allowed to read books at their own level at home, no mention was made of the use of pre-assessments at school.

Content. Although there was little evidence to show that Kay differentiated instruction in the area of content, her reflections from the TxBESS documents indicated that she understood that it would be good practice for her to group the children by ability, "Before preparing a lesson, it is important to take student's ability level and interest into account. Preparing a lesson that is too difficult for some students will only cause frustration and a sense of failure by the students" (E-11). However, her belief did not appear in any of her artifacts.

Kay did design a topic-based weather unit that involved research,

> . . . all students were given the opportunity to participate in a form of independent research. I checked out books from the school library regarding all forms of weather and seasons. I also found educational weather websites and allowed students, during center time, to do "research" on the web regarding weather. Kindergarten research is not as independent as higher grades may be because they cannot read as fluently. However, I allowed them to look at websites and books to gain knowledge and to apply what was being taught to written materials. (E-15)

Kay's examples indicate she provided some differentiation in the area of content (e.g., the third level of the content strand, C3) but did not identify major generalizations

and themes or base the content on student performance and interests (Johnsen et al., 2002). For the most part, the developed curriculum was based on pre-existing school units and the district's scope and sequence, not on individual student performance.

Preference. Kay did relate her activities to the lesson objectives and provided varied materials. For example, in her TxBESS lesson, "she provided visual and auditory examples for students to use and follow" and "all students had hands-on activities."

She did not, however, provide varied activities for different students or allow them to make choices in how they would learn the objectives. These examples, therefore, would place her at the fourth level out of five levels within the preference strand (Johnsen et al., 2002).

Environment. Kay seemed to understand and effectively implement centers for learning in her classroom. Throughout the archival data she referred to centers that were set up in the classroom. It appeared as though most of the centers were set up during the entire school year with little or no change in content (E-2). For example, in her efolio she referred to the block area, the home living center, the listening center, and the computer center. In her TxBESS documents, however, she talked about various centers she had set up for a specific math lesson she taught (e.g., grouping, tangram, pictures, and writing numbers centers). Given that Kay established learning centers that related to the learning objectives, she would be rated at the fifth level of the environment strand.

Summary of outcomes. Kay did not provide many examples in her data to support her differentiation. Her strongest areas appeared to be in the preference and environment strands. In preference, she varied the activities for the classroom, but not for individual

children. Similarly, in environment, all of the students used the same materials in each of the math learning centers. Her weaker areas of differentiation were in content and rate. In content, the starting point for her curriculum was the district's scope and sequence, not the individual learner. For rate, she paced her instruction for the whole class, but again, not for individual students with the exception of one special needs child who had an individual educational plan. In conclusion, while Kay noted individual differences in her beliefs about students, her classroom examples focused more on whole group instructional practices.

Case Study: Pre-service Teacher Lynn

Individual Characteristics

Demographics and background. Lynn was a white female who was 21 years old at the beginning of her internship experience. She began her elementary school experience in a small town in Oklahoma. In third grade she and her family moved to London where she attended an international school through eighth grade. Her family then moved to a prestigious suburb of a large urban city in Texas where she attended grades 9 through 12.

Lynn chose to pursue education as her career because of the experiences she had with her teacher in the second grade. She explained, "Mrs. Tucker . . . She was like Mrs. Frizzle on 'Magic School Bus' . . . that crazy red hair – really enthusiastic. So, I've known I wanted to be a teacher since second grade." Lynn chose to attend Baylor University because the teacher education program had ". . . a superior field experience-

based program" (I-1). While earning her certification in elementary education and gifted education, she also took coursework and passed the exam to be certified in ESL (I-2).

Lynn was extremely articulate in her speech and in her writing. She completed her assignments on time and was very thorough and meticulous in the way she addressed every task, paying attention to detail, and providing descriptive illustrations. For instance, in her efolio she provided six examples in both narrative and artifact form for one benchmark when only one example would have been necessary (E-6). She displayed a quiet confidence while interacting with peers, public school personnel, parents, Baylor faculty, and students in the classroom. She had the ability to get along well with others in every situation and took a leadership role among her classmates at the university (I IS-1).

When asked to describe Lynn, M-4 stated,

> Fabulous . . . a lifesaver. I just remember how much time she put into it. She was devoted and she loved the kids. She always found different approaches and methods that met the needs of each kid. Every lesson we did, she made sure that every child's learning style was met . . . The kids loved her. She gave everything she had to that semester . . . hours and hours of work. I don't know how else to describe her. (I-5; I-6)

M-1 corroborated and expanded on M-4's description of Lynn,

> . . . Saturday night I had the great honor of hearing Grant Teaff speak . . . and he was talking about what makes a person successful. As he described this successful person, there were several people who came to mind, but [Lynn] was one of them because he said three characteristics. One is a positive attitude. Oh my gosh, she always had a positive attitude about everything she did – these kids were going to excel - they were going to get it. They were going to do better than anybody else had. She was the biggest cheerleader. The second one was best effort. [Lynn] never came ill-prepared. [Lynn] always had a newer idea, a better idea. And when something didn't work, she came in the next day with something even better, so she was constantly re-evaluating what she was doing and what the kids were doing and was always prepared to do something different to benefit the kids. And, then, the last thing was caring. She loved these kids and she loved them from day one with all their faults and with all their baggage . . . she just adored these kids and you could tell it in the way she spoke to them. She was compassionate, she went out of her way to address their affective needs . . . She

> will always be successful no matter what she does, and her students are going to be successful because of her. (I-13)

Cognitive ability. Her class rank in high school was 99 in a graduating class of 656. Lynn scored 1160 on the SAT, the second highest score of the participants in this study, and 28 on the ACT. In the undergraduate program, Lynn maintained an overall GPA of 3.95; her GPA in education courses was a 3.96.

Beliefs. Lynn shared her beliefs as she completed her TxBESS Class Background Study and entered evidence into her electronic portfolio. She highlighted her feelings about the importance of teachers getting to know their students, planning learning experiences that focus on student interests, establishing procedures in the classroom, setting the stage for children to take ownership in their learning, and differentiating instruction for individual students. With regard to her belief about ways that teachers acquire information about students, she stated that it is ". . . important to find out about a child's personal history; helpful to talk to previous teachers and look at grades from previous years . . ." (T CBS 16). She also shared her belief that "Learning styles and interests are important to know about the students so that the curriculum can be more engaging for the students" (T CBS 16).

In speaking to the importance of establishing procedures and routines, Lynn wrote, "Students take responsibility for their learning and organization when they follow posted procedures independently" (E-3). She also shared her belief in the necessity of differentiating curriculum,

> [I began my internship] in [M-4]'s class, which was an extremely mixed group, so to differentiate was really the only way to meet all of the needs . . . [we had to] write different leveled activities, different center, and lessons and provide

> resources that provided more scaffolding for some than others . . . we had to differentiate, and otherwise we would have left kids in the dust or bored some to tears. It wasn't an option to not [differentiate], I don't think." (I-5)

Campus and University

School (C-1 and C-2) and classroom context. Candidate Lynn participated in two internship experiences. During the fall, she was placed in a general education classroom with a cluster of gifted students (C-1) and in the spring she was placed in a self-contained classroom for gifted students (C-2). Lynn explained in the TxBESS Class Background Study that the student population in the classroom consisted of 20 students, six females and 14 males. All 20 of the students were English Proficient. Seventeen students were identified as gifted and talented, five students were receiving 504 modifications and one was identified as having learning disabilities. One of the students was Asian, while the rest of the class was White. The candidate reported that the three students who were not identified as gifted and talented were *below average* (T CBS 3).

Relationships with the schools (C-1 and C-2), faculty, and peers. Lynn developed meaningful relationships with both of her mentor teachers and communicated with both of them on a regular basis. Data indicate that Lynn and M-4 communicated frequently and planned together regularly. For example, Lynn stated that she had "conferences with [her] mentor teacher daily." She further stated, "I discuss my teaching and accept feedback from my mentor teacher on a daily basis" (T CBS 15). In the TxBESS documents, the candidate referred to working closely with M-4 as she used the pronoun "we" eight times in her description of planning experiences. Her mentor teacher stated in the TxBESS Data Collection Notes that the "Intern continuously collaborates with

mentor regarding parent and student issues." In addition, Lynn's Intern Supervisor (IS-1) noted in the TxBESS Activity Profile Data Collection Notes that "[Lynn] consistently collaborates with mentor regarding parent and student issues" (TAP-4f).

The candidate reported that resource persons available to her at C-2 included administrators, the counselor, the department grade-level chair, the librarian, special education/inclusion teacher, the school nurse, and members of her grade-level team. She became familiar with her students through content-based assessments, IEPs, information included in permanent records, student surveys, and by using strategies to assess prior knowledge. She also stated in her TxBESS Plan for Learning that "it was helpful to talk to previous teachers," referring to teachers who had worked with the students in prior years (T CBS 16).

During her second semester, Lynn was assigned to a mixed urban-rural campus (C-1). She worked with two mentor teachers during her assignment at C-1. The two mentors team-taught, working with grades three and four. Mentor teacher one (M-1) taught all of the math and science; mentor two (M-2) taught all of the language arts and social studies. Lynn followed the children in M-1's class throughout the day. This class was comprised of 20 students, 17 of whom were identified as gifted.

In summary, Lynn taught students at two campuses during her intern year. One would be described as more suburban and predominated by middle to upper class children whereas the other would be described as more urban with a majority of the students from lower to middle class. In both schools, Lynn was supported by strong mentors and administrators.

Professional Standards

In the archival data reviewed, this candidate often referred to how she addressed knowledge, skills, and dispositions as outlined in the School of Education standards (benchmarks) while participating in the internship during her assignments at both C-1 and C-2. Performance on professional standards was documented in TxBESS, mentor and supervisor observation notes, mid-semester and end-of-semester conferences, and other evidence in her efolio.

Strand one: Creating a positive learning environment. With regard to establishing a positive learning environment at C-1, Lynn emphasized respect, expectations, and the use of consequences stating , "I create an environment centered around respect by modeling respect, complimenting respectful behavior, and giving consequences for poor choices and disrespectful behavior to peers, teachers, and others in the school" (T DCN 2a). She referred to the importance of the teacher establishing a positive learning environment and high expectations nine times in her TxBESS document. Statements in the document supporting her skill in this area included, "My expectations of what students were going to learn were clearly stated at the beginning of this lesson . . .", and "The classroom has posted expectations that were taught at the beginning of the school and are continued to be reinforced daily" (T DCN 2b). These expectations were also included in her efolio.

Lynn provided artifact evidence in her efolio that included engagement data showing on the average that students were engaged in the lesson 95% of the time (E-1). She also spoke to the importance of using reinforcement and correction to increase learning as she commented,

> Depending on the type of instruction (whole-group, small group, individual) and the student's personality, I vary my responses to be appropriate for the situation and how the student best responds to correction or praise. Public praise is more effective for some student than others and quiet personal reminders are more effective with some students, so I respond to behaviors based on the student's personality and typical response to correction or praise. (E-6)

M-4 corroborated Lynn's reflections by observing, "Routines and procedures were taught and modeled," and "Expectations for each [center] were clearly established" (T DCN 2a). After another lesson, M-1 wrote, "During every lesson, [Lynn] stated each expectation she is wanting students to perform." She added, "While students were working in their small groups to create number patterns, she made every effort to state positive, reasonable expectations. If students begin to respond inappropriately, she immediately reestablishes her "rules" and students respond positively" (E-1).

Strand two: Assessment. In the area of formative and summative assessment, Lynn provided solid evidence that she used a variety of strategies to assess student knowledge and to plan for instruction. "I record both anecdotal and observation notes based on student participation and demonstrated knowledge," stated Lynn. "I give formative assessments daily and pre- and post-tests to check for progress" (E-4). In referring to the assessment management system that she created to keep track of knowledge acquisition of her students, Lynn reported, "I maintain progress reports on each student by posting pre-test scores, formative assessments, and post-test scores in Excel" (E-4).

Evidence presented in the efolio confirmed that Lynn pre-assessed student knowledge for her unit using a test that discriminated for every student in the class. She gave pre- and post-assessments for objectives taught, and every student acquired new

knowledge as he/she progressed through the learning experiences. In addition, artifact evidence is provided to show that Lynn kept anecdotal records of student performance. Lynn described her assessment practices saying, "I designed progress charts for specific lessons and objectives that enabled me to check off specific skills and knowledge as students demonstrated mastery" (E-5).

Lynn designed post-assessments that specifically addressed content presented in the lessons she taught. She stated,

> I designed assessments for all content areas that matched student knowledge and characteristics – math, science, social studies, language arts, reading. After discussing my unit on Journeys, I created a post test that assessed each specific objective of the generalizations presented in my unit. The posttest specifically matched the knowledge presented throughout the unit and was a telling assessment demonstrating student areas of mastery and weakness. . . . I also assessed student learning using alternative methods such as creating and using rubrics with specific criteria to evaluate products and presentations. (E-8)

Lynn also provided evidence in her efolio to verify her understanding of using assessment records to advocate for children and provide data for placement in programs to meet specific needs. Referring to a situation she addressed while participating in her internship at C-1, she stated,

> I tracked one student's achievement very closely to provide a portfolio of work, grades, strengths, and weaknesses to be discussed and use as evidence to support his referral to special education. [Lynn] and I put together a portfolio of this struggling student's work, his formative and summative assessments in all subject areas, progress reports, and report cards that were used in his ARD and referral to special education. (E 9)

M-1 agreed with all of Lynn's observations. Lynn did use pre/post assessment in a variety of formats. For example, M-1 noted during the fall mid-semester conference, "Pre-assessments are given to direct curriculum and then students are reassessed based on achievement level/skills" (E-5). Lynn provided examples of unit pre-assessments she had

created as artifact evidence in her efolio. The pre-assessments included various items in a variety of formats including fill-in-the blank and open-ended questions (E-8).

M-1 also referred to Lynn using rubrics to assess student understanding during one of the lessons she observed. She commented on the candidate's use of authentic assessment in the form of letters to Congress written by the students during the lesson as well as Lynn's effective use of questioning to guide instruction and check for student understanding. M-3 described how Lynn communicated with students about progress in learning saying, "She went over the papers individually or in small groups so they would understand what they missed and what they needed to study" (E-5).

M-3 also provided evidence that Lynn effectively gathered assessment data to aid in the referral process of a student. She wrote,

> [Lynn] did an impressive job at our ARD today. We discussed possible admittance into special education, separate from his speech concerns. She was a source of detailed examples as to why our student would benefit from additional support. She is professional and quick to make accurate observations. (E 9)

Strand three: Curriculum planning. Lynn demonstrated a thorough understanding of curriculum planning. She repeatedly referred to using the Texas Essential Knowledge and Skills (TEKS), the state standards, in planning and implementing her lessons. Lesson plans provided as efolio evidence included a thorough description of each part of the lesson, including differentiation for various groups of students based on pre-assessments administered. For example, in several of the lesson plans presented in the efolio as evidence, Lynn provided detailed information including the title of the lesson; lesson objectives written to include the content, process, and product; a complete description of the Texas Essential Knowledge and Skills (TEKS) that would be covered; a rationale for

teaching the lesson; materials needed; an outline of procedures that included questions at various levels of Bloom's Taxonomy; a detailed description of the various centers at which students would participate and have choices based on their readiness levels; and assessment/evaluation procedures (E-12). In addition, Lynn provided a framework for a differentiated unit she had planned and implemented based on the overarching theme "Journeys." The framework included generalizations as well as a range of content, processes, and products that addressed various readiness levels of students in her classroom (E-12).

She employed a variety of technology in her teaching including power point presentations, video streaming, E-instruction CPS technology, smart board, LCD projector, computers in the classroom, and the computer lab.

Strand four: Professional development and communication. Lynn effectively used feedback to improve her instruction. In a note that M-1 wrote to Lynn following a lesson observation, she stated, "You did a fantastic job evaluating the strengths and weaknesses of your lesson from yesterday and making changes to enhance the learning of the students" (E-16).

Lynn provided evidence of communicating effectively with other professionals in the school while assigned to C-1. She shared,

> I communicated with the Occupational Therapist about another student in an effort to find strategies to promote his engagement in the classroom. I provided input as to what did and did not work for this student in the classroom and helped to implement various strategies for his heightened engagement in my daily lessons. (E-10)

On the fall mid-term Professional Practice Evaluation Form, M-1 highlighted Lynn's strengths in the area of communication by writing about Lynn's ability to

collaborate and reflect daily. M-1 also highlighted the strength of Lynn to communicate with all stakeholders, writing that Lynn "speaks professionally to students, parents, and staff" and "is confident and respectful with parents and informs them in an appropriate manner" (E-4).

M-3 noted that, while at C-2, Lynn contributed professionally at several parent conferences, writing in observation documents, "Prior to the conferences, [Lynn] gave specific comments pertaining to academic/behavior strengths, weaknesses, and examples. She was able to contribute positively to the meeting" (E-17).

In summary, Lynn met all of the professional standards as described in the benchmarks. Her university supervisors rated each of the benchmark areas as showing proficiency. Lynn received the highest overall score on her efolio of all the study participants (overall score of 9 out of a possible 9). She received 9 out of 9 in three strands and 8.7 out of 9 in the fourth strand. Moreover, she passed the required state tests for both EC-4 and gifted and talented certificates.

Outcomes

Rate. In her planning Lynn considered individual differences in rate. She stated that she "planned each lesson around a very flexible time schedule as the lesson pacing and time spent was always adjusted based on individual student characteristics" (E-7). She also considered special populations of students in her planning and pacing. "If I had English as a Second Language (ESL) students in my classroom I would be conscious of monitoring their progress and adjusting my pacing to ensure their participation and continued understanding" (E-7).

She frequently used pretests to determine curricular adjustments and grouping:

> I gave a pretest with a high ceiling to assess what knowledge students already had and what needed to be taught. Using these pretest scores and breakdown of objectives that needed to be addressed, I created assessments and progress monitoring charts to be used throughout the unit. I was able to group students based on ability and demonstrated progress and regroup students throughout the unit based on their progress. (E-5)

She also "varied assessment based on student characteristics by creating multiple formats of tests based on the content taught in ability groups" (E-8). She then used her assessment data to design multiple activities. "When I planned tiered and differentiated lessons for students based on their ability, I also gave tiered assessments for each ability group based on the work and content they studied" (E-9).

Lynn was able to implement classroom management strategies that not only allowed her to keep track of individual progress but also allowed the students to pace their activities:

> For my unit on Journeys students had an independent research assignment over a state of their choice. I created a "Research Road" with stop and yield signs for each step in their research and product development process. Students moved their car to track their progress, allowing students to work at their own pace and I could easily track their progress. (E-7)

Overall, Lynn demonstrated the highest level in the area of rate on the Classroom Instructional Practices Scale (e.g., Rate, Level 9) (Johnsen et al., 2002). She used pretests and ongoing assessments to design and implement curricular activities for the students. She also used ongoing assessments to group and regroup students. Students were able to work with materials that were matched to the knowledge and skills that they needed to learn and were able to pace themselves through the activities.

Content. Lynn designed and implemented an interdisciplinary unit on Journeys, focusing on immigration, migration, and exploration. ". . . This unit was organized in a very logical, sequential format where student knowledge built on prior knowledge and previous lessons and application of knowledge was increasingly more complex with higher levels of independence" (E-12).

Lynn also considered the individual student's readiness in her unit design. Her mentor noted, "I appreciate you separating the focus, the lesson and the culminating activity by ability level" (E-1). Although Lynn did not have the opportunity to work with ELL students during her internship, she reported in her efolio,

> If I had English as a Second Language (ESL) students in my classroom I would place an emphasis on concrete representation in my materials for instruction. I would also label objects and furniture in the room to provide the ESL students with more exposure to the English language. (E-4)

In the area of content differences, Lynn designed interdisciplinary units, specified attributes of the generalizations, and allowed student performance to guide the content. These practices placed her at the C6 level on the Classroom Instructional Practices Scale (Johnsen et al., 2002).

Preference. Lynn developed tasks that were related to the knowledge and skills that her students needed to learn. She noted,

> I provided choices that included written products, creative/artistic products, technology driven products, and research based products. For a student with fine motor skills development delays I orally administered tests given in the classroom and allowed extended time for other based on their IEPs. (E-8)

In this area of preference differences, Lynn not only matched the activities and assessments to individual student's needs but also varied the formats and response

dimensions, providing choices for individual students. These practices placed her at Preference 5 level (Johnsen et al., 2002).

Environment. To adapt for rate, content, and preference differences, Lynn established learning centers to organize her multi-level materials and allow students to work independently: She noted,

> When we have stations or centers I always prepare a box with an instructions page and all of the necessary materials to complete the center assignment. Preparing for each center/station in this way allows students to be more independent with less confusion and fewer questions. (E-4)

She added, "I planned tiered assignments in math and differentiated station activities for all of the centers in the classroom (E-7). Her mentor teacher noted,

> What a great idea to arrange the math lessons this week into stations on Monday, Wednesday, and Friday based on the ability level of all the students. It was clearly well accepted by the class. They loved rotating and anticipated each of the three groups this week. I appreciate the time you contributed to preparing the three stations and then creating the tiered lessons within each station. Your plans were clear and focused, your materials were organized and each objective was met through the presented activity. I am so impressed. (M-1 note)

This organization of the classroom placed her at an Environment 5 level. She arranged the classroom so that students were able to interact with one another in learning centers. Within the learning centers, the students were using materials that were matched to the content and to their preference.

Summary of outcomes. Lynn summarized her skills in adapting for individual differences, she noted,

> Because of the variety of ability levels in [M-1's classroom], I planned lessons that provided differentiated instruction reviewing, re-teaching, and allowing more time for some students while accelerating and enriching for others. I differentiated not only in rate and preference but also in the content of the lessons. Because lessons were catered to individual needs, engagement was high as the

> content pertained to their level developmentally and academically as well as their interests. (E-7)

M-1 was impressed by her skills. She wrote in a note to Lynn,

> I am learning so much from you – as are the students – and am encouraged to continue your tips to differentiated instruction once you are finished with your assignment in our class. Thank you for modeling the importance of this technique and for consistently basing, preparing and grading each of your lessons around the ability level of all our students. Each child feels encouraged to learn and participate and most importantly, feels successful because you tailored the task to their individual needs. (M-1 note)

Clearly Lynn achieved the highest levels of differentiation in rate and preference and next to highest levels in content and environment. Considering that only 6% of practicing teachers provide for rate differences and that only 3% provide for content differences at these levels, her performance is clearly outstanding (Johnsen et al., 2002).

Case Study: Pre-service Teacher Anne

Individual Characteristics

Demographics and background. Anne was a white female who was 21 years old at the beginning of her internship experience. She grew up in an upper middle-class suburb in North Central Texas.

According to her university supervisor and course instructors, Anne was very perceptive of the feelings of others and worked well with other people because of her optimistic outlook and her congeniality. She was articulate in both her written and verbal communication. Her work was thorough and provided many descriptive examples—not only in her efolio but also in her comments to students in her classroom. Her commitment to teaching, her work ethic, and her optimistic nature was mentioned by her

mentors (M-8; M-10), “I love your passion, enthusiasm, positive attitude, dependability, organizational skills, and preparedness” (PPEF, 9/07); and “[Anne] gives 110% at all times” (PPEF, 10/07). Her other mentor summed up Anne’s characteristics in this way:

> She is such a natural teacher. She has a heart for teaching. She loves kids. She is very organized and gets things done the proper way. She is a planner. She was always on time, always had her lessons ready to go, and planned out beautifully. But she was also very laid back and fun with the kids. She didn’t take things too seriously. I think that is what I loved about her and what the kids loved about her. . . . (M-10 I, p. 7)

Anne’s intern supervisor (IS-2) corroborated M-8’s observations of Anne’s strengths,

> [Anne] was talented . . . She was a natural teacher. She had unbelievable social skills, but without compromising any integrity at all . . . no matter whom she worked with. She never turned in an assignment that was less than perfect. The other thing about [Anne] that I thought was so impressive was her ability to adjust her instruction within the lesson. She could pick up immediately if it wasn’t going as planned, and she didn’t hesitate to change the whole plan around if it wasn’t working for the kids . . . She was talented, had great social skills, and the confidence to adjust. (IS-2; I-9)

Cognitive ability. Anne scored 1190 on the SAT, the highest score of all of the participants in the study. In the undergraduate program, Anne maintained an overall GPA of 3.64; her GPA in education courses was 3.86.

Beliefs. In her efolio, Anne shared her beliefs about respect, behavior management, and adapting instruction. She said, “Respect is given to students in order to receive it” (TCBS13). She added that this respect is developed through a positive learning environment where students are engaged:

> As a teacher, it is essential to constantly monitor both social and academic behavior of students. The students need to receive both positive and negative reinforcement in order to know the teacher’s expectations of them. These types of

> reinforcement and correction should be used in every lesson in order to increase students' engagement and to teach them to respect the teacher as well as each other. (E-6)

She added, "In any classroom, classroom management is extremely vital to the engagement of students and the effectiveness of the learning" (E-2).

Anne also believed strongly in assessment for planning instruction. She wrote,

> Not only does a teacher have to assess students in order to decide what information to teach, they have to adapt their lessons based on ongoing assessments in order to make sure students are still gaining the knowledge that they need. (E-13)

Campus and University

School and classroom context. According to information recorded in Anne's TxBESS Class Background Study, which was completed during the time she was assigned to the GT pullout classroom, the student population in her fourth grade group consisted of eight students, four females and four males, all of whom were proficient in English and identified as gifted learners. Of the eight children in the classroom, five were White, two were African American, and one was Hispanic (T CBS 1-6).

Relationships with the schools, faculty, and peers. The candidate reported that resource persons available to her included administrators, the counselor, the department grade-level chair, the diagnostician, education service center staff, educator preparation faculty, and members of her grade-level team. She did not list her mentor teacher at C-7 as a person she considered to be a resource when planning instruction. She reported that she became familiar with her students through content-based pre-tests, a review of

permanent records, standardized tests, strategies for assessing prior knowledge, and student surveys (T CBS).

Anne planned with her peers – one in particular. IS-2 explained,

> [Anne] counted on her classmates for a lot of support. She met with [Lynn] often, and they planned together. They weren't even in the same intern group, but [Anne] would come to seminar and share ideas that they had discussed. I think they had a group that met and planned together. (IS-2; I-9)

Anne got along well with her mentor teachers (M-8 and M-10). She was quiet, and introspective in a way, very reflective in her practice. As a newcomer to any situation, she appeared to carefully assess every aspect of the environment and do a great deal of observing in order to clearly understand the context before interacting on a deeper level with the people. M-10 explained,

> When I first met [Anne], she was soft-spoken at times and very structured and very sweet. As she became more comfortable with me and the class, she definitely let loose and [could be] silly and fun. We did a lot of singing in our class . . . different songs and rhymes to learn things. She jumped right in. She loved it all. (I-7)

M-8 corroborated M-10's observations,

> Anne was just a little quiet when participating in staff meetings . . . if called upon, yes, she would answer, but would she voluntarily answer? No. . . . Now, she could come back to the classroom and tell you anything you wanted to know, but she's just quieter, more introverted in that respect. (I-11)

Professional Standards

In the archival data reviewed, Anne often referred to how she addressed knowledge, skills, and dispositions as outlined in the benchmarks while participating in the internship during her assignments at both C2 and C7. Performance on professional standards was documented in TxBESS, mentor and supervisor observation notes, mid-semester and end-of-semester conferences, and other evidence in her efolio.

Strand one: Creating a positive learning environment. As mentioned previously, Anne had strong beliefs about creating a positive learning environment so that students would develop respect for the teacher and one another. She noted in her efolio, Benchmark 1:

> As a classroom teacher, it is important to always establish clear expectations for your students to follow. A teacher cannot expect his/her students to act or work in a certain way unless she/he has given specific expectations or instructions that can be clearly understood. It is important that each expectation is positive and reasonable. (E-1)

Her mentor teacher (M-8) described how Anne acted on her beliefs:

> She interacts beautifully with the students by giving praise, encouragement, guidance, etc. During the lesson, whether the students were working as a whole group, on their two teams, or independently, the environment was positively charged with enthusiasm for learning. [Anne] has established and maintains a high level of respect for and from the students. She has high expectations and the students strive to attain them.

Across all observations and ratings, mentors and intern supervisors consistently rated Anne's classroom management as proficient, even at the beginning of her intern year.

Strand two: Assessment. Anne believed in the importance of assessment. She stated,

> When assessing the knowledge of students in the classroom, it is extremely important for teachers to give feedback to their students. Students need to know how they are progressing in their class so that they know what they need to work on in the future. (E-10)

She described specific ways that she used pre- and post-assessments in her classroom. She used pre-assessments for planning and then differentiating her lessons, "These pre-assessments showed me the knowledge that my students previously had and the knowledge that they still needed to gain. I was able to use the pre-assessments to

determine how to best differentiate the lesson" (E-12). She also used assessments when she implemented a differentiated unit:

> While doing this, I always made sure to match my assessments to student knowledge and student characteristics. An example of this is when I implemented a unit about adaptations with my 5th grade G/T class. The students in this class were all extremely creative and enjoyed hands-on activities. Throughout my unit, I assessed them by having them create many hands-on products. . . . At the end of the unit, I gave my students a post-assessment that I created. This post-assessment closely matched the knowledge that the student had gained throughout the entire unit. (E-8)

She also used assessments in other settings as well,

> . . . student assessment information needs to be collected for meetings such as ARDs, parent conferences, and team meetings. . . . We used this information to help plan future lessons and give extra support to students where it is needed. (E-10)

Anne communicated how she incorporated assessments into her lessons not only for the teacher's use but also for her students as well, "There were many times that I gave the students opportunities to assess themselves on their work. . . . After completing centers, I had them assess themselves on each task by using a rubric" (E-9).

M-8 corroborated Anne's reflections by observing,

> The students were assessed according to the objective. . . . The students self-assessed themselves . . . and also shared their research with the class (T DCN 3a). . . . She . . . [asked] students lots of great questions to assess prior knowledge. . . . (T DCN 3b)

In terms of ongoing assessments, the intern supervisor observed, "Assessment was ongoing and the teacher provided immediate feedback to the students throughout the lesson" (CVR 4/8). Overall, Anne viewed assessment as important and continually evaluated her students' strengths and weaknesses.

Strand three: Curriculum planning. Anne demonstrated an understanding of curriculum planning and instruction by organizing knowledge, creating authentic learning experiences, developing thematic units, and varying instructional strategies. In organizing knowledge, Anne stated,

> Students should have an idea of what the declarative, procedural, and strategic knowledge is that they are learning so that they can successfully use this knowledge . . . students were able to explain the concept to me, how to use it, and when it might be used in a real situation. (E-11)

Anne offered several examples of how she involved students in methods of the discipline in their learning experiences. During one unit on archeology in her GT pullout classroom, Anne provided examples of how archeologists excavated artifacts to study them. Then the children participated in a simulated dig site on the playground at their campus (E-3). On another occasion, Anne facilitated the learning of her students as they studied philosophy. During this unit, the students researched Confucius and several other famous philosophers. They then acted as philosophers, creating their own words of wisdom and teaching the class in the role of a philosopher (E-14). She also varied her instructional strategies. For example, in her unit, Anne used a simulation, hands-on activities, and problem solving techniques to help the students understand how to form a civilization (T PFL ID-1d). Anne also incorporated technology in her teaching in a variety of ways. She explained, "One day I guided my children through a virtual tour of the Great Wall of China so that they could see what the wall actually looks like" (E 4).

The intern supervisor described how Anne organized declarative knowledge in her lesson: "The teacher began the lesson by reviewing concepts and connecting content to be covered in the lesson to prior learning. She then introduced the concept of 'congruency' by showing the children a variety of shapes on the Elmo Projector" (CVR

2/8). M-8 also noted Anne's varied and authentic instructional strategies, "The teacher guided the students as they used problem solving and decision-making skills to survive as a civilization on their island . . . This lesson really built on their strengths, their interests, and their cultural understanding of civilizations" (TDS 1a).

Strand four: Professional development and communication. Anne thoroughly addressed all of the benchmarks within this strand. She used feedback and reflected on her growth as a teacher. She continually communicated with her mentors, parents, students, and other professionals (E-17). As M-8 mentioned,

> she has met most all of our parents at Meet the Teacher night, PTA Open House, on field trips, etc. . . . She has attended all Staff Development days, Teacher Inservice, Lead G/T Teacher meetings, Faculty meeting, PTA Open House . . . .

Moreover, she sent home weekly newsletters to parents that included information about what their child was doing and questions parent might ask their child about what they had learned and to stimulate their thinking (M-8 I). M-8 also noted the quality of her communications:

- You are such an enthusiastic teacher and my whole team enjoys working with you (FPDC-2/8).
- You are competent and willing to share ideas with parents and other teachers (PPEF 2/8).
- Our parents are loving having you in our class (PPEF 2/8).
- Thank you for attending so many staff and team meetings. Your input has been so helpful! Great job on comments during our ARDS as well (PPEF 4/8).

Both in number and in quality of communications, Anne obtained proficiency on all of the benchmarks in this strand.

In summary, Anne met all of the professional standards as described in the benchmarks. Her university supervisors rated each of the benchmark areas as showing proficiency. Anne had the second highest overall efolio rating of all the participants in the study (9 out of a possible 9). Moreover, she passed the required state tests for both EC-4 and gifted and talented certificates.

Outcomes

Rate. Differentiation in rate is closely related to pre-assessment information, finding out what students know and do not know and using the information. Anne believed in pre-assessments and implemented them frequently. As Anne's mentor mentioned in her interview, ". . . she taught nothing without giving a pre-assessment and seeing what they knew and where she was going to start them with it. And she was fantastic about that" (M-8 I). As Anne reflected, "After looking through the pre-assessments of all students I was able to make decisions about what I was going to teach . . . I was able to include activities that differentiated for both my higher and lower achieving students" (E-13). In using the pre-assessment information, Anne (a) formed small instructional groups based upon the students' pre-assessment performance, (b) provided "extra guidance to students who were falling behind to make sure that they did not miss any important aspects of the lesson" (E-7), "had students work at different paces depending on their skill level" (E-7), and "conference[d] with [students] about how they did on that particular skill" (E-5). These characteristics indicate that Anne is providing

for individual difference in rate at one of the highest levels (e.g., see the 9th level of Rate) (Johnsen et al., 2002) because she uses pre-assessment on a continuing basis.

Content. Anne designed interdisciplinary units based on the overarching themes of "adaptations" (E-8) and "civilizations" (T PFL ID-1d). She also developed curriculum around students' interests (CVR 9/7). For example, "Children were given the opportunity to research independently, answering questions through research of topics that were of interest to them" (CVR 9/7). She also matched her curriculum to her assessments,

> I selected this pre-test so that I could get an idea of what the students already knew and what they would need to know regarding the curriculum for the G/T class. This pre-assessment included a "KWL" chart. This was a way for me to use student characteristics in assessment. After reviewing this assessment, I could see what students were interested in learning . . . (E-8)

Her attention to interdisciplinary themes and the students' interests would place Anne at the highest levels in content (e.g., see the 7th level of Content) (Johnsen et al., 2002).

Preference. Anne provided students with varied activities in learning new content and in showing their knowledge and skills. She said,

> It is important as a teacher to focus assessments on student characteristics. One way that I did this was by giving my students options within their assessments. For example, I taught one lesson about progress in Native American tribes. The students were responsible for creating something that Native Americans might have created as a form of entertainment. I gave the students a wide range of materials and the option of creating either a musical instrument or a game. (E-8)

She added,

> Another way I matched students' characteristics to the knowledge I was teaching was by allowing them to work at their own pace and have the freedom to make their own choices about things throughout the lesson. For instance, in this lesson students made choices about what they wanted to measure in the classroom. Also, I allowed students that mastered the original objectives to stretch their knowledge further by doing different activities as well as with questions I asked them. (E-12)

Given that Anne related her activities to the knowledge and skills, varied her activities, and allowed students to make choices based on their interests, she would be rated at the highest level in preference (see the 5th level of Preference) (Johnsen et al., 2002).

Environment. Anne frequently had students working together in small groups and in learning centers. She also used areas outside of the classroom for additional learning experiences. She described how her learning centers were related to the content in this way:

> I pre-assessed my third grade class a week before the unit so that I could get an idea of what specific interests that they had regarding "mummification." Then I took these interests in planning my lesson. I used the information that I wanted them to learn and created centers for the students to complete. At each center [the children] would have the opportunity to use their creative thinking skills to produce a work of art based on the knowledge that they had gained at each center. (E-14)

She also used centers for research, "One section of the room is set up as a research center (computers, dictionaries, encyclopedias, magazines, etc.) that students are welcome to use for independent research" (T CBS 11). As mentioned before, Anne also used areas outside of the classroom for learning such as using the playground as a simulated dig site. Anne's use of centers and of areas outside the classroom for learning would place her at the highest level in the area of Environment-E6 (Johnsen et al., 2002).

Summary of outcomes. Throughout all of Anne's evidence--efolio, TxBESS, and reflections--she stressed the importance of adapting for individual differences. She developed curriculum based on student interests and pre-assessments, used varied learning activities and assessments, provided students with choices, and allowed students

to progress at their own rates. She was able to manage the classroom so that she could differentiate instruction,

> Throughout the lesson, students worked at their own pace, in small groups, partners, or independently. They were responsible for managing the materials . . . as well as cleaning up the materials. They also used computers in our classroom efficiently in order to complete their research. (T DCN 2c)

Her mentor and intern supervisor were also impressed by her skills. M-8 viewed her as "a natural teacher" (I-7) and stated in February, "You make differentiation seem so easy" (CVR 2/8). IS-2 observed, "You paced the lesson in a way that kept all children actively engaged. You differentiated instruction to provide appropriately challenging learning experiences for each child and you managed the classroom beautifully. What a joy to watch you teach!" (CVR 4/8). Anne achieved the highest levels of differentiation in all areas: rate, preference, content, and environment (Johnsen et al., 2002).

Case Study: Pre-service Teacher Emma

Individual Characteristics

Demographics and background. Emma was a White female who was 21 years old at the beginning of her internship experience. She attended private school in a large urban area in far west Texas on the Mexican border in kindergarten through the eighth grade. She then attended public school in grades 8 through 12, spending her first two years in a large urban high school and her last two years in a very small west Texas school district.

Emma's intern supervisor (I-2) described Emma's strengths, saying,

> I think one of her strengths was her sensitivity. I think she picked up easily on the feelings and needs of people and the kids in the classroom. She had a way of

> relating to the children in a calm way . . . She was dedicated to the students and she was a very hard worker . . . She was very receptive of feedback.

I-2 also mentioned that she worked hard to help Emma gain confidence as a teacher,

> She really lacked confidence. I am afraid that one of her placements really contributed to her lack of confidence. It was probably not the best place for her . . . She questioned herself a lot, even if she did a wonderful job. (I-8)

I-2 also noted Emma's tendency to reflect critically along with her desire to improve her practice,

> . . . she was good at reflecting and she was very verbal in her reflecting. She would go back through the entire lesson when she was debriefed, without my prompting. She wondered if she should have introduced the lesson differently or if she should have modified in another area. It was not as if she wasn't pleased with what she was doing, but she was always wanting to make sure she was doing the very best she could.

Corroborating I-2's observations about Emma's sensitivity, M-9 noted,

> I remember that there was one student that was really giving her difficulties, and the mother wrote a really ugly note in the assignment book thinking I would see it, and [Emma] saw it, and it upset her so much. (I-6)

M-9 also mentioned that Emma had very good relationships with the children, "The kids loved her. They were so glad when she came back [the second semester to visit]" (I-7). She also described Emma's ability to plan ahead, "She wouldn't wait and say, 'I need this form tomorrow.' . . . She would give me a list and say, 'This is what I need this week' (I-6) and her professionalism, "She was here on time. She got her work done on time and didn't let anything that was going on in her personal life interfere with her being a good teacher" (I-7).

Her other mentor, M-7 also shared Emma's strengths in relating to her students.

> She had a motherly presence with the children and it was very obvious that she loved them and they loved her. She is the only one when it came time for her to leave [that] I think everyone of the children had tears. One child brought it up that we had to do something really special for [Emma] because she is so special.

> So, I bought a big wicker basket and they brought gifts to fill it. One little boy brought a $10 bill that he got for his birthday and he wanted me to get whatever she needed. . . . She really captured their hearts because she was down on their level. (I-7)

M-7 also observed, "[Emma] was punctual, organized, hardworking and driven [sic] to do her best each day" (PPEF 2/27).

Cognitive ability. During her undergraduate studies, Emma maintained an overall GPA of 3.82; her GPA in education courses was a 3.92. She scored 1070 on the SAT and 21 on the ACT, the second highest SAT score of the eight participants in the study. Emma received some small scholarships from the School of Education during her sophomore, junior, and senior years; other than that, she received no scholarships or financial aid (I-1; I-2).

Beliefs. Emma seemed to believe strongly in differentiating learning experiences for children. She stated,

> To me, [differentiation] is just something you have to do . . . I mean that's your job, regardless if you're [teaching] GT or not. You are always going to have different levels in your room. And, it's your job to do your best for those kids, and so you have to figure out their level and where to challenge them and how to meet them where they are and always keep them moving forward . . . (I-9)

Emma felt that establishing clear expectations and a stable environment was imperative when working with young children. She stated, "It is important to be positive, fair, and consistent with the students to show that the expectations are clear and enforced" (E-6).

In addition, Emma shared her belief that relating content to life experiences for children helped to engage them in the learning process, " It is important to access their prior knowledge about a topic and if possible to make it more applicable to them by using real-life examples" (E-11).

Campus and University

Schools (C-2 and C-6) and classroom context. Participating in the EC-4/GT dual certificate program, Emma spent one semester teaching at C-2 in the second grade and one semester at C-6 teaching in a GT pull-out classroom, working with identified gifted students in grades K through 5. During the first semester, there were five identified gifted students in her second grade classroom; the total student population of the class was 21 (I-3). The Class Background Study, which is part of the TxBESS Activity Profile, was missing from Emma's folder, so most information about the gender and ethnicity regarding students is not reportable. Emma did describe the two campuses in light of support she felt teachers received. Emma shared in her interview that teachers at C-2 received support in dealing with both GT and ELLs. She stated, ". . . at [C-2] I know there was support for ELL students and I know like the GT. So those were both two programs where the kiddos were pulled out when they needed that extra help" (I-4). She went on to describe other types of personnel support that was available at C-2, ". . . there was the Literacy Library Lab that was there and somebody whose job was to work that lab . . . I know the counselor would come in at different times and do lessons" (I-5). Emma did not seem to notice a great deal of support at C-6, describing the campus environment as

> a whole 'nother [sic] thing . . . I mean you are the pull-out program . . . As far as school-wide, I really don't know what I could say about other people that would support except the teachers would let [the children] leave their room [to come to GT]. (I-5)

In describing the learning experiences offered to children at C-2, Emma reported that all of the children received the same instruction. She noted, ". . . at [C-2, I] just did

not see a lot of [differentiated instruction] for those kids . . . and it was like, okay, I need to use this . . . I need to do better for those kids who aren't really receiving [differentiated learning experiences]" (I-6). In comparison, Emma described the learning environment in the GT classroom at C-6, saying

> I mean it was like [differentiated instruction] galore! . . . It was just very individualized and very product oriented . . . and the overall curriculum was very differentiated for each of those grade levels. I liked that . . . we did like research projects I remember. (I-10)

Relationships with the schools (C-2 and C-6), faculty, and peers. Emma reported having positive relationships and support from one mentor teacher, her peers, and the university faculty. When describing the difference in the two campuses, Emma gave a lot of credit to her mentor teacher at C-6 for helping her to understand the children at that urban campus, "I haven't been in a school quite like [C-6] . . . so I kind of took my lead from [M-7] and how she interacted with the kids and with the staff, and parents, and she really was my example for how to meet their needs" (I-8).

When asked about relationships with other interns, D-3 stated,

> I loved my, my [sic] group. And I think that being in the GT group you spend more time together, and I feel like you get to move up the years together. And, GT is so different, I think, the program . . . I don't know if it still is, but what everyone else was doing, and just having Dr. J. who pushes you. Well, like you need that support from people around you. But, yea, I had a great group. (I-6)

D-3 elaborated her feelings of support from her peers, describing her relationships with them, and the ease of communication in their interactions. She stated,

> I mean you are on the same level so you feel comfortable enough to say things that you wouldn't say to your mentor, or your professor, or you know. That's your time when you're like "Okay, I'm not okay" like "Are you not okay either?" And then you can be not okay together and figure it out. (I-15)

Emma alluded to the coursework and assignments that she was required to complete in the dual certificate program, explaining,

> I mean it was so hard, but that unit - that dang unit. Oh, my gosh! But it forces you to another level. And, yea, that was definitely good practice. And it pushed me forward to the next semester . . . to continue what I'd learned. (I-7)

She continued by describing the support she received from university faculty saying,

> . . . my professors were great! I mean I knew if I needed help with something, which I did, I knew that I could go to I-2 and ask for help. And, Dr. J . . . I felt the same thing even with Dr. W. I mean, I didn't have her my senior year, but I knew I could go ask her for help, too. (I-15)

Professional Standards

Emma included evidence in her efolio and in her interviews regarding her mastery of the knowledge and skills within the benchmark strands. Additional evidence was found in her intern supervisor and mentors' interviews and observations.

Strand one: Creating a positive learning environment. In her efolio, Emma described the ways that she addressed each of the learning environment benchmarks. For example, she reviewed the rules with the students when she taught her first lesson, "I had them describe how they could follow the rules and then I gave them some examples of how *not* to follow the rules" (E-1). Moreover, in managing behavior, she said, "I found that it is much easier to be positive and use students as good models for other students than to address individual negative behaviors drawing more attention to bad behavior" (E-6). Her mentor M-9 and her intern supervisor also noticed how Emma was positive with the students, "She is very positive with the students, yet she can be firm when they do not follow the rules" (M-9 FPDC 9/26); "[Emma] used many positive comments to reinforce desired behaviors" (IS-2 CVR 11/12). Her interaction data corroborated her

mentor and intern supervisor's comments. The relationship between her academic praises to her corrections improved from 7:4 to 12:1 in a two-week time span. Her ability to create a positive environment was also supported by student engagement data; students were engaged 94% (E-11), 97% (E-1), and 100% (E-7) across three different classroom observations.

Strand two: Assessment. Emma provided evidence to support her proficiency in the area of assessment. She made a concerted effort to ensure that her assessment practices matched the knowledge of her students as well as their particular characteristics, using formative assessment to check for prior knowledge, questioning to assess understanding, and varying assessments to differentiate and measure skill acquisition of individual children. M-7 noted during a formal observation, "Students were given different problems as the teacher differentiated instruction" (CVR 11/12).

Examples of evidence to support Emma's use of questioning were discovered throughout archival documents. Her university supervisor noted her prowess in this area on two different occasions, "The teacher assessed prior knowledge of her students through questioning" (IS-2 CVR 2/15; IS-2 CVR 3/25). M-9 corroborated I-2's observations, writing, "Questioning was used throughout the lesson to assess student knowledge," and "Questions were directed to the whole group as well as to individual students" (M-7 CVR 2/26).

I-2 noted Emma's use of various formative and summative assessments to monitor the growth of her students, "Teacher took anecdotal notes on student progress as they interacted with their learning environment. The teacher closed the lesson by having

children describe their learning during the critical thinking/divergent thinking activity" (IS 2 CVR 2/15). In another lesson, IS-2 observed,

> The teacher had each student write problems on white boards and hold up their boards when they had finished working their problems so she could check for understanding . . . as students worked independently, the teacher closely monitored their work and provided one-on-one assistance when needed. (CVR 11/12)

Emma communicated assessment information to the students, continually keeping students apprised of their progress. For example, M-9 noted during an observation of Emma, "[Emma] used individual passports to assess students' progress. They had an oral conference and then [Emma] checked off students before they were allowed to move on" (CVR 4/9). In addition, Emma met frequently with students to discuss their academic growth. She wrote in her efolio, "I was able to share my quantitative records with the students on a regular basis so that they were informed of their progress in my class" (E-5). M-7 corroborated these individual meetings with students, noting on a formal observation form, "[Emma] consistently communicated progress with all students. Students are given immediate feedback for a job well done" (E-5).

Emma also effectively communicated student assessment information to other professionals and parents. M-7 shared, "[Emma] assisted [her mentor] as [they] began the process of screening spring semester gifted and talented nominees" and participated in an ARE (Annual Review and Evaluation) meeting (E-9). Emma described these experiences,

> Through these quantitative and qualitative assessments my mentor teacher and I were able to present this information to a committee of professionals. We then deliberated over these assessments and decided who would be referred to the gifted and talented program. (E-9)

In another professional setting, Emma contributed to an ARD meeting at which parents and other professionals were present, “I was able to contribute information about the child’s strengths and weaknesses that I had observed in the classroom” (E-10).

Strand three: Curriculum planning. As Emma embarked on her experiences as an intern, she quickly realized that following the textbook was not going to keep the children engaged,

> . . . At times the curriculum seemed to drag and they were not too interested in the lessons. I discovered quickly that my students loved doing science experiments. I began to look outside the curriculum to extend our lessons with more hands-on activities. The students responded well to the new adaptations and were engaged in the lessons. I also added a novel about the Dust Bowl that incorporates the journal entries from a boy close to their age. (E-5)

Emma organized knowledge for the students in a variety of ways, depending on the content she was teaching. While observing, IS-2 noted that Emma related “the lesson today to prior learning” (IS-2 CVR 10/4) and “. . . guided application of knowledge; starting with concrete experiences and moving to more abstract learning” (IS-2 CVR 2/15). Another example of Emma’s ability to organize knowledge was clearly described in an efolio entry, “I would also think about the different kinds of knowledge that they would be learning. I would always begin my lessons by asking questions and then stating what we would be learning about [the three types of knowledge]” (E-6). IS-2 summarized a lesson by stating, “You included declarative (time), procedural (the process of telling time), and conditional (when one needs to tell time) knowledge in your lesson!” (CVR 10/4).

Emma provided the opportunity for students to use information independently to ensure mastery. Not only did the children practice skills independently after they were

taught, but they also conducted independent research on an invention of their choice, "[T]he students were allowed to choose from this list the one that they wanted to learn the most about" (E-15). Emma also provided "the option of extended learning by creating an Inventor's Packet" (E-15). M-9 applauded Emma's classroom practices in varying activities, using a variety of grouping strategies, and providing students with authentic experiences, "In her science unit on 'force,' [Emma] used the textbook for a reading selection on magnets, vocabulary games, and hands-on experiments to teach the students. She also used whole group instruction as well as cooperative groups." She also went over the "scientific method and how the students should behave like real scientists when performing the magnet experiments" (E-14). M-9 added, "Emma's lessons are always well planned and appropriate to the learning and the curriculum" (PPEF 10/8). M-7 also noted Emma's attention to providing students with learning opportunities that highlighted the methods from a variety of disciplines. For example, during an observation, M-7 wrote, "It was obvious that the students 'got it' when it came to considerations and acting/thinking like a judge" (E-7).

Strand four: Professional development and communication. Emma critically reflected on her practice, always working to improve the students' learning experiences. If one approach did not work, Emma willingly shifted gears and tried another strategy, "This lesson started off with good intentions, but went downhill quickly. It was evident that the students did not want me to stand at the front of the room and talk to them. I had to think about my students' needs and I changed my communication style, my role as their teacher, the assessments I used, and had them take on a leadership role" (E-13). On another benchmark, she noted, "Often, while writing my reflection at the end of the week,

I would think about the different areas that I could improve on or a new experience I had that week" (E-16).

Emma seemed to enjoy being a part of the community of practice, interacting with teachers, and learning from her experiences. Emma said, "I attended weekly grade level meetings that often involved the principal. While in these meetings I was able to relate curriculum planning ideas, assessment information, field trip ideas, and any concerns that I had" (E-10). M-9 noted Emma's involvement in the school activities, "[She] attends our weekly team meetings and has participated in several parent conferences" (M-9 PPEF 10/8).

Emma also participated in professional development and co-presented at a math conference with M-7, "[Emma] was a presenter (with me) at the regional Central Texas Council of Teachers of Mathematics. She was wonderful as a speaker sharing ideas with other professionals" (M-7 PPEF 2/27). She also participated as a master teacher's assistant in the "Interdisciplinary Creative Problem Solving Conference (ICPCS) at Baylor" (E-16), a state-wide conference for gifted and talented secondary students.

Emma seemed to realize the value of ongoing communication with parents,

> I also participated in numerous parent conferences which provided a great opportunity to relate important information about each student to the parents. This also allowed the parents to communicate with me in between reporting periods. I also welcomed the parents to contact me if they needed to. Parents did take me up on this offer and I frequently discussed such things like the child's progress, strengths, or weaknesses in the classroom. At times I even discussed with the parent concerns they had about their child's social interactions at school. They always were grateful when I took the time to communicate with them and it was a good experience to have. (E-10)

In summary, on her mid-semester and final reports, Emma was rated proficient in all but three areas (PPEF 10/8; PPEF 4/21). In the other areas, she was rated competent.

Emma met all of the professional standards as described in the benchmarks. Her university supervisors rated each of the benchmark areas as showing proficiency. Moreover, she passed the required state tests for both EC-4 and gifted and talented certificates.

Outcomes

Rate. In the area of providing for rate differences, Emma frequently used pre-assessments. In E-14, she noted that she formed ability groups "created from pre-assessment [information]." On E-7 and E-12, she also described how she actually used pre-assessment information,

> I used pre-assessments which helped drive my instruction. These assessments allowed me to gauge each student's knowledge of a topic and also then I wasn't wasting their time or mine with material that they already knew. These assessments helped me to better understand my students' characteristics and consider them when I was planning my lessons. (E-7)
>
> I also used on-going assessments while I was teaching to be able to adapt the lesson to my students' needs. For example, while teaching my students about how to tell time I found that they had already mastered time to the hour. I had them move onto telling time to the half four and those who were ready practiced more difficult times. (E-12)

Her mentors also corroborated Emma's use of pre-assessments,

> Emma has done two pre-assessments in math and science as well as formal assessments in math and reading (M-9 PPEF 10/8) and used individual passports to assess students' progress. They had an oral conference and then [Emma] checked off students before they were allowed to move on. (M-7 CVR 4/9)

Her intern supervisor also observed, "Students were given different problems as the teacher differentiated instruction" (CVR 11/12).

The use of pre-assessments at varied times that allowed students to progress to new knowledge and skills places Emma at the highest level of rate − R9 (Johnsen et al., 2002).

Content. Emma incorporated critical and creative thinking into her lessons and organized her content around the TEKS, state standards, and themes. For example, her intern supervisor observed, "Students responded with various answers; all of which were accepted by the teacher and used to elevate thinking" (IS-2 CVR 2/15). She organized several units around themes. These focused on "forces," "change," and "decision making" (E-11; E-12). For example,

> During the group activity [Emma] modeled for them how to make decisions. Students used evaluative thinking to make criterion-based judgments. The class "brainstormed" together and all arrived at the same conclusion. Their conclusion was based on factual information, not an opinion. (M-7 CVR 2/26)

While Emma did not describe how she used student performance or interest to determine her content (the sixth and seventh levels of content), she did consistently use interdisciplinary curriculum and included generalizations within her unit. This evidence would place her at the fourth level of content − C4 (Johnsen et al., 2002).

Preference. Emma aligned her lessons with the TEKS and varied her activities. Her mentor described this variation with her students. M-7 observed, "[Emma] varied activities to keep students engaged" (M-7 CVR 2/26) and also noted how students were allowed choices in the ways that they showed their knowledge,

> One student shared her love of music by 'singing her reflection at the music station. Students were allowed to express their creativity through art and poetry . . . Students were allowed to showcase their best piece at the end of the lesson. (M-7 CVR 4/9)

In the area of preference, therefore, Emma would be rated at the highest level of preference – P5, where students are allowed the choice of "varied tasks and/or response dimensions" (Johnsen et al., 2002, p. 49).

Environment. Emma arranged her classroom into learning centers. As her mentor noted, "All materials were organized and in place at each center" (M-7 CVR 4/9). These centers varied based on the content of the lesson and were organized so that the students could use the materials independently, "All instructions were typed in detail and placed at each center" (M-7 CVR 4/9). Emma did not mention the use of school and/or community as learning centers so the arrangement of the learning environment would place her at the next highest level in the environment strand – E5 (Johnsen et al., 2002).

Summary of outcomes. Emma was rated at the highest levels of rate and preference. She allowed the students to progress according to pre-assessment information and allowed them to select how they might show their knowledge and skills (i. e., R9 and P5). While she organized her classroom into learning centers to accommodate this variation of tasks and rate, she did not use other areas outside of the school as learning opportunities, which placed her at the P5 level, the next highest level in the preference strand. Her weakest area was in content where she was rated at the fourth out of seven levels. She regularly used themes and generalizations, but did not change the sequence of the knowledge or skills for each student or use student interest to reorganize her content.

In conclusion, Emma provided for individual differences at the highest levels in rate and preference followed by environment. Her relatively weakest area was in content since she didn't vary the sequence of knowledge and skills or incorporate student interest.

Case Study: Pre-service Teacher Mary

Individual Characteristics

Demographics and background. Mary was a white female who was 21 years old at the beginning of her intern year. She lived in New Orleans and went to a private school until the second grade, a non-Catholic school for the third grade, and a public school for the fourth grade. She then moved to New Guinea where she attended an international school for the 5th grade. After her fifth grade year, she and her family moved to Houston where she finished her K-12 public school education in a large suburban school district.

When she came to Baylor, she majored in political science and planned to go to law school, but she said, "that just did not work" (I-1). She then took a test at the Baylor Career Counseling Center. Test results indicated that she should be a teacher. Upon learning of the results, Mary recalled,

> I thought that teaching would be the worst job in the world growing up. After I took the test I started thinking about it and I thought that maybe that would be a good job for me and I thought about it more and realized that probably would be the best job for me. That is how I got into it and I am glad I did. (I-2)

According to her efolio, Mary mentioned that she attended professional development that addressed higher-level questions and inclusion (E-16); her mentor also said that she attended "numerous staff development sessions and realizes the importance of professional growth" (E-16). Mary particularly emphasized her attendance at the

diabetes training at the Region XII because she was able to identify early signs in one of her children (E-16; I-2).

Her university supervisor (IS-1) mentioned Mary was "very to herself" but "conscientious of deadlines and expectations" (I-5). M-2 reported that "she is organized, open to suggestions, positive and driven to do a good job in whatever she undertakes" (PPEF 10/1). M-7 also mentioned that she did her job—"what she's supposed to do" (I-8). Neither suggested that Mary volunteered for "extra after-hours activities" (M2, I-8). However, Mary did work with other candidates on planning and curriculum, "[we were] trying to figure out what kinds of lessons we should make—especially for the science—because we were doing the same thing but she was doing third and I was doing fourth" (I-8). Her roommate was also an intern and they talked "a lot about what to do for my kids" (I-8).

Cognitive ability. During her undergraduate studies, Mary maintained an overall GPA of 3.33; her GPA in education courses was a 3.78. She scored a 1070 on the SAT.

Beliefs. Mary shared her beliefs in the importance of knowing students and understanding their backgrounds, the need for differentiating instruction to meet the needs of individual children, equity for all students, and the necessity of communicating high expectations in a learning environment in which students set their own goals.

In response to a question about the importance of a teacher knowing about the background of students, Mary believed,

> It is important for me to know what the students enjoy learning about as well as any information about [sic], that might affect their ability to learn. These things are important because they could either make the student more interested in learning, if it is a topic they enjoy; or prohibit the student from being able to

> complete their work if they have a problem at home that they can not [sic] get off of their mind. (T CBS 6)

She also believed strongly in equity for students, "I feel that it is very important to interact equally with all students throughout the day" (T DCN 2a).

In terms of differentiation, Mary "believe[s] that it is important to pace the lesson based on student understanding because it will help not waist [sic] time, or bore the students because they already understand the information" (T PFL1c). She added in her interview:

> "I definitely believe that . . . in an ideal world you would differentiate for every student every single day . . . that would be amazing. It is very difficult to do . . . especially when you get caught up in doing things, but I definitely think it is a very important thing to do. Not any one student is going to be able to do the same exact thing as another one. They are all going to do different things at different times and need different things. I really believe in it. I think it is very important. (I-9)

Mary felt that effective communication and high expectations set the stage for student success. On her TxBESS plan, she expressed, "I found that if the students know what you are grading them on, and your expectations are high, they will for the most part reach to meet their goals" (TBDC-4a).

Mary did, however, mention after leaving Baylor that her strong beliefs sometimes interfered with learning new information:

> When I was in Baylor - I mean, I will be honest, I was sitting there and you guys were saying, these low socioeconomic kids, they are going to have different backgrounds that they are coming from and you are going to have to have different ways to reach them and I was thinking, well, that's just silly, they should all just be the same. (I-7)

She added, that her experiences have changed her beliefs. "Everything you all told us . . . I mean, we went over all the different types of exceptionalities and I think it

was my fault that I wasn't really aware of what was going on with those students. But, I mean, you learn" (I-7).

In summary, Mary believes in differentiating and pacing instruction for individual students—even more so with her current experiences. She noted, however, that while differentiating is important, it is not easy for teachers to accomplish.

Campus and University

Schools and classroom context. According to information recorded in the TxBESS Class Background Study by Mary, the student population in her fourth grade classroom consisted of 19 students, 10 females and 9 males. Two of the students were English Language Learners. Mary noted that one of the students was diagnosed with attention deficit/hyperactivity disorder and one was diagnosed with emotional disturbance. Nine of the 19 children in the classroom were identified as gifted and talented (T CBS 3). Of the 19 students in the classroom, 13 were White, two were African American, and four were Hispanic (T CBS 1-6). The candidate reported that resource persons available to her at C-1 included administrators, counselors, media center staff, her mentor, university faculty, and members of the fourth grade teaching team.

Mary spent her first semester in a GT pull-out program at C-6 and her second semester in a general education classroom. The teachers at the general education campus (C-1) mentioned the support from the principal and fellow teachers:

> I feel like the principals are very supportive – anytime we have a problem, I feel like I can go to either one of them and talk to them. . . . our counselor is always there for us to help us out [sic]. As far as going to our grade-level leaders, they are there to help us out and do what we need. This is a very supportive campus to work with. (M-2, I-1)

The university supervisor (IS-1) noted that all of Mary's mentors

> embraced anything that the girls would bring into the classroom. Although they could have certainly suggested things, and I am sure that they did, I just remember mainly that they were very supportive of whatever the students wanted to bring in. (I-3)

Mary discovered,

> The small groups and the curriculum in her GT placements allowed her to do more independent study projects. [On the other hand], in her general education classroom, [the students] were all expected to do the fourth grade work . . . like they were all expected to study Texas history or whatever . . . so that was a little more difficult to differentiate. (Mary I)

Mary did have access to technology (SmartBoards), was able to view center-based instruction, and use literature circles when she was in the general education classroom (M-2, I-11).

During Mary's general education placement, she also noted that the teachers were supported by the administration (e.g., they received special funds to attend NASA), and when the GT program was threatened, the principal supported its retention. On the other hand during Mary's gifted education placement, she noted that the "students were not really pulled that often for GT services" (I-4) and the teacher did not receive any additional financial support although the principal did attend identification and planning meetings.

Relationship with schools, faculty, and peers. Mary's mentor viewed one of her major roles as modeling effective classroom practices, "usually, I serve as an example for them. They come in and watch us teach, we answer questions about specific kids, about the teaching, about the curriculum" (M-2, I-3). Mary noticed that exceptionality did not seem to affect the mentors' expectations, "My first assignment was a pull-out GT

program and with all GT kids we had – some of them were low socioeconomic – but she treated them all the same" (I-4). Mary added,

> Her curriculum lent itself much more to differentiating. I don't recall students within her class being pre-assessed. . . . They did fun and creative things and she was able to do that because she didn't have to teach the meat and potatoes of it. She was allowed to let them think outside the box and do fun and innovative things.

Her university supervisor corroborated Mary's observations by noticing that

> in [the GT pull-out] classroom some really neat and unusual things she would do with her students, which led me to believe and think that she did also believe that students require more than just the pen and paper task to learn. I remember her class being very creative and the students enjoyed learning. (I-2)

Mary also noted that her mentors in the general education classroom also differentiated for their students:

> They were able to study things they wanted to study. They had them doing hands-on projects where they got to design a lab for outer space to grow plants and we had all the tools that they needed, like Styrofoam and other materials. And, in reading and social studies, they were reading chapter books and describing it in groups. I mean they really let them run their own education in a way. Not completely, but they had more control over their education than kids, I think, in a normal classroom would. (I-4)

On the other hand, the university supervisor noticed, "teachers were not doing or willing to do pre-assessment to discover where their students were (IS-1, I-3).

Mary felt that "all three of her mentors were really, really good" (I-9). Besides having examples of differentiation within the classroom, Mary also noted:

> [The mentor] would sit down and teach [math] to me so that I could teach it to them because I just – it sounds terrible, it was just fourth grade math, but math just scares me in general. She was very helpful and patient. (Mary I)

Moreover, she "worked a lot with [both] teachers [in the general education classroom setting] trying to figure out what would be the best way to do things. . . . The teachers

. . . also had the expertise to work with diverse learners" (Mary I). Mary's mentor noted that the two interns and the two mentor teachers would do a lot of planning together, "if they're working on the same TAKS objective, we'll plan for that together. If we're doing one of our big units, then we'll all get together and collaborate on a lot of that" (M-2; I-8; I-9).

While the mentors provided guidance, they also allowed Mary to experiment with new ideas,

> It's a really great role model and it goes both ways just because they also bring new ideas for us to . . . when they come in with new ideas, a lot of times we can help them just tweak it or say, "You might want to try it this way versus the way you have it planned," just from our experience. We can give them that advice. Sometimes their ideas, I will think, "I'm not sure that's going to work," but I will want to see what happens, "Try it," and they'll surprise me and the kids will do exactly what they want them to do (M-2; I-3; I-4).

Mary worked with other candidates who were in the dual certificate program. They planned lessons together, particularly when they were in the same school setting. She also observed, "In class we would all support each other. If someone was having an issue we would all talk about it on Tuesday night [during class time] (I-12).

Mary said that her university supervisor was "very helpful. If you needed her you could call her or email her and she was right back to you" (I-11). On the other hand, Mary "didn't ask her as much about what to do with diverse students. I mean if I did, I am sure she would have helped me. I just never did ask her about that. I was just trying to get the lessons out in time" (I-9).

The university supervisor did understand the concept of differentiation and would have been able to help Mary in that area. In describing practices related to differentiation, the university supervisor noted,

> Instruction should not be driven by the curriculum. Instruction should be driven by students and their needs. Pre-assessment plays a huge part in looking at the whole picture of differentiated instruction and just in the beginning to discover exactly what students need. . . . So I think it is basically driven by pre-assessments, learning and discovering where your students are and then giving them what they need in regards to the curriculum. (I-3)

The university supervisor also felt that Mary and the other dual certificate interns were supported by university faculty,

> While I was instructing the students they were also in Dr. J's classes each semester, fall and spring. I certainly feel that class and her expertise, as well as her guidance and mentorship, would be probably one of their biggest supports of using and becoming aware of instruction in that domain. (I-3)

During her interview, Mary was able to describe the specific topics and experiences that helped her become a teacher. For example,

> The very first GT class where we had the one student and we did the GT project with them . . . that was very interesting and we got to go through the whole process with one student (I, p. 4). She added that it was also helpful to work with an individual student in a whole group setting, "seeing both sides, seeing how to do it for a small group, and for a whole large group." (I-6)

She also shared that she "still [had] my binder [from her internship] and I look back on it to try and get ideas. I've got my math binder from that one class. That was a good one. And, it helps me think about each student (Mary I).

Mary did feel prepared to teach gifted students (e.g., "how the gifted child thinks and the different things they need to support their learning and differentiation, Interview, p. 7). On the other hand, Mary said that she did not feel as prepared to teach special education students (I-7).

Professional Standards

Mary received proficient in every area of her TxBESS, and no action plan was included. She was also rated proficient in every strand on her efolio by both faculty members who assessed her efolio (overall score of 8 out of a possible 9). On her three-way conference forms, her relative strengths were in the areas of creating a positive learning environment and in curriculum planning; her weakness was in assessment, professional development, and communication. On her final three-way conference form, she was rated a "3" (i.e., "proficient") in all areas. Strengths and weaknesses within each of the strand areas are noted below.

Strand one: Creating a positive learning environment. The mentors and Mary noted the importance of establishing expectations (E-1). For example, "At the beginning of every lesson, I explain to the students what we will be doing in class that day" (T CBS 11); "I make sure that I model all of the rules of the social contract every day, by listening when students are talking, saying please and thank you, and always showing them respect" (T CBS 13).

She also noted how important that differential reinforcement was for creating a positive environment (E-6). For example, referring to a child with ADHD who was not accepted by her peers, she said,

> He had a very hard time getting along with other students and getting his work done because he was so easily distracted. I would work with this student to stay on task, but also I worked with the rest of the class to help them to become kinder to him. (T DCN 4f)

Strand two: Assessment. Mary demonstrated her use of assessment strategies in numerous ways in her efolio and TxBESS Activity Profile. She referred to the use of

questioning to assess student acquisition of knowledge and skills, stating, "Questioning the students based on their understanding will help me understand what they comprehend and what they are still behind on" (E-9) (T PFL1c).

Mary also provided evidence of using pre- and post-assessments, qualitative forms of assessment, and recordkeeping to monitor student progress,

> I recorded all of their pre- and post-assessments, and anecdotal notes that I took during class about their understanding of the topics, along with anything else that happened during the day. I know that having multiple forms of data on a student is beneficial to the teacher to help them plan lessons for the students, and to keep track of their progress. (E-5; E9) (T CBS 4b)

She informed students of their progress, allowing them to monitor their own growth, believing that by doing so, she would encourage them to take ownership in their learning,

> . . . the records had not only quantitative but also qualitative records for the students to look over and review. After seeing the first progress report, all of my students were motivated to work hard and improve their grades. I saw improvement in all of the students . . . because they all knew what they needed to do to increase their scores. (E-5)

Strand three: Curriculum planning. Mary mentioned numerous times the importance of addressing the state standards in the planning and implementation of her lessons. For example, she wrote in her efolio,

> In all of my lessons for every subject, I would match the knowledge the students would be learning to the TEKS [Texas Essential Knowledge and Skills]. I made sure the TEKS were not only involved in the lesson, but also in the product produced from the lesson. (E-12)

Referencing an understanding that it is important for the teacher to know the content that he/she will be teaching, Mary states,

> Before I teach any lesson, I make sure that I have as much knowledge as possible on the content" (T DCN 1a). She also made a point of sharing the lesson objectives with her students before each learning experience, I would start every lesson by going over the class social contract and going over the objectives of the

> day. I would explain a little bit about what we would be learning and the type of things we would be doing. . . . I found that doing this would help prepare the students for the rest of their time in class because they knew what to expect. (E-11)

Her supervisor also noted, "[Mary] used the archaeological tools and magazines to focus the students on your objective" (CVR, 10/11).

Mary provided evidence in her efolio to support her understanding and teaching the three types of knowledge,

> I introduced the students to the words declarative, procedural, and strategic/conditional by creating exit tickets that [they] had to complete before they left for the day. It was important that the students know and understand these words and what they mean because it would help them understand what they were doing, how they were going to do it, and when they would be able to use it in real life. (E-11)

Strand four: Professional development and communication. During her general education placement, Mary sent letters home to parents to introduce herself and ongoing reports in the students' take-home folders (T DCN 4c). She wrote notes home to parents in their grade paper folders each week and interacted with parents who accompanied students on a field trip to NASA,

> We had 20 parents attend the trip, and 10 of these were parents of my students. This provided me with a wonderful opportunity to meet the parents, and spend some time with them and their student. Having an open forum of communication with parents is very important to make sure that all people involved in the students' education are on the same page. (E-17)

Mary also communicated regularly with students in her classroom, not just once a week when her graded papers went home (E-10). Her mentor teacher (M-2) within the GT pull-out program noted on her Professional Practice Feedback Form that Mary ". . . she has a great work ethic and is constantly helping out" (9/6). In addition, M-2 commented on the way that she and Mary shared ideas and learned from each other, "I

think we make a good team. . . . she's taught me a few things about technology that will enable me to become a better teacher" (PPF, 10/1).

Mary participated in a variety of professional development experiences. She attended faculty meetings weekly and interacted on a regular basis with other professionals. She explained,

> On days where the students would be released early, we would have professional development meetings where we would learn about new ways to teach math, inclusion, as well as asking student higher level questions. During these professional development meetings, I had a lot of time to speak to other teachers and professionals in the building and get ideas form them about lessons and behavior management. (E-16)

Mary communicated daily with her mentor teachers about "students and their performance" (E-17). Mary also provided evidence in her efolio to substantiate her using feedback on her teaching to improve her performance and provide more effective learning experiences for her students. She wrote about a conference she had with M-2,

> Reflecting with my mentor about the lesson really helped me focus in on the aspects of teaching that I need more work on. I used her feedback, as well as my reflections on the lesson to help improve my lesson plans, work on my assessment methods, and writing and asking higher level questions. (E-16)

In summary, Mary was rated proficient in all of the areas on her final three-way conference, her TxBESS, and her efolio (e.g., creating a positive learning environment [7.9], curriculum planning [7.4], assessment [7.3], and professional development and communication [7.5]). She managed a classroom, used varied and formative assessments, planned instruction around standards and types of knowledge, worked as a professional team member, communicated with parents and students effectively, and used feedback for improving her teaching.

Outcomes

Rate. D-4 referred to ways that she used pre-assessment and ongoing assessment in planning and implementing curriculum.

> During this unit, I took multiple forms of assessment on each student. I started with a pre-assessment over Ancient Chinese Culture to see what background knowledge they had. I then used this knowledge to differentiate my lessons and materials for each student. During each day, I would take a qualitative assessment over the students work on the assignment. This helped me to know day-to-day what each student understood, and who was going to need extra support. (E-9)

She continued using pre-assessments to plan her instruction during her time in the general education classroom,

> I did a lesson with the fifth grade students over different types of systems. I pre-assessed all of the students before creating my lesson plans so I could differentiate in not only the product but also in the content and the assessment. (E-13)

Baylor faculty who rated her efolio also noted, "Your evidence indicated you used assessment continually throughout the unit. I liked the student self-evaluation using the rubric" (E-9 efolio assessment).

During the time that students in her GT classroom participated in independent study, Mary differentiated instruction by providing individual students with packets containing content that matched their levels of content mastery on the topic they had chosen,

> Based on their chosen topics and the amount of background knowledge they had on the subjects, I provided the students with a packet of information about their topic, an information chart for all students to fill out, and a page of suitable websites with information on their topics. This way all of the students had materials that matched their level of knowledge. (E-12)

Faculty who assessed the efolio also noted, “The students worked independently in the design of their products. You also guided research in their study of ancient China” (E-15 efolio assessment).

The use of pre-assessments at a set time, allowing students to progress to new knowledge and skills places Mary at the next to highest level of rate − R8. She did not indicate that students were allowed to progress to new content or to pursue concepts in greater depth.

Content. Based on the characteristics of learners in the classroom, Mary planned a variety of questions before the lessons that ranged from low to higher levels using Bloom’s Taxonomy (T DCN 3b). She also used student performance to plan her instruction. For example, during her second semester when Mary was in the general education classroom, she planned her unit based on each student’s assessment: “I decided if the students would be working more independently on researching a system or if they would be working in a more structured manner with a body system, something they had some prior knowledge on” (E-13). She also paid particular attention to special needs students,“. . . I have two ELL students, and even though they do not normally have a hard time understanding the information, I will make sure that I am available to further explain the information” (T PFL Id).

Mary also taught students strategies that were authentic to the methods of the discipline,

> I worked with students on science every day. We would visit the science lab at least once a week, where the students had the opportunity to act as a scientist. I made sure they consistently used the correct scientific vocabulary in the lab such as data, hypothesis, materials, and observations. This helped the students think

> like a scientist and help [sic] them to use and understand scientific terms that they will need in the future. (E-14)

She was careful to make sure that the students understood the important attributes of the products that they were developing. For example, she showed a brochure that she created providing an example of a product of one of the students' units (CVR, 9/27).

While Mary used interest surveys to develop activities for her TxBESS lesson (T CBS 1b) and provided opportunities for students in her classroom to engage in independent study, the students' choices of topic were limited to the unit (e.g., Ancient Chinese Culture or Texas history) (e.g., "I allowed the students to choose their own topic to research on Ancient Chinese culture" [E-12]).

Overall, Mary's evidence indicates that she included creative and critical thinking skills, that she integrated multiple disciplines, and used authentic methods. However, it is unclear if she used broad-based themes other than those associated with her Ancient China unit (e.g., "cultures). She did not alter her curriculum sequence based on student performance nor did she use their interest in guiding the content. She would therefore be rated at a C4 level on the Classroom Instructional Practices Scale (Johnsen et al., 2002).

Preference. In reference to selection of materials for a particular lesson with fourth grade students, Mary stated, "I chose these materials because they facilitate the learners. There are both tactile and visual materials" (TID-11). Her mentor also noted that Mary provided students with a variety of choices. For example, students were allowed to choose their individual projects within an archaeology unit (e.g., brochure, PowerPoint) (CVR, 9/27). In addition, during study of the Alamo, Mary offered a variety of products from which her students could choose to demonstrate mastery of content,

> At the beginning of the semester, I gave all of the students an interest inventory to see what form of assessment was their favorite. I used this information to help me create assessments for all of the students. . . . Students were allowed to choose from three different assessments to show their knowledge of the Alamo. They could write a letter to an Alamo hero, create a newspaper article from a day during the siege of the Alamo, or take a written assessment over the information we covered. (E-8)

Mary provided the students with a variety of choices in learning the knowledge and skills within circumscribed units of study, which would place her at the highest level of preference – P5 (Johnsen et al., 2002).

Environment. Mary allowed students to group themselves for an activity in which the students were creating a flag to represent their GT class (T DCN 1e) and to conduct research independently on a new "ology" (E-15). Her efolio photos show students working together in science centers, independently, and gathering data outside the school building. These variations in the environment would place her at the highest level of the environment strand of the Classroom Instructional Practices Scale – E6 (Johnsen et al., 2002).

Summary of outcomes. Mary was rated at the highest levels of environment and preference (e.g., E6 and P4). She organized learning centers and allowed students choices of how they were going to learn. In the area of rate, she designed curriculum around pre-assessments, but did not allow the students to move beyond the unit's circumscribed knowledge and skills (e.g., R8). Her weakest area was in content where she was rated four out of a possible seven. She did use authentic methods and organized one unit around the theme of "cultures." However, she did not change the sequence of the knowledge or skills for each student or use student interest to reorganize her content.

Cross-Case Analysis

In the cross case analysis, factors influencing instructional practices with diverse students were used to organize the data (Table 1). These factors included campus and university variables, individual characteristics, and professional standards. The researcher aggregated data across eight different cases into categories and examined the similarities and differences between each case. The cross-case analysis provided an opportunity to look for patterns and draw conclusions.

Individual Characteristics

These individual characteristics were considered as possible factors influencing the candidates' instructional practices with diverse students: background and demographic characteristics, cognitive ability, beliefs, and social support outside the university and school environments.

Background and demographic characteristics. With the exception of one candidate (Amy), all of the candidates were White, traditional students, and 21 years of age at the beginning of the study. Among the candidates four attended private schools (e.g., Jan, Kay, Emma, Mary) and four attended public schools (e. g., Amy, Bev, Lynn, Anne) the majority of their K-12 schooling. Two of the candidates who had attended private school did attend a public school during their junior and senior years (e.g., Emma and Jan). Two of the candidates studied abroad (Lynn and Mary). All of the general education candidates received financial aid but only one of the dual certificate candidates did (Emma). With regard to scholarships, all but one (Mary) of the dual certificate

candidates and one of the general education candidates (Jan) received scholarships from public and/or private sources.

Only one candidate made reference to support that she received from family, "I chose to come to Baylor . . . Well, my mom was pushing for it and I also heard that they had a very good educational program" (Amy; I-1). None of the other candidates mentioned family as supporting their educational choices or program.

Cognitive ability. In terms of estimates of cognitive ability, Lynn, Anne, and Bev scored significantly higher (e.g., ≥ 60 points) on their SAT than the other candidates (Cloud, 2006). The overall GPA was highest for Lynn and Emma. Between the two groups, the dual certificate candidates tended to score higher on the SAT and had higher GPAs. The average SAT score for all of the candidates was 1096 (Table 10).

Table 10

Individual Characteristics of Cognitive Ability

Candidate	SAT score	ACT score	GPA-Overall	GPA-Education
Amy	1060	NA	3.50	3.62
Bev	1150	NA	3.45	3.88
Jan	1040	NA	3.09	3.39
Kay	1030	NA	3.23	3.80
Lynn	1160	28	3.95	3.96
Anne	1190	24	3.64	3.86
Emma	1070	21	3.82	3.92
Mary	1070	NA	3.33	3.78

The dual certificate candidates' average score was 1122; the general education candidates' average score was 1070. The average GPA in education courses for all the participants was 3.78. For general education candidates, it was 3.67; for dual certificates, 3.88. Their average GPA in all of their courses at the University was 3.50. For general education candidates, it was 3.32; for dual certificates, 3.69. Kay did mention that she struggled with learning and needed special attention.

Beliefs. The majority of the candidates stated beliefs in three areas: classroom environment, curriculum, and individual differences. In the classroom environment area, candidates from both certificate areas mentioned the importance of establishing routines and procedures and clear expectations to engender respect and effective communication. In the curricular area, candidates stated that differentiation was important, particularly relating students' past knowledge or experiences to instruction. In the individual differences area, candidates felt that it was important to learn about the background and history of the children. Differences were noted among the candidates in the ways that they interpreted specific concepts such as "differentiation." For example, all of the dual certificate candidates mentioned that learning experiences needed to be differentiated; while one general education candidate spoke of differentiation as gearing up and gearing down. Two of the dual certificate candidates talked about the assessment area. One stated, "Assessment must drive instruction;" the other said, "I think a big component of differentiating is a lot of allowing students to work at different paces, and to accelerate and compact where they show that they've mastered something" (Lynn; I-6). Two of the dual certificate candidates also mentioned the importance of monitoring student's behavior and of keeping progress records. Two of the general education candidates (Bev

and Jan) talked more about the importance of the broader learning community of the school. One (Bev) planned activities with the special education teacher. Some important belief areas were mentioned only once: professional development and relationships with parents. For example, one general education candidate mentioned the importance of professional development, "enhancing one's knowledge and skills is important;" and in working with parents, "In communicating with parents, it's important to establish a trusting relationship" (Bev; E-18).

Campus

This section will describe the similarities and differences between campuses—their student demographics, campus supervision and social support, material resources, and the candidates' integration into the community of practice.

School and classroom context. With the exception of one general education candidate (Amy), all of the candidates interned in schools with students from diverse backgrounds (i.e., the majority of the students were minority and/or economically disadvantaged). As expected, in those schools with more diversity, there were also more students identified as being at risk and limited English proficient. Across all campuses the student teacher ratio averaged 15:1. No outstanding differences were noted across classrooms where candidates were placed, although dual certificate candidates who were in pull-out programs worked with fewer students per class period.

Relationships with schools, faculty, and peers. All of the candidates talked about a positive relationship with their mentor teachers in their benchmarks. For example, three of the dual certificate candidates described how much they learned from observing

and modeling their mentor teacher. Relationships were established through regularly scheduled meetings for planning and reflecting, freedom to implement lessons, collaboration, and support. However, when interviewed a year later, three of the candidates (Amy, Jan, Emma) described challenges in relating to their mentors. The length of the challenge varied for each of the three candidates. The dual certificate candidate (Emma) had a positive relationship with one mentor and a difficult relationship with the other; one of the general education candidates (Jan) had a challenging relationship with her mentor throughout the entire intern year while the other's (Amy) relationship with her mentor improved by the second semester. Challenges occurred around the mentor's willingness to allow the candidates' freedom in implementing benchmarks, to be creative, and to differentiate instruction. In one case, the candidate was an African American in a predominantly White school and needed time to adjust to the situation. All of the mentors described positive relationships with the candidates with the exception of the one candidate who had difficulty adjusting to an all-White school. In that case, the mentor described how much the relationship improved during the year,

> And then I guess over Christmas she thought about it, and she came back a totally different girl! She was collaborating with teachers, she was talking to her peers, she was working with me [and] asking questions . . . She would go above and beyond. She would stay after school late. She really did good [sic]. She just had a little bit of that attitude problem at the first . . . She was brilliant, she was excellent, and the kids loved her. And the parents did, too. I mean they absolutely loved her. It was just that one little hurdle we had to get over. (I-7)

Only three of the candidates referred to material resources. One general education candidate described how she had access to resources and materials in planning her lessons. A dual certificate candidate (Lynn) described how she had access to technology such as SmartBoards and how the curriculum allowed her to differentiate and

do more independent study projects. She added that her math binder from one of her courses was particularly helpful. On the other hand, one of the dual certificate candidates (Emma) felt that the curriculum hindered differentiation at one of the campuses.

All of the candidates described meetings with other teachers at their grade level. The dual certificate teachers spoke about interacting with other professionals at the district level as well. For example Anne said,

> I attended the district's G/T lead teacher meeting at the beginning of each month. In these meetings we collaborated in planning curriculum for the year. We also spent some time discussing current events, theories, and ideas regarding gifted and talented education. (E-16)

University

This section will describe the university factors that may have influenced the candidates—seminars and courses, supervision and collaboration with faculty, and collaboration with and social support from peers.

Outside of the dual certificate candidates, no other candidates mentioned specific courses or seminars as a factor that contributed to their internship success. All four of the dual certificate candidates specifically mentioned that the intern year courses supported their work in the field, connected the content to practices, and provided time to discuss issues.

All of the candidates reported the importance of support from university faculty who were either at their school and/or taught courses. The types of support mentioned included (a) specific, descriptive feedback regarding their teaching (Kay; I-12); (b) comparing the college class to the school setting (Lynn; I-7); (c) planning, implementing, and reflecting on the effectiveness of lessons (Anne, T DCN 4e); (d) implementing class

projects in the field (Lynn; I-12; Emma; I-7); (e) general encouragement (Emma; I-15); (f) high expectations (Emma; I-15; Jan; I-7); (g) easy, frequent access (Mary, I . . .); (h) collaborating with both university-based and field-based faculty (Mary; IS-1 I, p. 3); (i) constructive criticism (Bev; I-7); (j) encouraging networking (GC I-7); and (k) improving communication skills (Amy; I-4). In only one case was the intern supervisor very critical of the candidate. Upon later reflection, Amy felt that the criticism helped her develop communication skills and tolerance toward other cultures (I-4). Overall, all of the candidates were extremely positive about the support they received from the University faculty.

With the exception of Anne who depended primarily on her teacher (I-4), the rest of the candidates reported relying on support from their peers. Overall, they felt that they got good ideas about different activities and different strategies (Jan, I-7; Kay; I-13; Lynn; I-7). Bev even reflected that she felt "like [she] learned more from peers . . . than [she] did from one of the classes [she] had, . . . particularly in ways of accepting diverse classrooms" (Bev; I-6). Bev added, "It really depends on your support as to whether you are going to be successful" (Bev; I-6). Specifically, Amy mentioned that the other interns taught her how to communicate her thoughts and ideas (Amy; I-4). The candidates interacted not only with peers in their own certificate program, but also with peers in the dual certificate program (Kay; I-13). Two of the dual certificate candidates did mention that because they were in a cohort, moving through the years with their peers, that they were able to talk about things as a class (Mary) and felt comfortable saying things to one another that they might not say to their mentor or professor (Emma; I-15): "'Okay, I'm not okay' like 'Are you not okay either?' And then you can be not okay together and

figure it out." Two interns, however, felt more isolated during their intern year than their TA year (Jan; I-7). One felt better when she was with other candidates she had known during her TA year (Jan; I-7); the other, because she was married (Kay, I-13).

Professional Standards

Standards included knowledge, teaching skills, and dispositions. Overall, all of the candidates scored in the proficient range on their School of Education (SOE) Benchmarks (e.g., 7, 8, or 9). Some variation was noted for specific benchmarks. For example Amy was scored in the competent range in strand one by one of her observers (5.6); the other scored Amy in the proficient range (7.4). Kay received the lowest overall ratings with five of her observations across all benchmarks being scored in the competent range. In general, the dual certificate candidates scored higher (average = 8.5) than the general education candidates (average = 7.9).

Variations were noted in the quality and amount of information in the candidates' efolios and TxBESS documents. First, the dual certificate candidates included more description and more artifacts in their efolios and in their TxBESS documents than the general education candidates. General education candidates tended to restate the benchmarks, focusing more on the whole class than individual students whereas the dual certificate candidates provided more examples of student work and assessments that addressed individual student differences.

Outcomes

The candidates' strongest area in providing for individual differences was in the area of preference (an average rating of 4.5 out of 5) (Table 11). All of the candidates

aligned their activities to the objectives in their lessons and varied the materials that they used (e.g., auditory, visual, manipulatives, etc.) (Preference Level 4). In addition, the dual certificate candidates allowed students to make choices in how they would learn the objectives (Preference Level 5).

Their next strongest area was in providing for environmental differences (an average rating of 5 out of 6). With the exception of one general education candidate, the remainder of the candidates established learning centers in their classrooms (Environment Level 5) with two dual certificate candidates also developing centers outside the classroom environment (e.g., archaeological dig) (Preference Level 6).

The candidates' two weakest areas for differentiation were in the areas of rate (6.75 out of 9) and content (4.1 out of 7). With the exception of one candidate, the general education candidates tended to provide for students who finished early by giving them tasks related to the same topic or discipline area (Rate Level 3) and/or they used only post assessments to design lessons for the next day (Rate Level 4). On the other hand, one of the general education candidates and all of the dual certificate candidates used pre-assessments along with post assessments for instructional planning (Rate Level 8) with three of the dual certificate candidates using them on a continuing basis to form small instructional groups, to offer extra guidance, to allow individual student to work at different paces, and to conference with students (Rate Level 9). Perhaps, one of the reasons for this difference relates to the candidates' view of pacing. In terms of the general education candidates, they viewed pacing as maintaining engagement during a sequence of lesson activities whereas the dual certificate candidates viewed pacing with a

more individual view of students (e.g., using formative assessments to plan curriculum and instruction).

Table 11

Candidates' Ratings on the Classroom Instructional Practices Scale

Candidates	Preference	Environment	Rate	Content
Amy	P4	E4	R4	C-2
Bev	P4	E3	R4	C2
Jan	P4	E5	R4	C3
Kay	P4	E2	R3	C3
Lynn	P5	E5	R9	C6
Anne	P5	E6	R9	C7
Emma	P5	E5	R9	C4
Mary	P5	E6	R8	C4

In the area of content, the general education candidates were rated at Level 2 (e.g., the candidate incorporated critical thinking into her lessons) or Level 3 (e.g., they designed topic-based or integrated units). While overall the dual certificate candidates were rated at a higher level in providing for content differences than the general education candidates, each dual was rated at a different level. For example, D-4 was rated at C4 (e.g., used authentic methods), D-3 at C5 (e.g., used interdisciplinary curriculum and included generalizations), D-1 at C6 (e.g., allowed the students' performance to guide the content), and D-2 at C7 (e.g., allowed the students to make choices regarding content based on their interests).

Conclusions

The majority of the candidates provided for diverse students in the areas of preference (e.g., how students learn) and environment (e.g., the context in which the students learned). However, the dual certificate candidates were better at differentiating their practices in the areas of rate (e.g., how quickly the students learned) and content (e.g., what the students learned). What were the factors that might have influenced the variations in the candidates' instructional practices with diverse students?

While there were cognitive differences for three of the candidates who had significantly higher SAT scores than the others (e.g., Lynn, Anne, and Bev), Bev did not have a correspondingly higher rating on the classroom instructional practices scale. Therefore, cognitive differences may not have been an influential factor in the candidates' instructional practices.

Differences in beliefs were also noted among the candidates in the ways that they interpreted specific concepts such as "differentiation." While all of the dual certificate candidates mentioned that learning experiences needed to be differentiated; only one general education candidate (Kay) spoke of differentiation. Another general education candidate (Bev) did work with the special education teacher and noted the importance of the broader learning community. Classroom material resources did act as an influence on three of the candidates with two (Lynn and Emma) specifically describing how resources either helped or hindered differentiation.

In terms of campus supervision, three of the candidates did experience challenges relating to their mentors. Two of the candidates had difficulty implementing the benchmarks and differentiated instruction (Jan and Emma).

At the university level, seminars and courses during the intern year appeared to influence the dual certificate candidates' differentiation of practices. Specific evidence appeared in their efolios and in their interviews, which focused more on individual differences.

One candidate (Amy) appeared to have a different experience than the others because of her cultural background. She was the only African American and the only candidate who was placed in a school that was not very diverse. While she relied on family support, her intern supervisor was very critical of her, and she also experienced difficulty relating to her mentor during the fall semester. These factors most likely influenced her performance in differentiating for learners.

In summary, the most important factors appeared to be the candidates' beliefs, their mentor teachers and intern supervisors, and seminars and courses during the intern year.

CHAPTER FIVE

Conclusions

Teachers in today's classrooms are confronted with the sometimes overwhelming challenge of effectively addressing a wide variety of student needs, abilities, and ethnic and cultural backgrounds (Hollins & Guzman, 2005). Student demographics are changing rapidly, and this change necessitates an adjustment in instructional practices of teachers. The increased diversity in classrooms calls for teachers to possess knowledge, skills, and dispositions to create culturally responsive learning environments (Gay, 2000), respond to the educational needs of students with cognitive differences and disabilities (Palinscar & Brown, 1987; Reynolds, Walberg, & Weissberg, 1999), and establish learning environments that support the education of children with exceptionalities in the heterogeneous classroom setting (George & Rubin, 1992; Hallahan & Kaufman, 1994; Lake, 1988; Maheady & Algozzine, 1991). As student populations become increasingly more diverse, teachers must respond to these changes in a way that supports the learning of each and every child.

However, responding to each and every child's learning needs is difficult in heterogeneous classrooms. Consequently, many teachers fail to individualize because of the multiplicity of factors that contribute to teachers' differentiation of instructional practices. Researchers agree that no single factor contributes to teachers' understanding of how to differentiate but rather a myriad of variables (Callahan & Tomlinson, 1999; George, 2005; Hallahan & Kaufman, 1994; Hollins & Guzman, 2005; Johnsen, Haensly, Ryser, & Ford, 2002; Maheady & Algozzine, 1991; Orfield & Kurleander, 2001;

Palinscar & Brown, 1987; Reynolds, Walberg, & Weissberg, 1999). This study's main focus was therefore to examine those variables that might contribute to the teachers' implementation of differentiated practices. In this case, the participants were pre-service teachers. The thought was that if teacher educators intervene early, there is a greater likelihood that future teachers will be able to meet the needs of each and every child.

Therefore, this study examined the question: What factors during the intern experience influence the pre-service teachers' instructional practices with diverse students? Specifically, it looked at the development of teacher education candidates' acquisition of knowledge, skills, and dispositions that contributed to the implementation of instructional practices that effectively meet the educational and affective needs of diverse student populations. Following an extensive review of the literature, a model was developed that included the variables that influenced teachers' classroom practices: professional standards, campus and university factors, and individual factors. Next, eight interns were selected. These interns had completed their teacher preparation program, passed their certification exams, and were hired as teachers in public school classrooms. To enhance the study, interns were selected from two different programs: the Early Childhood through Grade Four Generalist program (EC-4) and the Early Childhood through Grade Four Generalist/Gifted and Talented Dual Certificate program (EC-4/GT – dual certificate). Following data collection, cross-case study analyses were conducted to determine interns' implementation of instructional practices that addressed individual differences in four areas: content, rate, preference, and environment. The Classroom Instructional Practices Scale (CIPS) (Johnsen et al., 2002) was the instrument used to determine levels of differentiation in each area. Qualitative data sources used in the

cross-case analyses included interviews and archival data. Interviews were conducted with the participants, their mentor teachers, their intern supervisors, and the principals at their assigned campuses. Archival data included supervisors' observation records and performance assessments, candidate reflections, and candidate efolio entries.

This chapter is organized around the instructional practices with diverse students and the identified variables that contributed to the interns' implementation of instructional practices. Results will initially be discussed for each variable followed by a comparison with the extant research literature, an overview of the relationship of each variable to differentiated instruction, and a brief summary. The chapter will conclude with limitations, implications for practice, and recommendations for future research.

Pre-service Teachers' Instructional Practices with Diverse Students

Students have multiple and varied experiences, different abilities, diverse learning preferences, and a variety of interests and talents that they bring to the classroom (Bruner, 1985; Darling-Hammond, 1995). Individual differences, therefore, occur in (a) the knowledge and skills that students need and want to learn (e.g., content), (b) the students' preferences in learning (e.g., preference), (c) how quickly they learn (e.g., rate), and (d) the types of environments that enhance their experience (e.g., environment) (Johnsen et al., 2002). Using these areas, the instructional practices of interns were examined to determine the extent to which each of them differentiated instruction to meet the needs of diverse students in their classrooms during their internships/culminating field experiences.

The majority of the interns provided for diverse students in the areas of preference (e.g., how students learn) and environment (e.g., the context in which the students

learned). However, the dual certificate interns were better at differentiating their practices in the areas of rate (e.g., how quickly the students learned) and content (e.g., what the students learned) than were the general education interns.

Preference

The interns' strongest area in providing for individual differences was in the area of preference (an average rating of 4.5 out of 5). All of the interns aligned their activities to the objectives in their lessons and varied the materials that they used (e.g., auditory, visual, manipulatives, etc.) (Preference Level 4). In addition, the dual certificate interns allowed students to make choices in how they would learn the objectives (Preference Level 5).

Environment

The interns' second strongest area in providing for individual differences was providing for environmental differences (an average rating of 5 out of 6). With the exception of one general education intern, the remainder of the interns established learning centers in their classrooms (Environment Level 5) with two dual certificate interns also developing centers outside the classroom environment (e.g., archaeological dig) (Environment Level 6).

Rate

The interns' third strongest area for providing for individual differences was in the area of rate (6.75 out of 9). With the exception of one candidate, the general education interns tended to provide for students who finished early by giving them tasks related to the same topic or discipline area (Rate Level 3) and/or they used only post

assessments to design lessons for the next day (Rate Level 4). On the other hand, one of the general education interns and all of the dual certificate interns used pre-assessments along with post assessments for instructional planning (Rate Level 8) with three of the dual certificate interns using them on a continuing basis to form small instructional groups, to offer extra guidance, to allow individual students to work at different paces, and to conference with students (Rate Level 9). Perhaps, one of the reasons for this difference relates to the interns' view of pacing. In terms of the general education interns, they viewed pacing as maintaining engagement during a sequence of lesson activities whereas the dual certificate interns viewed pacing with a more individual view of students (e.g., using formative assessments to plan curriculum and instruction).

Content

With the exception of Anne, the interns' weakest area for providing for individual differences was in the area of content (4.1 out of 7). Although all interns in the dual certificate program scored higher in the area of content than did those who were in the regular EC-4 program, the performance of the dual certificate interns in this area was not as strong as in the areas of preference, rate, and environment. Several variables may have contributed to this finding. One is the focus in today's schools on the state standards and high-stakes testing. In many cases, mentor teachers appeared to be hesitant to veer far from the prescribed district curriculum, seemingly fearful that doing so might hinder the performance of their students on the state tests.

Another variable that may have influenced the degree to which the interns were able to differentiate content was the classroom structure. Some mentors seemed reluctant to allow interns to implement instruction that was in alignment with instructional

practices taught through university coursework. For example, Emma was assigned the task of implementing a differentiated unit in one of her assigned classroom; however, her mentor teacher had difficulty finding time in the schedule to allow her to complete the assignment, limiting Emma with regard to the amount of time she could allot to the learning experience for the children.

Finally, and perhaps most importantly, not every intern participated in coursework designed to provide them with specific knowledge and skills to understand the rationale and means for implementing differentiated instruction; only the interns in the dual certificate program took courses that focused on differentiation and exceptionalities. As Tomlinson (2003) has noted, if pre-service teachers are to be prepared to successfully implement instructional practices that address the unique needs of diverse learners, they must also experience a curriculum that focuses on differentiation and the importance of addressing the individual needs of their students.

Factors Contributing to the Pre-service Teachers' Implementation of Instructional Practices with Diverse Students

Professional Standards

The School of Education at the university where the interns completed their coursework and field experiences has 18 standards that describe knowledge, skills, and dispositions that pre-service are expected to acquire during their study and practice in the teacher education program. These standards are referred to as *benchmarks* and target four main areas: creating a positive learning environment (Strand 1), assessment (Strand 2), curriculum planning (Strand 3); and professional development and communication (Strand 4). Through observations, teacher reflections, and efolio entries, supervisors

determine the extent to which the pre-service teachers effectively address the knowledge, skills, and dispositions related to the 18 benchmarks.

As part of the benchmarks, all pre-service teachers in the School of Education are expected to include the state standards in their lesson plans and target them through instruction. All 8 interns in the study provided extensive evidence in their lesson plans and efolio entries to show that they met this expectation. In addition, faculty who worked with the EC-6 generalist and EC-6 dual certificate pre-service teachers included specific SPA standards in their syllabi and required the pre-service teachers to address these standards in their teaching and professional behaviors. Observation documents, lesson plans, and efolio entries incorporated evidence that the 8 participants in this study met the expectation of effectively addressing these standards in their planning, teaching, and professionalism.

Results – SOE benchmarks. All eight of the study participants scored within the proficient range on their School of Education (SOE) benchmarks (e.g., 7, 8, or 9) in their efolios; however, some variations were noted. Overall, the dual certificate interns scored higher (average = 8.5) than the general education interns (average = 7.9), providing more artifacts and elaborated narrative than the general education candidates in both efolio entries and TxBESS documents.

Relationship to research. Although no research was found that specifically addressed pre-service teachers' acquisition of the knowledge, skills, and dispositions included in professional standards, researchers have noted the difficulties faced by teachers new to the profession as they attempt to meet and exceed the professional

teaching standards in today's diverse American schools (Cochran-Smith & Lytle, 1999; Kronberg, Walker, & Zimmerman, 2003; Lachat, 1999). In addition to diverse student populations and the necessity for flexibility in implementing differentiated instructional practices is the concurrent need for teachers to address standards for both themselves and their students in an era with an extreme focus on high-stakes testing. Kronberg, Walker, and Zimmerman (2003) addressed this challenging situation by stating,

> Differentiated instruction, when done thoughtfully and with clarity of purpose, is complex. It involves an intricate dance between holding standards steady for all students while creating multiple pathways for students to achieve those common standards. It changes the role of both teachers and students. In differentiated classrooms, teachers and students work together to create meaningful learning opportunities . . . students are taught skills of self-directedness and assume a shared responsibility for learning. . . . Teachers become facilitators of learning, skillful at implementing ongoing assessment that guides instruction. Those who differentiate their teaching engage in ongoing inquiry, planning, persistence, flexibility, and reflection. (p. 8)

Relationship to differentiation. All eight of the interns in this study performed in the proficient range on their efolios as they provided evidence of mastery of the 18 benchmarks identified by the School of Education as the professional teaching standards by which pre-service teachers' performance would be assessed. Although efolio ratings did not discriminate for interns' performance on the benchmarks in terms of their differentiation of learning experiences with diverse student populations, several of the study participants included narrative and artifact examples in their efolio entries that tended to support their implementation of differentiated instruction during their intern year. For example, the dual certificate interns posted differentiated unit plans that were based on overarching themes along with pictures of student products resulting from the differentiated units, and two of the EC-4/GT dual certificate interns described centers that

they had set up outside of the classroom to address student interests and varying ability levels.

Summary. As evidenced in both efolio benchmark entries and TxBESS documents, interns in the EC-4 general education program tended to restate the benchmarks, focusing more on the whole class than individual students while interns in the EC-4/GT dual certificate program provided more examples of student work and assessments that addressed individual student differences. For example, EC-4 dual certificate interns provided numerous examples of lesson plans that included strategies for differentiating instruction, matrices for differentiated units designed, photographs of students participating in center activities, evidence of continual use of pre- and post-assessments that guided their instructional decisions, and feedback from intern supervisors and mentor teachers that showed professional growth. These interns included lengthy, descriptive narrative to support their implementation of benchmarks and examples of differentiating instruction for students. EC-4 interns provided one or two artifacts that were accompanied by short narrative statements in efolio entries. They addressed the benchmarks for the most part, but did not elaborate in their narrative or directly address ways they differentiated instruction. Faculty in different programs appeared to have different expectations for the type, number, and quality of artifacts that were needed to demonstrate proficiency.

Campus and University Factors

A myriad of factors related to campus and university experiences of interns were examined in this study including: mentor characteristics, seminars/courses, university

faculty, social support, collaboration, curriculum, student demographics, and materials/resources. Initially, these factors were separated into two categories: university factors and campus factors (Figure 1); however, once the data review began, evidence emerged to indicate that the university and campus factors should be combined to make one category due to the field-based nature of the program and the blurring of social interactions and relationships within and between the two contexts.

Of all the factors considered in the category of campus and university factors, mentor teachers, university faculty/intern supervisors, and seminars/courses taught at the university had the most significant effect on interns' instructional practices with diverse students in this study.

Results – Relationships with mentor teachers. All eight interns noted positive relationships with their mentor teachers in their efolio benchmark entries and three mentioned positive relationships with their mentor teachers as they completed their TxBESS Activity Profile at the beginning of their intern experiences. For example, three of the dual certificate interns described how much they learned from observing and modeling their mentor teacher. In terms of campus supervision, three of the interns did experience challenges relating to their mentors. Two of the interns (Jan and Emma) reported experiencing difficulty implementing the benchmarks and differentiating instruction.

At the university level, seminars and courses during the intern year appeared to influence the EC-4/GT dual certificate interns' differentiation of practices. These interns participated in courses that addressed differentiation and exceptionalities during the fall and spring semesters respectively. All four of the dual certificate interns noted that the

intern year courses supported their work in the field, connected the coursework content to practice, and provided time to discuss issues, topics, and challenges. Specific evidence of their assertions appeared in their efolios entries and in their interviews, as they focused more on individual differences and instructional practices that supported the learning of diverse student populations. The EC-4 interns did not take any courses in addition to the 12-hour internship each semester and scored lower on the Classroom Instructional Practices Scale than did their EC-4/GT dual certificate pre-service teacher counterparts.

All eight of the study participants reported the importance of support from university faculty who were either at their school campus and/or taught courses. Overall, all eight interns were extremely positive about the support they received from the university faculty, including their intern supervisors. In only one case was the intern supervisor very critical of the pre-service teacher. Upon later reflection, Amy felt that the criticism helped her grow personally and professionally, developing communication skills and tolerance toward other cultures (I-4).

Although social support, collaboration, curriculum, student demographics, and materials/resources were also considered as campus and university factors that may influence pre-service teachers' instructional practices with diverse students, less evidence emerged to support the notion that these factors influenced instructional practices to the same degree as mentor teacher characteristics, university faculty/intern supervisors, and courses/seminars. Only three interns alluded to material resources as helping or hindering their differentiation of instruction, one mentioned collaborating with a special education teacher at her school, and three spoke about support from peers that helped them in their planning efforts. With the exception of one intern, there was no evidence to

suggest that student demographics at the schools where study participants interned had an influence on instructional practices. The one intern who experienced difficulty was an African American intern who was assigned to a school with very little diversity. As mentioned previously, she felt out of place at her assigned campus during the first semester, but exhibited professional growth and impressive adjustment during the second semester. At the end of her internship, she reported that the experiences she had during her internship, at a school where the educators and students came from a different cultural background than her own, helped her to grow as a professional.

Relationship to research. In terms of field-based and university-based experiences, programs that are coherent and provide opportunities for extended practice with feedback from professionals who share a common understanding of the program's vision appear to be the most effective in assisting pre-service teachers' implementation of differentiated instruction (Buitink, 2009). The findings of this study parallel those of Tomlinson (2003) who emphasized the importance of coursework and seminar experiences that support the work of pre-service teachers in the field. Tomlinson (2003) found that if pre-service teachers are to be prepared to successfully implement instructional practices that address the unique needs of diverse learners, they must also experience a curriculum that focuses on differentiation. EC-4/GT dual certificate interns, whose degree plans included coursework that focused on differentiation and exceptionalities, scored higher in all areas of differentiated instructional practice as measured by the Classroom Instructional Practices Scale, suggesting that coursework targeting individual student needs and methods for addressing these needs is an important component of teacher education programs.

Research also points to the importance of pre-service teachers being placed for field-experiences in the classrooms of mentors who can support them in their efforts to implement effective instructional practices for diverse student. Darling-Hammond et al. (2005) noted the significant difference that mentor teachers and university faculty make in the learning experiences of pre-service teachers: "Novices often attest to the important role that school and university supervisors play in the teaching and learning of practice, although there is little systematic research on exactly what the most effective supervisors do" (p. 412).

The three interns in this study (Amy, Jan, and Mary) who experienced difficulty implementing research-based instructional practices reported feeling frustrated in the classrooms to which they were assigned for their culminating field experiences. This frustration stemmed from their mentor teachers not supporting them in their efforts to implement instructional practices that they were taught through university coursework. To the credit of Amy, Jan, and Mary and their university supervisors, the interns were able to gradually develop relationships with their mentor teachers, implement instructional practices that were expected as part of their field experience, and experience success with their students. Still, their development as interns may have been deterred by mentors who, at least initially, were not supportive of their efforts or the requirements of their field experiences.

Relationship to differentiation. Study participants reported that, for the most part, mentors supported them in their efforts to implement instructional practices that were in alignment with benchmarks and required by their course instructors. However, results of the study suggested that three of the eight interns reported being placed with mentor

teachers who hindered their ability to implement lessons that allowed them to meet expectations and provide evidence in benchmark entries to substantiate their mastery of the SOE standards. One of these interns (Emma) had two different intern placements during her year-long internship--a general education classroom one semester and in a GT pullout classroom the other. While she reported having mentor support in implementing differentiated instruction in her second placement, she expressed concern about the mentor in her first placement.

In terms of coursework and seminars, a review of the results of study participants' ratings on the Classroom Instructional Practices Scale indicated that the content and pedagogy they learned in their coursework and the encouragement they received from university faculty played a significant role in their propensity to differentiate learning experiences in the classrooms where they practiced. The EC-4/GT dual certificate interns, who concurrently participated in their internships and took coursework that focused on differentiation and student exceptionalities, scored higher in all areas on the CIPS, indicating that they differentiated instruction to a greater degree than did the EC-4 general education interns in all four areas: content, rate, preference, and environment.

Summary. Both mentor teachers and coursework/seminars were factors during the intern internship that influenced interns' instructional practices with diverse students. The stronger the mentor model and the more focused the coursework was on differentiating classroom practices, the more likely the candidate was able to develop practices that addressed the needs of each student. Other aspects of the university and campuses, initially considered as influential factors in the study, did not appear to effect instructional practices.

Individual Factors

These individual characteristics were considered as possible factors influencing the interns' instructional practices with diverse students: background and demographic characteristics, cognitive ability, beliefs, and social support outside the university and school environments.

Results – Participant demographics. With the exception of one study participant (Amy), all of the interns were White, traditional students, and 21 years of age at the beginning of their intern experience and had attended either public or private K-12 schools. All of the EC-4 general education interns received financial aid but only one of the EC-4/GT dual certificate interns did (Emma).

Three interns (Bev, Lynn, and Anne) scored higher on their SATs than the other study participants with four (Amy, Lynn, Anne, and Emma) maintaining an overall GPA of 3.5 or greater. Between the two groups, the dual certificate interns tended to score higher on the SAT and had higher GPAs.

The majority of the participants stated beliefs in three areas: classroom environment, curriculum, and individual differences. Differences were noted among the interns in the ways that they interpreted specific concepts such as "differentiation" with EC-4/GT dual certificate interns stressing the importance of assessment and monitoring of students and EC-4 general education interns stressing the importance of the learning community.

Only one participant (Amy) mentioned family as an important factor that contributed to her social support. This intern was the only African American in the study and was placed in a school for her internship that did not offer a diverse setting. As has

been mentioned previously, she experienced difficulty with communication and *fitting in* during the first part of her internship, but exhibited significant growth and adjusted well during the second semester. The other seven study participants did not mention support from family members or others outside their teacher preparation program experiences.

Relationship to differentiation. While there were cognitive differences for three of the interns in the study, this factor did not appear to be influential on the interns' instructional practices. On the other hand, beliefs about differentiation and how to accommodate rate differences, did appear to be related. For example, when asked about her feelings regarding differentiation, Lynn responded, ". . . we had to differentiate, and otherwise we would have left kids in the dust or bored some to tears. It wasn't an option to not [differentiate], I don't think" (I-5). Artifact evidence and interviews corroborated Lynn's statement, clearly communicating that she addressed individual differences in rate by using pre-assessments that discriminated for all children to plan instruction, creating multiple formats of tests based on content taught in academic ability groups, and allowing students to pace their own activities as they kept records of their progress in unit study.

Emma also shared her beliefs about differentiation, ". . . it's [the teacher's] job to do your best for those kids, and so you have to figure out their level and where to challenge them and how to meet them where they are and always keep them moving forward . . ." (I-9). Emma, like Lynn, continually used pre-assessments, formed ability groups, and engaged in ongoing assessment to differentiate learning experiences for individual students. Both of these interns were rated at the highest level (Level 9) in the area of rate when performance was assessed using the Classroom Instructional Practices Scale.

Cultural background may have been an individual factor that played an important role in the interns' instructional practices with diverse students. One candidate, who had a different cultural background, was placed in a school that was not very diverse. While she relied on her family support, her intern supervisor was very critical of her, and she also experienced difficulty relating to her mentor during the fall semester. These factors most likely influenced her performance in differentiating for learners.

Relationship to research. Research points to the important role that pre-service teacher beliefs play in the preparation of teachers (Borg, 2005; DaSilva, 2005; Morten, Williams, & Brindley, 2006; Pajares, 1996; Warford & Reeves, 2003). According to Hammerness et al. (2005), prospective teachers come to their career preparation experiences with preconceived beliefs that affect what they learn from teacher educators and field experiences. These beliefs derive from many years of "observing people who taught them and using this information to draw inferences about what good teaching looks like and what makes it work" (Hammerness et al., 2005, p. 367). Pajares (1992) wrote that studying the beliefs of pre-service teachers is imperative because "unexplored entering beliefs may be responsible for the perpetuation of antiquated and ineffectual teaching" (p. 328); however, Buitink's (2009) findings from a recent study supported the idea that teacher education candidates can change their beliefs and adopt new ideas about teaching during their student teaching when university faculty, student teacher supervisors, and mentor teachers share common goals for what pre-service teachers need to learn from their field experiences.

Although little research was found to support the notion that beliefs contribute specifically to the pre-service teachers' instructional practices with diverse students, the

interns who scored highest on the Classroom Instructional Practice Scale in this study shared the belief that differentiating instruction for individual students was an important aspect of instructional practice.

Only one participant in the study was African American, and of all the participants, she appeared to experience the most difficulty adjusting to her internship placement. She was the only African American in her seminar group and was one of only three African Americans in the entire teacher education group seeking certification in grades EC-4. Although no research was found that addressed the effects of pre-service teacher ethnicity on instructional practices with students, research did support the fact that ethnicity contributes significantly to the socialization of students in the collegiate culture (Ancis, Mohr, & Sedlacek, 2000; Banks & Kohn-Wood, 2007; Biasco, Goodwin, & Vitale, 2001). With this in mind, individual variables such as ethnicity also need to be considered and may mitigate or influence other factors.

Summary. In examining the effects of all of the individual factors on the interns (cognitive ability, beliefs, and social support), beliefs appeared to be an influential factor in terms of interns' instructional practices with diverse learners. Supporting this argument, findings of this study are consistent with the extant literature that emphasized the importance of pre-service teacher beliefs.

Relationship of Results to the Model and to Theory

The initial analysis of the data was conducted by reading through all gathered information to establish a basic understanding of the scope of accumulated data. This process provided the researcher with an opportunity to preview the data and extrapolate

any potential themes that could be useful at a later point in the data analysis. This process was replicated through all eight cases in their entirety. Using the four-category model presented in Chapter Three, all relevant data points from the interviews and archival data were coded for each participant in the study. Because of the field-based nature of the program and the blurring of social interactions and relationships, the university and campus factors were combined into a single category. These data points were then compared within and across cases. After all of the factors for each case were examined and the evidence was reviewed, the Classroom Instructional Practices Scale (Johnsen et al., 2002) was used to determine the degree to which each pre-service teacher in the study differentiated their instructional practices for diverse students. Factors were then reexamined to identify those that had the most influence on the differentiation ratings.

Relationship to the Model

At the onset of this study numerous factors were considered to determine which ones might influence the interns' instructional practices with diverse students. These factors were organized around four main themes: campus factors (student demographics, social support, supervision, materials, mentoring, and curriculum), individual characteristics (attitudes and beliefs, cognitive ability, and social support), professional standards (knowledge, skills, and dispositions), and university factors (seminars/courses, social support, supervision, collaboration, and curriculum). As the collection and analysis of data progressed, certain factors emerged as having the most influence on instructional practices of interns. Other factors, although they may have appeared to have

a minimal effect on some interns, did not seem to influence the instructional practices of the interns to the same degree.

With regard to campus factors, all eight of the interns in the study spoke to the impact that mentors and intern supervisors had on their instructional practices. Conversely, particular campus student demographics, material resources, and social support were mentioned by only a few of the interns and did not appear to have a substantial effect on all of their instructional practices.

In the area of individual characteristics, the only factor that emerged as having a substantial effect on the instructional practices of the eight interns in the study was their beliefs. Although cognitive differences in study participants were noted, these differences did not appear to be related to the individual intern's instructional practices to a great degree. And, only one intern mentioned family support in her interview as being influential.

While there was variation in the evidence provided within the efolios, all eight of the study participants were rated in the proficient range on their School of Education benchmarks by their respective faculty. Therefore, professional standards appeared to be understood and addressed by all of the interns.

Within university factors, seminars and coursework appeared to influence the candidates' implementation of differentiated practices. Since curriculum and collaboration occurred in both the courses and weekly school seminars and both university and school faculty were involved in supervision, the campus and university factors were merged into one theme.

Moreover, in analyzing the data, it was determined that the most important factors influencing the interns' instruction with diverse students appeared to be the interns' beliefs, their mentor teachers, university faculty/intern supervisors, and seminars/courses during the intern year. Thus, the model presented in Chapter Three has been modified to depict the findings of this study (Figure 2).

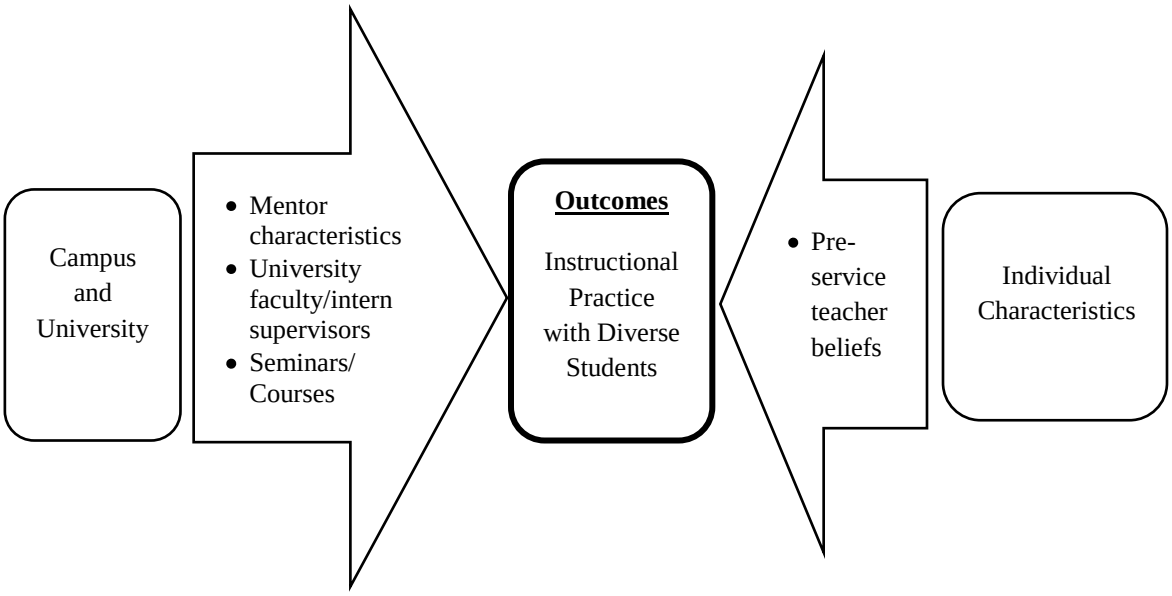

Figure 2. Factors influencing instructional practices with diverse students

Relationship to the Theory

The interns in this study entered the teaching profession at a challenging time, with an increasingly diverse student population and with the public judging teachers based on their students' performance on high stakes tests. These circumstances highlight the need for pre-service teachers to receive instruction and participate in field experiences that prepare them to provide educational environments that are responsive to the needs and characteristics of diverse students, making the task of educating teachers a more complex endeavor than ever before. In fact, Kennedy (1998) purported that the reality of

teacher education programs is much more complex than that reported in much of the literature; in addition, he emphasized both the challenges and the importance of examining factors that influence the practices of pre-service teachers with diverse students.

Zeichner and Conklin (2005) explained that attempting to isolate the effects of particular program dimensions, from the teacher education program in which the dimensions exist or from the characteristics of particular pre-service teachers in a program, may not provide a great deal of useful information. These researchers add that a close look must be taken at the interactions of pre-service teachers in the setting in which they are located and with the people who inhabit them. With these ideas in mind, situated learning theory, particularly that of Lave and Wenger (1991), was chosen as the theoretical framework for this study.

Lave and Wenger (1991) reformulated the conception of learning, placing emphasis on the whole person and viewing the individual, interactions, and life experiences as mutually constitutive. These theorists proposed that educators need to move from the idea that learning is the reception of factual knowledge or information and acknowledge the fact that learning is a process of participation in communities of practice, contexts in which participation is initially legitimately peripheral but, with time and commitment, gradually increases in complexity and engagement. Wenger (1998) further developed the situated learning model to which he and Lave (1991) referred as communities of practice, proposing that there are four main components of this social learning theory: (a) meaning – learning as experience, (b) practice – learning as doing,

(c) community – learning as belonging, and (d) identity – learning as becoming, with these four components intricately interrelated and mutually defining.

The teacher education candidates in this study entered their culminating field experience (internship) having previously received instruction in content and pedagogy. They had participated in approximately four hours of field experience each week during the previous year, working with small groups of children in public school elementary classrooms while being supported on campus by classroom teachers, university faculty, and a school faculty member whose responsibility was to work closely with university faculty to support the teacher education candidates. Thus, the field experiences of these interns had been somewhat limited; however, the internship was not their first exposure to classrooms of children with diverse learning needs. For the internship, each candidate was assigned to a kindergarten, first, second, or third grade classroom and worked with a mentor or supervising teacher who was the classroom teacher of record. Mentor teachers, who were experienced educators, considered experts in their communities of practice, had attended research-based mentor training, had been recommended by their campus administrators, and had expressed a desire to work with interns.

Learning as experience. According to Lave and Wenger (1991), learning is not isolated and internal, but is dependent upon interactions in the environment as one establishes meaning and knowledge within a social context. With attention to interactions mentioned above, Wenger (1998) emphasized the importance of experience and competence that those new to a community of practice bring to the learning experience. In addition, he highlighted the notion that a good balance of experience and competence communicated by the member new to the community as a whole will aide in

the acclimation of the new member into the established community. He explained that experience and competence must interact in a way that is accepted by members of a community in order for a novice to move forward in quest of becoming a full-fledged community member. The novice must understand that, at times, it is necessary to transform their own experiences so that they align with the existing regime, or he/she is likely to experience difficulty fitting in and being accepted. In certain situations, the novice is able to assert competence and, carefully inviting community members to participate in his or her experience, is able to add new components to the repertoire of their practice.

The interns in this study brought to the internship their personal experience as a Pre-K-12 student, their experience in learning coursework content and pedagogical knowledge, and experience as teaching associates (approximately 4 hours per week with small groups of children) during the junior year of their teacher education program. Several of the study participants were very successful in fitting rather seamlessly into the communities of practice to which they were assigned. For example, upon entrance to the C-1 community as an intern, her mentor recognized Lynn's work ethic, her skills, and her commitment to the school and children. This helped her establish rapport with her mentor teacher who, in turn, shared her impressions of Lynn with other members of the campus faculty. Her mentor teacher (M-4) described Lynn, "She was devoted and she loved the kids. She always found different approaches and methods that met the needs of each kid . . . The kids loved her. She gave everything she had to that semester . . . hours and hours of work" (M-4 - I-5-6). In addition to being accepted and respected by her mentor teacher, Lynn was able to assert her competence and make changes in the

practices of the community. Her mentor (M-1) reported using the ideas that Lynn shared with her to improve her own instructional practice and to differentiate for individual students. She specifically mentioned incorporating Lynn's system for organizing centers and keeping track of student progress into her own teaching. M-1 also shared that she had taken a unit that Lynn had created and shared it with the entire school faculty because it so effectively differentiated for the students. In the case of Lynn, the pre-service teacher was able to quickly develop a positive relationship with her mentor (or expert in the community) while making her experience fit the regime of the community. She was also able to use her competence to make changes in the community of practice even though she was only in that particular assignment for one semester. Lynn experienced the same success at the other campus to which she was assigned. At the end of the year, both of her mentor teachers (M-1 and M-4) reported having changed their instructional practice with diverse learners as a result of having had the opportunity to work with and learn from Lynn.

On the other hand, some interns had a more difficult time merging their experience and competence into the communities of practice to which they were assigned for their internship experiences. Jan reported frustrations regarding the structured classroom setting and lack of support from the mentor teacher to whom she was assigned. Her intern supervisor seemed to understand Jan's frustrations and explained that Jan had a hard time developing relationships and fitting in as a member of the C-5 community of practice,

> She is willing to do whatever it takes every time. But she gets discouraged and easily disillusioned. There are certain times when you have to be flexible enough to be able to live with something until you can do something else. She got along

> fine with [M-3], but I felt sorry for her because I knew she had so much of a reservoir that she never got a chance to use.

In Jan's case, she had the knowledge and skills to implement instructional practices to address the needs of diverse students; however, she was unable to establish the type of relationship with her mentor teacher necessary to invite this established member of the community to participate in her experience and was, thus, not successful in making the impact she would have liked to have made.

Learning as doing: Legitimate peripheral participation. Lave and Wenger's (1991) theory evolved from prior research that examined the acquisition of knowledge and skills in the environment of the workplace. These researchers illustrated their theory by pointing to the historical significance of apprenticeship as a means of producing knowledgably skilled persons (e.g., midwives, tailors, quartermasters). Providing numerous examples, they explained that within their framework of situated learning theory is the concept of legitimate peripheral participation, the process by which newcomers become a part of a community of practice. Communities of practice involve contexts in which new members begin on the fringes or periphery as apprentices, with limited knowledge or experience in the domain. As the learner observes and gradually begins to participate in the community, he/she may work alongside a more experienced member of the community, gaining the knowledge and skills of the practice and moving into a more central role in the community. Finally, after much training and practice, the learner is able to contribute to the problem solving practices within the community, oftentimes having gained the critical competencies and respect of community members to the extent that he/she is considered an expert.

The participants in this study first entered communities of practice in the field of education during their teaching associate (or junior) year at the university. During this year, they were assigned to a clinical instructor (certified classroom teacher) with whom they worked for approximately 1 1/2 hours each morning for two semesters. Approximately half of this time was spent planning and reflecting with the clinical instructor and the other half of the time was spent teaching small groups of children under the guidance of the clinical instructor and university faculty who were assigned to specific campuses. During the teaching associate year, the teacher education candidates were introduced to campus and classroom environments and began what Lave and Wenger (1991) would refer to as their apprenticeship, learning the vocabulary, tools, and skills of the profession and gradually taking on limited amounts of responsibility with the guidance of an experienced teacher. The senior year (or internship) involved a more thorough immersion into a community of practice in that the interns spent all day on their assigned campuses, working with and learning from a mentor teacher. As Lave and Wenger (1991) explained in their examples of the apprenticeship, the mentor teacher was the experienced member of the community who worked with the intern learning the tools of the profession. The mentor played an important role in the growth of the newcomer and in helping the newcomer integrate into the community of practice. Interns continually enhanced their knowledge of the tools of the practice as they worked with their mentor teachers, gradually assuming more and more responsibility and providing instruction to whole classrooms of children. Their internship experience lasted an entire year.

The interns in this study entered communities of practice for their internship (or senior year experience) on the periphery, observing and gradually beginning to participate as community members. As Lave and Wenger (1991) proposed, legitimate peripheral participation involves more than simply the learning process, and is, instead, "a reciprocal relation between persons and practice" (p. 34). Some of the study participants easily merged into the communities of practice, able to manage the delicate balance of engaging in the existing practice and, at the same time, negotiating the system in a way that they might try some of their own ideas. Other study participants had more of a struggle moving from the periphery to a more central role in their professional communities.

Although Lynn, Anne, Bev, and Kay entered their respective campus communities as new interns knowing none of the teachers or the administrators, they quickly immersed themselves in the learning process and were able to establish relationships with their mentor teachers. They reported enjoying the contexts in which they worked and gave examples of meeting with their mentor teachers regularly, co-planning, reflecting with their mentor teachers, and participating in campus activities. For example, mentor (M-5) was impressed with Bev's attitude and work ethic upon her arrival at her new assignment, stating, "I am very impressed with [Bev's] transition to our district. She has come in and become involved without my asking . . . [she] has come in ready and eager to continue her internship, and I appreciate her willingness to learn" (FPDC-10/07). M-5 shared, "[Bev] worked really well with the kids, and she worked really well with the adults. . . . She wanted to learn everything she could . . . she came in and jumped right in!" (I-6). Bev reported that, although her mentor teacher (M-5) did not

differentiate instruction, M-5 “was completely open to letting me try new ways of teaching” (Bev, I-5).

On the other hand, Amy, Jan, Emma, and Mary had more difficulty getting acclimated to their campus communities during the intern experience. Amy appeared to experience the most challenge in this area. For example, Amy reported not feeling comfortable in her intern placement in the beginning because it was very different for her culturally. During the first semester, Amy’s mentor teacher noted on the TxBESS Data Summary that Amy was at the lowest level of performance in the area of interacting in a positive way with other professionals (FPDC-10), stating, “. . . she didn’t want to listen to any suggestions at all. She didn’t want to see my stuff, she kept to herself. . . . She really just wanted to do it herself and that was it” (I-6). It was not until after the Christmas break that she began to accept feedback from her mentor teacher and merge into the community.

The challenges that Amy experienced could have resulted from her being from a different ethnic background than her mentor teacher and the vast majority of teachers and students at the campus to which she was assigned for her internship. It should be noted, however, that although Amy stayed on the periphery of the community of practice much longer than did the other interns, once she began to examine her practices and interact in a more positive way with her mentor teacher and intern supervisor, she experienced a great deal of success and respect in the community and was able to contribute in a positive way. It was at this point that her use of some instructional practices that attended to individual differences of students emerged.

Learning as belonging: Communities of practice. Lave and Wenger's (1991) situated learning model clearly communicates that learning communities develop around the interests and ideas that are of value to their members and encompass relationships that develop over time. These relationships result in mutual learning that represents the quest of the larger community.

Participants in this study began their internships by meeting and working with their assigned mentor teachers for one or two days prior to the students beginning the school year; this was their initial introduction into the community of practice. Coming into the new learning context was not easy for some of the interns in the study. They had been attending classes at the university in which they had learned new research-based teaching strategies and were eager to implement their new knowledge and ideas. This is where the attitude and beliefs of the mentor teacher and the curricular focus at the campus seemed to come into play.

For example, Emma reported entering her internship experience with enthusiasm, doing her best to establish a positive relationship with her mentor teacher and implement instructional practices that were required as part of her internship. The curricular focus in the classroom to which Emma was assigned was on the high-stakes testing; the mentor teacher was structured in her approach to scheduling and in her attention to teaching the material over which her students would be tested on the district and state examinations. When it came time for Emma to take responsibility for instruction, the mentor had difficulty relinquishing her class to Emma and was reluctant to take time out of the schedule for Jan to implement the differentiated unit she had planned. When reflecting back on her experiences in working with Emma while she was in this setting, her intern

supervisor (IS-1) reported, “She really lacked confidence. I am afraid that one of her placements really contributed to her lack of confidence. It was probably not the best place for her . . . She questioned herself a lot, even if she did a wonderful job” (I-8).

Jan experienced similar frustrations. She reported liking her mentor teacher and making an effort to fit in at her assigned campus, however, she stated in her interview that she was not always able to implement the instructional practices that she felt were best for the students, “[M-3] was a little bit older and kind of the older traditional way of teaching, and so I felt like I didn’t want to do too many things . . . I was limited because of the way that her classroom was set up there wasn’t room for me to do differentiation. And, it wasn’t just her too [sic]; it was the school district, their standards that they had put. So, I worked with her as much as I could . . .” (I-5).

Other participants experienced a more positive match with regard to interests and ideas that were a part of the classroom cultures in which they worked. For example, Kay was able to establish a positive relationship with her mentor teacher (M-10) and work closely with her to engage the students as she took responsibility for teaching the class. Kay sought guidance from her mentor on a regular basis and gave her credit for helping her “be a better teacher” (T CBS 4e). Kay reported that her mentor teacher oversaw her lesson planning, gave her access to resources and materials, helped her evaluate the progress of her students, and supported her in behavior management. Both Kay and M-10, in their interviews, used the same terms to describe their planning and interacting with students. For example, they both referred to “gearing up and gearing down” when describing how they differentiate instruction for students in the classroom. Archival data

and interview responses corroborated the close relationship and shared beliefs of Kay and M-10.

The findings of this study indicated that, when interns were able and willing to develop around the interests and ideas that were of value to the members of the community of practice and were able to engage in meaningful relationships with their mentor teachers, they became accepted and revered in the community of practice rather quickly and were able to implement the instructional practices they had learned.

Learning as becoming: Identity. Lave and Wenger (1991) proposed that when people work together in a community of practice, learning and the construction of identities are inseparable, "Learning thus implies becoming a different person with respect to the possibilities enabled by these systems of relations" (p. 53). Thus, learning is not just a change in practice, it is also a change in identity (Lupu, 2010), and shaping individuals' identities becomes the *fundamental project* in a community of practice (Lave & Wenger, 1991). Wenger (1998) advised that participation in a community of practice can lead to full membership or to exclusion and the sense that a person does not belong as a member of the community. To become a full member of a community, an individual must assimilate social practices and relationships, assessing the significance of beliefs, interests, ideas, and relationships, and interpret how new learning might be applied in specific contexts. In addition, Wenger (1998) argued that an important mission of communities of practice is to strengthen the identities of the members in two significant ways, (a) by integrating their prior learning and existing knowledge into the practices of the community, and (b) by "opening trajectories of participation that place engagement in its practice in the context of a valued future" (p. 215).

Wenger (1998) also addressed the role that beliefs play in communities of practice, noting that shared beliefs do not constitute shared practice. He purported that when beliefs are not shared in a community, the situation not only suggests that there are problems to be solved, but there are also opportunities for "the production of new meanings" (p. 84). Beliefs are an integral part of a person's identity; therefore, they play a significant role in identity development within a community of practice.

The professional and personal identities of interns in this study developed to a variety of extents and in a multitude of different ways. As has been mentioned previously, Amy, assigned to a campus for internship that presented an entirely new cultural experience for her, struggled to change her identity in a way that would allow her to fit in with the membership of the community at first. She was a very smart young lady; in fact, she was valedictorian at the large high school she attended and her intern supervisor (IS-3) reported, "She was a really bright girl . . . She really was smarter than many of the girls [in my intern group]" (IS-3 – I-6). Although Amy was very intelligent, she had a hard time feeling a part of the campus. IS-3 explained that "[Amy] was not happy with her [intern] assignment and she didn't want to be in a small town setting. She wanted to be in the inner city. . . . When she began, it was like she had a chip on her shoulder . . . She had never been in an all-white school" (IS-3 - I-6). IS-3 went on to report that Amy had felt more a part of the learning community when she had participated in her teaching associate experience at an inner-city school. In fact, according to IS-3, Amy had said to her several times that she felt more comfortable in the inner-school setting where "everyone looked like me" (IS-3 – I-6). Then, after the Christmas break, Amy's whole demeanor changed. IS-3 explained,

> And then, I guess over Christmas she thought about it, and she came back a totally different girl! She was collaborating with teachers, she was talking to her peers, she was working with me [and] asking questions . . . She would go above and beyond. She would stay after school late. She really did good. She just had a little bit of that attitude problem at the first . . . She was brilliant, she was excellent, and the kids loved her. And the parents did, too. I mean they absolutely loved her. It was just that one little hurdle we had to get over. (I-7)

Amy's adjustment to a culturally different context may have affected her ability or desire to alter her identity at the beginning of her internship.

Juxtaposed to the identity development of Amy, both artifact documents and interviews provided evidence to show that Lynn quickly began to establish her professional identity in both communities of practice in which she participated during her intern year. As was mentioned in the section above (Learning as experience), Lynn was accepted and respected in both communities of practice she participated in during her internship. Both mentor teachers (M-1 and M-4) noted her commitment to tasks and to differentiating for individual children in the classroom; in fact, both mentor teachers acknowledged the fact that they had learned a great deal from Lynn, particularly about pre-assessing and differentiating instruction, and used her ideas as modeling for their instruction with diverse learners. M-1 even shared Lynn's ideas and lessons with other teachers at her campus because she was so impressed with Lynn's work.

Returning to Wenger's (1998) descriptions of establishing identities in communities of practice, it appears that, in Lynn's case, both the individual and the community accomplished their goals for identity formation of the new member. Lynn was able to integrate her beliefs into the community of practice, and the community of practice in which she participated was able to open "trajectories of participation that place[d] engagement in its practice in the context of a valued future" (p. 215).

The remainder of the interns did not experience the difficulties in establishing their professional identities that Amy did. Each pre-service teacher in the study made progress in identity development, but did so at different rates and in different ways. In examining the results of pre-service teacher ratings on the Classroom Instructional Practices Scale, beliefs and identity development may have played a role in the instructional practices with diverse students, particularly for Lynn, who had the highest rating of all participants in the study. Lynn's ability to establish her identity allowed her to share her competence with others and influence the instructional practices for diverse learners at the campuses to which she was assigned. Identity development may have been influenced by each candidate's beliefs.

Summary

Lave and Wenger's (1991) situated learning theory focuses on the process of an individual becoming a member of a community of practice by working alongside an established community member, gradually learning and acquiring skills that enable them to move to the next level of community membership – a contributor to the decision-making and practices in the community. In this study, mentor teachers served as the established community member who guided the interns as they entered and became increasingly engaged in their respective campus communities of practice. Some interns experienced more success than others in this learning and integration process. It appeared that beliefs shared by both the mentor teacher and the intern facilitated a more rapid integration into the campus communities.

In addition, EC-4 dual certificate candidates moved through the teacher education program together, taking a class as a group during the sophomore year and participating

in seminars and field experiences as a group during the entire junior year. Although they were not assigned to the same campus for their internship experience, this cohort had the opportunity to interact at least once a week when they took an evening course together during both the fall and spring semesters. Having shared experiences through the majority of their teacher preparation program, this group of pre-service teachers was able to form their own community of practice in which they shared ideas, established a history of working relationships, and formed their respective identities within the group. Study of the EC-4 dual certificate cohort of teacher education candidates was not the objective of this researcher for this study; however, three of the four EC-4 dual certificate candidates mentioned, either directly or indirectly, in their interviews that having the opportunity to share ideas, frustrations, accomplishments, and concerns with members of this community and the university faculty member who guided their studies provided support for them as they realized their goal of becoming a teacher. The researcher notes, in the section *Recommendations for Future Research* in this study, that close examination of pre-service teachers who go through the EC-4 dual certificate program as a cohort at the university may provide valuable information about the aspects of that particular program in light of factors that influence pre-service teachers instructional practices with diverse learners.

Limitations

Bogdan and Biklen (2006) define qualitative data analysis as "working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (p. 145). In this case, the researcher used the constant comparison data analysis

model to analyze data throughout the study, taking care to look across all cases for patterns in order to avoid premature conclusions while examining the data in various ways. The researcher recognizes, however, that in qualitative research, there are limitations that affect the findings. Some of these limitations are reported in this section.

Reliability

Reliability in this qualitative study was dependent upon whether or not the results described from the data were reliable and consistent. Measures taken to ensure reliability in the current study included the background and position of the investigator, triangulation of the data, and the establishment of a clear and well-designed audit trail. To address reliability issues, an *inquiry audit* was performed in which an external auditor examined both the process and the product of the research for consistency (Lincoln & Guba, 1991).

Triangulation. Multiple data sources were used for triangulation in this study. In addition to the audio-taped interviews of interns, mentor teachers, intern supervisors, and campus administrators, archival data were reviewed. This data included: (a) observation forms completed by mentor teachers and intern supervisors, (b) reflections written by interns, (c) a variety of performance assessment documents completed by field supervisors and interns themselves, and (d) efolio entries created by study participants during their intern experience.

Although multiple data sources were included in this study, human beings recorded the data and it is recognized that each person brings biases with them to any situation. Sources of the data (e. g., intern supervisors, mentor teachers, interns) had

different expectations and vested interests in the teacher education program to varying extents, which could have compromised the reliability of the study.

Internal Validity

Whether or not the findings of a study seem credible or believable connotes internal validity in qualitative research (Miles & Haberman, 1994). Merriam (2009) suggests that internal validity in qualitative study can be determined by asking the questions: "How congruent are the findings with reality? Do the findings capture what is truly there?" (p. 213).

There are several limitations of this study that may have affected the internal validity. First, the overall quality of the data varied in several respects. Some of the efolios created by the study participants were more thorough than others, providing more examples and including more descriptive entries in both narrative and artifact form. The more thorough efolios provided a clearer picture of the instructional practices of the interns.

In addition to the variation of data available in efolios, there was a data source missing from one intern's folder. Emma's folder of archival data did not include a copy of the TxBESS Activity Profile (TAP). This document comprised one of the four formal observations conducted by the mentor teacher for the candidate during the 2006-2007 school year and included a class background study, candidate reflections, teacher observation notes, and a goal setting sheet (Appendix D). Although the researcher was able to gather a great deal of information about the instructional practices of Emma from other data sources, the absent TAP may have included information that would have altered study results, particularly for Emma's case study.

Observation notes and intern assessment documents were completed by a variety of observers, each bringing to the task varying educational backgrounds, beliefs, knowledge, and experience. Some of the documents included more descriptive information than others, making them inconsistent across study participants. If one observer had conducted observations and completed assessment documents for all study participants, the results of the study would more accurately depict reality.

Finally, due to the fact that the EC-4 dual certificate interns participated in a course that focused on differentiation and were instructed by a university faculty member who is an expert in exceptionalities, they were more familiar with differentiation vocabulary. This may have affected the ease with which EC-4 dual certificate interns discussed differentiation as well as the quality of artifacts they provided in their efolios as evidence of instructional practices that differentiated for diverse student populations.

In this study, data were triangulated, peer examination and member check were included, researcher bias was considered, and interview questions were piloted.

Implications for Practice

Critics from both inside and outside teacher education have noted that traditional pre-service teacher education programs have not done an adequate job of preparing teachers to teach diverse populations (Ladson-Billings, 1995, 1999; Zeichner & Hoeft, 1996). This issue must be addressed by teacher preparation entities if (a) the pre-service teachers being prepared to enter the workforce are to experience success and remain in the profession; (b) the educational needs of the diverse population of students in classrooms are to be met. In order to accomplish such goals, pre-service teachers who are currently being prepared for their profession must learn and practice skills that will

enable them to address effectively the needs of populations of students that will grow increasingly diverse in the future (U.S. Bureau of the Census, 2005).

In addition, evidence highlights the notion that the reality of teacher education programs is much more complex than that reported in much of the literature (Kennedy, 1998). In recognizing the complex array of factors that may contribute to the propensity of interns to effectively address the educational needs of each and every child, numerous factors were examined in this study, including professional standards, individual factors, and campus and university factors. These factors were examined in light of four areas of differentiation: content, rate, preference, and environment. The findings of the study suggest that the factors most significantly contributing to interns' implementing practices that effectively address the needs of diverse students included their beliefs, the mentor teachers to which they were assigned, their university faculty/intern supervisors, and the coursework and seminars that accompanied their culminating field experience.

These findings point to the need for teacher preparation programs to:

1. Pre-assess the beliefs of pre-service teachers, understanding that they come to their teacher preparation experience with preconceived notions about what it means to be a teacher. Dispelling myths and providing quality learning opportunities that will enable the individual candidate to plan and implement teaching strategies that effectively deal with realities must be at the core of learning experiences in which the pre-service teacher participates.

2. Ensure that interns are placed with supervising teachers who model best practices. These teachers ideally participate in research-based mentor training, provide an environment in which interns are encouraged to try new things and safely learn from

their experiences, and share in the teacher preparation program's vision, goals, and objectives.

3. Assign interns to university supervisors who have the knowledge, skills, and experience to support teacher education candidates in building and maintaining positive relationships with mentor teachers and in implementing best practices.

4. Offer specific courses in conjunction with the culminating field experience that guide the interns in acquiring knowledge, skills, and dispositions for differentiating instruction in the areas of content, rate, preference, and environment while teaching them strategies to effectively meet the needs of children with exceptionalities.

Recommendations for Future Research

The review of extant research that is presented in this study highlights the need for further examination of the complex array of factors that influence the instructional practices of pre-service teachers with diverse students. One of the ways that teacher preparation programs may increase the success of pre-service teachers in the field is to guide them in implementing learning experiences that differentiate for the vast cultural and cognitive differences they will encounter in the classroom (Tomlinson, 1995). Many studies have been conducted to evaluate characteristics of teacher preparation programs; however, studies that focus on teaching educators to differentiate instruction effectively to meet the needs of a wide array of learners are scarce. The research that has been conducted on this topic focuses only on instructional practices of teachers who are already in the field (Johnsen et al., 2003).

George (2005), in a manuscript about rationale for differentiating instruction in the regular classroom, quoted Orfield and Kurleander (2001):

> The best teachers have always recognized that every student is unique and, to a degree, deserve and require special attention and adaptation of the learning experience to fit those unique needs, interests, abilities, and attitudes. In the 21st century, however, teachers are being asked to work with ever more broadly diverse groups of learners. The American public school is, literally, bursting with diversity and our awareness of that diversity increases apace. (p. 189)

As student populations become increasingly more diverse, teachers' knowledge and skills for addressing individual needs will become even more pronounced. For this reason, the profession would be well-served through research that examines methods for preparing pre-service teachers to enter the field of education with the tools necessary to successfully address the learning needs of each and every child.

The current qualitative study, although limited in scope, may serve as an impetus for further study of the factors that have been identified as having a positive impact on pre-service teachers' instructional practices with diverse learners: beliefs, mentor teachers, university supervisors, and courses and seminars.

The eight participants in the current study have matriculated into the profession in a variety of settings with various levels of support. A longitudinal investigation of their instructional practices with diverse students as they progress in their teaching careers would provide insight into long-term effects of the factors that appear to have made a difference in their teaching as interns.

In the current study, one group of interns went through the teacher preparation program as a group. Although the effects of learning cohorts on the instructional practices with diverse student populations was not a focus of this study, evidence did emerge to suggest that the interns who took their coursework together and shared learning experiences throughout the program supported and learned from one another.

The instructional practices of pre-service teachers who progress through programs as a group may warrant further study.

Studies addressing the characteristics of quality mentors and field supervisors would facilitate improved placement sites for pre-service teachers during their training. As has been mentioned, Darling-Hammond et al. (2005) noted the significant difference that mentor teachers and university faculty make in the learning experiences of pre-service teachers, "Novices often attest to the important role that school and university supervisors play in the teaching and learning of practice, although there is little systematic research on exactly what the most effective supervisors do" (p. 412).

Although the results of this study lend credence to the important role that teacher beliefs, mentoring, and course/seminars play in influencing the instructional practices of pre-service teachers, the findings merely uncover the tip of the iceberg, setting the stage for further investigation of the identified factors and pointing to new directions for additional research.

Conclusion

This study was designed to investigate the complex array of factors that influence pre-service teachers' instructional practices with diverse students during a teacher education program's culminating field experience. Although many studies have been conducted to evaluate characteristics of teacher preparation programs, no research has examined the complexity of factors that were included in the current study.

Initially, the researcher set out to examine 17 factors organized around four main themes (campus factors, individual characteristics, professional standards, and university factors) to determine which ones influence the pre-service teachers' instructional

practices with diverse students to the greatest degree. After closely examining the 17 factors, 4 emerged as having the greatest impact. These four included (a) the beliefs of the individual interns, (b) characteristics of mentor teachers to whom the interns were assigned for their culminating field experiences, (c) characteristics of the intern supervisors and other university faculty members who worked with the interns, and (d) the coursework/seminars that the interns participated in during their culminating field experiences. The findings of this study and recommendations for future research will be useful in further exploration of the identified factors.

APPENDIXES

APPENDIX A

SOE Benchmarks

(Revised May 2005)

STRAND 1: CREATING A POSITIVE LEARNING ENVIRONMENT

Benchmark 1: Establishes expectations
Benchmark 2: Arranges space for safety and effective learning
Benchmark 3: Establishes small and large group procedures, routines, and manages transitions
Benchmark 4: Prepares and manages materials and technology for effective learning
Benchmark 5: Keeps progress records in order to match and adapt curriculum to student
Benchmark 6: Uses reinforcement and correction to increase learning and show respect
Benchmark 7: Paces lessons and activities to engage students

STRAND 2: ASSESSMENT

Benchmark 8: Assessment method matches knowledge (curriculum) and student characteristics
Benchmark 9: Formative assessment provides information regarding student(s)' achievement level
Benchmark 10: Assessment information is communicated to students, parents, and other professionals

STRAND 3: CURRICULUM PLANNING

Benchmark 11: Focuses students' attention on the information
Benchmark 12: Organizes the knowledge when planning instruction
Benchmark 13: Presents information for instruction that is related to assessment
Benchmark 14: Guides students' application of knowledge
Benchmark 15: Provides opportunities for student(s) to use information independently

STRAND 4: PROFESSIONAL DEVELOPMENT AND COMMUNICATION

Benchmark 16: Participates in professional development
Benchmark 17: Is proficient in communication with students, parents, and other professionals
Benchmark 18: Collaborates with parents and other caregivers

APPENDIX B

Baylor University School of Education
Learner-Centered Educator (Conceptual Framework)

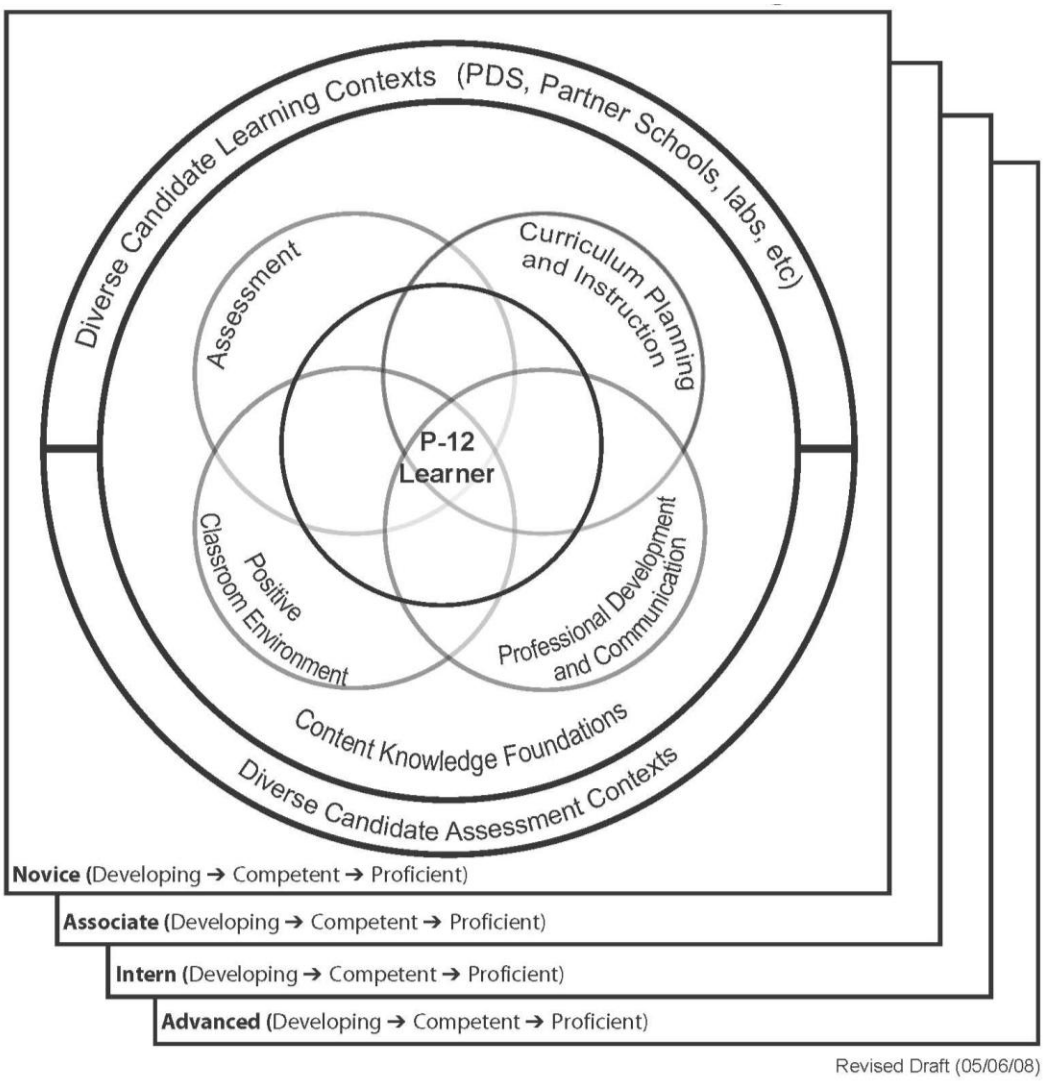

Figure B.1. Conceptual Framework

APPENDIX C

Candidate Observation Form

Baylor University School of Education
Candidate Visitation Report

Candidate: _____ **Date: _____**

Grade/Content Area: _____ **Observer: _____**

Campus: _____ **CI/Mentor: _____**

Strand I: **Creating a Positive Learning Environment:** 1. establishes expectations; 2. arranges space for safety and effective learning; 3. establishes small and large group procedures, routines, and manages transitions; 4. prepares and manages materials and technology for effective learning; 5. keeps progress records in order to match and adapt curriculum to student; 6. uses reinforcement and correction that increases learning and shows respect; 7. paces lessons and activities to engage students.

Strand II: **Assessment**: 8. assessment method matches knowledge (curriculum) and student characteristics; 9. formative assessment provides information regarding student(s)' achievement level; 10. assessment information is communicated to students, parents, and other professionals.

Strand III: **Curriculum Planning:** 11. focuses students' attention on the information; 12. organizes the knowledge when planning instruction; 13. presents information for instruction that is related to assessment; 14. guides students' application of knowledge; 15. provides opportunities for students to use information independently.

Strand IV: **Professional Development and Communication:** 16. participates in professional development; 17. is proficient in communication with students, parents, and other professionals; 18. collaborates with parents and caregivers.

Additional Comments:

Candidate Signature_____ Faculty Signature_____

APPENDIX D

TxBESS Activity Profile Forms

Class Background Study

Teacher: _____

District: _____ **Campus:** _____

Mentor: _____

Grade level(s): _____ **Subject(s):** _____ **Date:** _____

Directions to the beginning teacher: With guidance from your mentor, respond to the following questions for the class that will be the focus of the *TxBESS Activity Profile*. Note that the numerals and letters in parentheses following each question refer to the related standard in the *TxBESS Framework*.

1. How many students are in your class? (1b) _____
   Female _____ *Male* _____

2. Approximate age range of your students (1b): ___

3. Describe the general instructional levels represented by the students in this class (, advanced, average, below grade level, mixed). (1b)

4. Approximately how many students are in each of the following language categories? (1b)
   English proficient _____
   English language learner ____

5. Approximately how many students have been identified as having the following special needs? (1b)
   Attention deficit/hyperactivity disorder _____
   Blindness or visual impairment _____
   Deafness or hard of hearing _____
   Developmental impairment _____
   Emotional disability _____
   Giftedness _____
   Learning disability _____
   Physical disability _____
   504 modifications _____
   Multiple impairments _____
   Other: _____

6. Approximately how many students are represented in the following ethnic groups? (1b)
   Asian _____
   African American _____
   Hispanic _____
   White _____
   Other: _____

7. How do you become familiar with what your students already know and are able to do? (1b)
   Content-based pretests _____
   Individualized educational plans (IEP) _____
   Permanent records _____
   Standardized tests _____
   Strategies for accessing prior knowledge (, KWL charts) _____
   Student surveys _____
   Other: _____

8. How do you become familiar with your students' individual interests and cultural backgrounds? (1b)
   Extracurricular activities _____
   Family/caregiver contact _____
   Getting-acquainted activities _____
   Interest inventories _____
   Student writing/journals _____
   Student-teacher email _____
   Other: _____

9. What resource persons are available to you in planning instruction? (1d)

Administrators _____
Counselors _____
Department/grade-level chair _____
Diagnosticians _____
Education service center staff _____
Librarian/media center staff _____
Mentor _____
Special education/inclusion teachers _____
Educator preparation faculty _____
Team members _____
Others: _____

10. What resources are available to students needing assistance? (4f)

Administrators _____
Counselors _____
Special education/inclusion teachers _____
Librarian/media center staff _____
School nurse _____
Outside agencies _____
Social workers _____
Others: _____

11. Describe how you establish and implement important classroom routines and procedures (, distribution and collection of materials, transition between activities). (2c)

12. Describe how you establish and maintain standards of conduct (, posting rules and consequences, implementing school policies). (2d)

13. Describe how you establish and maintain an atmosphere of trust, openness, and mutual respect (, greeting students, modeling courtesy). (2a)

14. How do you encourage students to take responsibility for their own learning? (2b)

15. How do you coordinate learning activities with other colleagues (, same grade level/content area teachers, special education teachers, language acquisition teachers)? (4d)

16. What else is important to you about the background of your students? (1b)

Plan for Learning

Teacher: _____

Mentor: _____

Date: _____

Directions to the beginning teacher: With guidance from your mentor, complete this plan for the class your mentor will observe. Note that the numerals and letters in parentheses following each question refer to the related standards in the *TxBESS Framework*.

STANDARDS-BASED INSTRUCTION	
PLAN	**RATIONALE**
Describe the key knowledge and skills (objectives) you intend for students to learn in this lesson. (1c)	Why are these objectives appropriate for these students at this time? (1c) Describe how these objectives build on previous lessons and how they lead to future lessons. (1a, 2b)
ASSESSMENT STRATEGIES	
PLAN	**RATIONALE**
How do you plan to assess how well the students have achieved the learning/objectives in <u>this</u> lesson? (1f) Check all that apply. _____ Observation _____ Written test (multiple choice, true/false) _____ Oral report _____ Performance _____ Individual or group project _____ Portfolio entry _____ Conference _____ Student self-assessment _____ Peer assessment _____ Rubric _____ Other: _____	Why have you chosen these approaches for assessment for <u>this</u> lesson? (1f) How do these assessment approaches support your long-term assessment plan? (1f)

INSTRUCTIONAL DELIVERY	
PLAN	**RATIONALE**
Describe your instructional delivery. Address each of the following questions. • What instructional strategies will you use for this lesson? Include estimates of time allocations. (1e)	Address each of the following questions. • Why have you chosen these instructional strategies? (1e)
• How will the students be grouped for instruction? (1e)	• Why have you chosen this grouping of students? (1e)
• What activities have you planned for your students? (1e)	• Why have you chosen these activities? (1e)
• What instructional materials, resources, and technology will you use? **Attach a copy of instructional artifacts.** (1d)	• Why have you chosen these instructional materials and resources? (1d)
• What modifications will you make for identified students with special needs? (1c)	• Why have you chosen these modifications? (1c)
• How will you accommodate different instructional levels and learning styles of students in your class? (1c)	• Why have you chosen these accommodations? (1c)

Are there any special circumstances that the observer should be aware of?

Data Collection Notes

Teacher: _____

Mentor: _____

Date: _____

Directions to the mentor: Complete these notes with data provided by the beginning teacher and data gathered in the classroom observation. You may complete the beginning teacher's reflection column based on the Learning Reflection and on the conference with the beginning teacher.

Data Collection Notes

Cluster 1: Planning for Learner-centered Instruction

Data	Beginning Teacher Reflection
1a: Demonstrating Knowledge of Content and Pedagogy (Content knowledge; Prerequisite relationships; Content-specific pedagogy)—See Plan for Learning	
1b: Demonstrating Knowledge of Students (Characteristics of age group; Students' varied approaches to learning; Students' skills and knowledge; Students' interests and cultural heritages)—See Class Background Study, Plan for Learning	
1c: Selecting Key Knowledge and Skills (Significance; Clarity; Suitability for diverse students)—See Plan for Learning, Learning Reflection	
1d: Demonstrating Knowledge of Materials, Resources, and Technology (Materials/resources; Technology)—See Class Background Study, Plan for Learning, Instructional Artifacts, Learning Reflection	
1e: Designing Activities That Promote Student Learning (Learning activities; Learning groups; Lesson structure)—See Plan for Learning, Learning Reflection, Instructional Artifacts	
1f: Planning to Assess Student Learning (Assessment content and methods; Criteria)—See Plan for Learning, Learning Reflection	

Data Collection Notes (cont'd)

Cluster 2: A Classroom Environment That Promotes Equity, Excellence, and Learning

Data	Beginning Teacher Reflection
2a: Creating an Environment of Rapport and Respect (Teacher interaction with students; Student interaction)—See Class Background Study	
2b: Establishing a Culture for Learning (Importance of content; Expectations for learning and achievement)—See Class Background Study	
2c: Managing Classroom Procedures (Transitions; Materials and supplies; Non-instructional duties; Volunteers and paraprofessionals)—See Class Background Study	
2d: Managing Student Behavior (Expectations; Monitoring of student behavior; Response to student behavior)—See Class Background Study	
2e: Organizing Physical Space (Environmental considerations in support of learning; Safety and arrangement of furniture; Accessibility to learning and use of physical resources)	

Data Collection Notes (cont'd)

Cluster 3: Instruction and Communication

Data	Beginning Teacher Reflection
3a: Communicating Clearly and Accurately (Directions and procedures; Oral and written language; Student communication)	
3b: Using Questioning and Discussion Techniques (Quality of questions/discussion techniques; Student participation)—See Learning Reflection	
3c: Engaging Students in Learning (Representation of content; Activities and assignments; Grouping of students; Materials, resources, and technology; Structure, sequencing, and pacing)—See Instructional Artifacts, Learning Reflection	
3d: Assessing Student Learning (Implementation of assessment; Use for planning; Quality and timeliness of feedback)—See Instructional Artifacts, Learning Reflection	
3e: Demonstrating Flexibility and Responsiveness (Lesson adjustment; Response to students; Persistence)	

Data Collection Notes (cont'd)

Cluster 4: Professionalism

Data	Beginning Teacher Reflection
4a: Reflecting on Teaching (Accuracy; Use in future teaching)—See Learning Reflection	
4b: Maintaining Accurate Records (Student progress in learning; Non-instructional records)—See Statement of Professional Responsibilities, Instructional Artifacts	
4c: Communicating with Families/Caregivers (Information about the instructional program; Information about individual students; Engagement of families/caregivers in the instructional program)—See Statement of Professional Responsibilities, Instructional Artifacts	
4d: Contributing to the School (Relationships with colleagues; Service to the school)—See Statement of Professional Responsibilities, Class Background Study, Mentor Questionnaire	
4e: Growing and Developing Professionally (Enhancement of content knowledge and pedagogical skill; Participation in beginning teacher support)—See Mentor Questionnaire	
4f: Serving as an Advocate for Students (Decision-making; Student advocacy)—See Class Background Study, Statement of Professional Responsibilities, Mentor Questionnaire	

Learning Reflection

Teacher: _____
Mentor: _____
Date: _____

Directions to the beginning teacher: Complete the Learning Reflection immediately following your observed lesson. You may wish to refer to the *TxBESS Framework* to add details to your reflection.

GENERAL REFLECTION
Overall, how effective was this lesson? What is the basis for your judgment? (4a)

ALTERATIONS
Did you depart in any way from your lesson plan? If so, how? Why? (3e, 4a)

FUTURE PLANNING
What might you change the next time you teach this lesson? (4a)

Learning Reflection (cont'd)

INSTRUCTIONAL DELIVERY—Respond to these questions for each aspect.		
	*How were the following aspects of your instructional delivery effective **for all students**? How was delivery similar or different to what you had planned? (4a)*	*What might you do differently to improve the lesson?(4a)*
Key Knowledge and Skills (1c, 3c)		
Instructional Strategies (1e, 3b, 3c)		
Student Grouping (1e, 3c)		
Materials, Resources, and Technology (1d, 3c)		
Assessment (1f, 3d)		

Statement of Professional Responsibilities

Teacher: _____
Mentor: _____
Date: _____

Directions to the beginning teacher: Complete the following three sections and attach artifacts as directed.

MAINTAINING RECORDS
Describe your record-keeping procedures. Provide two samples of your record-keeping systems (, attendance records, grade books, or financial records such as accounts of lunch money). At least one sample must be an instruction-related record. Be sure to remove identifying information, such as students' last names. (4b)

FAMILY/CAREGIVER COMMUNICATION
What types of information do you communicate to the families/caregivers of students in your class? Provide two samples of your communications with families/caregivers (, notes about individual students, newsletters, and communication logs). Be sure to remove identifying information, such as students' last names. (4c)

PROFESSIONAL GROWTH
List professional development activities in which you have participated since being hired for this teaching position (, attending workshops, beginning teacher orientation, consulting with colleagues or your mentor, joining a professional organization). (4d)

Mentor Questionnaire

Teacher: _____
Mentor: _____
Date: _____

Directions to the mentor: Answer the following three questions.

1. List examples you have observed of the beginning teacher's professional interactions with colleagues. Include examples of how the beginning teacher has participated in activities designed for beginning teacher support. (4d, 4e)

   _____

   _____

   _____

   _____

   _____

2. List examples of the beginning teacher's participation in school activities. (4d)

   _____

   _____

   _____

   _____

   _____

3. List examples of the beginning teacher's efforts to advocate for students and/or respond to student needs/concerns. (4f)

   _____

   _____

   _____

   _____

   _____

Data Summary

Teacher: _____
Mentor: _____
Date: _____

Directions to the mentor and beginning teacher: After considering all the data gathered in the TAP, the beginning teacher and mentor consult the developmental continuum in the *TxBESS Framework*, highlighting the descriptors that best represent the data collected. The Data Summary may be used to record overall impressions. For each standard, circle *D* for Developing, *C* for Beginning or Advanced Competent, or *P* for Proficient. If performance is at the Developing level, check the elements in which the beginning teacher needs improvement.

Data Summary

Cluster 1: Planning for Learner-centered Instruction

Standards and Elements	Circle performance level. If D, check reason.		
Standard 1a: Demonstrating Knowledge of Content and Pedagogy	**D**	**C**	**P**
Content Knowledge: Teacher displays a lack of understanding of the structure of the discipline, or the teacher makes content errors.			
Prerequisite Relationships: Teacher displays a lack of understanding of knowledge and skills students must already have in order to learn the identified content.			
Content-specific Pedagogy: Teacher displays a lack of understanding of pedagogical strategies used to promote student learning of the content.			
Standard 1b: Demonstrating Knowledge of Students	**D**	**C**	**P**
Characteristics of Age Group: Teacher's plans are not aligned with the developmental characteristics of the age group.			
Students' Varied Approaches to Learning: Teacher's plans do not reflect knowledge of the different approaches to learning that students exhibit.			
Students' Skills and Knowledge: Teacher's plans do not reflect understanding of students' prior knowledge and skills.			
Students' Interests and Cultural Heritages: Teacher's plans do not reflect knowledge of student interests and/or cultural heritages that would further enhance student learning.			

Standards and Elements	Circle performance level. If D, check reason.		
Standard 1c: Selecting Key Knowledge and Skills	**D**	**C**	**P**
Significance: Selected knowledge and skills are trivial, represent low expectations for students, or require little or no conceptual understanding.			
Clarity: Key knowledge and skills are not discernible.			
Suitability for Diverse Students: Teacher selects key knowledge and skills that are not aligned with students' needs.			
Standard 1d: Demonstrating Knowledge of Materials, Resources, and Technology	**D**	**C**	**P**
Materials/Resources: Teacher's plans do not indicate an awareness of school or district resources that would assist in teaching and in student learning, or teacher inappropriately uses materials and resources.			
Technology: Teacher's plans do not indicate an awareness of technology that would assist in teaching and student learning, or teacher inappropriately uses technology.			
Standard 1e: Designing Activities That Promote Student Learning	**D**	**C**	**P**
Learning Activities: The planned activities do not support key knowledge and skills, or they lack coherence.			
Learning Groups: The planned activities do not include meaningful groupings of students.			
Lesson Structure: The planned activities have no defined structure or an illogical sequence.			
Standard 1f: Planning to Assess Student Learning	**D**	**C**	**P**
Assessment Content and Methods: The content identified for assessment and/or the assessment methodology are not aligned with key knowledge and skills and/or activities; or little or no evidence of assessment plans are present.			
Criteria: The criteria identified for the assessment are not aligned with the key knowledge and skills and/or activities.			

Data Summary

Cluster 2: A Classroom Environment That Promotes Equity, Excellence, and Learning

Standards and Elements	Circle performance level. If D, check reason.		
Standard 2a: Creating an Environment of Rapport and Respect	**D**	**C**	**P**
Teacher Interaction with Students: Classroom interactions between the teacher and students are disrespectful or inappropriate (, sarcasm, putdowns, physical contact, conflict).			
Prerequisite Relationships: Teacher displays a lack of understanding of knowledge and skills students must already have in order to learn the identified content.			
Content-specific Pedagogy: Teacher displays a lack of understanding of pedagogical strategies used to promote student learning of the content.			
Standard 2b: Establishing a Culture for Learning	**D**	**C**	**P**
Importance of Content: Teacher demonstrates a low level of commitment to the content.			
Expectations for Learning and Achievement: Teacher demonstrates low expectations for student achievement. Student products are not evident or do not reflect relevant learning.			
Standard 2c: Managing Classroom Procedures	**D**	**C**	**P**
Transitions: Transition procedures are haphazard, inefficient, or nonexistent, resulting in loss of instructional time.			
Materials and Supplies: Procedures for handling materials and supplies are haphazard, inefficient, or nonexistent, resulting in loss of instructional time.			
Non-instructional Duties: Procedures for handling non-instructional duties are haphazard, inefficient, or nonexistent, resulting in loss of instructional time.			
Volunteers and Paraprofessionals: Procedures for volunteers and paraprofessionals are haphazard, inefficient, or nonexistent, resulting in loss of instructional time.			
Standard 2d: Managing Student Behavior	**D**	**C**	**P**
Expectations: Student behavior reflects teacher's lack of clear expectations.			
Monitoring of Student Behavior: Student behavior reflects teacher's lack of monitoring of student behavior.			
Response to Student Behavior: Teacher responds inappropriately to student behavior, resulting in loss of learning time.			

Standards and Elements	Circle performance level. If D, check reason.		
Standard 2e: Organizing Physical Space	**D**	**C**	**P**
Environmental Considerations in Support of Learning: The classroom's physical arrangement does not support the lesson.			
Safety and Arrangement of Furniture: The teacher fails to use standard safety procedures in the physical environment.			
Accessibility to Learning and Use of Physical Resources: The physical arrangement does not support the learning of all students. Some aspects of the lesson may be physically inaccessible for some students.			

Data Summary

Cluster 3: Instruction and Communication

Standards and Elements	Circle performance level. If D, check reason.		
Standard 3a: Communicating Clearly and Accurately	**D**	**C**	**P**
Directions and Procedures: Teacher's oral and/or written directions and procedures are unclear.			
Oral and Written Language: Teacher's oral and/or written communication contains errors, is unclear, and/or is inappropriate for students.			
Student Communication: Teacher's communication does not facilitate appropriate teacher-student or student-student exchanges.			
Standard 3b: Using Questioning and Discussion Techniques	**D**	**C**	**P**
Quality of Questions/Discussion Techniques: Teacher asks low-level questions in a recitation format, resulting in trivialized student participation.			
Student Participation: Students' responses do not reflect new learning.			
Standard 3c: Engaging Students in Learning	**D**	**C**	**P**
Representation of Content: Many students are not engaged in significant learning as a result of poor representation of content.			
Activities and Assignments: Many students are not engaged in significant learning as a result of inappropriate activities and assignments.			
Grouping of Students: Many students are not engaged in significant learning as a result of inappropriate grouping.			
Materials, Resources, and Technology: Many students are not engaged in significant learning as a result of inappropriate use of materials and resources.			
Structure, Sequencing, and Pacing: Many students are not engaged in significant learning as a result of a lack of lesson structure and/or inappropriate sequencing and pacing.			
Standard 3d: Assessing Student Learning	**D**	**C**	**P**
Implementation of Assessment: Assessment is not aligned with the lesson.			
Use for Planning: Assessment results are not used to plan future instruction.			
Quality and Timeliness of Feedback: Students do not use the teacher's feedback, if and when given.			

Standards and Elements	Circle performance level. If D, check reason.		
Standard 3e: Demonstrating Flexibility and Responsiveness	**D**	**C**	**P**
Lesson Adjustment: Teacher adheres to the instructional plan in spite of a lack of student understanding or interest.			
Response to Students: Teacher ignores students' questions.			
Persistence: Teacher assumes little or no responsibility when students fail to understand.			

Data Summary

Cluster 4: Professionalism

Standards and Elements	Circle performance level. If D, check reason.		
Standard 4a: Reflecting on Teaching	**D**	**C**	**P**
Accuracy: Teacher does not know whether a lesson was effective or achieved its purpose, and/or misjudges the success of a lesson.			
Use in Future Teaching: Teacher does not offer suggestions for how a lesson may be improved in the future.			
Standard 4b: Maintaining Accurate Records	**D**	**C**	**P**
Student Progress in Learning: Teacher has no system or a haphazard system for maintaining academic records, resulting in errors and confusion.			
Non-instructional Records: Teacher has no system or a haphazard system for maintaining non-instructional records, resulting in errors and confusion.			
Standard 4c: Communicating with Families/Caregivers	**D**	**C**	**P**
Information about the Instructional Program: Teacher provides little or no information about the instructional program to families/caregivers.			
Information about Individual Students: Teacher provides little or no information about individual students to their families/caregivers.			
Engagement of Families/Caregivers in the Instructional Program: Teacher makes few or no attempts to engage families/caregivers to initiate communication in regard to the instructional program and/or classroom activities.			
Standard 4d: Contributing to the School	**D**	**C**	**P**
Relationships with Colleagues: Teacher maintains minimal relationships with colleagues.			
Service to the School: Teacher does not consistently fulfill contractual and/or professional obligations.			
Standard 4e: Growing and Developing Professionally	**D**	**C**	**P**
Enhancement of Content Knowledge and Pedagogical Skill: Teacher does not participate in professional development activities.			
Participation in Beginning Teacher Support: Teacher does not participate in support activities designed for beginning teacher support.			
Standard 4f: Serving as an Advocate for Students	**D**	**C**	**P**
Decision Making: Teacher does not use critical data to identify necessary actions in support of student growth or to meet individual student needs.			
Student Advocacy: The teacher does not take action once a need is identified.			

TxBESS Action Plan

Teacher: _____

Mentor: _____

Date: _____

Standards Chosen for Further Development	Action(s) To Be Taken	Mentor Responsibilities	Beginning Teacher Responsibilities	Timeline	Success Indicators

APPENDIX E

Feedback on Professional Development and Communication

Professional Practice
Baylor University
School of Education

Candidate_____ Date_____

Instructor (signature) _____

Candidate (signature) _____

BU Faculty (signature)_____

√ Candidate is showing expected progress.
√- Candidate needs assistance in this area.
C Conference is needed with the clinical instructor/mentor and resident faculty/intern coordinator.

Instructor	**Candidate**	**BU Faculty**	
_____	_____	_____	Is dependable (No absences and/or provided notification of absence before hand and arranges for make-up.)
_____	_____	_____	Is punctual (Consistently arrives in the classroom and/or seminars before/at the scheduled time.)
_____	_____	_____	Is reliable (Always completes tasks on time.)
_____	_____	_____	Meets expectations for professional dress
_____	_____	_____	Demonstrates effective planning, preparation, and use of materials
_____	_____	_____	Seeks assistance and resources from CI/Mentor as needed
_____	_____	_____	Seeks and uses feedback to improve
_____	_____	_____	Is positive with students
_____	_____	_____	Respects confidentiality in conversations about students/parents
_____	_____	_____	Uses accurate and effective written/oral communication
_____	_____	_____	Meets expectations for professional conduct
_____	_____	_____	Is positive with peers and other professionals

Other comments by instructor and/or candidate:

White copy – Candidate Yellow Copy – Office of Professional Practice Pink Copy – Baylor Faculty

APPENDIX F

Interactions

Instructor: _____Date: _____

Time Observed: _____ Observer: _____

Academic Corrections	Behavior Corrections

Specific Corrections	General Corrections

Total # of Corrections:

Academic Praises	Behavior Praises

Specific Praises	General Praises

Total # of Praises:

Total: _____ Praises to _____Corrections

Comments:

APPENDIX G

Engagement: 10-minute Sample

Candidate:
Mentor: Date:
Time Observed: Observer:

Time	Setting S, G, I	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6	Type of Task
:30								
1:00								
1:30								
2:00								
2:30								
3:00								
3:30								
4:00								
4:30								
5:00								
5:30								
6:00								
6:30								
7:00								
7:30								
8:00								
8:30								
9:00								
9:30								
10:00								

Every 30 seconds, observe each of six randomly selected students. Observe each student for 5 seconds during the minute.

Codes:

%_____ + = On Task--following directions, looking at teacher
%_____ – = Off Task--not engaged
%_____ W = Waiting--raising hand
%_____ S = Small Group--smaller than whole class
%_____ G = Whole Group
%_____ I = Independent--one student working alone
%_____ H = Hands-on
%_____ P = Paper/pencil
%_____ D = Discussion
%_____ L = Lecture
%_____ O = Other

APPENDIX H

Professional Practice Evaluation Form

Candidate_____ Date_____ _____Intern _____TA _____Novice
Campus_____Grade Level_____ Subject_____

Semester ☐ **Fall** ☐ **Spring** ☐ **Summer**

NE = No Evidence 1 = Developing 2 = Competent 3 = Proficient

Strand 1: Creating a Positive Learning Environment

1. Establishes expectations.	NE	1	2	3
2. Arranges space for safety and effective learning.	NE	1	2	3
3. Establishes small and large group procedures, routines, and manages transitions.	NE	1	2	3
4. Prepares and manages materials and technology for effective learning.	NE	1	2	3
5. Keeps progress records in order to match and adapt curriculum to student.	NE	1	2	3
6. Uses reinforcement and correction to increase learning and shows respect.	NE	1	2	3
7. Paces lessons and activities to engage students.	NE	1	2	3

Comments:_____

_____

Strand 2: Assessment

8. Assessment method matches knowledge (curriculum) and student characteristics.	NE	1	2	3
9. Formative assessment provides information regarding student(s)' achievement level.	NE	1	2	3
10. Assessment information is communicated to students, parents, and other professionals.	NE	1	2	3

Comments:_____

_____

Strand 3: Curriculum Planning

11. Focuses students' attention on the information.	NE	1	2	3
12. Organizes the knowledge when planning instruction.	NE	1	2	3
13. Presents information for instruction that is related to assessment.	NE	1	2	3
14. Guides students' application of knowledge.	NE	1	2	3
15. Provides opportunities for students to use information independently	NE	1	2	3

Comments:_____

_____

Strand 4: Professional Development and Communication

16. Participates in professional development.	NE	1	2	3
17. Is proficient in communication with students, parents, and other professionals.	NE	1	2	3
18. Collaborates with parents and other caregivers.	NE	1	2	3

Comments:_____

_____

Additional comments_____

_____

_____

Candidate Signature_____

Faculty Signature_____ **Faculty Signature**_____

REFERENCES

Ancis, J., Mohr, J., & Sedlacek, W. (2000). Student perceptions of campus cultural climate by race. *Journal of Counseling and Development, 78*, 180-185.

Anderson, C., Beaty, L., Bromage, A., Cousin, G., Day, K., Hounsell, J., Land, R., Litjens, J., McCune, V., Meyer, E., Nisbet, J., & Reimann, N. (2007). *Learning and teaching at university: The influences of subjects and settings.* Teaching and Learning Research Programme. Research Briefing. Retrieved from http://www.tlrp.org/pub/documents/Hounsell%20RB%2031%20FINAL.pdf

Association of Childhood Education International. (2007). *Elementary education standards and supporting explanation.* Retrieved from http://acei.org/wp-content/uploads/ACEIElementaryStandardsSupportingExplanation.5.07.pdf

Astleitner, H. (2000). Designing emotionally sound instruction: The FEASP-approach. *Instructional Science, 28*(3), 169-198.

Au, K. (1980). Participation structures in reading lessons with Hawaiian children: Analysis of a culturally appropriate instructional event. *Anthropology and Education Quarterly, 11*(2), 91-115.

Ayers, W. (Ed.). (1995). *To become a teacher: Making a difference in childrens' lives.* New York: Teachers College Press.

Ball, D. L., & Bass, H. (2000). Interweaving content and pedagogy in teaching and learning to teach: Knowing and using mathematics. In J. Boaler (Ed.), *Multiple perspectives on the teaching and learning of mathematics* (pp. 83-104). Westport, CT: Ablex.

Ball, D. L., & Cohen, D. K. (1999). Developing practice, developing practitioners: Toward a practice-based theory of professional development. In L. Darling-Hammond, & G. Sykes (Eds.). *Teaching as the learning profession: Handbook of policy and practice* (pp. 3-32). San Francisco, CA: Jossey-Bass.

Banks, J. S. (1991). Teaching multicultural literacy to teachers. *Teaching Education, 4*(1), 135-144.

Banks, J. S. (2008). *Teaching strategies for ethnic studies* (8th ed.). Boston: Allyn and Bacon.

Banks, J., Banks, C., Cortes, C., Hahn, C., Merryfield, M., Moodley, K., Murphy-Shigematsu, S., Osler, A., Park, C., & Parker, W. (2005). *Democracy and diversity: Principals and concepts for educating citizens in a global age.* Seattle, WA: University of Washington, Center for Multicultural Education.

Banks, K., & Kohn-Wood, L. (2007). The influence of racial identity profiles on the relationship between racial discrimination and depressive symptoms. *Scholarship, Paper 7.* Retrieved from http://digitalcommons.iwu.edu/psych_scholarship/7

Bates, A., & Burbank, M. (2008). Effective student teacher supervision in the era of no child left behind. *The Professional Educator, 32*(2), 18-41.

Baum, S. M., Renzulli, J. S., & Hébert, T. P. (1999). Reversing underachievement: Creative productivity as a systemic intervention. *Gifted Child Quarterly, 39*, 224-235.

Baumfield, V. (1997). *Thinking skill: Identifying generic principle and supporting effective implementation.* Paper presented at The 7th International Conference on Thinking. Retrieved from http://www.nie.ac.sg:8000/wwwnie/think/Papers /index.html

Baumgartner, F., Koerner, M., & Rust, F. (2002). Exploring roles in student teaching placements. *Teacher Education Quarterly, 29*(2), 35-58.

Baumgartner, F., Koerner, M., & Rust, F. (2002). Exploring roles in student teaching placements. *Teacher Education Quarterly, 29*, 35-58.

Beijaard, D., Verloop, N., & Vemunt, J. (2000). Teachers' perceptions of professional identity: An exploratory study from a personal knowledge. *Teaching and Teacher Education, 16*(7), 749-764.

Bennett, C., Okinaka, A., & Xiao-yang, W. (1988, April). *The effect of a multicultural education course on preservice teachers' attitudes, knowledge, and behavior.* Paper presented at the Annual Meeting of the AERA, New Orleans, LA.

Bereiter, C., & Engelmann, S. (1966). *Teaching disadvantaged children in the preschool.* Engelwood Cliffs, NJ: Prentice Hall.

Berliner, D. C. (1994). Expertise: The wonder of exemplary performance. In J. Mangieri, & C. C. block (Eds.), *Creating powerful thinking in teachers and students: Diverse perspectives* (pp. 161-186). Fort Worth, TX: Harcourt Brace College Publishers.

Betts, G., & Kercher, J. (1999). *Autonomous learner model: Optimizing ability.* Greely, CO: Autonomous Learner Publications.

Beyer, B. K. (1991). *Teaching thinking skills: A handbook for elementary school teachers*. Boston: Allen and Bacon.

Biasco, F., Goodwin, E., & Vitale, K. (2001). College students' attitudes toward racial discrimination. *College Student Journal, 35*(4), 74-79.

Bickel, W. E., & Bickel, D. D. (1986). Effective schools, classrooms, and instruction: Implications for special education. *Exceptional Children, 52*(6), 489-500.

Bogdan, R. C., & Biklen, S. K. (2006). *Qualitative research for education: An introduction to theory and methods*. (5th ed.) Boston: Allyn and Bacon.

Borg, M. (2005). A case study of the development in pedagogic thinking of a pre-service teacher. *Teaching English as a Second or Foreign Language, 9*(2), 81-109.

Bowman, N. (1979). College supervision of student teaching: A time to reconsider. *Journal of Teacher Education, 30*(3), 29-30.

Boydell, D. (1986). Issues in teaching practice supervision research: A review of the literature. *Teaching and Teacher Education, 2*(2), 115-125.

Bransford, J. D., & Stein, B. S. (1993). *The IDEAL problem solver* (2nd ed.). New York: Freeman.

Bransford, J., & Darling-Hammond, L. (2005). *Preparing teachers for a changing world: What teachers should learn and be able to do.* San Francisco, CA: Jossey-Bass.

Bransford, J., Derry, S., Berliner, P., Hammerness, K., & Beckett, K. L. (2005). Theories of learning and their roles in teaching. In L. Darling-Hammond, & J. Bransford (Eds.), *Preparing teacher for a changing world: What teachers should learn and be able to do* (pp. 40-87). San Francisco, CA: Josey-Bass.

Briggs, L., Richardson, W., & Sefzik, P. (2001). Comparing student teacher ratings and student teacher self-ratings of elementary student teaching. *Education, 106*(2), 150-159.

Brighton, C. M., & Moon, T. R. (2007). *Two decades of research on differentiation: What do we know?* Presentation at the National Association for Gifted Children Annual Professional Development Conference.

Britton, L. R., & Anderson, K. A. (2010). Peer coaching and preservice teachers: Examining an underutilized concept. *Teaching and Teacher Education, 26*(2), 306-314.

Britzman, D. (2003). Cultural myths in the making of a teacher: Biography and social structure in teacher education. *Harvard Educational Review, 56*(4), 442-456.

Brown, C. A., & Cooney, T. J. (1982). Research on teacher education: A philosophical orientation. *Journal of Research and Development in Education, 15*(4), 13-18.

Brown, D. C. (1996). Why ask why: Patterns and themes of causal attribution in the workplace. *Journal of Industrial Teacher Education, 33*(4), 47-65.

Brown, J., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organizational Science, 2*(1), 40-57.

Brown, J., Collins, A., & Duguid, S. (1989). Situated cognition and the culture of learning. *Educational Researcher, 18*(1), 32-42.

Bruner, J. (1985). Models of the learner. *Educational Researcher, 16*, 5-8.

Buitink, J. (2009). What and how do student teachers learn during school based teacher education? *Teaching and Teacher Education, 25*, 18-127.

Burns, F. D. (1993). Independent study: Panacea or palliative? In C. J. Makers (Ed.), *Critical issues in gifted education: Programs for the gifted in regular education classrooms Vol. III* (pp. 381-399). Austin: PRO-ED.

Caine, R. N., & Caine, G. (1994). *Making connections: Teaching and the human brain.* Alexandria, VA: Association for Supervision and Curriculum Development.

Callahan, C. M., & Tomlinson, C. A. (1999). The effects of mentoring relationships on preservice teachers' attitudes toward academically diverse students. *Gifted Child Quarterly, 43(*2), 56-62.

Carnegie Task Force on Teaching as a Profession. (1986). *A nation prepared: Teachers for the 21st century: The report of the task force on teaching as a profession.* New York: Author.

Chamberlain, T. A. (2005). *Branching out or breaking off: An exploration of first-year students' social network.* Unpublished manuscript, Indiana University, Bloomington, IN.

Chinn, P., & Russell, T. (1995). *Structure and coherence in a teacher education program: Addressing tension between systematics and the educator agenda.* Paper presented at the Annual Meeting of the Canadian Society for the Study of Education, Montreal, Quebec, Canada.

Cliatt, M. J., Shaw, J. M., & Sherwood, J. M. (1980). *Effects of training on the divergent-thinking abilities of kindergarten children. Child Development, 51*(4), 1061-1064.

Cochran-Smith, M. (1991). Learning to teach against the grain. *Harvard Educational Review, 61*(3), 279-310.

Cochran-Smith, M. (2003). Multicultural teacher education: Research, practice, and policy (2nd ed.). In J. A. Banks (Ed.), *The handbook of research on multicultural education* (2nd ed.), (pp. 931-978). San Francisco: Jossey-Bass.

Cochran-Smith, M., & Lytle, S. (1993). *Inside/outside: Teacher research and knowledge*. New York: Teachers College Press.

Cochran-Smith, M., & Lytle, S. L. (1999). Relationships of knowledge and practice: Teacher learning in communities. In *Review of research in education* (Vol. 24, pp. 249-306). Washington, DC: American Educational Research Association.

Cochran-Smith, M., & Lytle, S. L. (1999). The teacher research movement: A decade later. *Educational Researcher, 28*(7), 15-25.

Cochran-Smith, M., & Zeichner, K. (2005). Executive summary. In M. Cochran-Smith, & K. M. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education* (pp. 1-36). Mahwah, NJ: Lawrence Erlbaum.

Cohen, D. K., & Hill, H. C. (2000). Instructional policy and classroom performance: the mathematics reform in California. *Teacher College Record, 102*(2), 294-343.

Cohen, L. M., & Frydenberg, E. (2006). *Coping for capable kids: Strategies for parents, teachers, and students.* Waco, TX: Prufrock Press.

Colangelo, N., Assouline, S. G., & Gross, M. U. M. (2004). *A nation deceived: How schools hold back America's brightest students,* Vol. 1. The Templeton National Report on Acceleration. The Connie Belin & Jacqueline N. Blank International Center for Gifted Education and Talent Development.

Coldron, J., & Smith, R. (1999). Active location in teachers' construction of their professional identitites. *Journal of Curriculum Studies, 31*(6), 711-726.

Collins, A., Brown, J. S., & Holum, A. (1991). Cognitive apprenticeship: Making things visible. *American Educator, 15*(3), 38-46.

Council for Chief State School Officers (CCSSO). (2011). *InTASC core model teaching standards: A resource for state dialogue.* Washington DC: Interstate Teacher Assessment and Support Consortium.

Council for Exceptional Children. (2004). Definition of a well-prepared special education teacher. Retrieved from http://www.cec.sped.org/content/navigationmenu/professionaldevelopment/professionalstandards/well-prepared-final.pdf

Cramond, B., Martin, C. E., & Shaw, E. L. (1990). Generalizability of creative problem solving procedures to real-life problems. *Journal for the Education of the Gifted, 13*, 141-155.

Creswell, J. W. (1994). *Research design: Qualitative & quantitative approaches*. Thousand Oaks, CA: Sage.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five traditions* (2nd Ed.). Thousand Oaks, CA: Sage.

Cummins, J. (1986). Empowering minority students: A framework for intervention. *Harvard Educational Review, 56*(1), 18-36.

Dalzell, R. S. (1997). *Hit or myth: Teaching students to think. Do we?* Paper presented at the 7th International Conference on Thinking. Retrieved from http://www.nie.ac.sg:8000/wwwnie/think/Papers/index.html

Darling Hammond, L., Fickel, L., MacDonald, K., Miller, L., Ruscoe, G., Silvernail, D., Snyder, J., Whitford, B., & Zeichner, K. (2006). *Powerful teacher education: Lessons from exemplary programs.* San Francisco: Jossey Bass.

Darling-Hammond, L. (1995). Changing the conceptions of teaching and teacher development. *Teacher Education Quarterly, 22*(4), 9-26.

Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching.* New York: National Commission on Teaching and America's Future.

Darling-Hammond, L. (1999). *Teacher quality and student achievement: A review of state policy evidence.* Seattle, WA: Center for the Study of Teaching and Policy.

Darling-Hammond, L., & MacDonald, M. (2000). Where there is learning there is hope: The preparation of teachers at the Bank Street College of Education. In L. Darling-Hammond (Ed.), *Studies of excellence in teacher education: Preparation at the graduate level* (pp. 1-95). Washington, DC: American Association of Colleges for Teacher Education.

Darling-Hammond, L., & McLaughlin, M. W. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan, 76*(8), 597-604.

Darling-Hammond, L., French, J., & Garcia-Lopez, S. (2002). *Learning to teach for social justice.* New York: Teachers College Press.

Darling-Hammond, L., Hammerness, K., Grossman, P., Rust, F., & Shulman, L. (2005). The design of teacher education programs. In L. Darling-Hammond, & J. Bransford (Eds.), *Preparing teacher for a changing world: What teachers should learn and be able to do* (pp. 390-441). San Francisco, CA: Jossey-Bass.

DaSilva, M. (2005). Constructing the teaching process from inside out: How pre-service teachers make sense of their perceptions of the teaching of the four skills. *Teaching English as a Second Language Electronic Journal, 9*(2), 1-19.

Davis, G. A. (1991). Teaching creative thinking. In N. Colangelo, & G. A. Davis (Eds.), *Handbook of gifted education* (pp. 236-244). Needham Heights, MA: Allyn and Bacon.

Davis, G. A., Rimm, S. B., & Siegle, D. (2010). *Education of the gifted and talented* (6th ed.). Boston: Allyn and Bacon.

Day, C., Fernandez, A., Hauge, T., & Moller, J. (2000). *The life and work of teachers: International perspectives in changing times.* London: Routlage.

Delcourt, M. A. B. (1993). Creative productivity among secondary school students: Combining energy, interest, and imagination. *Gifted Child Quarterly, 37*, 23-31.

Dellett, K., Fromm, G., Karn, S., & Cricchi, A. (1991). Developing metacognitive behavior in third and fourth grade students. Retrieved from http://gse.gmu.edu/reserach/articles/Clearview/Final%20Report.html

Denton, J. J. (1982). Early field experience influence on performance in subsequent coursework. *Journal of Teacher Education, 33*(2), 19-23.

Denton, J. J., Morris, J. E., & Tooke, D. J. (1982). The influence of academic characteristics of student teachers on cognitive attainment of learners. *Educational and Psychological Research, 2*(1), 15-29.

Denzin, N. K., & Lincoln, Y. S. (2011). Introduction: Entering the field of qualitative research (4th ed.). In N. K. Denzin, & Y. S. Lincoln (Eds.), The SAGE *Handbook of qualitative research*.(pp. 1-42)Thousand Oaks, CA: Sage.

Desimone, L. M., Porter, A. C., Garet, M. S., Yoon, K. S., & Birman, B. F. (2002). Effects of professional development on teachers' instruction: Results from a three year longitudinal study. *Educational Evaluation and Policy Analysis, 24*(2), 81-112.

Dewey, J. (2007). *The educational situation* (Reprint - Original work published 1904). Whitefish, MT: Kessinger Publishing.

Dick, R. D. (1991). An empirical taxonomy of critical thinking. *Journal of Instructional Psychology, 18*, 79-92.

Doyle, W. (1997). Heard any really good stories lately? A critique of the critics or narrative in educational research. *Teaching and Teacher Education, 13*(2), 93-99.

Duffee, L., & Aikenhead, G. S. (1992). Curriculum change, student evaluation, and teacher practical knowledge. *Science Education, 76*, 493-506.

Edgecombe, N. (2011). *Accelerating the academic achievement of students referred to developmental education.* CCRC Working Paper No. 30. New York: Teachers College, Columbia University.

Edwards, A., Gilroy, P., & Hartley, D. (2002). *Rethinking teacher education: Collaborative responses to uncertainty.* New York: Routlage.

Ellenburg, F. (1981). You can pay me now or you can pay me later. *The Clearinghouse, 54*, 200-205.

Ellis, V. (2009). *Subject knowledge and teacher education: The development of beginning teachers' thinking.* New York: Continuum International Publishing Group.

Ennis, R. H. (1989). Critical thinking and subject specificity: clarification and needed research. *Educational Researcher, 18*, 4-10.

Ericsson, K. A., Krampe, R., & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review, 100*(3), 363-406.

Evans, R. (2001). *The human side of school change: Reform, resistance, and real-life problems of innovation*. San Francisco: Jossey Bass.

Evertson, C. Emmer, E., Sanford, J., & Clements, B. (1983). Improving classroom management: An experiment in elementary classrooms. *Elementary School Journal, 84*, 173-188.

Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record, 103*(6), 1013-1055.

Feiman-Nemser, S., & Katz, D. (2004). New teacher induction in a culture of professional development. In J. I. Goodlad, & T. J. McMannon (Eds.), *The teaching career.* (pp. 96-117). New York: Teachers College Press.

Feimer-Nemser, S., & Buchmann, M. (1983). *Pitfalls of experience in teacher education* (Occasional Paper 65). East Lansing: Michigan State University, Institute for Research on Teaching.

Feldhusen, H. J. (1985). *Toward excellence in gifted education.* Denver: Love Publishing.

Feldhusen, J. F., & Kolloff, P. B. (2009). The Purdue three-stage enrichment model for gifted education at the elementary level. In J. S. Renzulli (Ed.), *Systems and models for developing programs for the gifted and talented* (pp. 126-152). Mansfield Center, CT: Creative Learning Press.

Feldhusen, J., Van Tassel-Baska, J., & Seeley, K. (1989). *Excellence in educating the gifted.* Denver: Love.

Fernandez, C. (2002). Learning from Japanese approaches to professional development: The case of lesson study. *Journal of Teacher Education, 53*(5), 393-405.Fischetti, J., & Larson, A. (2002). How an integrated unit increased student achievement in a high school PDS. In I. N. Guadarrama, J. Ramsey, & J. L. Nash (Eds.), *Forging alliances in community and thought: Research in professional development schools* (pp. 227-258). Greenwich, CT: Information Age Publishing.

Flick, U. (2009). *An introduction to qualitative research* (4th ed.) London: Sage.

Floden, R., & Meniketti, M. (2005). Research on the effects of coursework in the arts and sciences and in the foundations of education. In M. Cochran-Smith, & K. M. Zeichner (Eds.), *Studying teacher education* (pp. 261-308). Mahwah, NJ: Erlbaum.

Flores, M. A., & Day, C. (2006). Contexts which shape and reshape new teachers' identities: A multiple perspective study. *Teaching and Teacher Education, 22*(2), 219-232.

Foley, C. (2008). *Family involvement can help with students' college success.* IUPUI Family Ed. Retrieved from http://enroll.iupui.edu/admissions/documents/presentations/family_involvement.pdf

Fuchs, L. S., Fuchs, D., Powell, S. R., Seethaler, P. M., Cirino, P. T., & Fletcher, J. M. (2008). Intensive intervention for students with mathematics disabilities: Seven principles of effective practice. *Learning Disability Quarterly, 31*(2), 79-92.

Fullan M. G. (1993). *Change forces: Probing the depths of educational reform.* New York: Farmer Press.

Fullan, M. G. (2007). *The new meaning of educational change* (4th ed.). New York: Teachers College Press

Futrell, M. H., Gomez, J., & Bedden, D. (2003). Teaching the children of a new America: The challenge of diversity. *Phi Delta Kappan, 84*(5), 381-385.

Gallagher, J. J., & Gallagher, S. A. (1994). *Teaching the gifted child* (4th ed.). Boston: Love.

Gamoran, A., & Berands, M. (1987). The effects of stratification in secondary schools: Synthesis of survey and ethnographic research. *Review of Educational Research, 57*, 415-435.

Gamoran, A., & Weinstein, M. (1995). *Differentiation and opportunity in restructured schools.* Madison, WI: Center on Organization and Restructuring of Schools. Retrieved from ERIC database. (ED386828)

Gandara, P. (2002). A study of high school Puente: What we have learned about preparing Latino youths for postsecondary education. *Educational Policy Special Issue: The Puente Project – Issues and perspectives on preparing Latino youth for higher education, 16*(4), 474-495.

Garcia, E. (1993). Language, culture, and education. In L. Darling-Hammond (Ed.), *Review of research in education* (Vol. 19, pp. 51-98). Washington, DC: American Educational Research Association.

Gay, G. (2000). Developing cultural critical consciousness and self-reflection in preservice teacher education. *Theory into Practice, 42*(3), 181-187.

Gay, G. (2003). Planting seeds to harvest fruit. In G. Gay (Ed.), *Becoming multicultural educators: Personal journey towards professional agency*. San Francisco, CA: Jossey-Bass.

George, P. S. (2005). A rationale for differentiating instruction in the regular classroom. *Theory and Practice, 44*(3), 185-193.

George, P. S., & Rubin, K. (1992). Tracking and ability grouping in Florida: Educator's perceptions. *Florida Educational Research Bulletin, 23*(2-3). Retrieved from ERIC database. (ED353683)

Gersten, R., Carmine, D., & Woodard, J. (1987). Direct instruction research: The third decade. *Remedial and Special Education, 8*(6), 48-56.

Gersten, R., Ferrini-Mundy, J., Benbow, C., Clements, D. H., Loveless, T., & Williams, V. (2008). *Report 6: Report of the task group on instructional practices.* Washington, DC: U.S. Department of Education.

Geske, T. (1981). School administrators can make a difference. *Executive Review, 1*(4). Iowa City, IW: University of Iowa, Institute for School Executive. Retrieved from ERIC Database. (ED209763)

Gibbs, C. J. (1997). *Teacher thinking, teaching thinking, and self-efficacy.* Paper presented at The 7th International Conference on Thinking. Retrieved from http://www.nie.ac.sg:8000/wwwnie/think/Papers/index.html [1998, December15]

Goetz, J. P., & LeCompte, M. D. (1981). Ethnographic research and the problem of data reduction. *Anthropology and Education Quarterly, 12*, 51-70.

Goetz, J. P., & LeCompte, M. D. (1981). Ethnographic research and the problem of data reduction. *Anthropology and Education Quarterly, 12*, 51-70.

Goetz, J., & LeCompte, M. (1984). *Ethnography and qualitative design in educational research.* Orlando, FL: Academic Press.

Gold, Y. (1996). Beginning teacher support: Attrition, mentoring, and induction. In J. Sikula (Ed.), *Handbook of research on teacher education* (2nd ed.), (pp. 548-594). New York: McMillan.

Grant, C. A., & Koskella, R. A. (1986). Education that is multicultural and the relationship between preservice campus learning and field experiences. *Journal of Educational Research, 79*(4), 197-204.

Grant, C. A., & Zozakiewicz, C. A. (1995). Student teachers, cooperating teachers, and supervisors: Interrupting the multicultural silences of student teaching. In J. M. Larkin, & C. E. Sleeker (Eds.), *Developing multicultural teacher education curricula* (pp. 259-278). Albany, NY: State University of New York Press.

Greca, A. M. (1980). Can children remember to be creative? An interview study of children's thinking. *Child Development, 51*(2), 572-575.

Griggs, S. A. (1991). *Learning styles counseling.* Ann Arbor, MI: ERIC Counseling and Personnel Services Clearinghouse, The University of Michigan.

Grossman, P. (2005). Research on pedagogical approaches in teacher education. In M. Cochran-Smith, & K. M. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education* (pp.425-476). Mahwah, NJ: Erlbaum.

Grossman, P. L., & Stadolsky, S. S. (1995). Content as context: The role of school subjects in secondary school teaching. *Educational Researcher, 24*(8), 5-11, 23.

Gutierrez, K., & Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice? *Educational Researcher, 32*(25), 19-25.

Hallahan, D. P., & Kaufman, J. M. (1994). *Exceptional children.* Boston, MA: Allyn & Bacon.

Hallinger, P. (1992). School leadership development: An introduction. *Education and Urban Society, 24*(3), 300-315.

Hamachek, D. (1999). Effective teachers: What they do, how they do it, and the importance of self-knowledge. In R. Lipka, & T. Brinthaupt (Eds.), *The role of self in teacher development* (pp. 189-224). Albany, NY: State University of New York Press

Hammerness, K. (2006). *Seeing through teachers' eyes: Professional ideals and classroom practices.* New York: Teachers College Press.

Hammerness, K., Darling-Hammong, L., Bransford, J., Berliner, D., Cochran-Smith, M., McDonald, M., & Zeichner, K. (2005). How teachers learn and develop. In L. Darling Hammond, & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 358-389). San Francisco, CA: Josey-Bass.

Hammerness, K., Grossman, P., Rust, F., & Shulman, L. (2005). The design of teacher education programs. In L. Darling Hammond, & J. Bransford (Eds.), *Preparing teacher for a changing world: What teachers should learn and be able to do* (pp. 358-389). San Francisco, CA: Jossey-Bass.

Hattie, D. L., Olphert, W., & Cole, B. (1982). Assessment of student teachers by supervising teachers. *Journal of Educational Psychology, 74*, 778-785.

Hébert, T. P. (1998). Gifted black males in an urban high school: Factors that influence achievement and underachievement. *Journal for the Education of the Gifted, 21,* 385-414.

Hébert, T. P. (2002). Gifted black males in a predominantly white university: Portraits of high achievement. *Journal for the Education of the Gifted, 26,* 25-64.

Henry, M. (1983). The effect of increased exploratory field experience upon the perceptions and performance of student teachers. *Action in Teacher Education, 5*(1-2), 66-70.

Hertberg-Davis, H. L., & Brighton, C. M. (2006). Support and sabotage: Principal's influence on middle school teachers' responses to differentiation. *The Journal of Secondary Gifted Education, 17,* 90-102.

Higher Education Act of 1965 (reauthorized in 1968, 1971, 1972, 1976, 1980, 1986, 1992, 1998, and 2008.). Retrieved from http://en.wikipedia.org/wiki/ Higher_Education_Act_of_1965

Hockings, C., Cooke, S., Bowl, M., Yamashita, H., & McGinty, S. (2008). *Learning and teaching for diversity and difference in higher education: Towards more inclusive learning environments.* Teaching and Learning Research Programme. Retrieved from http://www.tlrp.org/pub/documents/Hockings%20RB%2041%20FINAL.pdf

Hodgkinson, H. (2001). Educational demographics: What teachers should know. *Educational Leadership, 58*(4), 6-11.

Hoepfl, M. (1997). Choosing qualitative research: A primer for technology education researchers. Journal of Technology Education, *9*(1), 59.

Hollins, E. R., & Guzman, M. T. (2005). Research on preparing teachers for diverse populations. In M. Cochran-Smith, & K. M. Zeichner (Eds.), *Studying teacher education* (pp. 477-584). Mahwah, NJ: Erlbaum.

Howard, T. C., & Aleman, G. R. (2008). Teacher capacity for diverse learners: What do teachers need to know? In M. Cochran-Smith, S. Freiman-Nemser, D. J. McIntyre, & K. E. Demers (Eds.). *Handbook of research on teacher education: Enduring questions in changing contexts* (3rd ed.), (pp. 157-174). New York: Routledge.

Howey, K. R., & Zimpher, N. L. (1989) *Profiles of preservice teacher education*. Albany: State University of New York Press.

Hsu, S. (2005). Help-seeking behavior of student teachers. *Educational Research, 47*(3), 307-318).

Humphrey, D. C., & Wechsler, M. E. (2005). Insights into alternative certification: Initial findings from a national study. *Teachers College Record, 110*(1), 1-63.

Hunkins, F. P. (1995). *Teaching thinking through effective questioning.* Norwood, MA: Christopher-Gordon.

Hurtado, S., Carter, D. F., & Spuler, A. (1996). Latino student transition to college: Assessing difficulties and factors in successful college adjustment. *Research in Higher Education, 37*(2), 135-157.

Ingersoll, R. M., & Smith, T. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *Educational Evaluation and Policy Analysis, 26*(3), 681-714.

Isaksen, S. G., & Parnes, S. J. (n.d.). Curriculum planning for creative thinking and problem solving. *The Creative Problem Solving Group*. Retrieved from http://www.cpsb.com/research/articles/creative-problem-solving/Curr-Planning-CPS.html

Isakson, S. G., & Trefinger, D. (1985). *Creative problem solving: The basic course.* Buffalo, NY: Bearly Limited.

Johnsen, S. K., & Johnson, K. L. (2007). *Independent study program*. Waco, TX: Prufrock Press.

Johnsen, S. K., & McIntosh, J. (Eds.). (1993). *Baylor University's creative problem solving conference for secondary gifted students 1993 lesson plans booklet.* Waco, TX: Baylor University.

Johnsen, S. K., & Ryser, G. R. (1996). An overview of effective practices with gifted students in the general-education settings. *Journal for the Education of the Gifted, 18*(4), 379-404.

Johnsen, S. K., Haensly, P., Ryser, G., & Ford, R. (2002). Changing general education classroom practices to adapt for gifted students. *Gifted Child Quarterly, 46*, 45-63.

Johnsen, S. K., Haensly, P., Ryser, G. R., & McIntosh, J. (1994). *Project mustard seed: Application for continuation grant under Javits gifted and talented students education program.* Washington, DC: U.S. Office of Education.

John-Steiner, V., & Mahn, H. (1996). Sociocultural approaches to learning and development: A Vygotskian framework. *Educational Psychologist, 31*(3-4), 191-206.

Jones, E. D., & Southern, W. T. (1991). Conclusions about acceleration: Echoes of debate. In W. T. Southern, & E. D. Jones (Eds.), *The academic acceleration of gifted children* (pp. 223-239). New York: Teachers College Press.

Kao, C., & Hébert, T. P. (2006). Gifted Asian American adolescent males: Portraits of cultural dilemmas. *Journal for the Education of the Gifted, 30,* 88-117.

Kaplan, S. N., Kaplan, J. A., Madsen, S. K., & Gould, B. T. (1980). *Change for children: Ideas and activities for individualizing learning.* Glenview, IL: Good Year Books.

Kennedy, M. (1987). Inexact sciences: Professional education and the development of expertise. In E. Z. Rothkopf (Ed.), *Review of research in education* (Vol. 14, pp. 133-167). Washington DC: American Educational Research Association.

Kennedy, M. (1998). *Form and substance in inservice teacher education*. *Research Monograph 13.* Madison, WI: National Institute of Science Education, University of Wisconsin-Madison.

Kennedy, M. (1999). The role of preservice teacher education. In L. Darling-Hammond, & G. Sykes (Eds.) *Teaching as the learning profession: Handbook of teaching and policy*. (pp. 54-85). San Francisco: Jossey Bass.

Kenny, M. E., & Stryker, S. (1996). Social network characteristics and college adjustment among racially and ethnically diverse first-year students. *Journal of College Student Development, 37*(6), 649-658.

Kessels, J. P. A. M., & Korthagen, F. A. J. (1996). The relationship between theory and practice: Back to the classics. *Educational Researcher, 25*(3), 17-22.

Khatena, J. (1992). *Gifted: Challenge and response for education*. Illinois: F. E. Peacock.

Kitano, M. (1998). Gifted Latina women. *Journal for the Education of the Gifted, 21,* 131-159.

Knopper, D., & Fertig, C. (2005). Differentiation for gifted children: It's all about trust. *The Illinois Association for Gifted Children Journal, 6*(1), 6-8.

Kraak, A. (2000). Education to critical thinking perhaps the most important education formation of the present. *Educational Acting, 4,* 51-70.

Kraft, N. (2001). *Standards in teacher education: A critical analysis of NCATE, INTASC, and NBPTS*. Paper presented at the annual meeting of the American Education Research Association, Seattle, WA. Retrieved from ERIC database (ED462378).

Kronberg, R., Walker, D., & Zimmerman, J. (2003). Teaching to diversity in an age of standards. *Impact, 16*(1), 8-9.

Kulik, J. A., & Kulik, C. C. (1992). Meta-analytic finding on grouping programs. *Gifted Child Quarterly, 36,* 73-77.

LaBoskey, V. K., & Richert, A. (2002). Identifying good student teaching placements: A programmatic perspective. *Teacher Education Quarterly, 9*(2), 7-34.

Lachat, M. A. (1999). *Standards, equity, and cultural diversity*. Northeast and Islands Regional Educational Laboratory, A Program of The Education Alliance at Brown University. Retrieved from http://www.lab.brown.edu/pubs/standards/StEqDiv.pdf

Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal, 32*(3), 465-491.

Ladson-Billings, G. (1999). Preparing teachers for diverse student populations: A critical race theory perspective. In A. Iran-Nejad, & D. Pearson (Eds.), *Review of research in education* (Vol. 24, pp. 211-248). Washington, DC: American Educational Research Association.

Ladson-Billings, G. (2001). *Crossing over to Canaan: The journey of new teachers in diverse classrooms.* San Francisco, CA: Jossey-Bass.

Lake, S. (1988) *Equal access to educational alternatives to tracking and ability grouping.* Practitioners' Monograph #2. California League Middle Schools. Retrieved from ERIC database (ED 303 553)

Lasley, T. (1996). Mentors: they simply believe. *Peabody Journal of Education, 71*(1), 64-70.

Latz, A. O., Speirs Neumeister, K. L., Adams, C. M., & Peirce, R. L. (2009). Peer coaching to improve classroom differentiation: Perspectives from Project CLUE. *Roeper Review, 31*(1), 27-39.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* Cambridge, UK: Cambridge University Press.

LeCompte, M., & Preissle, J. (1993). *Ethnographic and qualitative design in educational research* (2nd ed.). Orlando, FL: Academic Press.

Lee, C. D. (1993). *Signifying as a scaffold for literacy interpretation: The pedagogical implications of an African American discourse genre.* Urbana, IL: National Council of Teachers of English.

Lee, C. D. (1995). A culturally based cognitive apprenticeship: Teaching African American high school students skills in literacy interpretation. *Reading Research Quarterly, 30*(4), 608-630.

Lewis, C. C., & Tsuchida, I. (1998). A lesson is like a swiftly flowing river: How research lessons improve Japanese education. *American Educator, 22*(4), 12-17, 50-52.

Liaw, E. C. (2009). Teacher efficacy of pre-service teachers in Taiwan: The influence of classroom teaching and group discussions. *Teaching and Teacher Education, 25*, 176-180.

Lincoln, Y. S., & Guba, E. G. (1991). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous?: Trustworthiness and authenticity in naturalistic evaluation. In D. D. Williams (Ed.), *Naturalistic evaluation. New directions for program evaluation, No. 30* (pp. 73-84). San Francisco, CA: Jossey-Bass.

Linn, R. L. (2000). *The design and evaluation of educational assessment and accountability systems 9CSE. Tech. Rep. No. 539*. Los Angeles: CA: University of California, Center for Research on Evaluation Standards and Student Teaching.

Lofland, J., & Lofland, L. (1984). *Analyzing social settings: A guide to qualitative observation and analysis* (2nd ed.). Belmont, CA: Wadsworth.

London, H. B. (1989). Breaking away: A study of first-generation college students and their families. *American Journal of Education, 97*(1), 144-170.

Lopez, R., & MacKenzie, J. (1993). A learning center approach to individualized instruction for gifted students. In C. J. Maker (Ed.), *Critical issues in gifted education, Vol. 3: Programs for the gifted in regular classrooms* (pp. 215-239). Austin, TX: PRO-ED.

Lortie, K. S. (1975). *School teacher: A sociological study.* Chicago, IL: University of Chicago Press.

Lupu. M. (2010). Learning to be a teacher between participating to a community of educational practice and belonging to a learning community. *Journal of Educational Sciences, 12*(2), 63-69.

Ma, L. (2010). *Knowing and teaching elementary mathematics: Teachers' understanding of fundamental mathematics in China and the United States.* (2nd ed.) Mahwah, NJ: Erlbaum.

Mace, F. C., Belfiore, P. J., & Hutchinson, J. M. (2001). Operant theory and research on self-regulation. In B. J. Zimmerman, & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (2nd ed.), (pp. 39-65). Mahwah, NJ: Erlbaum.

Maheady, L., & Algozzine, B. (1991). The regular education initiative: Can we proceed in an orderly and scientific manner? *Teacher Education and Special Education, 14*, 66-73.

McDiarmid, G. W. (1994). The arts and sciences as preparation for teaching. In K. R. Howey, & N. L. Zimpher (Eds.), *Informing faculty development for teacher educators* (pp. 99-137). Norwood, NJ: Ablex.

McDiarmid, G. W., & Clevenger-Bright, M. (2008). Rethinking teacher capacity. In M. Cochran-Smith, S. Feiman-Nemser, & D. McIntyre (Eds.), *Handbook of research on teacher education* (pp. 134-156). New York: Rutledge.

McDiarmid, G. W., & Price, J. (1990). *Prospective teachers' views of diverse learners: A study of the participants in the ABCD project* (Research Report 90-6). East Lansing, MI: National Center for Research on Teacher Learning.

McIntosh, J., & Meacham, A. (1992). *Creative problem solving in the classroom.* Waco, TX: Prufrock Press.

McKnight, C., Crosswhite, J., Dossey, J., Kifer, E., Swafford, J., Travers, K., & Cooney, T. (1987). *The underachieving curriculum: Assessing U.S. school mathematics from an international perspective.* Champaign, IL: Stipes Publishing Company.

McKoen, F., & Harrison, J. (2010). Developing pedagogical practice and professional identities of beginning teacher educators. *Professional Development in Education, 36*(1-2), 25-44.

McNally, J., Cope, P., Inglis, B., & Stronach, I. (1997). The student teacher in school: Conditions for development. *Teacher and Teacher Education, 13,* 485-498.

Merriam, S. (1991). *Case study research in education: A qualitative approach.* San Francisco: Jossey-Bass.

Merriam, S. (1998). *Qualitative research and case study applications in education.* San Francisco, CA: Jossey-Bass.

Merriam, S. (2009). *Qualitative research: A guide to design and implementation.* San Francisco: Jossey-Bass.

Midgett, J., & Olsen, J. (1983). Perceptions of gifted programming. *Roeper Review 5*(3), 42-44.

Miles, M. B., & Huberman, A. M. (1994). *A qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA.

Monk, D. H. (1994). Subject area preparation of secondary mathematics and science teachers and student achievement. *Economics and Education Review, 13*(2), 125-145.

Monk, D. H., & King, J. A. (1994). Multilevel teacher resource effects in pupil performance in secondary mathematics and science: The case of teacher subject matter preparation. In R. G. Ehrenberg (Ed.), *Choices and consequences: Contemporary policy issues in education* (pp. 29-58). Ithica, NY: ILR Press.

Moon, T. R. (2005). The role of assessment in differentiation. *Theory Into Practice, 44*(3), 226-233.

Morten, M. L., Williams, N. L., & Brindley, R. (2006). Colliding cultures: Career switchers transition to elementary school classrooms. *Action in Teacher Education, 28*(10), 40-50.

Mykut, P., & Morehouse, R. (1994). *Beginning qualitative research: A philosophic and practical guide.* Washington, DC: Falmer.

National Association for Gifted Children. (2006). *NAGC – CEC Teacher knowledge and skills standards for gifted and talented education.* Retrieved from http://www.nagc.org/index.aspx?id=1873

National Association for the Education of Young Children. (2010). *2010 NAEYC standards for initial and advanced early childhood professional preparation programs.* Washington DC: Author.

National Center for Education Statistics. (2006). *The condition of education 2006 in brief.* Retrieved from http://nces.ed.gov/programs/coe/

National Center for Educational Statistics. (2007). *Trends in international mathematics and science study* (TIMSS). U.S. Department of Education, Institute of Education Sciences. Retrieved from http://nces.ed.gov/timss/results07.asp.

National Council for Accreditation of Teacher Education. (2001). *Standards for professional development schools*. Retrieved from http://www.ncate.org/documents /pdsStandards.pdf

National Council of Social Studies. (2002). *National standards for social studies teachers.* Retrieved from http://downloads.ncss.org/NCSSTeacherStandardsVol1-rev2004.pdf

National Council of Teachers of Mathematics. (1991). *Curriculum and evaluation standards for school mathematics.* Reston, VA: Author.

National Council of Teachers of Mathematics. (1991). *Professional standards for teaching mathematics.* Reston, VA: Author.

National Institute for Urban School Improvement (2001). *Practices for English-language learners: An overview of instructional practices for English-language learners: Prominent themes and future directions.* Retrieved from http://www.urbanschools.org/pdf/5years.pdf

National Research Council. (2000). *How people learn: Brain, mind, experience and school.* (Expanded ed.). Washington, DC: National Academies Press.

National Science Teachers Association. (2006). *National science education standards*. Retrieved from http://www.nap.edu/openbook.php?isbn=0309053269

NCATE. (2011). *Glossary of professional development schools*. Retrieved from http://www.ncate.org/Standards/NCATEUnitStandards/NCATEGlossary/tabid/477/Default.aspx

Neihart, M., Reis, S., Robinson, N., & Moon, S. M. (2002). *The social and emotional development of gifted children.* Waco, TX: Prufrock Press.

Nelson, J. R., & Frederick, L. (1994). Can children design curriculum? *Educational Leadership, 51*(3), 71-74.

Nespor, J. (1987). The role of beliefs in the practice of teaching. *Journal of Curriculum Studies, 19*, 317-328.

Newman, J. L. (1991). *The effects of the talents unlimited model on students' creative productivity.* Unpublished doctoral dissertation, University of Alabama, Tuscaloosa, AL.

Nieto, S. (2000). *Placing equity front and center: Some thoughts on transforming teacher education for a new century.* Boston, MA: Pearson.

No Child Left Behind Act of 2001. (2003). *Standards and assessments non-regulatory guidance.* Retrieved from http://www2.ed.gov/policy/elsec/guid/saaguidance03.doc

Nunez, A. M., & Cucarro-Alamin, S. (1998). *First generation students: Undergraduates whose parents never enrolled in postsecondary education* (NCES 980082). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

Oakes, J., & Lipton, M. (2006). *Teaching to change the world* (3rd ed.). New York, NY: McGraw-Hill

Olechak, F. R. (1991). Assessing program effects for gifted/learning disabled students. In R. Swassing, & A. Robinson (Eds.), *NAGC 1991 research briefs* (pp. 86-89). Washington, DC: National Association for Gifted Children.

Olenchak, F. R., & Renzulli, J. (1989). The effectiveness of the schoolwide enrichment model on selected aspects of elementary school change. *Gifted Child Quarterly, 33*(1), 36-46.

Olsen, B. (2008). Introducing teacher identity and this volume. *Teacher Education Quarterly, 35*(3), 3-6.

Orfield, G., & Kurlander, M. (2001). *Diversity challenged: Evidence on the impact of affirmative action.* Cambridge, MA: Harvard Education Publishing Group.

Orland-Barak, L. (2002). The impact of practice teaching on the first year of teaching: Learning to ask different questions. *Teacher Education Quarterly, 29*(2), 99-122.

Osborn, A. (1963). *Applied imagination: Principles and procedures of creative problem-solving.* New York: Scribner.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research, 66*(4), 328.

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62*(3), 307-332.

Palinscar, A. S., & Brown, D. A. (1987). Enhancing instructional time through attention to metacognition. *Journal of Learning Disabilities, 20*(2), 66-75.

Parker, A., & Brindley, R. (2008). Exploring graduate elementary education preservice teachers' initial teaching beliefs. *The Professional Educator, 32*(2), n.p. Retrieved from http://www.auburn.edu/academic/societies/professional_educator/articles/parker_final.pdf

Parnes, S. (1981). *The magic of your mind.* Buffalo, NY: Bearly Limited.

Patry, J. (1996). *Critical thinking handbook.* Rohnert Park, CA: Foundation for Critical Thinking.

Patton, M. (2002). *Qualitative evaluation and research methods* (3rd ed.). Newbury Park, CA: Sage Publishing.

Paul, R. (1993). *Defining critical thinking.* Santa Rosa, CA: Foundation for Critical Thinking. Retrieved from http://www.criticalthinking.org/aboutCT/define_critical_thinking.cfm

Paul, R., & Elder, L. (2008). *The miniature guide to critical thinking concepts and tools*. Tomales, CA: Foundation for Critical Thinking Press.

Pelavin, S. H., & Kane, M. (1990). *Changing the odds: Factors increasing access to college*. New York: The College Board.

Peterson, J. S. (2001). Gifted and at risk: Four longitudinal case studies of post-high-school development. *Roeper Review, 24,* 31-39.

Peterson, J. S. (2002). A longitudinal study of post-high-school development in gifted individuals at risk for poor educational outcomes. *The Journal of Secondary Gifted Education, 14*, 6-18.

Petri, G. (2011). *Sparking critical thinking.* Learning Station Session: Poster. Presented at the Library of Congress presentation on Digital-Age Teaching and Learning.

Phillips, S. U. (1985). Participant structures and communicative competence: Warm springs children in community and classroom. In C. B. Cazden, V. John-Steiner, & D. H. Hymes (Eds.), *Functions of language in the classroom* (pp. 370-394). New York: Teachers College Press.

Pressey, S. L. (1949). *Educational acceleration: Appraisals and basic problems* (Ohio State University Studies, Bureau of Educational Research Monograph No. 31) Columbus: Ohio State University Press.

Pugh, K. J. (2006). [Review of the book *Aesthetic experience in science education: Learning and meaning-making as situated talk and action*, by P. Wickman]. *Science Education, 90,* 956-959. doi: 10.1002/sce.20170

Raths, J, & Lyman, F. (2003). Summative evaluation of student teachers. *Journal of Teacher Education, 54,* 206-216.

Rayle, A. L.**,** & Chung, K. (2007). Revisiting college students' mattering: Social support, academic stress, and the mattering experience. *Journal for College Student Retention: Research, Theory, and Practice, 9*(1), 21-37.

Renzulli, J. S. (1977). *The enrichment triad model: A guide for developing defensible programs for the gifted and talented.* Mansfield Center, CT: Creative Learning Press.

Renzulli, J. S., & Reis, S. M. (2011) *The schoolwide enrichment model executive summary.* Neag Center for Gifted Education and Talent Development. Retrieved from http://www.gifted.uconn.edu/sem/semexec.html

Renzulli, J. S., & Smith, L. H. (1984). Learning style preferences: A practical approach for classroom teachers. *Theory Into Practice, 18,* 44-50.

Reynolds, A. J., Walberg, H. J., & Weissberg, R. P. (Eds.). (1999). *Promoting positive outcomes: Issues in children's and families' lives.* Washington, DC: Child Welfare League of America.

Richardson, V. (1996). The role of attitudes and beliefs in learning to teach. In J. Sikula (Ed.), *Handbook of research on teacher education* (pp. 102-119). New York: McMillan.

Richardson-Koehler, V. (1988). Barriers to the effective supervision of student teaching: A field study. *Journal of Teacher Education,* March-April, 28-34.

Richert, A. E. (1990). Teaching teachers to reflect: A consideration of programme structure. *Journal of Curriculum Studies, 22,* 509-527.

Robinson, N. (2004). Effects of academic acceleration on the social-emotional status of gifted students. In N. Colangelo, S. G. Assouline, & M. U. M. Gross (Eds.), *A nation deceived: How schools hold back America's brightest students,* (Vol. 2, pp. 59-67) The Templeton National Report on Acceleration. The Connie Belin & Jacqueline N. Blank International Center for Gifted Education and Talent Development.

Rogers, K. B. (1991). *The relationship of grouping practices to the education of the gifted and talented learner.* Storrs, CT: National Research Center on the Gifted and Talented.

Rokeach, M. (1969). *Beliefs, attitudes, and values: A theory of organization and change.* San Francisco, CA: Jossey-Bass.

Rosaen, C., & Florio-Ruane, S. (2008). The metaphors by which we teacher: Experience, metaphor and culture in teacher education. I. M. Cochran-Smith, S. Feiman-Nemser, & J. McIntyre (Eds.), *Handbook of research on teacher education: Enduring issues in changing contexts* (3rd ed.) (pp. 706-731). New York: McMillan.

Ross, S. M., Hughes, T. M., & Hill, R. E. (1981). Field experiences as meaningful contexts for learning. *Journal of Educational Research, 75*(2), 103-107.

Rowley, J. (1999). *The good mentor. Educational Leadership 56*(8), 20-22.

Rowley, J. (2002). *Teacher effectiveness in the education of gifted and talented students: A comparison of teachers trained, not trained and undertaking training in gifted education*. Unpublished doctoral dissertation, University of New South Wales, Australia.

Rutherford, J., & Ahlgren, A. (1990). *Science for all Americans: Project 2061.* New York: Oxford.

Ryan, J., & Kuhs, T. (1993). Assessment of preservice teachers and the use of portfolios. *Theory into Practice, 32*, 75-81. Scanlan, J. S. (2006). *The effects of Richard Paul's universal elements and standards of reasoning on twelfth grade composition. Research proposal.* Alliant International University, San Diego, CA.

Schack, G. D. (1986). *Creative productivity and self-efficacy in children.* Unpublished doctoral dissertation, University of Connecticut, Storrs.

Schack, G. D. (1993). Effects of creative problem-solving curriculum on students of varying ability levels. *Gifted Child Quarterly, 37*, 32-38.

Schack, G. D., Starko, A. J., & Bums, D. E. (1991). Self-efficacy and creative productivity: Three studies of above average ability children. *Journal of Research in Education, 1*(1), 44-52.

Schlossberg, N. K., Lynch, A. Q., & Chickering, A. W. (1989). *Improving higher education environments for adults.* San Francisco, CA: Jossey-Bass.

Schon, D. (1995). *The reflective practitioner: How professionals think in action.* NY: Basic Books.

Schon, D. (1990). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions.* San Francisco: Jossey Bass.

Schunk, D. (2009). *Self-regulated learning.* Retrieved from http://www.education.com/reference/article/self-regulated-learning/

Schunk, D. H., & Ertmer, P. A. (2005). Self-regulation and academic learning: Self-efficacy enhancing interventions. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 631-649). San Diego, CA: Academic Press.

Schwandt, T., & Halpen, E. (1988). *Linking auditing and metaevaluation: Enhancing quality in applied research.* London: Sage.

Seigle, D. (2003). *The assumptions of qualitative design.* Retrieved from http://www.gifted.uconn.edu/siegle/research/Qualitative/qualquan.htm

Sewell, A. M., Fuller, S., Murphy, R. C., & Funnell, B. H. (2002). Creative problem solving: A means to authentic and purposeful social studies: A journal for teachers, students, and teachers of history. *The Social Studies, 93*(4), 176-179.

Shavelson, R. J. (1973). What is the basic teaching skill? *Journal of Teacher Education, 14*, 144-151.

Shavelson, R. J. (1983). Review of research on teachers' pedagogical judgments, plans, and decisions. *The Elementary School Journal, 83,* 392-413.

Shore, B. M., Cornell, D. G., Robinson, A., & Ward, V. S. (1991). *Recommended practices in gifted education: A critical analysis.* New York: Teachers College Press.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*(2), 4-14.

Shulman, L. S., & Shulman, J. (2004). How and what teachers learn: A shifting perspective. Journal of *Curriculum Studies, 36*(2), 257-271.

Simpson, M., & Tuson, J. (1995). *Using observations in small-scale research: A beginner's guide*. Edinburgh: Scottish Council for Research in Education. Retrieved from ERIC Database. (ED394991)

Sleeter, C. (2007). *Making choices for multicultural education: Five approaches to race, class, and gender.* Columbus, OH: Merrill.

Slick, S. K. (1998). The university supervisor: A disenfranchised outsider. *Teaching and Teacher Education, 14*(8), 821-834.

Smutny, J. F., Walker, S. Y., & Meckstroth, E. A. (1997). *Teaching young gifted children in the regular classroom: Identifying, nurturing, and challenging ages 4-9.* Minneapolis, MN: Free Spirit.

Soy, S. K. (1997). *The case study as a research method.* Unpublished paper, University of Texas at Austin. Retrieved from http://www.ischool.utexas.edu/~ssoy/usesusers/l391d1b.htm

Speirs Neumeister, K. L. (2004). Understanding the relationship between perfectionism and achievement motivation in gifted college students. *Gifted Child Quarterly, 48*, 219-231.

Speirs-Neumeister, K. L. (2002). Shaping an identity: Factors influencing the achievement of newly married, gifted young women. *Gifted Child Quarterly, 46*, 291-305.

Starko, A. J. (1986). *The effects of the revolving door identification model and a career counseling component on the career development of vocational-technical school students.* Unpublished doctoral dissertation, University of Connecticut, Storrs.

Stigler, J. W., & Hiebert, J. (2009). *The teaching gap: Best ideas from the world's teachers for improving education in the classroom.* New York: Free Press.

Stodolsky, S., & Grossman, P. (1995). The impact of subject matter on curricular activity: An analysis of five academic subjects. *American Educational Research Journal, 32*(2), 227-249.

Strauss, A., & Corbin, J. (2007). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.

Strong, M., & St. John, L. (2001). *A study of teacher retention: The effects of mentoring for beginning teachers.* Working Paper # 3. Santa Cruz, CA: New Teacher Center at University of California Santa Cruz.

Sumara, D. J., & Luce-Kapler, R. (1996). (Un)becoming a teacher: Negotiating identities while learning to teach. *Canadian Journal of Education, 12*(1), 65-83.

Taylor, L. A. (1992). *The effects of secondary enrichment triad model on creative productivity and self-efficacy*. Unpublished doctoral dissertation, University of Connecticut, Storrs.

Texas Education Agency. (2007). *Academic excellence indicator system*. Retrieved from http://ritter.tea.state.tx.us/perfreport/aeis/2008/index.html

Tieso, C. (2004). Through the looking glass: One school's reflections on differentiation. *Gifted Child Today, 27*(4), 58-65.

Tomlinson, C. A. (1995). *How to differentiate instruction in mixed-ability classrooms: A professional inquiry kit.* Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2000). Reconcilable differences: Standards-based teaching and differentiation. *Educational Leadership, 58*, 6-13.

Tomlinson, C. A. (2003). Differentiated instruction in the regular classroom: What does it mean? How does it look? *Understanding Our Gifted, 14*(1), 3-6.

Torrance, E. P. (1986). Teaching creative and gifted learners. In M. G. Whitrock (Ed.), *Handbook of research on teaching: A project of the American Educational Research Association* (3rd ed.) (pp. 630-647). New York: McMillan.

Torres, R. (1984). *An assessment of cognitive abilities of preservice teachers in agriculture education.* Paper presented at National Agriculture Education Research Conference. Retrieved from http://209.85.165.104/search? q=cache:DePBWuYndmIJ:pubs.aged.tamu.edu/ conferences/WRAERC1999 /pdf/wr-1999-043.pdf+Cognitive+ability+%2B+ Preservice+teacher +%2B+research&hl=en&ct =clnk&cd=1&gl=us

Treffinger, D. (1975). Teaching for self-directed learning: A priority for the gifted and talented. *Gifted Child Quarterly, 19,* 46-49.

Treffinger, D. (1980). *Encouraging creative learning for the gifted and talented.* Ventura, CA: Ventura County Superintendent of Schools.

U.S. Bureau of the Census. (2000). *Statistical abstract of the United States.* Retrieved from http://www.census.gov/prod/www/statistical-abstrat-us/html

U.S. Bureau of the Census. (2005). *School enrollment in 2005.* Retrieved from http://www.census.gov/population/pop-profile/dynamic/schoolenrollment.pdf

U.S. Department of Education. (2001). *Individuals with disabilities education act, Amendments of 2004.* Retrieved from http://www.ed.gov/policy/ elsec/guid/states/index.html

U.S. Department of Education. (2006). *Conditions of education in brief 2006.* Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006072

U.S. Department of Education. (2007). *No child left behind, Reauthorization act*. Retrieved from http://www.ed.gov/nclb/landing.jhtml

U.S. Department of Education. (2011). *The condition of education 2011.* Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2011033

Udall, J., & Daniels, J. (2005). *Creating the thoughtful classroom.* Cheltenham, VIC: Hawker Brownlon Education.

Van Tassel-Baska, J. (2005). *Comprehensive curriculum for gifted learners* (3rd ed.) Boston: Allyn and Bacon.

Van Tassel-Baska, J. (2006). A content analysis of evaluation findings across 20 gifted programs: A clarion call for enhanced gifted program development. *Gifted Child Quarterly, 50*, 199-210.

Van Tassel-Baska, J., & Stambaugh, T. (2005). Challenges and possibilities for serving gifted learners in the regular classroom. *Theory into Practice, 44*, 211-217.

Vygotsky, L. (1978). *Mind in society: Development of higher psychological processes,* 14th ed. (M. Cole, Trans.). John-Steiner, S. Scribner, & E. Souberman (Eds.). Cambridge, MA: Harvard University Press.

Walker, R. (1980). The conduct of educational case studies: Ethics, theory and procedures. In W.B. Dockerell, & D. Hamilton (Eds.), *Rethinking educational research.* London: Hodder & Stoughton.

Warford, M. K., & Reeves, J. (2003). Falling into it: Novice TESOL teacher thinking. *Teaching and Teacher Education, 9*(1), 47-65.

Weinstein, C. (1988). Preservice teachers' expectation about the first year of teaching. *Teaching and Teacher Education, 4*(1), 31-41.

Weinstein, C. E., Husman, J., & Dierking, D. R. (2000). Self-regulation interventions with a focus on learning strategies. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 727-747). San Diego, CA: Academic Press.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity.* Cambridge, MA: Cambridge University Press.

Westberg, K. L. (1999). What happens to young, creative producers? *NAGC: Creativity and Curriculum Divisions' Newsletter, 3,* 23-26.

Westberg, K. L., Archambault, F. X., Dobyns, S. M., & Salvin, T. J. (1993). The classroom practices observational study. *Journal for Education of the Gifted, 16*(2), 120-146.

Wideen, M. F., Mayer-Smith, J., & Moon B. (1998). A critical analysis of the research on learning-to-teach. *Review of Education Research, 68*(2), 130-178.

Wilder, R. Z. (1992). *The role of the mentor teacher: A two-phase study of teacher mentoring programs*. Report No. 92-1. Princeton, NJ: Educational Testing Service.

Wilson, G., & I'Anson, J. (2006). Reframing the practicum: Constructing performative space in initial teacher education. *Teachers and Teacher Education, 22*, 353-361.

Wilson, S., Floden, R, & Ferrini-Mundy, J. (2002) Teacher preparation research: An insider's view from the outside. *Journal of Teacher Education, 53*(3), 190-204.

Winebrenner, S. (2001). *Teaching gifted kids in the regular classroom: Strategies and techniques every teacher can use to meet the academic needs of the gifted and talented.* Minneapolis, MN: Free Spirit.

Yin, R. K. (1994). *Case study research: Design and methods* (2nd ed.). Thousand Oaks, CA: Sage.

Zeichner K., & Liston, D. (1985). Varieties of discourse in supervisory conferences. *Teaching and Teacher Education, 1*(2), 155-174.

Zeichner, K. (1993). The adequacies and inadequacies of three current strategies to recruit, prepare, and maintain the best teachers for all students. *Teachers College Records, 105*(3), 490-515.

Zeichner, K. (2005). A research agenda for teacher education. In M. Cochran-Smith, & K. M. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education* (pp. 737-760). Mahwah, NJ and London: Lawrence Erlbaum Associates, Inc.

Zeichner, K., & Conklin, H. (2005). Teacher education programs. In M. Cochran-Smith & K. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education* (pp. 645-736). Mahwah, NJ: Erlbaum.

Zeichner, K., & Hoeft, K. (1996). Teacher socialization for cultural diversity. In J. P. Sikula, T. J. Buttery, E. Guyton, & Association of Teacher Educators (Eds.), *Handbook of research on teacher education* (2nd ed.) (pp. 525-547). New York: Macmillan.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-39). San Diego, CA: Academic Press.

Zimmerman, B. J. (2001). Theories of self-regulated learning and academic achievement: An overview and analysis. In B. J. Zimmerman, & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (2nd ed., pp. 1-37). Mahwah, NJ: Erlbaum.

Zimmerman, B. J., & Kitsantas, A. (1999). Acquiring writing revision skill: Shifting from process to outcome self-regulatory goals. *Journal of Educational Psychology, 91*, 241-250.