

THE EXTENT TO WHICH LATINA/O PRESERVICE TEACHERS DEMONSTRATE  
CULTURALLY RESPONSIVE TEACHING PRACTICES DURING SCIENCE AND  
MATHEMATICS INSTRUCTION

by

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B.S., Texas Tech University, 1995

M.S., Texas Tech University, 2002

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Elementary Education  
College of Education

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Manhattan, Kansas

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## **Abstract**

Complex social, racial, economic, and political issues involved in the practice of teaching today require beginning teachers to be informed, skilled, and culturally responsive when entering the classroom. Teacher educators must educate future teachers in ways that will help them teach all children regardless of language, cultural background, or prior knowledge. The purpose of this study was to explore the extent to which culturally and linguistically diverse (CLD) novice teachers described and demonstrated culturally responsive teaching strategies using their students' cultural and academic profiles to inform practice in science and mathematics instruction. This qualitative exploratory case study considered the culturally responsive teaching practices of 12, non-traditional, Latina/o students as they progressed through a distance-based collaborative teacher education program. Qualitative techniques used throughout this exploratory case study investigated cultural responsiveness of these student teachers as they demonstrated their abilities to: a) integrate content and construct knowledge; b) illustrate social justice and prejudice reduction; and c) develop students academically during science and mathematics instruction.

In conclusion, student teachers participating in this study demonstrated their ability to integrate content by: (1) including content from other cultures, (2) building positive teacher-student relationships, and (3) holding high expectations for all students. They also demonstrated their ability to facilitate knowledge construction by building on what students knew. Since there is not sufficient data to support the student teachers' abilities to assist students in learning to be critical, independent thinkers who are open to other ways of knowing, no conclusions regarding this subtheme could be drawn. Student teachers in this study illustrated prejudice reduction by: (1) using native language support to assist students in learning and understanding science and math content, (2) fostering positive student-student interactions, and (3) creating a safe learning environment. Results also indicated that these student teachers demonstrated their ability to develop students academically by creating opportunities for learning in the classroom through their knowledge of students and by the use of research-based instructional strategies. However, based on the data collected as part of this study, the student teachers' abilities to illustrate or model social justice during science and math instruction were not demonstrated.

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## **Dedication**

Dedicated to my father Julio Hernandez – who never passed up an opportunity to learn.

## Chapter 1 - Introduction

The information age has placed information at the touch of a button, and no longer is a third-grade, fifth-grade, or even a high school education sufficient for meeting the most basic of needs in the United States (U.S.). Research has demonstrated that students from underrepresented groups are frequently not receiving the education needed to prosper in this changing society (Trent, 1990). An alarming number of students from underrepresented groups do not graduate from high school or college (Slavin & Calderón, 2001). In order to see an increase in the number of high school graduates and the number of individuals earning a bachelor's degree from diverse and underrepresented groups, there must be increased access to education. Research into the effectiveness of programs aimed at increasing the high school graduation rates, and thus enrollment at the university level for diverse [Hispanic] students has listed several factors that hinder progress in this area (Slavin & Calderón 2001). According to Slavin & Calderón (2001), the risk factors and/or challenges that prevent diverse [Hispanic] students from achieving these goals include: personal, environmental, and school learning-conditions. Each factor interacts to collectively hinder students, parents and school districts in their attempt to educate this diverse population. When considering culturally and linguistically diverse (CLD) students, these factors can help educators develop profiles for individual children in order to individualize instruction and aid the district in providing appropriate services (Slavin & Calderón 2001).

The argument can be made that in order to graduate students from underrepresented groups with the requisite skills necessary to prosper in our society, reform is needed in teacher education to more adequately prepare teachers to meet the needs of all students. The Holmes group reported and outlined a plan for such reform in teacher education as early as 1986. However, current policies and practices have changed little since *Tomorrow's Teachers* was published in 1986 (Fullan, Galluzzo, Morris, & Watson, 1998). Although a consensus on what makes a good teacher education program has yet to be reached, Goodlad (1994), listed 19 postulates that attempt to provide an outline of what a good program would look like in colleges and universities (p. 70). These postulates include a focus on preparing teachers to meet the changing needs of society.

According to Geneva Gay (2003), "We know for certain that teaching in U.S. schools is increasingly a cross-cultural phenomenon, in that teachers are frequently not of the same race, ethnicity, class, and linguistic dominance as their students. This demographic and cultural divide is becoming even more apparent as the numbers of individuals of color in teacher preparation and active classroom teaching dwindle" (p.1). "The evidence that teacher race/ethnicity can make a positive difference in the learning of students of color supports efforts to increase the number of teachers of color" (Villegas and Davis, 2008, p. 600). Research is needed to explore the effectiveness of reform efforts to diversify the teaching force and prepare more culturally responsive teachers. Wilson, Floden, & Ferrini-Mundy (2001) state:

“As the population of U. S. school-age children becomes increasingly more diverse, our pool of potential teachers remains less so. We need to consider policies that increase the diversity of the teacher pool, and we need to prepare all teachers to teach children whose backgrounds are different than their own. Researchers have had little opportunity to investigate the implications of this shift in students and their teachers, and while a question concerning the preparation of teachers to teach diverse students was not a focal one in this review, we argue (in our recommendations for future research) that it ought to be central in the next generation of research on teacher preparation.” (p. 6).

This study sought to investigate the extent to which CLD candidates recruited into a teacher education program met the needs of CLD students in the classroom. Based on this need, a qualitative exploratory case study approach was used to demonstrate the extent to which a cohort of students who represent the growing diversity in our nation’s schools [Latino/as] implemented culturally responsive teaching strategies in their science and mathematics teaching.

### **Statement of the Problem**

The demographic change in the student population has shifted towards a more diverse one, with Hispanic enrollment increasing by 64% over the ten-year period from 1992-1993 to 2002-2003 (Fry, 2006). The majority of teacher education programs require students to complete a multicultural education course sometime before graduation. However, many of the students who graduate from these institutions continue to feel inadequately prepared to teach children of diverse backgrounds. Research has shown that teachers prepared according to the widely used traditional model are less likely to relate to their diverse students which could lead

to “lower student participation, and result in teachers’ misconceptions of student motivation, ability, and potential” (Rueda, Monzó, & Higareda, 2004, p. 57). As a result, it is important that teacher education programs acknowledge and strive to implement, “Existing research [that] suggests that having knowledge about the students’ communities, cultural practices, and primary language can potentially provide meaningful and engaging learning contexts in which students can use their cultural resources for greater academic gains” (p. 60).

In 1995, the National Science Teachers Association (NSTA) issued a statement with regard to multicultural education in which they outlined five tenants necessary for teachers, teacher educators, and licensing programs. According to Cooper and Matthews:

“Science teachers must become acquainted with their students, especially within the communities in which they live. By doing so, science becomes a contextualized engagement and a culturally relevant experience, one that allows students to link their daily experiences to what they do in class.” They also state that, “Teachers must educate themselves through personal investigations and professional development in the historical contributions of different ethnic groups to the development of science. In doing this, teachers’ knowledge bases will expand and students will have opportunities to recognize that people who look like them, speak like them, overcome obstacles like them and preserver like them can be successful and make contributions to our society.” (Cooper & Matthews, 2005, p. 52)

One strategy for creating a more culturally proficient teaching force is to recruit more CLD students into teacher education. There is a limited amount of research aimed at investigating the impact minority teachers have on the achievement of culturally and linguistically diverse students. However, there is a strong indication that minority teachers do have a positive impact on the academic achievement of CLD students (Gay, Dingus, & Jackson, 2003; Villegas & Davis, 2008). According to Villegas & Davis (2008) there are “three major arguments for diversifying the teaching force,” 1) “teachers of color can serve as role models”, 2) “teachers of color tend to have higher expectations for students of color”, and 3) “racial/ethnic minority teachers are uniquely positioned to use their first-hand knowledge about the cultural, background and everyday life experiences of students of color to help them build bridges to learning” (p. 584). For example, Villegas & Davis state that Klopfenstein (2005) found an increase in the number of Black students who enrolled in and completed Algebra II was linked to

an increase in the number of Black teachers in the district (p. 588). Rueda et, al. (2004) believe that it is important for teacher education programs to help minority teachers recognize and utilize their knowledge of CLD students' culture and community in the classroom, and illustrate that..."good pedagogy includes and is intricately tied to students' cultural knowledge, beliefs, and practices" (p. 65).

The teacher education program examined throughout this research study seeks to educate future teachers "to be knowledgeable, ethical, caring decision makers through a mission characterized by: ...promotion, understanding, and celebration of diversity" (COE brochure, Fall 2008). More specifically this teacher education program began an initiative to recruit and prepare a cohort of CLD candidates (primarily non-traditional paraprofessionals) to meet more effectively the growing number of CLD students in the state.

### **Purpose of the Study**

The purpose of this study was to explore the extent to which CLD novice teachers described and demonstrated culturally responsive teaching strategies using their students' cultural and academic profiles to inform their practices in science and mathematics instruction. For the purposes of this study, culturally responsive teaching was defined as the teachers' abilities to: (1) integrate content, (2) facilitate knowledge construction, (3) reduce her/his own prejudice along with that of her/his students, teach and model social justice, as well as assist in the academic development of students. More specifically, this study focused on a cohort of 12, primarily non-traditional paraprofessional, Latino/a teacher candidates and the extent to which they: a) integrated content and facilitated knowledge construction; b) illustrated social justice and prejudice reduction and; c) developed students academically during science and mathematics instruction.

Several studies have discussed the relationship between majority teachers and diverse students, and others have shown that paraprofessional educators have influenced children from similar cultural backgrounds, (Rueda & Monzo, 2000; Monzo & Rueda 2000; Monzo, 2001; Rueda, Monzo, & Higareda, 2004). However, there remains a gap in the literature related to how novice Latino/a teachers use culturally responsive teaching practices in their mathematics and science classrooms. For this reason, the researcher chose to focus specifically on how each student utilized the contextual factors found in his or her classroom and the strategies he or she

developed and implemented with those factors in mind. This was in order to evaluate the CLD novice teachers' culturally responsive teaching practices.

The researcher examined suggested culturally responsive teaching practices of several of the leading researchers in the area of multicultural education, culturally relevant pedagogy, and culturally responsive teaching (Banks, 1981; Ladson-Billings, 1995; Gay, 2003; Nieto, 2004; & Villegas & Lucas, 2002). Using a thematic analysis approach the researcher then compiled a framework using key ideas and suggestions from the literature (see Appendix B). Qualitative techniques such as thematic analysis can be used “when looking for themes to arise as a result of...active inspections of...raw data” (Shank, 2006). The framework developed by the researcher was then used to operationally define culturally responsive teaching as the teacher's ability to integrate content, facilitate knowledge construction, reduce prejudice, model social justice, and develop students academically to meet the needs of all learners. This operational definition of culturally responsive teaching led the researcher to derive five major categories from which to analyze the data collected throughout the study: 1) Content integration, which is the inclusion of content from many cultures, the fostering of positive teacher-student relationships, and holding high expectations for all students; 2) Facilitating knowledge construction which is defined as the teachers' ability to build on what the students know as they assist them in learning to be critical, independent thinkers who are open to other ways of knowing; 3) Prejudice reduction, which is defined as the teacher's ability to use a contextual factors approach to build a positive, safe classroom environment in which all students are free to learn regardless of their race/ethnicity, social class, or language; 4) Social justice which is the teacher's willingness “to act as agents of change” (Villegas & Lucas, 2002), while encouraging their students to question and/or challenge the status quo in order to aid them in “the development of sociopolitical or critical consciousness” (Ladson-Billings, 1995); and 5) Academic development, which is defined as the teacher's ability to “create opportunities in the classroom” (Villegas & Davis, 2008) that aid all students in developing as learners to achieve academic success, and the use of research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles.

As a result, this study focused on one main question along with three supporting questions aligned with the framework developed by the researcher:

To what extent do Latino/a novice elementary teacher candidates demonstrate culturally responsive teaching practices during science and mathematics instruction?

- a. How do they integrate content and facilitate knowledge construction?
- b. How do they illustrate/model social justice and prejudice reduction in the science and math classroom?
- c. How do they develop students academically?

### **Brief Description of Methodology**

This qualitative exploratory case study considered the culturally responsive teaching practices of 12, non-traditional, Latino/a students as they progressed through a teacher education program. A qualitative design such as this was appropriate when the outcomes of the study included descriptions and interpretations arising from discovery, insight, and analysis (Creswell, 2007). These 12 candidates were part of a federally funded scholarship program (Synergy) as well as a federally funded Teacher Quality Enhancement grant (Equity & Access) that provided the infrastructure necessary for the delivery of a distance-based teacher education program. The 12 CLD student teachers had completed all coursework for teacher licensure.

The research followed these candidates throughout their student teaching semester. During this time period, each candidate planned and taught multiple lessons and units and was observed numerous times by cooperating teachers, clinical instructors, university supervisors, as well as the researcher. Evidence from all science and math instruction was collected and analyzed, including: 1) artifacts of teaching such as philosophy of teaching statements, contextual factors summaries written by the student, lesson plans, guiding question outlines, and post teaching self-reflections; 2) formal direct and videotaped observations of teaching; 3) final evaluations of field experiences and student teaching; as well as 4) audio taped interviews. Data related to item 1, and parts of 2 and 3 were compiled into a student teaching portfolio at the end of the student teaching experience. All interviews were audio taped and transcribed and some observations were videotaped. All data were coded according to the procedure offered by Miles and Huberman (1994).

### **Significance of the Study**

Anecdotal evidence from a prior study conducted by the researcher revealed that student teachers in science and math methods struggled to identify contextual factors impacting learning



and teaching accommodations or modifications based on such contextual factors. Often preservice teachers saw no need to use targeted teaching strategies or modifications to address CLD student needs in the classroom. Some preservice teachers often mimicked their cooperating teacher's suggestions, which tended to be inadequate in meeting the diverse students' needs in the classroom. Other times preservice teachers mentioned the paraprofessional in the classroom as a strategy or modification used to assist the CLD student. Most strategies preservice teachers used when addressing cultural differences were too general and focused on surface issues, such as mode of dress or food preferences, rather than what research has shown to be effective. The best suggestions made by preservice students were aimed at special education students and students who struggle moderately but had no instructional education plan on file (Hernandez & Shroyer, 2007). The implications of this are that many of our future teachers either do not understand the need for addressing the contextual factors of their classrooms or they have not received adequate training in recognizing CLD student needs.

A distance-based teacher education program known as "Equity & Access" was designed to increase teacher diversity with the hope that CLD, English Language Learner (ELL) teachers would be able to identify with CLD students and plan strategies to meet their needs. The current research was conducted in order to determine the extent to which candidates participating in the Equity & Access Teacher Preparation Program exhibit culturally responsive teaching practices during science and math instruction. This study will help to determine the effectiveness of the grant project and provide suggestions for enhancement of teacher education programs. Findings from this study will contribute to the body of knowledge related to the knowledge, skills, and dispositions needed to help student teachers to become culturally responsive teachers.

The student teachers in the Equity & Access Teacher Preparation Program, known hereafter as the Synergy Students, differed from students in the traditional program because the majority of them were nontraditional paraprofessionals, and all were CLD and ELLs. Another difference between the programs was the method of delivery. All Synergy students completed the program off campus in the communities where they lived and worked, approximately 230 miles from the main campus.

The complex social, racial, economic, and political issues involved in the practice of teaching today require beginning teachers to be informed, skilled, and culturally responsive when entering the classroom. Teacher educators must educate future teachers in ways that will help

them teach all children regardless of language, cultural background, or prior knowledge. The researcher would argue that comprehensive reform in teacher education, recruitment and retention of CLD students, and enhanced preparation for all teacher educators is critical for the future success of our rapidly changing student population. This study contributes to our understanding of this reform process. This is of utmost importance if we as a nation want to diversify our workforce in the areas of science and math in order to remain competitive globally.

### **Limitations of the Study**

First, the student teachers in this study came from a very specific pool in that they were all Mexican-American, primarily non-traditional, English language learners, and first generation college students. The majority of them were also paraprofessionals. As a result of the specificity, the researcher will not make claims relevant to all distance courses, all diverse learners, all teacher education programs, or all traditional versus non-traditional non-English speaking students. This study was conducted under a unique environment utilizing a unique delivery method.

Second, as the researcher, my involvement in the both the Synergy and Equity & Access programs must be acknowledged. I participated in the initial recruitment of several of the student teachers and later acted as an observer with the university supervisor while evaluating the participant's student teaching semester. Therefore I made a conscientious effort to remain open about my background and internal beliefs as well as attempted to refrain from becoming overly sympathetic or empathetic towards the student teachers.

Although I am a representative of an underrepresented group, namely Mexican-American as well as a female, I do not believe that my experiences parallel those of the student teachers. First, both of my parents were born and raised in the U.S., and they both learned to speak English before attending school formally. As a result, I was raised as a native speaker of English. Second, I attended a traditional high school where I was prepared well for an undergraduate education, and I entered my undergraduate program as a traditional student the fall after my senior year in high school. Finally, although I worked long hours to support myself, and had some family obligations as an undergraduate, I was not the sole provider or caregiver for my family. As such, I had the freedom to study when I was not at work or at school.

My experiences in the classroom, especially in math and science, also were positive. As a result I perused an undergraduate degree in biology with a minor in chemistry, both of which included math to a large degree. I then went on to earn a Master's degree, also in Biology, after having taught in the public school system for two years. My interest in culturally responsive teaching, from the perspective of the minority culture, stems from my own experiences in the classroom working with non-English and limited English speaking students.

### **Definition of Terms**

The following terms will be used throughout the study.

**Academic Development:** the teacher's ability to "create opportunities in the classroom" (Villegas & Lucas, 2004) that aid all students in developing as learners to achieve academic success, and the use of research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles.

**CLD:** Culturally and Linguistically Diverse

**Facilitating Knowledge Construction:** the teacher's ability to build on what the students know as they assist students in learning to be critical, independent thinkers who are open to other ways of knowing.

**Content Integration:** the inclusion of content from many cultures, the fostering of positive teacher- student relationships, holding high expectations for all students.

**Culturally Responsive Teaching:** the teacher's ability to integrate content, facilitate knowledge construction, reduce prejudice, model social justice, and develop students academically to meet the needs of all learners.

**ELL:** English Language Learner

**Equity & Access:** Department of Education Teacher Quality Enhancement [TQE] funded teacher preparation project.

**Hispanic:** A Federal term used to classify people of Spanish speaking decent.

**Latino/a:** Describes a person of Hispanic background.

**Minority:** Any person from an underrepresented group including; African American, Asian American, Hispanic, or Native American

Prejudice Reduction: the teacher's ability to use a contextual factors approach to build a positive, safe classroom environment in which all students are free to learn regardless of their race/ethnicity, social class, or language.

Preservice teacher: Describes a person enrolled in the teacher education program.

Social Justice: the teacher's willingness "to act as agents of change" (Villegas & Lucas, 2002), while encouraging their students to question and/or challenge the status quo in order to aid them in "the development of sociopolitical or critical consciousness" (Ladson-Billings, 1995, p. 483).

Student teacher: Describes a person in the field experience portion of the teacher education program.

Synergy: A federally funded Title III scholarship project that provided funding for the students' tuition, fees, books, and a small stipend each month as well as for support staff salaries.

Teacher candidate: Another way to describe a person enrolled in a teacher education program.

## **Conclusions**

The focus of this study was to determine the extent to which Latino/a novice elementary student teachers described and implemented culturally responsive teaching strategies in their classroom with respect to science and mathematics instruction. In order to reach the goals of the study, a variety of data was collected and analyzed using a framework designed by the researcher, based on a synthesis of the literature in multicultural education and culturally responsive teaching. The need for a well educated populace specifically prepared for work in the technology sector has been well documented in the literature, as well as the low number of minority candidates prepared for such jobs. This study aimed to ultimately offer suggestions and strategies for preparing teachers from underrepresented groups to become culturally responsive teachers in order to better educate minority students in science and mathematics to address the changing needs of our diverse, technological society.

## Chapter 2 - Literature Review

### Introduction

Two trends exemplify the demographic characteristics of culturally and linguistically diverse (CLD) students attending public schools in the United States: first, the number of CLD students increased by 95% and second, fifteen states have experienced more than a 200% growth in CLD students in the last decade (Kindler, 2002). According to a report issued by the United States Census Bureau, two in five Hispanics 25 and older have graduated from high school (Ramirez & de la Cruz, 2003). The lack of representation from the Hispanic community is felt most in the areas of Science, Technology, Engineering, and Mathematics (STEM) where CLD students are not being served well and are underrepresented. “Indeed, the data show stark contrasts between the achievement of Hispanic and white, non-Hispanic students in the science classroom, translating these data into an equally startling gap in educational attainment on the whole” (Rochin & Mello, 2007; p. 314). According to Chapa and De La Rosa (2006), the number of Latino students decrease as they move through the higher education pipeline. “For example, in 2000 Latino individuals accounted for 12.5% of the total population and 17.5% of the college-age population; however, only 10.8% of the high school graduates were Latino, 9.9% of the associate degree recipients were Latino, and only 6.6% of all bachelor’s degrees and 3.8% of all doctorates were Latino individuals” (Chapa & De La Rosa, 2006; p. 204). To alleviate this situation we need to improve our education system to appropriately meet the needs of CLD students. “What are critical...are creative methods for reducing barriers and positive measures for ensuring that interested students achieve higher levels of education” (Rochin & Mello, 2007; p. 314).

Past and current research into the effectiveness of programs aimed at increasing academic achievement for diverse [Hispanic] students has mentioned several factors that hinder progress (Slavin & Calderón 2001). According to Slavin & Calderón (2001), the risk factors and/or challenges that prevent diverse [Hispanic] students from academic achievement include: personal, environmental, and school learning-conditions. Each factor interacts collectively to hinder students, parents, and school districts in their attempt to educate this diverse population. When considering culturally and linguistically diverse (CLD) students, these factors can help

educators develop profiles for individual children in order to individualize instruction and aid the district in providing appropriate services (Slavin & Calderón 2001).

“The importance of preparing teachers to exercise trustworthy judgment based on a strong base of knowledge is increasingly important in contemporary society” (Darling-Hammond & Branson, 2005; p. 2). According to Darling-Hammond & Branson (2005), effective teaching requires improvement in teacher education in ways that will address the demands of educating students who can think critically and perform a variety of skills. In 1995 the Holmes Group published “Tomorrow’s Schools of Education” in which they outlined a course of action to improve teacher education for the benefit of all children across the country. Their call to action stemmed from the many ineffective teacher education programs they had observed among too many colleges and universities. The group declared the following:

The voices of youngsters go unheard while adults who should act on their behalf duck the inevitable controversies that must be faced to ensure quality educators in every classroom of every public school in America. When unqualified or incompetent teachers oversee children’s learning the children never fully recover (p. 8).

In 1987, the National Board for Professional Teaching Standards (NBPTS) was formed to address the need for professional standards for teachers (NBPTS, 2008). The NBPTS along with other state and local agencies worked to provide standards for effectively evaluating teaching practices and to develop assessments that adequately addressed teaching competencies in order to ensure teachers have the knowledge, skills, and dispositions needed to help all students learn.

The focus of this chapter was to provide a historical look at teacher preparation and high quality culturally responsive science and mathematics teaching by discussing the history of K-12 reform; science and math education and science and math reform in the United States (U.S.) including the science standards and math standards, instructional science and math methods for diverse learners; the reform movement in preservice teacher preparation; science and math teacher preparation, and finally multicultural educational methods of instruction with an emphasis on culturally responsive teaching.

### **The Reform Movement in K-12 schools**

The reauthorization of the 1965 Elementary and Secondary Education Act (ESEA) as No Child Left Behind (NCLB) has raised many concerns among educators and parents. ESEA and

President L.B. Johnson's main goal was to offer all children an equal education, especially poor children across the country (NEA, 2006). Since its passage, ESEA has been reauthorized eight times, the latest in 2001 as NCLB. In the early years, ESEA granted federal funds to school districts and each district used the funds however they saw fit. It was not until the late 1980s that Congress began asking for accountability measures informing the Federal government with regard to what programs were being funded and their effectiveness in aiding "at risk" students. In the early 1990s, standards-based reform became the initiative of the day under the Clinton administration. According to the most recent reauthorization, NCLB, states must assess and report the progress of all students in reading/language arts, mathematics, and science by 2008, and include social studies by 2010, (Abedi 2004). In order for the states to be in compliance with the law, each school and district must show Adequate Yearly Progress (AYP). AYP implies that the majority of students tested score at the proficient level or higher across the curriculum. Not only must each school and district report student progress, they must also disaggregate the data regarding: economically disadvantaged students, students from major racial and ethnic groups, students with disabilities, and students with limited English proficiency. Beginning with the 2004-2005 school year, the AYP data collected was forwarded to the Federal government as verification of compliance with NCLB, and focused on all grade levels from second-grade through high school (Abedi, 2004).

Of greatest concern in the age of No Child Left Behind is the academic achievement of all students regardless of culture or linguistic background. The challenges CLD students face in the area of academics are such things as: curricula that are focused on high stakes testing, the academic language necessary for content areas like science, and the lack of time given to classroom interaction in order to increase language and content knowledge (Herrera & Murry, 2005).

NCLB will undoubtedly impact CLD students more than any other group, especially in the areas of math and science, which have not typically been taught in ways that would augment language and content development. The question then becomes, what are the best methods for teachers to use in order to ensure that all students in their classrooms reach the level of proficiency necessary to be in compliance with NCLB? Science and mathematics are the gatekeepers to higher achievement in school, entry into higher education and many professional preparatory programs. However, many barriers exist that prevent diverse students from

succeeding in these subject areas. Barriers include issues such as understaffed and under-funded schools, low expectations, tracking, quality of courses offered, and access to resources and qualified teachers (Clark, 1999).

### **Mathematics and Science Education in the United States**

The need for the reformation of mathematics education in the United States has been debated and discussed for over a century (Senk & Thompson, 2003). The evolution of mathematics education has been slow and at times painful. According to Senk and Thompson (2003), mathematics instruction in the 19<sup>th</sup> century consisted of basic mental discipline techniques focusing on following a set of rules and how to apply them using whole numbers, fractions, decimals, and percents. Teachers would demonstrate the procedure, students would recite it back, and exercises were given as practice. The Committee of Ten, appointed by the National Education Association in the 1890s, issued the first report by a professional organization discussing the educational needs of public schools (Senk & Thompson, 2003). The Committee of Ten found mathematics education in the public school system to be inadequate. Despite the recommendations made by The Committee of Ten and other commissions, mathematics education continued along the same path in the early 1900s as it had taken throughout the 1800s. However, research on learning and methods of instruction made great strides during this time. Educators argued about the best methods of mathematics instruction with one side emphasizing drill and practice while the other side focused on number sense and mathematical reasoning and thinking.

The National Science Foundation (NSF) was formed in the 1950s; its main purpose being to promote research in the sciences and mathematics (Senk & Thompson, 2003). Until Sputnik was launched in 1957, the NSF provided much of its education funding on the development of teaching materials for math and science (p. 8). Between 1957 and 1970, the development of new instructional material that came to be known as *the new math* (Senk & Thompson, 2003) was launched. Critics claimed that it was too theoretical because it sought to increase student understanding of the concepts behind the algorithms learned in the classroom. As a result of this controversy, the 1970s brought about the back-to-basics movement, which again emphasized computational skill as opposed to mathematical understanding (p. 9). Finally in the 1980s the National Council of Teachers of Mathematics (NCTM) published *An Agenda for Action*, and the



National Commission on Excellence in Education (NCEE), published *A Nation at Risk*. Each report illustrated the poor performance of young students in the United States (U.S.) when compared to other nations (p. 9). In this report and others, students in the U.S. scored significantly below students from other countries.

As a result of these reform efforts, led by the NCTM, the *Curriculum and Evaluation Standards for School Mathematics* was published in 1989, followed by the *Professional Standards for Teaching Mathematics* in 1991, and the *Assessment Standards for School Mathematics* in 1995. The *Curriculum and Evaluation Standards for School Mathematics* was the result of the Commission on Standards for School Mathematics established by the NCTM in 1986. According to the Commission, “The *Standards* is a document designed to establish a broad framework to guide reform in school mathematics...” (NCTM, 1989). The *Standards* were a necessary component in meeting the needs of the changing society in which mathematical literacy was of great importance. The *Standards* were written to address five main goals to aid students in obtaining mathematical literacy: “(1) that they learn to value mathematics, (2) that they become confident in their ability to do mathematics, (3) that they become mathematical problem solvers, (4) that they learn to communicate mathematically, and (5) that they learn to reason mathematically” (p. 8).

Also in 1989, the American Association for the Advancement of Science (AAAS) published Project 2061: A Report on Literacy Goals in Science, Mathematics, and Technology. The report discussed the need for scientific literacy and the state of curricular affairs in 1989. The researchers involved in the report stated that, “...Without a scientifically literate population, the outlook for a better world is not promising” (AAAS, 1989). The report also discussed the need for curricular reform in science and math, as well as the limited knowledge elementary teachers have in either area (AAAS, 1989). Another concern expressed in the report was that many high school teachers were not meeting reasonable standards for preparation, and that science textbooks often hindered rather than helped support teachers. It also was noted that the science curriculum lacked depth and focused more on memorization rather than understanding and critical thinking (AAAS, 1989).

The report went on to propose a three-phase project expected to span a decade or more known as Project 2061. During Phase I, an attempt was made to develop a conceptual base for reform by defining the knowledge, skills, and attitudes all students should gain throughout their

school experience, from kindergarten through high school. The report, *Science for All Americans* (SFAA) was the result of that effort. The main purpose of Phase II of Project 2061 was to produce a variety of curriculum models that school districts and states could use as they began to reform the teaching of science, mathematics, and technology. Phase III, of the project was to involve collaboration among scientific societies, educational organizations and institutions, as well as other groups involved in the reform of science, mathematics, and technology education in a nationwide effort to turn the Phase II plan into educational practice (AAAS, 1989).

*Benchmarks for Science Literacy* (AAAS, 1993), was the follow-up publication to SFAA (AAAS, 1989). This book served as a guide and companion to the SFAA recommendations on how to develop a more scientifically literate society. *Benchmarks* (1993) specified how students should progress towards science literacy and recommended what they should know and be able to do by the end of the second, fifth, eighth and 12th grades. *Benchmarks* (1993) included comments on overall ideas to be learned and gave examples of the kinds of student experiences that foster scientific learning and literacy. It also was designed to help school districts and schools see the need to reform the current science education system by discussing the information students will need to make informed and socially conscious decisions about the world around them once they leave school. The *Benchmarks* (1993) also emphasized five other important reforms:

- (1) reduce the amount of material being covered in science, mathematics, and technology,
- (2) goals should be shared with everyone describing what should be know and done by students,
- (3) learning should be focused on science literacy encompassing learning across the content areas,
- (4) curricula should reflect state and district requirements, student backgrounds, teacher preferences, and local environment, and
- (5) changes in science education must be comprehensive and long-term (p. XII).

This publication was not developed in order to provide a prescribed and pre-scripted curriculum. Instead it was written as a guide for schools and districts to use in developing their own curriculum using the recommendations and research provided by other teachers of science and the science community as a whole.

In 1996, the *National Science Education Standards* (the Standards) were released in order to address the needs outlined in several reports including: (1) The 1989 AAAS report, *Project 2061: A Report on Literacy Goals in Science, Mathematics, and Technology*; (2) The *Scope, Sequence & Coordination Project* developed by the National Science Teachers Association (NSTA) and; (3) *A Nation at Risk* published in 1983. The Standards were written by scientists and science educators from across the country to address the lack of scientific literacy seen from most students in the nation's school system. The Standards outlined what teachers and students should know and be able to do during science instruction from kindergarten through twelfth grade and sought to develop an educational system in which all children, "demonstrate high level of performance" (NRC, 1996). "Science standards for all students" (p. 2) typifies the commitment the NRC has made to include the rapidly growing diversity in the public school system. The Standards also attempted to address the diversity of learning styles present in every classroom (NRC, 1996).

Another major event to impact science and mathematics education reform at this time was the 1989 Charlottesville Education Conference of Governors (Finley, 2000). Although the governors decided that education should remain a state responsibility, they began discussing the need for national educational goals, in 1990, then "President George Bush announced six national education goals;" which included the goal that "the U.S. [was] to be first in the world in mathematics and science achievement by the year 2000 (p. 2)." As a result, the Trends in International Mathematics and Science Study (U.S. DOE, 1996) was developed and implemented to measure the mathematics and science knowledge and skills of students from 41 countries at five grade levels (U.S. DOE, 1996). The first TIMSS report focused on eighth-grade math and science students, with analysis of fourth and twelfth-grade levels to follow (U.S. DOE, 1996). At the time of the initial analysis, U.S. students scored above the international average for science, but below in mathematics; and there were five nations that had higher averages for both subjects (p. 19). According to the most recent TIMSS report, as of 2007, U.S. scores in math had improved by 11 points since 1995, but there was not real difference in science scores, (Gonzales, Williams, Jocelyn, Roey, Kastberg, and Brenwald, 2008); the 1990 goal of first in the world has yet to be realized.

In 1999, then Secretary of Education Richard Riley appointed a 25-member commission charged with informing the country with regard to the state of mathematics and science teaching

in the US. The National Commission on Mathematics and Science Teaching for the 21st Century (The Glenn Commission) published its report, *Before It's Too Late*, (2000) later that year. In their report the Glenn Commission discussed three main goals and suggested ways in which each could be reached.

Goal 1: Establish an ongoing system to improve the quality of mathematics and science teaching in grades K-12.

Goal 2: Increase significantly the number of mathematics and science teachers and improve the quality of their preparation.

Goal 3: Improve the working environment and make the teaching profession more attractive for K-12 mathematics and science teachers.

The Commission suggested seven strategies in order to implement the first goal including, needs assessments, summer institutes, inquiry groups, leadership training, internet portal, a coordinating council, and reward and incentive programs. In order to actively address the second goal (p. 2), the Commission suggested a strategy for identifying exemplary models of teacher preparation, finding ways to attract additional qualified candidates into teaching, and developing mathematics and science teaching academies. The final goal included strategies focused on induction programs, district/business partnerships, incentives for teachers, and salaries that were competitive with industry positions (p. 9). The Commission called everyone involved in the education of children, administrators, teachers, parents, teacher educators and policy makers to action in implementing these goals to improve mathematics and science education.

As the Glenn Commission was meeting to devise their goals, the NCTM was meeting to develop a resource guide as a companion document to the three main reform documents released between 1989 and 1995. The *Principles and Standards for School Mathematics* (2000), aimed to give educators a tool for implementing the reform efforts put out by the National Council of Teachers of Mathematics much as the *Benchmarks* (1993) were developed after the release of SFAA (1989). The document discusses the principles, which contains six themes: equity, curriculum, teaching, learning, assessment, and technology; and the standards, which contains the content standards and the process standards (NCTM, 2000).

## **Instructional Science and Math Methods for Diverse Learners**

The mathematic reforms and the goals of the Glenn Commission, taken together with the Science and Math Standards provide a new vision for meeting the needs of CLD students. As stated by Clark (1999), there can be no high achievement or academic success for [Hispanic] students without, “access to skilled professional teachers, adequate classroom time, a rich array of learning materials, accommodating work spaces, and the resources of the community surrounding their schools” (p. 1).

The Science Standards also focus on certain aspects said to be essential for diverse [Hispanic] groups and ELLs in the classroom, namely the unifying concepts and processes standard and the science as inquiry standard (NRC, 1996). The unifying concepts and process standards overlap with strategies recommended for all students by emphasizing the need to make connections between what a student has learned in a previous classroom to what he/she is learning in the new classroom. The Standards stress the importance of inquiry science investigations in order to make the content more meaningful for students learning a second language as well as for those students who may struggle to grasp some of the more abstract concepts embedded in science (NRC, 1996). Utilizing this form of investigation helps teachers engage students in their own learning while making it comprehensible. Through inquiry science, students are encouraged to ask questions, think critically, and construct their own meaning (NRC, 1996). This is an important aspect of educating students with a diversity of learning styles, because it validates what he/she brings to the classroom (Clark, 1999).

A cornerstone of the math *Principles and Standards* (NCTM, 2000) is the Equity Principle, which states, “Excellence in mathematics education requires equity – high expectations and strong support for all students” (p. 11), and is woven throughout each of the remaining principles. According to the equity principle, teachers should hold high expectations for all students, including students who are speakers of languages other than English who have historically been marginalized because of the language barrier. Teacher must also take language into consideration when developing lessons and assessments in order to properly evaluate what they know and are able to do. The final component of the equity principle involves the professional development of teachers especially in regard to understanding their own “beliefs and biases” (p. 14).

While the science and math standards provided general suggestions for providing equal opportunities for all students, other researchers have developed methods of instruction specifically to address the needs of CLD students. Two examples include the Cognitive Academic Language Learning Approach (Chamot & O'Malley, 1994) and the Sheltered Instruction Observation Protocol (SIOP) model (Echevarria, Vogt, & Short, 2000). The Cognitive Academic Language Learning Approach (CALLA) is an instructional model that was developed to meet the academic needs of students learning English as a second language in American schools (Chamot & O'Malley, 1994). During the first part of the study, Chamot & O'Malley (1994) identified several learning strategies that many high achieving ELLs used throughout the curriculum. They then tested the effectiveness of those strategies on less proficient ELLs. They found that the effective strategies could be taught to the lower performing ELL students, and that the strategies resulted in improved performance. They also found that the more successful students used a variety of strategies that they changed depending on the content and context of the lesson. The CALLA was designed with three types of ELL students in mind: (1) students who could communicate in the second language, but had not developed grade-level, academic language skills; (2) students who had developed grade-level academic language skills in their first language (L1), but who need assistance in transferring concepts to the second language (L2); and (3) students who were bilingual English-dominant, but who had not yet developed academic language skills in either language (Chamot & O'Malley, 1994).

Rochelle Gutierrez (2002) examined three successful Latino/a mathematics educators and identified strategies that aided these educators in working to improve student learning, especially among non-native English speakers. According to Gutierrez (2002), much of the research in mathematics education related to educating non-native English speakers entails the use of the student's native language. According to Gutierrez, students receiving instruction in their native language, "...seem to be more engaged in their work and to have greater access to the mathematical material (p. 1052)." This strategy allows the students to see themselves as valuable student teachers in their own learning thus aiding them to become academically successful; which is a major component of culturally relevant teaching. As Gloria Ladson-Billings (1995) stated, "culturally relevant pedagogy must provide a way for students to maintain their cultural identity while succeeding academically (p. 476)."

The goal of the Sheltered Instruction Observation Protocol (SIOP) model is to help prepare teachers to teach content effectively to English language learners while helping the students develop language skills. The SIOP model is a training and evaluation instrument that gives teachers the concrete examples and plans they need in order to implement the model effectively. The protocol contains three main sections: Preparation, Building Background, and Review/Assessment. Although the SIOP model does not contain “canned” lessons, it gives teachers an idea of the kinds of instruction that have been shown to be most effective for ELL students (Echevarria, Vogt, & Short 2000). In this way, teachers learn to adjust their lessons using strategies that build on prior knowledge, and assess each student effectively according to his/her needs. According to Geneva Gay (2003), “culturally responsive teachers know how to determine the multicultural strengths and weaknesses of curriculum designs and instructional materials and make the changes necessary to improve overall quality (p. 108).”

Mbamalu (2001) discussed the necessity of using a transitional strategy model of learning for students who are academically underachieving. The transitional strategy model is an “ordered and sequential development of information from one topic to another” (p. 269). Another aspect of this strategy is that it serves to bring about changes in the misconceptions a student may hold about a subject. Using this strategy, teachers build on each student’s prior knowledge and background to enhance concept attainment while enhancing language development. The transitional strategy model makes an effort to link similar concepts and organize them sequentially so that they make sense to the student and the student is then able to apply the information and make connections. The transitional model builds from one topic to the next and focuses on a few important topics to cover in depth. For cognitive development, this is a way to develop strategies specific to each student, so that he/she may use those strategies in other areas of study or in the real world. The transitional strategy model also discusses the importance of language and relevancy (Mbamalu, 2001). Science and math vocabularies can have different meanings in different contexts, so it is important that teachers address this before continuing a lesson. Also, a student must feel connected to the material he/she is learning and see that it is relevant to his/her life, otherwise he/she will not benefit from participant in the learning process. Buxton (1999), “...found that the whole class discussions with...provided students with opportunities to see the connections between their own experiences in the natural world and their understanding of science” (p. 20).

In a study conducted over a four-year time span, Fradd, Lee, Sutman, and Saxton (2001) developed and refined science content materials used for increasing CLD student acquisition of science concepts. They focused on an inquiry model suggested by the Standards and the National Science Foundation (NSF). Because the materials and lessons were developed with CLD students in mind, the transfer of skills from the first language to the second was encouraged, and concepts from many areas were integrated (Fradd et al., 2001). The integration of concepts has been widely suggested by many educational researchers because it provides all students the opportunity to see the relevance across many disciplines like science, math and language arts. Science inquiry also provides CLD students with recommended hands-on activities that help them make connections between what they observe during experimentation and the vocabulary they are learning. Fradd et al. (2001) worked to “promote inquiry through a continuum of experiences beginning with scaffolded explicit instruction and moving to student-initiated inquiry” (p. 480). In this way Fradd and the teachers in the study were able to use the application of learning as an important component of the Standards and tied it in with the notion that students had a sense of ownership in their learning and they felt confident regardless of their linguistic proficiency.

A math educator and researcher, Edward DeAvila (1988) conducted a review of the literature on cognitive development and found that “virtually no studies involving Spanish language background children have controlled for language proficiency in either Spanish or English or for intellectual development” (p. 102). In order to contribute to the field in this area, De Avila conducted a study in conjunction with a Title VII grant funded under the U.S. Office of Education called Finding Out/Descubrimiento (FO/D). The aim of the program was to increase skills and knowledge in measuring, counting, estimating, grouping, hypothesizing, analyzing, and reporting results. Approximately 253 second, third, and fourth grade students from a total of nine classrooms in nine schools participated in the program. A comparison group of about 300 students who were not participating in the program also was investigated.

DeAvila (1988) found that when the FO/D group was measured against the comparison group, the FO/D group performed better in math application and concepts. With regard to student characteristics, he found that “...even though the ‘problem’ group scored lower at both points in time, their rate of improvement was indistinguishable from the rest of the group despite the lower ‘expectations’” (p. 111). The linguistic characterization of students revealed that while



proficient students showed gains in most outcomes, the limited proficient students showed stronger gains in the tests measuring language proficiency (CCS, LAS, and MINI). The observational findings suggest that peer group interaction was a larger predictor of academic gains among students than student-teacher interactions. A secondary analysis revealed that direct instruction was well suited for improving memorization of facts and figures, but that conceptual learning required a more “hands-on” interactive approach.

The contributions this article has made to the field are many. The fact that most studies link English language proficiency with cognitive development is an important matter to consider. Regardless of a child’s first language, his/her cognitive development does not stop while learning English and it is extremely important to expose English language learners to subject area content. According to De Avila (1988), “...these data show that under classroom organizational conditions where language minority students are provided with access to multiple resources, including home language, peer consultation, manipulation and so on, they will acquire concepts as easily as mainstream students while at the same time acquiring English language proficiency and the basic skills” (p. 118). So, by allowing CLD students access to these resources, teachers expand student learning and increase second language acquisition.

In separate study, Walter Secada (1991) investigated whether or not children who were bilingual could solve word problems, and to what degree bilingualism affected a child’s ability to solve problems in either language. Secada (1991) studied 45 Hispanic first graders in four classes in two school buildings. Many of the students had been identified as limited English proficient and were placed in bilingual programs. Secada (1991) “...examined the relationship between degree of bilingualism and arithmetic problem solving...” (p. 219). In order to assess problem-solving capacities, children were given word problems that had been simplified linguistically using three different types of variables (p. 214). Language proficiency was measured using the pre - Language Assessment Scale (LAS) story retelling portion of the instrument (p. 220).

Secada (1991) found that there was a low correlation between Spanish-English on the verbal counting up and counting down, which suggests that the students are slightly stronger in English. The results indicated that Hispanic bilingual children’s ability to solve problems was comparable to monolingual English speakers. He also found that the level of language proficiency was an indicator of problem-solving ability. “Thus, even though performance in

English was superior to performance in Spanish, native-language (Spanish) competence was critical to performance in either language” (Secada, 1991, p. 228)

As with the De Avila (1988) article, Secada’s study emphasizes that the placement of LEP students in remedial courses until language proficiency is deemed sufficient can be detrimental by denying them the opportunity to use mathematics to solve real problems. Secada (1991) and De Avila (1988) argue against the current and past trend that places limited English proficient students in lower level classes where skill rather than content is emphasized. English language acquisition is not necessary in order for students to perform and understand the subject matter being taught in “mainstream” classrooms.

In order for teachers to fully meet the needs of all students in science and mathematics instruction, they must be “engage[ed]...in experiences that are grounded in an understanding of science and in the theoretical framework of how learners construct meaningful knowledge” (Dana, Campbell, & Lunetta, 1997). To meet the goal of preparing teachers in this way, teacher educators must develop programs aimed at educating pre-service and in-service teachers in ways that will highlight how children construct meaningful scientific knowledge (p. 423).

### **The Reform Movement in Teacher Education**

According to research, in order for a teacher to be effective in the classroom he/she must be able to use many different tools and strategies to ascertain how his/her students learn and what his/her students know (Darling-Hammond & Branson, 2005). Teacher preparation programs vary greatly across the country from traditional programs that focus on content rather than pedagogy, alternative programs aimed at second career educators, to programs that integrate content and pedagogy through practical field-based curricula (pp. 3-4). There is no one program that can claim to provide everything needed to prepare a teacher. “Since teacher education cannot impart a body of knowledge that comprises everything a teacher will ever need to know, it must lay a foundation for life-long learning” (Darling-Hammond & Baratz-Snowden 2007, p. 115).

Issues of teacher quality have long been discussed in society as well as in the research; however, the reform movement in teacher education began in the 1980s. The Holmes Group published the first of three monographs in 1986, “Tomorrow’s Teachers”. In it the group, made up of a consortium of approximately 100 research university across the United States (U.S.),

outlined plans to change the focus of teacher education to better reflect the needs of society in the U.S. In this first publication the Holmes Group concluded, “Much is at stake, for American students’ performance will not improve much if the quality of teaching is not much improved. And teaching will not improve much without dramatic improvements in teacher education” (The Holmes Group, 1986, p. 3). The goals outlined by the group included:

(1) To make the education of teachers intellectually more solid; (2) To recognize differences in teachers’ knowledge, skill, and commitment, in their education, certification and work; (3) To create standards of entry to the profession-examinations and educational requirements-that are professionally relevant and intellectually defensible; (4) To connect our own institutions to schools, and (5) To make schools better places for teachers to work, and to learn (p. 4).

The focus of this publication was on how to improve teacher quality by improving how teachers are educated at the university. “There is no doubt that our universities can do an...outstanding job for teachers. The only question is whether they will” (p. 20). In other words, the Holmes Group called on all universities who have teacher education programs to begin to work specifically on reforming the curriculum to address the needs of future teachers.

With the publication of the second of the three monographs, “Tomorrows Schools” in 1990, the Holmes Group discussed the need for Professional Development Schools (PDS). Within the framework of the PDS, the Group focused on developing partnerships across the university curriculum, colleges of education, and public schools. A long-term goal was also to develop “learning communities of teachers, and students that are at the same time centers of continuing, mutual learning and inquiry by prospective teachers, experienced teachers, administrators, and education and liberal arts professors” (The Holmes Group, 1990, p. 3). The outcome of a two-year discussion among the Group’s participants culminated with formation of six principles to organize the PDS (p. 7):

Principle One: Teaching and learning for understanding.

Principle Two: Creating a learning community.

Principle Three: Teacher and learning for understanding for everybody’s children.

Principle Four: Continuing learning by teachers, teacher educators, and administrators.

Principle Five: Thoughtful long-term inquiry into teaching and learning.

Principle Six: Inventing a new institution.

The Holmes Group recognized the challenges all universities, colleges of education, and public school systems would face in implementing such a plan, but they urged all parties involved to begin small and work towards the common goal of, “Teaching for understanding for everybody’s children” (pp. 85-95).

In 1995, with the publication of their third and final monograph, *Tomorrows Schools of Education*, the Holmes Group called for all universities involved in teacher preparation to: “design a new curriculum, develop a new faculty, recruit a new student body, create new location for much of their work, and to build a new set of connections to those they serve” (The Holmes Group, 1995, p. 9-10). They also outlined a set of seven goals to implement the plans including:

Goal 6: To center our work on professional knowledge and skill for educators who serve children and youth.

Goal 7: To contribute to the development of state and local policies that give all youngsters the opportunity to learn from highly qualified educators. (The Holmes Group, 1995).

These goals aim to focus on making connections between what future teacher should know and be able to do with regard to culturally responsive teaching to make their classrooms a more equitable and positive learning environment for all.

In order to address the changing demographics in the classroom, the Holmes group recommended that:

Professional studies should contribute research-based findings on learning differences that stem from cultural backgrounds. Education professionals can be taught procedures for gathering information about children, families, and communities and for assessing their teaching in light of children’s preferred learning and the interaction of the school with styles in the home and in the community (p. 49).

John Goodlad (1990) also published a researched based analysis of teacher preparation programs during this time. In this report he and his colleagues formulated a list of questions in order to evaluate the effectiveness of preservice teacher preparation programs; these questions became the 19 leading *Postulates* (Goodlad, 1990). In preparation for the study, Goodland and his colleagues noted that, “some school practices put students at risk...Consequently, teacher education programs must provide prospective teachers with at least the rudiments of what dealing with the whole of a school, not merely a class, involves. Future teachers must become

seriously engaged in studying the attributes of good schools and where and how schools go awry” (Goodlad, 1990, p.700). Throughout his research Goodlad stressed the importance of educating future teachers with the needs of all students in mind, especially in light of the rising number of marginalized “at risk” students throughout the 1980s. “Suffice it to say that all children must be prepared for responsible participation as citizens and for critical dialogue in the human conversation, and that the pedagogy and stewardship of teachers must embrace all children and young people...” (Goodlad, 1990, p.186).

This report along with others of its kind led many universities and state education agencies to rethink their preparation programs. The National Board for Professional Teaching Standards (NBPTS or the National Board). formed in 1987, developed standards for teachers, and introduced certification for highly qualified teachers. The National Board developed “Five Core Propositions” in order to assess the “knowledge, skills, dispositions and beliefs” ([www.nbpts.org/](http://www.nbpts.org/) accessed January 4, 2008) of those teachers applying for national board certification. The first, Proposition 1, states: Teachers are committed to students and learning, asked that the teacher illustrate how his/her classroom is equitable, and shows respect for “the cultural and family differences students bring to the classroom” ([www.nbpts.org/](http://www.nbpts.org/) accessed January 4, 2008). The National Board has recognized the need for ensuring that highly qualified teachers understand the learning process and believe that all children can learn.

The Interstate New Teacher Assessment and Support Consortium (INTASC) also was an organization that came out of the teacher education reform movement. The mission of INTASC was to develop standards and assessments aimed at improving teacher preparation programs and ensuring that all new teachers have the knowledge, skills, and dispositions required of effective educators (Collins, 1999). Among the knowledge, skills, and dispositions that INTASC developed was a commitment to diversity. There were 10 main principles developed to assess new teacher performance in the classroom. For example, Principle #3 relates most closely to culturally responsive teaching. It states: “The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners” (Collins, 1999). INTASC continued to acknowledge the increase in student diversity in many classrooms across the country, and the need to ensure that new teachers understand the need for high expectations for all children in a safe welcoming environment.

Many states also developed teacher education standards for teacher certification and joined the National Council for the Accreditation of Teacher Education (NCATE). Although NCATE has been in existence since 1954, it was not widely known or used by many colleges of education until the teacher education reform movement began. At that time NCATE began working with the National Board, INTASC, and various teacher education programs in order to stream-line and align the standards across all aspects of teacher preparation from preservice teacher education to inservice teacher professional development. What evolved were six performance-based standards for accrediting teacher education programs in 48 U.S. states including the District of Columbia and Puerto Rico (NCATE, 2006). Again, the standards developed by NCATE align with the National Board as well as INTASC standards; however, these standards are aimed at teacher education programs educating future teachers at member institutions of higher learning. In terms of cultural relevancy, diversity is a key standard for NCATE accreditation. NCATE looks to see how the program “designs, implements, and evaluates curriculum and experiences for candidates to acquire and apply the knowledge, skills, and dispositions necessary to help all students learn. These experiences include working with diverse higher education and school faculty, diverse candidates, and diverse students in P-12 schools” (NCATE, 2006).

A few years later in 1996, the National Commission on Teaching and America’s Future (NCTAF) published a report, *What Matters Most: Teaching for America’s Future* outlining plans for the recruitment, preparation and support for all teachers across the country (NCTAF, 1996). The report proposed five strategies for improving teacher quality:

- Get serious about standards, for both students and teachers.
- Reinvent teacher preparation and professional development.
- Fix teacher recruitment and put qualified teachers in every classroom.
- Encourage and reward teacher knowledge and skill.
- Create schools that are organized for student and teacher success.

NCTAF suggested that all states develop professional standards boards that would “license teachers based on demonstrated performance, including tests of subject matter knowledge, teaching knowledge, and teaching skill” (p. 11) to address goal one. The commission further suggested that there was a need to “organize teacher education and professional development programs around standards for students and teachers” when “reinventing teacher preparation and

professional development” (p. 11). According to NCTAF, the need for these reforms was imperative in order to address “our complex technological society” (p. 12). The need to recruit and retain teachers with the skills necessary to meet the demands of the profession has reached the critical point. No longer is the traditional approach to teaching and education adequate. “In short, to meet the needs of the 21<sup>st</sup> century, schools must successfully teach many more students from much more diverse backgrounds. And they must help them master more challenging content many times more effectively than they have ever done before” (p. 13). The strategies NCTAF suggested for improving teacher quality easily aligned with what researchers of culturally responsive teaching had been reporting as essential for educating culturally and linguistically diverse students in classroom across the country. According to this body of research, part of reinventing teacher preparation is acknowledging the need to educate future teachers to work in non-traditional classrooms with students from very different backgrounds. As well as, “to successfully move beyond the fragmented and cursory treatment of diversity that currently prevails, teacher educators must first articulate a vision of teacher and learning within the diverse society we have become (Villegas & Lucas, 2002).”

### **Science and Mathematics Teacher Preparation**

In 1996, the NSTA published a monograph that described the American Association for the Advancement of Science’s (AAAS) Project 2061 and how teacher preparation could be enhanced through tools developed to support teachers in helping all students to “think critically and independently, and to lead interesting, responsible, and productive lives in a culture that is increasingly reliant on science and technology” (NSTA, 1996). At the same time, the National Research Council published the National Science Education Standards. The standards for teaching addressed “what teachers of science at all grade levels should understand and be able to do” (NRC, 1996). There are six areas of focus:

The planning of inquiry-based science programs, the actions taken to guide and facilitate student learning, the assessments made of teaching and student learning, the development of environments that enable students to learn science, the creation of communities of science learners, and the planning and development of the school science program (NRC, 1996, p. 4).

These four areas of the Standards all aim to provide teachers support structures in order to be effective in educating all children. The Standards also address the critical need to consider equity throughout the educational system and to promote in teachers a belief that all students can learn and contribute to the classroom by implementing strategies that are aimed at a diversity of learning cultures and styles. “The diversity of students’ needs, experiences, and backgrounds requires that teachers and schools support varied, high-quality opportunities for all students to learn science” (NRC, 1996, p. 4).

The NSTA followed the release of the Science Standards with a position statement:

The National Science Teachers Association (NSTA) considers strong, performance-based science teacher education programs and science teacher licensure standards to be essential for all science teachers, including new and recent college graduates and those entering teaching from another profession. Based upon well-defined, commonly accepted professional standards, such programs will provide a foundation upon which teachers may build throughout their professional lives (NSTA, 2004).

In essence, the NSTA was calling on all teacher preparation programs to explicitly define what teachers should know and be able to do upon completion of the education program, before becoming licensed and throughout the teaching career. Along with this vision of science and math preparation, culturally responsive teaching proponents also aim to articulate a vision for moving the field of education forward to improve instruction and learning for culturally and linguistically diverse students (Villegas & Lucas, 2002).

Reports following the release of the National Standards on science teacher preparation indicated “many teachers, especially those who will teach in grades K-8, do not have sufficient content knowledge or adequate skills for teaching these [science] disciplines” (NRC, 2001). These reports also pointed to the fact that many teachers were not prepared to teach a standards-based curriculum (NRC, 2001, p. 31). As a result of this report and others, the Committee on Science and Mathematics Teacher Preparation published recommendations aimed at teacher educators, policy makers, and classroom teachers. The three general recommendations were:

- (1) Teacher education in science, mathematics, and technology be viewed as a continuum of programs and professional experiences that enables individuals to move seamlessly from college preparation for teaching to careers in teaching these subject areas.
- (2) Teacher education be viewed as a career-long process that allows teachers of science,



mathematics and technology to acquire and regularly update the content knowledge and pedagogical tools needed to teach in ways that enhance student learning and achievement in these subjects. (3) Teacher education be structured in ways that allow teachers to grow individually in their profession and to contribute to the further enhancement of both teaching and their disciplines (NRC, 2001, p. 10).

In the 2000 publication of *Principles and Standards for School Mathematics* (NCTM, 2000), the Teaching Principle also moves the focus of the mathematics reform to include teachers and teacher education. One component of this principle is, “The improvement of mathematics education for all students requires effective mathematics teaching in all classroom (p. 17).” In order to achieve this, teachers must participate in professional development opportunities, because effective teaching of mathematics goes beyond what they learned in their teacher preparation programs.

The ASTE contributed to the discussion of science education reform during this time by including publications aimed at improving science teacher preparation at conferences held across the country. ASTE recognized the importance of teachers in the classroom and the impact they have on student achievement; as a result the organization developed six standards for teacher educators in order to address the need for qualified teachers. The recommendations include: (1) knowledge of science, (2) science pedagogy, (3) curriculum, instruction, and assessment, (4) knowledge of learning and cognition, (5) research/scholarly activity, and (6) professional development activities (ASTE, 2007). The organization cautioned that the Standards were not an isolated checklist of activities from which beginning teachers could draw and transform themselves into highly qualified science educators. Rather they were a source available for teachers to continuously refine and redefine their practice over a lifetime of teaching science.

The ASTE and NCTM recommendations are echoes of the Glenn Commission’s report from 2000, with regard for the need to educate quality teachers in order to increase achievement for all students. The Commission outlined and discussed in depth three main goals for teacher education in the United States, and the need to “improve the quality of teacher preparation” (The Glenn Commission, 2000, p. 8). They also provided suggestions and strategies for policy makers, administrators and teachers; as well as parents and community members to “take personal responsibility” (p. 36) for the mathematics and science education their children receive.

## **Multicultural and Culturally Responsive Teaching Education**

Early in the 1970s, the American Association of Colleges for Teacher Education (AACTE) began to address the need for Multicultural Education, and in 1972 a commission released the “Statement on Multicultural Education”. It declared that, “...schools and colleges must assure that their total educational process and educational content reflect a commitment to cultural pluralism” (Currie, 1981, p. 169). The aim of the AACTE was to encourage teacher preparation programs to prepare future teachers for the diversity they would find in their classrooms. The Commission went on to suggest that each institution have a diverse faculty, staff and student body (Currie, 1981, p. 169). A few years later in 1979, NCATE released a standard for multicultural education that read:

Multicultural education should include but not be limited to experiences which: (1) promote analytic and evaluative abilities to confront issues such as participatory democracy, racism, sexism, and the parity of power; (2) develop skills for values clarification including the manifest and latent transmission of values; (3) examine the diverse cultures and the implications for developing teaching strategies; and (4) examine linguistic variations and diverse learning styles as a basis for the development of appropriate teaching strategies (Banks, 1981).

This standard emphasized the need for teacher education programs to look at their curriculum and the messages being sent through the faculty, staff and students at the institution. Unfortunately, the teacher education programs that did attempt to address the growing diversity in schools saw only the differences between CLD and the majority students and focused on a deficit model more often than not (Blumenberg, 1981).

The importance of equitable teaching is emphasized in all of the reports mentioned above as well as in the subsequent standards developed by each organization. We know from experience that, next to the parent, the teacher spends the greatest amount of time with children during the day (Banks, 1981). Research has also hinted that the teacher has the greatest influence on children, next to their parents (Baker, 1981, p. 34). All children enter the classroom with unique experiences and backgrounds and their own set of values, biases, and prejudices, so the teacher must be knowledgeable with regard to how children learn and how the curriculum impacts each child (Baker, 1981). The teacher is a major part of the curriculum, both transparent

and hidden. In order for multicultural education to work in the school, all teachers must be committed “to the value, the worth, and the dignity of every child in the classroom” (p. 34).

Sonia Nieto (2004) worked with teachers and conducted research to expand our understanding of multicultural education and culturally responsive teaching. In her definition she outlined “seven basic characteristics of multicultural education”:

Multicultural education is *antiracist education*.

Multicultural education is *basic education*.

Multicultural education is *important for all students*.

Multicultural education is *pervasive*.

Multicultural education is *education for social justice*.

Multicultural education is *a process*.

Multicultural education is *critical pedagogy* (p. 346).

According to Currie (1981, p. 170), there were several items that needed to be addressed with regard to educational equality and multiculturalism, especially with regard to preservice teacher preparation. He included a series of questions and statements related to teacher education and those who were preparing preservice teachers. One such statement was “Let those in teacher education practice what they preach, or at least make every effort to do so” (Currie, 1981, p. 170). Under this statement he included five areas that needed to be integrated throughout the teacher preparation program. First, “Professors should be expected to develop greater knowledge of, and contact with, individual teacher-education students.” Second, professors should use an elementary teacher model in which faculty and classroom teachers work together with a group of preservice students. Third, if student teachers are expected to use a variety of strategies to aid learning, then professors should also use a variety of techniques rather than lecturing in a traditional style. Fourth, Banks and others felt that teacher preparation programs should include a course or courses on how to develop a reading program to help children learn to read. Finally, university faculty should be involved in all aspects of teacher preparation including “consulting, supervising student teachers, and conducting research. Their commitment to multiculturalism must be total if the student teacher is to believe in the need for culturally and racially different children to have a chance” (p. 171).

Building on the work of Banks and others mentioned above, several researchers (including, Gloria Ladson-Billings, Geneva Gay, Ana Maria Villegas, and Tamara Lucas)

studied teachers who were committed to the values set forth in the early days of multicultural education. Gloria Ladson-Billings was among the first to clearly define what it meant to be a culturally relevant teacher:

“I suggest that culturally relevant teaching must meet three criteria: an ability to develop students academically, a willingness to nurture and support cultural competence, and the development of sociopolitical or critical consciousness. Next, I argued that culturally relevant teaching is distinguishable by three broad propositions or conceptions regarding self and other, social relations, and knowledge” (Ladson-Billings, 1995, p. 483).

According to her, in order for CLD students to succeed academically, a culturally relevant teacher must “provide a way for students to maintain their cultural integrity while succeeding academically”, this type of teacher values the diversity in her classroom rather than seeing it as a barrier to academic success. Ladson-Billings goes on to state that a culturally relevant teacher supports, “the development of sociopolitical or critical consciousness.” In this respect she believed that teachers have an obligation to educate their students to be active members of society and to question social inequalities.

A few years later, Geneva Gay (2003) took the definition of culturally relevant pedagogy, proposed by others, and began describing culturally responsive teaching practices in a similar way, “Culturally responsive teaching is defined as using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively” (Gay, 2003, p. 106). She believed that a culturally responsive teacher understood the cultural characteristics of his/her students and knew “detailed factual information about the cultural particularities of specific ethnic groups (p. 107).” Ms. Gay also felt that it was important for teachers to be able to modify the existing curriculum to address the needs of all students in the classroom, thus making connections between the students’ home and school environments. To address the needs of society as a whole, Gay noted that a culturally responsive teacher must create a positive learning environment, hold high expectations for all students, and communicate effectively with CLD students and their families. The final aspect of her vision for culturally responsive teacher was the use of learning strategies or, “the act of teaching is matching instructional techniques to the learning styles of diverse students (p. 112).”

Finally, Villegas and Lucas (2002) outlined a plan for curriculum development in the preparation of culturally responsive teachers:

“Six Strands...give coherence to our curriculum proposal for preparing culturally responsive teachers: (1) gaining sociocultural consciousness; (2) developing an affirming attitude towards students from culturally diverse backgrounds; (3) developing the commitment and skills to act as agents of change; (4) understanding the constructivist foundations of culturally responsive teaching; (5) learning about students and their communities; and (6) cultivating culturally responsive teaching practices.” (Villegas & Lucas, 2002, p. 26)

Their definition of a culturally responsive teaching combined many of the characteristics of Ladson-Billings (1995) and Gay’s (2002) descriptions of culturally relevant pedagogy and culturally responsive teachers. “By sociocultural consciousness, we mean an understanding that people’s way of thinking, behaving, and being are deeply influenced by such factors as race/ethnicity, social class, and language (p. 22).” Thus a culturally responsive teacher takes the students’ background into consideration when developing curriculum and interacting with students and their families. The second strand in their plan discussed the need for teachers to have an “affirming attitude towards students from culturally diverse backgrounds, meaning that culturally responsive teachers have high expectations for all students, they believe all students are capable of learning, and all students bring valuable experiences to the classroom. In the third strand, Villegas and Lucas call on culturally responsive teachers to “act as agents of change,” to be willing to advocate for their students, and challenge the social inequities inherent in schools. The fourth strand described culturally responsive teachers’ ability to assist their students in facilitating knowledge construction by building on what students bring with them to the classroom, thus having a constructivist view of learning. The fifth strand discussed the importance of teachers knowing their students and their communities. In this way culturally relevant teachers gain, “insight into how their students’ past learning experiences have shaped their current views of school and school knowledge (p. 26).” The final strand sought to link all of the previous five strands in a comprehensive, all encompassing view of culturally responsive teachers and their ability to use what they know about their students to teach effectively.

The design of the current study will focus on a synthesis of the aforementioned contributors to the culturally responsive teaching research database. All of the definitions described above were consolidated and refined to develop the framework from which the data was analyzed. The categories derived from these definitions include:

- (1) Content integration, which is the inclusion of content from many cultures, the fostering of positive teacher- student relationships, and holding high expectations for all students.
- (2) Facilitating knowledge construction, which is defined as the teacher’s ability to build on what the students know as they assist them in learning to be critical, independent thinkers who are open to other ways of knowing.
- (3) Prejudice reduction, which is defined as the teachers’ ability to use a contextual factors approach to build a positive, safe classroom environment in which all students are free to learn regardless of their race/ethnicity, social class, or language.
- (4) Social justice, which is the teacher’s willingness “to act as agents of change (Villegas & Lucas, 2004)”, while encouraging their students to question and/or challenge the status quo in order to aid them in “the development of sociopolitical or critical consciousness (Ladson-Billings, 1995).”
- (5) Academic development, which is defined as the teacher’s ability to “create opportunities in the classroom” (Villegas & Lucas, 2002) that aid all students in developing as learners to achieve academic success, and the use of research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles.

### **Demonstrating Teacher Competencies**

The previously described research demonstrated a consensus in the educational community that our teacher education programs must change to ensure we are preparing high quality teachers with the knowledge, skills, and dispositions to teach all children. Along with the dilemma of teacher quality comes the dilemma of measuring teacher quality. The challenge has been to develop assessments that accurately measure preservice teacher skill, knowledge and dispositions. In most cases, colleges of education as well as NBPTS and NCATE have chosen to emphasize a portfolio assessment tool as a way of measuring preservice teacher learning.

The NBTPS began creating standards for assessment as well as tools for teachers in the mid 1980s. The Teacher Assessment Project (TAP) funded by the Board began developing a working assessment model in 1986; at this point developers were looking at a three-pronged approach to assessment. “Part 1 would measure understanding of the content of different subject

matters, perhaps using paper-and-pencil tests as well as other instruments. Part 2 would examine the capacities needed to teach that content, using various types of performance assessments. Part 3 would involve direct observations of actual teaching practices by carefully trained observers” (Haertel, 1987). Currently, the Board is using a two-part process with several ways for teachers to demonstrate proficiency. The first component is a Portfolio that contains four entries. “Three of these entries are classroom-based, at least two of which require that [the teacher] provide video recordings of classroom interactions... candidates for the National Board Certification will be required to complete one entry in which work with families and the larger community and with colleagues and the larger profession is documented” (NBPTS, 2008, p. 1). The second component involves a demonstration of content knowledge by, “responding to six exercises developed and designed by practicing professionals in their certificate area.” The portfolio assessment system used to identify culturally responsive teaching in this study was developed through a detailed study of the NBPTS and INTASC portfolio assessment systems.

In 2002 NCATE commissioned a committee whose main objective was to explore teacher education programs in order to find “examples of assessments used in the preparation of teachers and other education professionals (NCATE, 2003, p. 1). This committee was created in order to address questions NCATE had been receiving from participating institutions with regard to performance-based accreditation. Several of the queries included questions:

What are appropriate assessments to use in the preparation of educators? How might an assessment of subject content knowledge differ from assessment of classroom teaching skills? How can learning among a candidate’s P-12 students be responsibly demonstrated? What information can be gathered during an admissions process to help identify candidates with potential to become effective teachers? And, especially what examples do you have of assessments for any of these questions? (p. 1).

The committee developed six criteria in order to evaluate examples of assessments sent to them from a sample of participating schools. Using the criteria they developed, the committee reviewed program assessments from 22 different institutions for a total of 36 examples. The criteria measured assessments as to whether or not they were:

- 1) “appropriate for the standards they are meant to address”; 2) “are accompanied by explicit statements of proficiencies candidates are expected to demonstrate”; 3) “are constructed so that different levels of candidate proficiency are clearly distinguished”;

4) “are used to reach meaningful decisions...judge candidate progression; and evaluate course, programs, or units”; 5) “include some ‘authentic’ forms of assessment”; and 6) “are systematically evaluated to ensure fairness, accuracy, consistency, and avoidance of bias” (p. i-ii).

The NCATE Committee found several innovative assessments although there were few examples to represent candidate subject knowledge or that addressed P-12 student achievement with preservice teachers in the classroom. The main purpose of the report was to provide institutions accredited by NCATE with “ideas for faculty and education unit/program administrators as they develop assessments for standards-based preparation of teachers and other educators,” (p. 1). The portfolio assessment system used in this study is continuously compared to the six NCATE assessment criteria as part of a yearly review and revision process.

As many of the entities directly involved with the education of pre-service teachers began to develop and adopt standards and criteria for evaluating novice and master teachers, the Educational Testing Service (ETS) was doing the same (Danielson, 1996). This Framework for Teaching is the base for the Conceptual Framework in the College of Education participating in this study. The Framework for Teaching is used for all courses and serves as the final evaluation for all field experiences that was used as a source of data in this study. Much of the work ETS began in 1987 in order to develop a “framework for state and local agencies to use for making teacher licensing decisions” (Danielson, 1996, p. viii) aided in the development of Charlotte Danielson’s *Enhancing Professional Practice: A Framework for Teaching* (Danielson, 1996). The Danielson Framework “identifies those aspects of a teacher’s responsibilities that have been documented through empirical studies and theoretical research as promoting improved student learning” (p. 1). A commitment to equity, cultural sensitivity, high expectations, developmental appropriateness, accommodating students with special needs, and appropriate use of technology is stated explicitly and implicitly throughout Danielson’s (1996) Framework.

The Framework (Danielson, 1996) is made up of four major domains: 1) planning and preparation, 2) the classroom environment, 3) instruction, and 4) professional responsibilities. Domain 1: Planning and Preparation focuses on the ways in which the classroom teacher illustrates his/her understanding of the content and pedagogy by designing meaningful lessons. According to Danielson, a meaningful lesson “...design is coherent in its approach to topics, includes sound assessment methods, and is appropriate to the range of students in the class”



(Danielson, 1996, p. 30). Within domain 1, there are six components described by Danielson, however, for the purposes of the current study only the one component that directly relate to cultural proficiency will be highlighted. Component 1b: Demonstrating knowledge of students' skills and knowledge, language proficiency, as well as special needs is the most relevant component of this category.

Domain 2: The Classroom Environment evaluates the teacher's ability to foster a safe place for students to take risks in learning in order to achieve their highest potential. The five components making up this domain all aim to document how the teacher interacts with his/her students in a positive atmosphere. All five components contain relevant teaching practices: interact well with students, have high expectations for all students, respond appropriately to student misbehavior, and use the physical space to make learning accessible for all, so for the purposes of the current study they will all be assessed.

Domain 3: Instruction is the essence of teaching, and the framework focuses on those areas that best illustrate the teacher's competence in this area. "Such teachers don't have to motivate their students because the ways in which teachers organize and present the content, the roles they encourage students to assume, and the student initiative they expect serve to motivate students to excel" (Danielson, 1996, p. 32). The researcher will focus on five subcomponents of this category, which include: expectations for learning and use of oral and written language, quality of questions, monitoring of student learning, and responding to students.

Domain 4: Professional Responsibility refers to the ways in which the teacher contributes to the learning community as well as the social community in which their students and families live. A true professional is a life long learner and advocate in many areas that affect not only students, but themselves as well. Educators who excel in this category "are known as educators who go beyond the technical requirements of their jobs and contribute to the general well-being of the institutions of which they are a part" (Danielson, 1996). For the purposes of this study only components 4b, 4c, and 4d will be assessed.

## **Conclusions**

When Congress reauthorized the ESEA and gave birth to NCLB, they had several initiatives in mind for reforming our current educational system. In the words of the authors, "The purpose of this title is to ensure that all children have a fair, equal, and significant

opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments” (Public Law 107-110, sec. 1001). Teacher education has also changed as a result of NCLB and the eight iterations of the ESEA. The Holmes Group consortium (1986, 1990, & 1995) also understood the need for reform among the institutions of higher education that were preparing the nation’s teachers. Organizations such as the National Board for Professional Teaching Standards (NBPTS) and the Interstate New Teacher Assessment and Support Consortium (INTASC) developed and implemented the standards and assessments for in-service and pre-service teachers in order to address the growing need to prepare a teaching force with the requisite knowledge, skills, and dispositions necessary to teach all children in culturally responsive ways. This study seeks to explore the extent to which a cohort of per-service teacher education students apply culturally responsive teaching practices through the use of culturally relevant strategies in their science and mathematics lessons in accordance with the reforms discussed throughout this review.

Although much research has been conducted in the area of culturally responsive pedagogy (Banks, 1981; Gay, 2003; Ladson-Billings, 1995; Nieto, 2004; Villegas & Lucas, 2002), this research has focused mainly on the impact of these strategies on African American students. Studies are needed that illustrate the extent to which culturally responsive teacher practices are demonstrated by teachers who share the heritage, culture, and language of Mexican and/or Mexican American, second language learners. In the current study, portfolio artifacts of teaching, direct and video observations, final evaluations, and interviews were used to demonstrate the extent to which Latino/a novice elementary teacher candidates demonstrated culturally responsive teaching practices during science and mathematics instruction by how they: (1) integrated content, (2) facilitated knowledge construction, (3) illustrated prejudice reduction, (4) modeled social justice and, (5) developed students academically. This study will provide programs of education with information regarding the extent to which Latino/a novice elementary teacher candidates demonstrate cultural responsive teaching practices during science and mathematics instruction.

## Chapter 3 - Methodology

This chapter provides a description of the research methodology used for this study. This study explored the extent to which Latino/a novice elementary teacher candidates demonstrated culturally relevant teaching practices during science and mathematics instruction. Specifically, candidates were prompted to collect classroom data and suggest targeted teaching strategies to help students in their classrooms successfully learn science and mathematics using culturally responsive teaching practices as part of their student teaching internship experience. Culturally responsive teaching, as defined in Chapter 1 of this study, states that the teacher must be knowledgeable with regard to how children learn and how the curriculum impacts each child.

For the purposes of the study the researcher focused on the five components of the model framework she developed for this study: 1) Content integration which is the inclusion of content from many cultures, the fostering of positive teacher-student relationships, and holding high expectations for all students; 2) Facilitating knowledge construction which is defined as the teacher's ability to build on what the students know as they assist them in learning to be critical, independent thinkers who are open to other ways of knowing; 3) Prejudice reduction, which is defined as the teacher's ability to use a contextual factors approach to build a positive, safe classroom environment in which all students are free to learn regardless of their race/ethnicity, social class, or language; 4) Social justice which is the teacher's willingness "to act as agents of change" (Villegas & Lucas, 2002), while encouraging their students to question and/or challenge the status quo in order to aid them in "the development of sociopolitical or critical consciousness" (Ladson-Billings, 1995); and 5) Academic development, which is defined as the teacher's ability to "create opportunities in the classroom" (Villegas & Davis, 2008) that aid all students in developing as learners to achieve academic success, and the use of research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles.

These five framework categories align with the main research question and the three supporting questions:

To what extent do Latino/a novice elementary teacher candidates demonstrate cultural responsive teaching practices during science and mathematics instruction?

- a. How do they integrate content and facilitate knowledge construction?

- b. How do they illustrate/model social justice and prejudice reduction in the science and math classroom?
- c. How do they develop students academically?

The information provided in this chapter is organized in the following sections: (1) research design, (2) setting, (3) participants, (4) data collection, and (5) data analysis.

## **Research Design**

Using qualitative techniques, this exploratory case study investigated the cultural responsiveness of the preservice teacher education candidates as demonstrated by their abilities to: a) integrate content and facilitate knowledge construction; b) illustrate social justice and prejudice reduction; and c) develop students academically during science and mathematics instruction. The *Synergy* candidates' culturally proficient teaching practices were examined through a thematic analysis of data from student teaching portfolio artifacts of teaching, formal direct and video taped classroom observations, final evaluations of teaching, and interviews.

The study was undertaken as a component of a larger, ongoing, longitudinal study that focused on the development of preservice teacher education students' understanding of pedagogy with regard to elementary science and mathematics. Specifically, as part of their science and math student teaching experience, the *Synergy* candidates were repeatedly prompted to collect classroom data, plan for, implement, and reflect on research-based teaching strategies to help their K-6 students successfully learn science and mathematics using the contextual factors collected in a culturally responsive teaching framework. Data analysis focused on the culturally responsive teaching practices identified throughout this planning, teaching, and reflecting process. For the purpose of this study, contextual factors were defined as those factors that can affect academic achievement in the classroom: gender, ethnicity/cultural make-up, language proficiency, academic performance/ability, and special needs as well as community and district factors.

A qualitative design was appropriate because the outcomes of the study surrounded descriptions and interpretations arising from discovery, insight, and analysis (Creswell, 2007). Evidence from all science and math instruction was collected and analyzed, including: 1) artifacts of teaching such as philosophy of teaching statements, contextual factors summaries written by the student, lesson plans, guiding question outlines, post teaching self-reflections, and

professional logs; 2) formal and videotaped observations of teaching; 3) final evaluations of field experiences and student teaching; as well as 4) audio taped interviews. Data related to item 1, and parts of 2 and 3 were compiled into a student teaching portfolio at the end of the student teaching experience. All interviews were audio taped and transcribed and some observations were video taped.

The use of the portfolio assessment is an ongoing process used by the education program faculty to follow preservice teacher development throughout the professional component of the program. As such, qualitative and anecdotal information was collected continuously from one semester to the next through the collection and analysis of the developmental portfolio. Students began the development of their portfolio during Block A, the Math/Science Methods block of courses, and continued working on their portfolio during Block B, the Social Studies and Language Arts block courses, and finished their portfolio during Student Teaching. The artifacts, observations and evaluations examined were submitted at the conclusion of the student teaching experience.

In order to develop a holistic perspective of the culturally responsive teaching practices, the researcher used the preservice students' point of view revealed through the analysis of student teaching portfolio artifacts. The perspectives of the students also were captured through individual semi-structured interviews that were conducted and transcribed in order to help in contextualizing the students' science and mathematics teaching practices throughout the teacher education program. Actual teaching behaviors were documented through direct and videotaped observations of their teaching. The perspectives of additional educators were recorded through field experience evaluation documents compiled by the cooperating teacher, clinical instructor, and the university supervisor. Triangulation of these data is essential for ensuring trustworthiness and an accurate understanding of student experience in this unique context.

This methodology involved “(a) the in-depth study of (b) one or more instances of a phenomenon (c) in its real-life context that (d) reflects the perspective of the participants involved in the phenomenon.” (Gall, Gall, & Borg, 2007). In using artifacts of teaching, observations, evaluations, and interviews, qualitative techniques such as thematic analysis were used to explore the document data collected (see Table 3.1 below). “They [documents] are a product of the context in which they were produced and therefore grounded in the real world” (Merriam, 1988, p. 109). Therefore the identification of preservice teacher understanding and

implementation of culturally responsive teaching strategies in relation to elementary science and mathematics instruction was examined.

**Table 3.1: Data Sources**

Data Sources	Data Source Element	Research Questions		
		a	b	c
Portfolio Artifacts	Philosophy of Teaching	X	X	
	Entry 2 – Contextual Factors, etc.	X		X
	Entry 3 – Lesson Plans	X		X
	Entry 4 – Analysis of Environment	X	X	
	Entry 5 – Formal Observations:			
	Cooperating Teacher	X	X	X
	Clinical Instructor	X	X	X
	University Supervisor	X	X	X
	Entry 6 – Professional Logs		X	X
Formal and Videotaped Observations of Teaching	Researcher Observations	X		
Final Evaluations	Cooperating Teacher University Supervisor	X		X
Interviews	Individual Students	X		X
	Synergy Program	X		X
		X		X

### Setting

The teacher education program involved in this study is located in a rural Midwest area and serves a student body that is primarily of the majority culture. All study student teachers were required to enroll in professional courses prior to student teaching. In the typical educational system in this Midwest state, children in K-6 classrooms receive instruction in all content areas from the same teacher throughout the school day for the entire school year. Students interested in obtaining a degree in education with a license to teach in the state must first follow a specified plan of study. Upon entering the university and declaring interest in education as a career, students are required to enroll in and complete 53-55 hours of general education courses (COE website, accessed Dec. 28, 2006) prior to applying for admittance to the teacher education program. Students must earn a 2.5 in core courses and a “C” or better in every course in order to be considered for admission to the elementary education program. The students also must enroll in and complete several pre-professional courses including Teaching As A Career and an Early Field Experience before entering the professional program.

Over 300 new teachers graduate from the institution each year (COE website, 2006). The teacher education program is founded on a framework that seeks to provide preservice teachers with clinical and field-based experiences throughout their educational program. The College's aim is to give preservice teachers an opportunity to apply research-based strategies in an authentic environment (COE website, 2006). The College of Education (COE) offers two academic programs: Bachelor of Arts in Elementary Education that leads to a K-6 certification, and a Bachelor of Arts in Secondary Education that leads to a 7-12 certification. Students interested in elementary education may choose to enter one of the seven areas of concentration available at the University: English, English for Speakers of Other Languages (ESOL), Mathematics, Modern Language, General Science, Social Science, or Special Education. Students interested in Secondary Education select one or more teaching fields: Agriculture Education, Art, Biological Sciences, Business, Chemistry, Earth Science, English, English/Journalism, Family & Consumer Science Education, Journalism, Mathematics, Modern Languages (French, German, Spanish), Music Education, Physics, Social Studies, or Speech/Theatre. Professional courses begin the junior year and culminate with student teaching regardless of the area of concentration, or teaching field. The student teachers in this study completed a Bachelor of Arts in Elementary Education with an area of concentration in ESOL.

The professional elementary education preparation program at the time the candidates in this study began was broken up into three main areas or "Blocks" in order to better focus on and address all the content areas. The first of the three "Blocks" (Block A) consisted of Elementary Mathematics Methods and Elementary Science Methods along with a field experience component; the second "Block" (Block B) included: Reading, Language Arts, and Social Studies along with a field experience; and the third and final "Block" (Block C) involved 16 weeks of classroom-based field experience and student teaching. The majority of field experiences and student teaching are completed in a Professional Development School (PDS) that is a regular public school working collaboratively with the teacher education faculty to enhance K-12 learning, initial teacher preparation, continuing professional development for all educators and research-based instruction. During the clinical experience course, students are assigned to work with a K-6 classroom teacher and the clinical instructor assigned to the elementary PDS where the students were placed. Clinical instructors (CI) are "school district liaisons and coordinators of PDS activities at the building level"; CI's coordinate all PDS activities and field experiences,

PDS communication efforts, simultaneous improvement efforts, and PDS program evaluation (COE, 2007).

### **Equity & Access Project**

The current research focused on just one part of a larger, comprehensive project, Equity & Access, which involved one university, three community colleges, and three school districts. These project partners collaboratively developed a program to address teacher preparation to enhance educational opportunities for all children and the CLD teacher shortage in the state. At the onset of the study, the university was in the second year of this tri-institutional collaborative grant project funded by the Department of Education as a Teacher Quality Enhancement [TQE] Grant. This overarching grant financed the collaboration across the institutions (the university, the community colleges and the three school districts). It also funded programmatic costs such as on-site university supervisors, the creation and delivery of upper-level courses, and tutoring and academic support for the students. In partnership with this comprehensive TQE grant, a federal Title III scholarship grant called Project Synergy provided funding for the students' tuition, fees and books as well as for support staff salaries. These two grant projects worked in tandem to provide the necessary academic, financial and emotional support for the students in the program. For the purposes of this research the term *Equity & Access Project* will be used to identify the collective efforts of the four institutions of higher education and two grant projects involved.

The *Equity & Access Project* sought to recruit and retain Latino/a students from the school districts and surrounding rural communities where the three two-year colleges are located. The main goal of the project was to graduate 30 student teachers with a bachelor's degree in Elementary Education and an ESOL/Bilingual endorsement. These graduates would then remain in their respective rural communities to teach the growing population of CLD students. Equity & Access primarily served paraprofessionals, other school related professionals, or those re-entering college after functioning in a career or home life (non-traditional students). Secondarily, it served recent high school graduates or community college students transitioning to the university (transitioning students). These categories can be autonomous or overlapping, depending on the individual student (Shroyer, Yahnke, Morales, Dunn, Lohfink, & Espinoza, 2008). The Synergy students were the first of two cohorts of students prepared as teachers through this Equity & Access Project.



The college of education has implemented and sustained a more traditional on campus program aimed at increasing the number of CLD undergraduates in the college. The *Equity & Access Project*, however, served as the first opportunity for the university to modify the existing model to create a distance-based collaborative teacher education program involving three different campuses and three school districts. This program also was designed for a more non-traditional audience with a considerable amount of education related professional experiences. As part of this modification, all courses and project activities were offered on site at the community colleges or in the partnering schools. Project staff tried to be as flexible as possible to accommodate the varying family and work needs of the students. Families were frequently included in project events and the students' native language and culture were incorporated into project activities whenever possible. A project coordinator and a project manager located at the main university campus, along with onsite project managers (one at each community college) served as the support and advising staff for the students. The CLD students took their first two years of coursework for community college credit and then in the subsequent years, faculty members from the college of education collaborated with community college faculty and school district personnel to offer the upper-level courses required for the degree through a variety of distance delivery and on-site modalities for university credit. In addition, one on-site university faculty and three on-site clinical instructors (a teacher or administrator from each district) served as university supervisors for all school based field experiences and the final internship (student teaching) the last two years of the program (Shroyer, et. al., 2008).

## **Participants**

The preservice elementary education students who were part of the *Equity & Access Project* were the population of the study. These students referred to as the Synergy candidates, were Mexican American and primarily place-bound, non-traditional, English language learner, first generation college students. All but one had been paraprofessionals or other school related professionals, such as substitute teachers and adult educators. One student was re-entering college after working in a non-educational career for many years. The student teachers in this study were enrolled in the elementary education professional course strand.

There were twelve students in the study, 11 females and one male. The students ranged in age from 25 to 57 years old with an average age of 39. All 12 of these students were bilingual.

Six of the 12 (50%) were born in the United States while six (50%) were born in Mexico. Of the six students born in the US, three (50%) were first generation, two (33%) was second generation, and 1 (17%) was third generation American born. Those who immigrated to the U.S. have been here between eight and 45 years with a group average of 25 years in the United States. Eleven of the 12 students (92%) had children. Eleven of the students were paraprofessionals or other school related professionals such as substitute teachers or adult educators. Before they began their student teaching experience, these 11 paraprofessionals had been working in the schools from 2 to 21 years with an average of nine years of K-12 school experience. As all of the student teachers in the study were enrolled in the elementary education program, they taught in K-5 classrooms (see table 3.2 below).

**Table 3.2: Student Teaching Grade Level by Participant**

Kindergarten	P004, P008
1 <sup>st</sup> Grade	P010
2 <sup>nd</sup> Grade	P005, P011, P012
3 <sup>rd</sup> Grade	P001, P006, P007
4 <sup>th</sup> Grade	P002, P009
5 <sup>th</sup> Grade	P003

### **Data Collection**

The data collected for this study was used to determine the extent to which the *Synergy* candidates demonstrated culturally responsive teaching practices during science and mathematics instruction through the unit lessons planned, taught, and reflected upon during Student Teaching. Data for the study were acquired through several methods, “Methodological triangulation combines dissimilar methods such as interviews, observations, and physical evidence to study the same unit” (Merriam, 1988 p. 69). Merriam (1988) suggests that the use of multiple methods is one of the strengths of the case study design. As previously noted, four sources of data were triangulated: 1) Artifacts of teaching such as philosophy of teaching statements, contextual factors summaries written by the student, lesson plans, guiding question outlines, post teaching self-reflections, and professional logs; 2) formal direct and videotaped observations of teaching; 3) final evaluations of field experiences and student teaching; as well as 4) audio taped interviews. Data related to item 1, and parts of 2 and 3 were compiled into a student teaching

portfolio at the end of the student teaching experience. All interviews were audio taped and transcribed and some observations were video taped.

A primary source of data included the Portfolio Teaching Artifacts each student provided at the end of the student teaching semester. These data encompassed a large amount of information related to the planning, teaching, and reflecting process. These data provided evidence regarding how each student teacher progressed in his/her understanding of pedagogy as well as classroom strategies to help all students learn. Additional data were collected through two types of observations of the student teachers in the field. Formal direct observations (included in the portfolio) were documents completed by the cooperating teacher, the clinical instructor, and the university supervisor after a formal observation of the candidates as they taught a science, or math lesson. These observation documents were based on the Framework for Teaching (Danielson, 1996) observation process and were completed at various points during the Student Teaching semester. Videotaped observations were records of teaching made by the researcher. These observations served as a real-time view of the student teachers' interactions with students in the classroom in order to ascertain the extent to which the student teachers practiced culturally responsive teaching strategies.

Interviews conducted by the outside evaluator from the Office of Educational Innovation and Evaluation (OEIE) along with interviews conducted by the Synergy project manager also were collected for analysis. The OEIE evaluator was hired to conduct the overall evaluation of the *Equity & Access Project*, and thus collected data pertaining to all grant related activities. The evaluator conducted and transcribed one-on-one interviews with each student teacher. The Synergy project manager also conducted and transcribed one-on-one interviews with each student teacher in accordance with the needs of the scholarship grant.

### ***Artifacts of Teaching***

“An educational portfolio is a collection of evidence and reflections documenting one’s competence and accomplishments in the teaching field. It may serve many purposes: to address growth (Developmental), to display best works (Showcase), and to showcase during a job search (Professional)” (COE, 2007). The main purpose of the portfolio assessment as it is used at the research institution is to assess development and competence of future teachers. Each portfolio entry is aligned with the standards and dispositions from the College of Education’s conceptual

framework, many of which involve elements of culturally responsive teaching (see Appendix A). Preservice teachers are encouraged to use the portfolio process to build their own capacity for self-reflection and self-evaluation. The faculty supervisors also use the final document to assess progress towards learning outcomes and program completion.

Preservice teachers are exposed to a modified version of the student teaching portfolio during the Block A and Block B clinical experience courses. The Student Teaching (ST) portfolio (see Appendix A) was the focal point of the artifact analysis:

These six entries were designed to assess the knowledge and skills identified in the four categories of the KSU Conceptual Framework (Perspectives and Preparation, Learning Environment, Instruction, and Professionalism)...The entries will provide evidence of your ability to: analyze your classroom context and make instructional decisions based on that analysis; design and implement meaningful, coherent, and integrated instruction; design challenging, useful classroom assessments; analyze student achievement and use the results to enhance future teaching and learning; impact student learning; create a positive learning environment; collaborate with different members of your learning community, and analyze and reflect on your experiences to improve your teaching and continue to grow professionally (COE, 2007).

The entries include: “(1) Biographical Data; (2) Contextual Factors and Student and Learning Adaptations; (3) Instructional Unit Plan; (4) Analysis of Classroom Learning Environment; (5) Formal Observations; and (6) Professional Logs. The rationale behind each entry will be explained below with the detailed description of the ST portfolio.

### ***Biographical Data***

**Entry 1** of the ST Portfolio was identified as the Biographical Data Entry. The purpose of this entry was to clarify the student teacher’s philosophical position and to introduce the student teacher to the cooperating teacher, the clinical instructor, the university supervisor, and possible future employers through the presentation of their resume, philosophy of teaching, and current transcripts. The resume was used to assess whether or not the student is able to present him/herself in a professional manner, while the college transcript was used to ensure that all required learning outcomes and courses for completion of the degree program had been met. The Philosophy of Teaching portion of Entry 1 was used to illustrate to the evaluator that the student teacher is able to articulate his/her “understanding of the historical, philosophical, and

social foundations of education...In addition...beliefs and vision for effectively teaching all students...promoting the well-being of [your] students, their families, and the larger community” (COE, 2007, p. 9). The philosophy statement was analyzed to determine the extent to which the students integrated content and constructed knowledge as well as illustrated or modeled social justice and prejudice reduction in their science and math classrooms.

### ***Contextual Factors and Student Learning Adaptations***

**Entry 2** included a description of classroom and school contextual factors and teaching adaptations to enhance student learning. It was used to ensure that the student teacher’s teaching is meaningful and appropriate for their classroom context and students’ characteristics (background, individual learning needs, developmental level, interests, and approaches to learning). All student teachers completed entry 1, contextual factors, prior to teaching their first lesson. Contextual factors are defined as background or educational aspects that can affect student achievement and learning. Students can be impacted by: the socio-economic make-up of the school; the gender and ethnic/cultural make-up of the class; as well as the language proficiency, academic performance levels, and special education needs of each student in the class. Preservice teachers also must describe students’ cognitive, physical, emotional, and social development, as well as their impact on learning. The community and school environment also must be considered as preservice teachers develop lessons and activities. These factors include the school district, the school, the classroom, the community where students live, and their families.

In this entry preservice teachers used their understanding of students to identify important contextual factors and student characteristics that impact learning in the classroom. They then used this contextual information to determine specific strategies, adaptations, and modifications that enhanced learning for all students. This process is used to assist the preservice teacher in developing strategies to augment all students’ learning. It is important for the student teacher to think about providing opportunities that accommodate all students regardless of their backgrounds and/or past learning experiences.

Student teachers identified the contextual factors, “through classroom observations, interactions or communication with students/parents/teachers/school personnel, students’ classroom scores and samples of student work, information found in...students’ cumulative folders, classroom/district/state test scores, individual educational plans, and any other records

such as a health history” (COE, 2007, p. 11). Throughout the entire portfolio process, preservice teachers were encouraged to keep the contextual factors in mind. By identifying student needs at the beginning of the lesson planning process, preservice teachers begin to internalize the classroom structure and how to teach all children in an effective, positive environment. Entry 2 was analyzed to determine each preservice teacher’s ability to integrate content, construct knowledge, and plan and carry out appropriate research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles in order to aid all students in developing as learners.

### ***Instructional Unit Lesson Plans***

**Entry 3** was the heart of the portfolio in that the design, implementation, assessment of, and reflections on instructional plans were developed. During student teaching, a multi-week Instructional Unit Plan was developed and taught. All instructional plans were required to be designed around significant concepts and skills as well as state and national standards in the content area.

The unit plan submitted as part of the Student Teaching Portfolio was divided into five parts: (1) Learning Goals and Objectives, (2) Instructional Design, (3) Demonstration of Integration Skills, (4) Analysis of Assessment Procedures, and (5) Self-Evaluation of Instructional Unit (COE, 2007, p. 15). The instructional plans were designed and implemented so that the cooperating teacher, the clinical instructor, and the university supervisor could assess the student teacher’s capacity to plan, teach, and assess effectively. For the purposes of data collection, only mathematics and/or science lessons and unit plans were analyzed. Entry 3 data was analyzed to determine the preservice teacher’s ability to plan, teach, assess, and reflect on instructional strategies and accommodations or modifications to meet all student needs. An emphasis of this analysis was students’ abilities to integrate content, construct knowledge and “create opportunities in the classroom” (Villegas & Davis, 2008) that aid all students in developing as learners.

### ***Analysis of Classroom Learning Environment***

**Entry 4** of the Student Teaching Portfolio included an analysis of the classroom learning environment in which the candidate was placed. In Entry 4 candidates analyzed and created “A learning environment that encourages positive social interactions, active engagement in learning,

and student self-motivation and responsibility that is built and maintained by: (1) creating an environment of respect and rapport, (2) establishing a culture for learning, (3) managing classroom procedures, (4) encouraging appropriate student behavior, and (5) organizing the physical environment” (COE, 2008, p. 34). Entry 4 was analyzed to determine if culturally responsive strategies were used as a part of the classroom-learning environment. In particular, the analysis focused on students’ positive teacher-student relationships, high expectations and positive, safe classroom environment in which all students were free to learn regardless of their race/ethnicity, social class or language.

### ***Direct and Video Observations***

**Entry 5** of the Student Teaching Portfolio included Formal [Direct] Observations that provided the evaluator with “evidence of instruction and evidence of competence in all four categories of the KSU Conceptual Framework” (COE, 2007, p. 37). Each candidate was asked to include evidence of the development, implementation, observations of, and reflections on five individual instructional lessons. These five lessons were required to be selected from three different subjects and/or three different classroom periods; however for the purpose of the study only science and/or math lessons were analyzed. At least one of these lessons was from the instructional unit. Observational data was recorded using forms adapted from the Educational Testing Service’s (ETS) Framework Observation Protocol (FOP) performance assessments. The cooperating teacher, the clinical instructor, the university supervisor, and the researcher observed each candidate on at least one occasion. The candidates also were videotaped on two or more occasions as he/she presented science or math lessons from the instructional unit plan. Those whose instructional unit plan did not include science or math lessons presented either a science or math lesson to be videotaped. Observational data was analyzed to determine the extent to which Latino/a novice elementary teacher candidates demonstrated culturally responsive teaching practices during science and mathematics instruction. Entry 5 was analyzed for all five components of the framework: content integration, facilitating knowledge construction, prejudice reduction, social justice, and academic development.

Each participant was observed during their student teaching semester by the cooperating teacher, the clinical instructor, and the university supervisor, however only five formal observation forms were required to be included in the portfolio. Because the nature of this particular student teaching experience was new and quite different from the traditional program,

an on-site a university supervisor and a university supervisor who traveled from the main campus observed each student teacher on different occasions. The Formal Observation Form has been aligned to Charlotte Danielson's Framework (Danielson, 1996), which includes areas directly related to culturally responsive teaching practices (see Appendix B). The Danielson Framework "identifies those aspects of a teacher's responsibilities that have been documented through empirical studies and theoretical research as promoting improved student learning" (p. 1).

Danielson's Framework (Danielson, 1996) is made up of four major domains; however, for this study they will be referred to as "categories" to illustrate the alignments with the program's goals and objectives. A commitment to equity, cultural sensitivity, high expectations, developmental appropriateness, accommodating students with special needs, and appropriate use of technology was stated explicitly and implicitly throughout Danielson's (1996) Framework. This was especially evident in categories 2 and 3 (learning environment and instruction); however, there were instances of this commitment within categories 1 (perspectives and preparation) and 4 (professionalism). The researcher focused on those subcomponents that related most directly with the definition of culturally responsive teaching in order to further illustrate the student teachers' use of culturally proficient teaching ideals and strategies.

Category 1: Perspectives and Preparation focused on the ways in which the classroom teacher illustrated his/her understanding of the content and pedagogy by designing meaningful lessons. According to Danielson, a meaningful lesson design "is coherent in its approach to topics, includes sound assessment methods, and is appropriate to the range of students in the class" (Danielson, 1996, p. 30). Within category 1, there are six components described by Danielson; however, for the purposes of the current study, only those that directly relate to cultural proficiency were highlighted. Demonstrating knowledge of students' skills, knowledge, language proficiency, as well as special needs were the most relevant components of this category.

Category 2: Learning Environment illustrated the candidate's ability to foster a safe place for students to take risks in learning in order to achieve their highest potential. The five components making up this category all aimed to document how the teacher interacted with his/her students in a positive atmosphere. Teachers skilled in this area interact well with students, have high expectations for all students, respond appropriately to student misbehavior, and use the physical space to make learning accessible for all.



Category 3: Instruction is the essence of teaching, and the framework focuses on those areas that best illustrate the candidate's competence in this area. "Such teachers don't have to motivate their students because the ways in which teachers organize and present the content, the roles they encourage students to assume, and the student initiative they expect serve to motivate students to excel" (Danielson, 1996, p. 32). The researcher focused on five subcomponents of this category, which included: expectations for learning and use of oral and written language, quality of questions, monitoring of student learning, and responding to students.

Category 4: Professionalism referred to the ways in which the candidate contributes to the learning community as well as the social community in which their students and families live. A true professional is a life long learner and advocate in many areas that affect not only students, but themselves as well. Educators who excel in this category "are known as educators who go beyond the technical requirements of their jobs and contribute to the general well-being of the institutions of which they are a part" (Danielson, 1996, p. 33).

Videotapes of each candidate also were acquired during the first and last month of student teaching in order to assess progress. The researcher participated in the videotaping of the second observation of science and math instruction in the field. These videotaped lessons were analyzed for evidence of all five components of the researchers' framework: (1) integrating content, (2) facilitating knowledge construction, (3) prejudice reduction, (4) social justice, and (5) academic development.

### ***Professional Logs***

**Entry 6** of the Student Teaching Portfolio included a professional log to document the preservice teachers' interactions with parents and colleagues, their contributions to their school and district, and their professional development activities. Entry 6 data was analyzed to ascertain whether or not the student teachers participated in opportunities to enhanced their culturally responsive teaching practices with regard to prejudice reduction, social justice, and academic development.

### ***Final Evaluations***

Each student teacher was evaluated by the cooperating teacher and university supervisor at the end of the student teaching field experience. This final evaluation serves as evidence of the student teacher's teaching as it was presented in the portfolio. The final evaluation is aligned

with The Framework for Teaching as described above as well as with the Conceptual Framework used by the College of Education. The data was analyzed for culturally responsive teaching practices with regard to whether or not the student teachers integrated content, constructed knowledge, and planned and carried out appropriate research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles in order to aid all students in developing as learners.

### *Interviews*

A grant supported external evaluator interviewed each student teacher following the completion of the requisite student teaching component of the teacher education program. There were 10 main questions along with five follow up questions and an opportunity for the student teachers to summarize their experience throughout the program (See Table 3.2 below). The evaluator, who audio taped each session, interviewed each student teacher one-on-one; the audiotapes were then transcribed for analysis. This study focused on those questions that pertain to culturally responsive teaching as well as teaching science and mathematics using culturally responsive ideals and strategies.

The data gathered through these interviews was analyzed to determine the extent to which each candidate integrated content, constructed knowledge, and developed their students academically throughout the student teaching experience.

**Table 3.3: Outside Evaluator Interview Protocol**

1. What is your strength as a teacher? • Follow-up - What attributed to these strengths?
2. What is your challenge as a teacher? • Follow-up - What helps or would help you with these challenges?
3. What subject is the most difficult for you to teach? Why? • Follow-up -What have you found helpful in addressing that challenge?
4. What subject is the easiest for you to teach? Why? • Follow-up - What prepared you?
5. Describe your comfort in working with students and how you build rapport.
6. Summary Question: You are from southwest Kansas and will be teaching in southwest Kansas. That is what the project wanted to accomplish. If you think back over your experience, this is in summary, is there anything about the program, your experiences that you want to share that you were not able to share in your responses to the questions.

The Synergy project manager also conducted interviews with each student teacher before the end of the student teaching experience (See Table 3.3 below). The focus of these interviews was to discuss the Synergy program experience with each student. The interview questions that the researcher focused on for this study pertained to the student teachers' comments on teaching and their experiences in the classroom. Interview data was used to determine the extent to which each candidate integrated content, constructed knowledge, and developed their students academically throughout the student teaching experience.

**Table 3.4: Project Synergy Interview Protocol**

1. Has your personal identity, for example: how you see yourself, changed and if it has in what ways?
2. What do you feel you bring to the teaching profession that others do not?
3. How would you complete the following sentences: I am here today _____ I will continue tomorrow _____

### **Data Analysis**

The purpose of this study was to explore the extent to which Latino/a novice elementary teacher candidates demonstrate culturally responsive teaching practices during science and mathematics instruction. Multiple pieces of data were collected from students, faculty, and staff and the researcher analyzed each piece of data numerous times. The researcher utilized a thematic approach for analysis given the breath and variety of the qualitative data collected (Miles & Huberman, 1994). Using the theoretical framework to guide the analysis via the constant comparative method, the researcher read and considered the range of data coded using the culturally responsive teaching categories, making initial notes on the various texts (Aronson, 1994; Lincoln & Guba, 1985; Straus, 1987). The researcher then re-examined the artifacts, observations, evaluations, and interview transcripts to identify commonalities among the data collected (Miles & Huberman, 1994). The codes were derived and classified into themes and sub-themes within the culturally responsive teaching framework developed by the researcher.

The first phase of the data analysis involved a review of all data collected: 1) artifacts of teaching which included: philosophy of teaching statements, contextual factors summaries written by the student, lesson plans, guiding question outlines, post teaching self-reflections and professional logs; 2) formal direct and videotaped observations of teaching; 3) final evaluations of field experiences and student teaching; and 4) audio taped interviews. After the first reading

of all data, the researcher constructed an electronic matrix document for each student teacher with the forms of data listed down the left column and the research questions as headings across the top row. During the subsequent readings of the data, the researcher noted phrases and/or quotes by the student teachers, the cooperating teacher, clinical instructor, and the university supervisor; video observations; and interview transcripts that appeared to answer the study's main research question and three supporting questions:

To what extent do Latino/a novice elementary teacher candidates demonstrate cultural responsive teaching practices during science and mathematics instruction?

- a. How do they integrate content and facilitate knowledge construction?
- b. How do they illustrate/model social justice and prejudice reduction in the science and math classroom?
- c. How do they develop students academically?

During the next phase of data analysis, the researcher broke the three sub-research questions down into five categories: (1) content integration, (2) facilitating knowledge construction, (3) prejudice reduction, (4) social justice, and (5) academic development. Subsequent readings of the data were then taken from each student teacher electronic matrix document and aligned with the corresponding electronic category matrix document created by the researcher. This particular electronic matrix document contained a list of the student teacher designations along the far left column with only those phrases, quotes, or observation notes that aligned with the category being analyzed in the adjacent column.

The final phase of the data analysis came about as the researcher noted the emergence of subcategories aligned with the category definitions:

1) Content integration

- The inclusion of content from other cultures.
- The fostering of positive teacher-student relationships.
- Holding high expectations for all.

2) Facilitating knowledge construction

- Build on what the students know.
- The use of “real world” examples.
- Assisting students in learning to be critical, independent thinkers who are open to other ways of knowing.

### 3) Prejudice reduction

- The use of native language support.
- The fostering of positive student-student interactions.
- Providing a safe learning environment.

### 4) Social justice

- The teacher's willingness to advocate for her/his students.
- Modeling the development of sociopolitical or critical consciousness.

### 5) Academic development

- The teacher's ability to create opportunities in the classroom for learning.
- The use of research-based strategies.

The researcher then created an electronic matrix document for each category with the student teacher designations along the far left column and the subcategories as headings across the top. The data was then re-examined for evidence to support the individual subcategory headings.

Throughout the data analysis process, the researcher maintained updated electronic copies of all matrix documents and evidence of analysis. The researcher also discussed the process and emerging categories with a peer reviewer to ensure that all categories and subcategories were being addressed. The peer reviewer also examined all electronic matrix documents, charts, results, and conclusion statements throughout the entire data analysis process in order to, “[provide] the widest possible range of information for inclusion in the thick description” (Lincoln and Guba, 1985, p. 316).

## **Ethics**

An application was submitted and approved by the Institutional Review Board (IRB) for research involving human subjects at Kansas State University. Permission for the study was sought and received from student teachers at the program site. Permission was obtained in accordance with the policies outlined and described in the TQE grant application and evaluation. The current research utilized data collected under this project, and any additional data collection was requested by following the Post-Approval Monitoring protocols outlined by the IRB. All student teachers were assured of privacy and confidentiality through the use of pseudonyms. Any other identifying information was deleted from quotes and other information presented in this document. Student teachers had the option not to participate and they were not penalized in any

way for choosing not to participate in the study. The teacher education program involved in the study was not identified. The researcher anticipates no adverse effects to human subjects involved in this research.

### **Role of the Researcher**

According to Gall, et al. (2007), “the researcher is the primary ‘measuring instrument’”. This means that the researcher interacted with the student teachers in the study in order to identify and interpret the phenomenon of interest through the eyes and experiences of the student teachers themselves. The personal involvement of the researcher can be a challenge, so the researcher must tread cautiously. As Merriam (1988) states, “...the investigator as human instrument is limited by being human—that is, mistakes are made, opportunities are missed, personal biases interfere” (p. 37).

The interest of the researcher in the current study was two-fold including interest as an instructor, and as a future faculty member. Interest in the topic evolved as the researcher moved from recruiting to assisting in course delivery to assisting in the supervision of the student teaching experience. As a future faculty member, the researcher was interested in finding ways to enhance student learning for undergraduates, as well as their future students in K-6 classrooms.

### **Issues of Quality**

As previously noted, this study was one part of a larger, comprehensive case study that considered how one university, three community colleges, and three school districts collaborated in developing a program to address the CLD teacher shortage in the state and the experiences of CLD primarily non-traditional students in a unique 2+2 distance-delivered program. As a result, the data analyzed was collected by the researcher as well as by persons other than the researcher in compliance with the goals of the grants associated with the comprehensive study. However, the current analysis of the data was unique to the study at hand, and all artifacts, observations, and interview transcripts were used simply to attempt to answer the research questions put forth in Chapter 1.

### ***Trustworthiness***

Trustworthiness was the term used to illustrate to the reader that the researcher had addressed issues of credibility, transferability, dependability, and confirmability in a qualitative study. Trustworthiness helps to increase the probability that credible findings are produced (Lincoln & Guba, 1985). Although the study consisted of 12 student teachers, the small number of participants was addressed in regard to trustworthiness by triangulating a variety of data collection methods. The researcher triangulated the data by including 1) artifacts of teaching such as philosophy of teaching statements, contextual factors summaries written by the student, lesson plans, guiding question outlines, post teaching self-reflections; 2) formal direct and videotaped observations of teaching; 3) final evaluations of field experiences and student teaching; as well as 4) audio taped interviews in order to establish trustworthiness. By including multiple data collection methods, the researcher explored how the themes emerge as the study moved forward.

### ***Internal Validity/Credibility***

There is a long-standing argument related to validity, both internal and external, in regard to naturalistic research. Whether or not researchers in the naturalistic research area choose to use internal validity as a method of measuring relationships also has been discussed. Lincoln & Guba (1985) define internal validity “as the extent to which variations in an outcome (dependent) variable can be attributed to controlled variation in an independent variable (p. 290). For the purposes of this study, the researcher followed Lincoln & Guba’s (1985) interpretation of credibility along with their operational definitions of what it means for a study to be credible. Lincoln & Guba (1985) described three “Activities increasing the probability that credible findings will be produced...prolonged engagement, persistent observation, and triangulation” (p. 301). Prolonged engagement, “is the investment of sufficient time to achieve certain purposes” with regard to the context of the study. In this case study the researcher began by recruiting several of the students into the Synergy program two years before moving on to her role in tutoring and observing them in the classroom. Although the researcher interacted with and observed the student teachers across a two-year period, the data collected took place over the last semester of the professional teacher education program, during student teaching.

According to Lincoln & Guba (1985), persistent observations add credibility to the study by “providing depth” (p. 304). During observations, the researcher focused on the details of the study in order to detect the characteristics of interest that support the context of the research.

According to Shank (2006), in order for a research study to be valid, “...the stance of the observer needs to be made explicit” (p. 111). In this case study, the role of the researcher was described under the data collection section.

### ***Reliability/Dependability***

Reliability is the extent to which the findings of the study can be repeated while observing the same results under different situations and/or time frames. In order to ensure that the results were as reliable as possible, the researcher used triangulation methods including prolonged engagement and persistent observation to ensure that as many aspects of the current study were examined as possible. As noted above in the data collection section, the researcher outlined in detail how the data was collected, and how it was analyzed.

### ***External Validity/Transferability***

External validity or transferability can be described as the extent to which the findings of a research study, “...can be transferred to different settings, or used with a different population” (Lincoln and Guba in Shank (2006) p. 115). This involves a detailed description of how the data was collected, analyzed, and compared to the population studied. The researcher provided a thick, rich description of the setting, the population, and the methods of collection when analyzing the data.



## Chapter 4 - Analysis of the Data

### Introduction

This study was conducted to explore the extent to which culturally and linguistically diverse (CLD) novice teachers describe and demonstrate culturally responsive teaching strategies using their students' cultural and academic profiles to inform practice in science and math instruction. This chapter will focus on detailing the data analysis of the current study. The findings will discuss categories and subcategories that emerged from the framework developed by the researcher to demonstrate Latino/a novice elementary teacher candidates' cultural responsive teaching practices during science and mathematics instruction. The chapter will be structured and organized in the following sections: (1) introduction, (2) description of categories in the framework, (3) content integration analysis, (4) construction of knowledge analysis, (5) prejudice reduction analysis, (6) social justice analysis, (7) academic development analysis, and (8) overall summary of findings.

As stated in chapter 3 of the study, the focus was on the researcher's operational definition of culturally responsive teaching, which was defined as the teacher's knowledge with regard to how children learn and how the curriculum impacts each child. Further, the researcher derived five major categories from which to analyze the data collected throughout the study: 1) content integration which is the inclusion of content from many cultures, the fostering of positive teacher-student relationships, and holding high expectations for all students; 2) facilitating knowledge construction which is defined as the teacher's ability to build on what the students know as they assist them in learning to be critical, independent thinkers who are open to other ways of knowing; 3) prejudice reduction, which is defined as the teacher's ability to use a contextual factors approach to build a positive, safe classroom environment in which all students are free to learn regardless of their race/ethnicity, social class, or language; 4) social justice which is the teacher's willingness "to act as agents of change" (Villegas & Lucas, 2002), while encouraging their students to question and/or challenge the status quo in order to aid them in "the development of sociopolitical or critical consciousness" (Ladson-Billings, 1995); and 5) academic development, which is defined as the teacher's ability to "create opportunities in the classroom" (Villegas & Davis, 2008) that aid all students in developing as learners to achieve

academic success, and the use of research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles.

This chapter will provide data related to each of the five categories of the framework as they relate to the student teachers' written and demonstrated teaching practices in the science and mathematics classroom. The analysis will contain five sections: (a) content integration, (b) facilitating knowledge construction, (c) prejudice reduction, (d) social justice, and (e) academic development. The analysis also will include a description of subcategories that emerged from the analysis of each major category. Data related to content integration included: (a) the inclusion of content from other cultures as demonstrated by 12 of 12 student teachers; (b) the fostering of positive teacher-student relationships demonstrated by 10 of 12 student teachers; and (c) holding high expectations for all demonstrated by 11 of 12 student teachers. Data related to facilitating knowledge construction included: (a) build on what the students know demonstrated by 12 of 12 student teachers; (b) the use of "real world" examples demonstrated by 9 of 12 student teachers; and (c) assisting students in learning to be critical, independent thinkers who are open to other ways of knowing demonstrated by 2 of 12 student teachers. Data related to prejudice reduction included: (a) the use of native language support demonstrated by 12 of 12 student teachers; (b) the fostering of positive student-student interactions demonstrated by 10 of 12 student teachers; and (c) providing a safe learning environment demonstrated by 9 of 12 student teachers. Data related to social justice included: (a) the teacher's willingness to advocate for her/his students demonstrated by 1 of 12 student teachers; and (b) modeling the development of sociopolitical or critical consciousness demonstrated by 6 of 12 student teachers. Data related to academic development included: (a) the teacher's ability to create opportunities in the classroom for learning demonstrated by 12 of 12 student teachers; and (b) the use of research-based strategies demonstrated by 12 of 12 student teachers.

The analysis of each category was completed using each entry of the portfolio artifacts of teaching for each individual student teacher as well as the videotapes of classroom practice, final student teaching evaluations, and interviews conducted upon the completion of the program. The overall categories related to the research questions will be presented in chapter 5.

The five categories of the researcher's framework were synthesized into one main research question and three sub-questions:

To what extent do Latino/a novice elementary teacher candidates demonstrate culturally responsive teaching practices during science and mathematics instruction?

- a. How do they integrate content and facilitate knowledge construction?
- b. How do they illustrate/model social justice and prejudice reduction in the science and math classroom?
- c. How do they develop students academically?

### **Content Integration Analysis**

Content integration is the inclusion of content from many cultures, the fostering of positive teacher-student relationships, and holding high expectations for all students. Two student teachers specifically mentioned the need to incorporate information and/or examples from different cultures when developing lessons. Content integration also allows the student teachers to make connections to the students' everyday lives when presenting or reinforcing new materials and concepts in science and math. At least three student teachers also specifically talked about their own background and how it allowed them to relate to their CLD students through language and similarities in home culture; for example what was expected of them from their parents and family. This category is similar to the prejudice reduction category in that one of the emphases is on building positive student-teacher relationships, however, this category focuses specifically on the relationships the student teachers built with the students rather than the students with each other. This allows the students to feel safe when participating in classroom discussions without fear of reprisals or negative comments from the teacher. All of the student teachers mentioned the need to have high expectations for all of their students in the science and math classroom. They saw its importance in helping the students to achieve academically as well as socially. Table 4.1 below indicates all student teachers demonstrated at least one element of content integration: eleven of twelve student teachers demonstrated the inclusion of content from other cultures, ten demonstrated positive student-teacher interactions, and eleven demonstrated high expectation.

Banks (1985) described content integration as, "the extent to which teachers use examples and content from a variety of cultures and groups to illustrate key concepts, principles, generalizations, and theories in their subject area or discipline." P005 exemplified this aspect of content integration by the recognizing that not all of her students observe all of the traditional

activities observed in the United States. She stated, "...I also had to have one of the students read a different book, "Pumpkin, Pumpkin", because his religion does not permit him to read anything that has to do with holidays". This was in response to question three of the Reflections of a Single Lesson that asks the student, "Did I alter my goals, strategies, activities, student grouping and/or assessment as I taught the lesson? If so, what changes did I make and why did I make these changes?"

The fostering of positive teacher-student relationships is also a sub-category found not only in the analysis of the content integration category, but in the social justice category as well as the prejudice reduction category. Under content integration, only those comments, observations, or interview answers that specifically mentioned how the student teachers related to their students were included. During her interview with the outside evaluator, P001 was asked, "How do you relate to students. What do you think helps you in your relationship with students to build a rapport?" To which the student teacher responded,

I have good relationship with the students that I have... That relationship they knew that I would help them. I care the same for everybody even though they were bad to me I say ok this is what you should be doing." She also stated, "If you show you care for them they show you back that you are wanted. It is very important to praise them and even though, ok you didn't [get it] right but you will get it next time. A good relationship is good because they feel confident and secure (P001).

In a study conducted by Gloria Ladson-Billings (1995), she concluded that, "By observing the students in their home/community environment, teachers were able to include aspects of the students' cultural environment in the organization and instruction of the classroom (p. 467)." The following is an excerpt from the outside evaluator interview of one student teacher who exemplifies this trait:

CK: [Q5] What is your strength as a teacher?

S4: I've only been doing it for a month. One thing that I've noticed just in this area, the dynamics here, the background that I come from is very similar to the students. So I can relate. I think 60% of our district is Hispanic and that's the same as my classroom. My classroom is more Hispanic than anything. I can really relate to the students. I know where they're coming from.

CK: Can you expand a little bit on that?

S4: A lot of their issues that they have at home, I had that, the same issues growing up.

CK: You attribute that to your background?

S4: I think it's easier just because I can communicate with them. I don't have to find that in between.

CK: When they share with you, you've had those previous experiences?

S4: Yes, and culture also. Sometimes like in reading class if we're reading a story, I can make good examples that they catch onto because I know a lot of them had the same experiences. Their culture is the same as mine. I can relate it to making tortillas or doing something from the Mexican culture. That's helped me a lot. I speak the language of the students, so I can communicate with the parents really well. I have good parent to teacher relationships. Being just a month, I've already had many telephone conversations or times that parent's have come in (P003)."

In another interview conducted by the Synergy Program Manager, P003 was asked, "What do you feel you bring to the teaching profession that others don't?" In which she responded, "I come to the profession with a lot of diversity, not only because students now are mostly Hispanic. I have that side, but I also have the Anglo side where I can see both sides to the story. I can see both points of view and that is one thing that I have that others may not (P003)."

One comment by the university supervisor found in another student teacher's final evaluation also illustrated Ladson-Billing's point, "Student-student and intern-student interactions are positive and respectful. The student population of the classroom includes 18 of 23 children who are Hispanic and 15 of those are English language learners. Highlighting similarities and differences between the native languages of her students, the intern developed a positive setting for both and thereby increased feelings of respect among all children in the classroom (P009)." On a more personal note, this particular student teacher was asked by the Synergy Program Manager, "What would you say to the critic who says too many exceptions were made for you?" For which she replied:

I will say that there are other avenues to get a teaching degree throughout universities which do not challenge the students to acquire the necessary skills to meet the needs of the students as K-State does. The students in our group decided to challenge ourselves to be better prepared to help all students succeed regardless of our own disadvantages, and

the exceptions that were made for us are just an example of the accommodations that students need to be successful in their learning. I feel that the teachers who persevere in their education regardless of the obstacles they face and look for support and take advantage of that support are a better role models and better teachers for the new generations than the teachers that chose an easier path to complete their degrees. Also, the teachers in this group will have a better understanding of the needs of the students in our area, than those students who did not experience any difficulties in their career (P009).

She went on to say, “The experience of acquiring another culture and another language as well as the knowledge acquired through this experience as a pioneer in completing part my degree through distance education and doing my practice here in Southwest Kansas where students struggle to learn the language mostly on their own (P009).” In response to the question: “What do you feel you bring to the teaching profession that others do not?” The Synergy Project Manger also asked all of the student teachers, “How important was it that Synergy personnel spoke your native language and/or the native language of your family?” To which P009 responded:

“I think that its important to me because of culture. I think that as we were growing up too many times culture was looked down on and I feel like even today so many kids won’t pick up a Spanish book. For example, here even, they don’t because they feel like they are going to be looked down upon by their peers or even maybe their teachers. I heard a comment from the librarian saying well we have Spanish books; here but yet, they won’t pick them up and read them. I didn’t say anything but I feel deep down inside that that is the reason why they don’t and so when the university accepts culture, different cultures, well obviously you will feel accepted then P011).”

These statements illustrate the student teachers’ belief that the inclusion of their students’ culture when designing and delivering lessons can have an impact on whether or not the CLD students participate in class.

All but one of the student teachers indicated verbally and in writing that they have high expectations for all of their students regardless of their language and/or learning background. The university supervisor discussed a particularly good example of this as she described her observation of P003 with regard to Category One of the evidence/feedback form.

She stated, "...The student teacher utilized all of the instructional strategies suggested in the contextual factors...In reflecting upon choices for small groupings, the student teacher explained WHY small grouping were chosen: interest of children, cultural/ethnicity backgrounds, reading level, and child's attention to task and ability to persevere with task. In the final evaluation of P003, the university supervisor stated that the, "Intern established a classroom culture built on respect"; "Intern set clear expectations"; and "Intern established high expectations which led to students' valuing of learning."

One student teacher discussed her thoughts regarding high expectations in entry 4 of the student portfolio artifacts of teaching. This entry of the portfolio included an analysis of the classroom learning environment in which the candidate is placed. In this entry candidates analyzed and created "A learning environment that encourages positive social interactions, active engagement in learning, and student self-motivation and responsibility that is built and maintained." The student teachers were asked to describe how they establish a culture for learning in their classroom for which P007 stated,

"As teachers we also need to set high expectations for our students. Students need to be aware of these expectations but they also need to know that the teacher will help them in reaching them. To promote success, students need to believe that they are able to accomplish what is expected of them, (Self-fulfilling prophecy)." She goes on to say, "As teacher it is my responsibility to create a positive relationship between my students and concepts so students do not have a negative perception of learning."

Student teachers' use of research-based instructional strategies that reflected the needs of a diversity of backgrounds and learning styles was frequently limited to classroom observations, because the majority of the student teachers often limited their written work to lists of items or short descriptions of their lesson plans and strategies. The university supervisor often documented teaching behaviors not documented in written plans. For example, the university supervisor summarized category one by stating, "Multiple learning activities were utilized, knowledge of student's age and characteristics was observed" in reference to P002. This university supervisor also stated that P009 demonstrated the, "Use of knowledge of students' backgrounds in choosing instructional strategies (visuals and small group interactions)." The university supervisor went on to state that, "Evidence observed in teaching episode is not

included in lesson preparation documents.” Further illustrating the student teachers’ lack of written details in lesson plans, but understanding of the need to ‘know’ their students when teaching the lesson.

**Table 4.1: Counts and Summary of Content Integration Category**

The inclusion of content from other cultures	The fostering of positive teacher-student relationships	Holding high expectations
12	10	11
At least three student teachers specifically talked about their own background and how it allowed them to relate to their CLD students through language and similarities in home culture - for example what was expected of them from their parents and family. At least two students also specifically mentioned the need to incorporate information and/or examples from different cultures when developing lessons. This also allowed the student teachers to make connections to the students’ everyday lives when presenting or reinforcing new materials and concepts in science and math.	This category is similar to the prejudice reduction category in that one of the emphases is on building positive student-teacher relationships; however, this category focuses specifically on the relationships the student teachers build with the students rather than the students with each other. The majority of student teachers fostered positive teacher-student relationships to allow the students to feel safe to participate in classroom discussions without fear of reprisals or negative comments from the teacher.	The majority of student teachers mentioned the need to have high expectations for all of their students in the science and math classroom. They identified the importance of high expectations in helping the students to achieve academically as well as socially.

### **Facilitating Knowledge Construction Analysis**

Facilitating knowledge construction is defined as the teachers’ ability to build on what the students know as they assist them in learning to be critical, independent thinkers who are open to other ways of knowing. The student teachers in this study demonstrated their ability to facilitate knowledge construction by the use of prior knowledge and ‘real world’ examples. All of the student teachers (12 of 12) discussed the importance of building on their students’ prior knowledge as a means to making science and math concepts accessible. The majority of the students (9 of 12) used ‘real world’ examples during science and math lessons, especially when introducing new concepts. As in other categories, the student teachers often demonstrated the ability to build on students’ background in practice, although, the majority of them did not include their understanding of facilitating knowledge construction in their portfolio artifacts of teaching. Although three of the student teachers discussed the fact that they wanted their students to be critical and independent thinkers/problem solvers, it was not as apparent in the



lessons they presented. Only two student teachers made mention of attempts to ensure that their students were open to other ways of knowing in their Entry 1 philosophy of teaching statement.

One area where the mention of prior knowledge was evident in the majority of student teachers was in Entry 1 of the student teaching portfolio. Entry 1 is used to illustrate to the evaluator that the student teacher is able to articulate his/her “understanding of the historical, philosophical, and social foundations of education...In addition...beliefs and vision for effectively teaching all students...promoting the well-being of [your] students, their families, and the larger community” (COE, 2007, p. 9). In this instance, the student teachers articulated their belief that to effectively teach all students, they needed to build on what the students knew in order to facilitate the construction of knowledge. In reference to how student teacher 006 understood what it meant to effectively teach all students in science and math classrooms, this student teacher stated, “I feel it is vital to look at the child as a whole individual and build on their prior knowledge”. Another student teacher, describing her philosophy of teaching stated, “I believe that effective teachers understand what knowledge their students already have and find a way to tap into that knowledge and build upon it everyday” (P010). Student teacher P004 also described her philosophy of effective teaching by stating, “I also feel it is important to be aware of my student’s prior knowledge. Understanding my student’s prior knowledge will help me be effective in the preparation and presentation of my lessons.” The student teachers also discussed the importance of relating new content to what the child already knows and is able to do in order to make connections. As one student teacher put it, “When developing lesson plans, an educator must consider the student’s background knowledge, cultural background, social economic influence, and connect those concepts to their daily life experiences, in every subject (P009).”

The use of ‘real world’ examples was most evident in Entry 3 of the portfolio artifacts of teaching of all of the student teachers, especially observations made during science lessons and illustrative examples provided during math activities. Entry 3, as described in chapter 3, is the heart of the portfolio in that the design, implementation, assessment of, and reflections on instructional plans are developed. During student teaching, a multi-week Instructional Unit Plan is developed and taught. All instructional plans must be designed around significant concepts and skills as well as state and national standards in the content area. During a math lesson, the university supervisor noted, “the student teacher established the importance of the math lesson by using a grocery shopping advertisement. The advertisement related the ‘realness’ of the

concept of solving problems using money (P001).” This student teacher was observed during the video observation using the floor tiles in the classroom to illustrate how to calculate the area of a square or rectangle, thus providing her students with a familiar means of measuring. Another student teacher used a student ‘bank’ from which she gave each pair a set amount of money to use as a means to check the answers they calculated on the activity sheet during the video observation (P003). During a kindergarten math lesson, one student teacher (P008) was observed on video leading the students in a couple of counting exercises using the days of the week and the number of days school had been in session. She also used different representations, including paper clips clipped together in tens. The math lesson for the day was teaching the students to recognize the numbers before (antes) and after (despues) on a number line. In this instance, the student teacher used the students themselves to stand along a number line taped on the floor; then she had them move left or right while the students observing attempted to recall the numbers before and after the number where the volunteer stood.

Student teachers also used ‘real world’ examples to illustrate science concepts. These examples were most evident in Entry 5 of the portfolio artifact of teaching. This particular entry, as described in chapter 3, includes Formal Observations that provide the evaluator with “evidence of instruction and evidence of competence in all four categories of the KSU Conceptual Framework” (COE, 2007, p. 37). Each candidate was asked to include evidence of the development, implementation, observations of, and reflections on five individual instructional lessons. In relation to the facilitating knowledge construction category for science lessons, the student teachers used a variety of ‘real world’ examples. One of the best examples came from a student teacher’s cooperating teacher’s final evaluation, in which she stated,

I would have to say that P004’s most outstanding achievement during her student teaching experience was the planning and teaching of her science unit. She worked VERY hard to plan a variety of activities around her science theme. She tied the letters we were learning into her unit as well! It is not an easy task to plan a cross-curricular unit and do it well! She had several guests come into our room and share. She asked our Principal,...to bring in his boa constrictor snake named Jake as a hands-on reptile experience! She had her husband come to our room and talk about reptiles and birds. She collected toy reptiles, birds and fish for the kids to sort and classify. She helped them make scuba masks to wear while they were exploring the ocean in our room. I enjoyed

seeing the excitement on the faces of the students, as they were able to do all these hands-on learning activities.

This student teacher also allowed her students to use a sock pulled over their hands and arms to illustrate how a snake sheds its skin; they were not allowed to use their other hand or any other body part to remove their 'skin' (P004).

Another student teacher stated, "Students will walk outside the school to look for a weed. We will pull the weed and see what part of the plant is underground (P011)." She discussed the rationale for taking her students outside to observe plants in question four of the Guiding Questions (What difficulties do students typically experience in this area and how do you plan to anticipate these difficulties?) where she said, "Students have a hard time with the concept of a seed turning into a plant. Some students had not made the connection of the plant coming from the seed. Being able to visually handle the seeds and plants will help students understand the function of seeds and plant parts." She also answered question six (How do you plan to engage students in the content? What will you do? What will the students do?), "I am engaging students by taking them outside and having them look at something that is familiar to them and dissecting it....Students will be involved in content by using a hands on activity". These two examples are characteristic of all the student teachers in that they all used hands-on activities to help the students make connections between what was familiar and the content they were learning for the first time. In this way, the student teachers assured themselves and their evaluators that they were demonstrating "evidence of instruction and evidence of competence in all four categories of the KSU Conceptual Framework" (COE, 2007, p. 37)." Especially in relation to the Conceptual Framework, Standard 7, which states, "The educator plans effective, integrated, and coherent instruction based upon the knowledge of all students, home, community, subject matter, curriculum standards, and current methods of teaching reading" (COE, 2007, p. 16).

The majority of student teachers demonstrated little evidence of the last component of the facilitating knowledge construction category, assisting students in learning to be critical, independent thinkers who are open to other ways of knowing. In her philosophy of teaching, one student teacher stated, "I will provide an environment that supports investigation and experimentation of new ideas. My practice will create an environment that is highly collaborative, project-based, resource-rich, challenging, and equitable" (P001). To a small

degree her comment is one example aligned with the last component of the facilitating knowledge construction category in that she mentioned providing an environment that supports the “experimentation of new ideas”. Another student teacher gave the most detailed example of assisting students in learning to be critical, independent thinkers who are open to other ways of knowing. In her philosophy of teaching statement she said,

I will help students develop critical thinking skills by creating a positive learning environment by respecting and promoting intellectual diversity. One of my objectives as a teacher is to serve as a guide for my students to provide them with the tools they need to communicate effectively as they prepare for the world around them. My ultimate objective is to motivate my students towards a level of independence where they develop a desire to learn and think for themselves (P010).

**Table 4.2: Counts and Summary of Facilitating Knowledge Construction Category**

Build on what the students know	“Real world” examples	Assist students in learning to be critical, independent thinkers who are open to other ways of knowing
12	9	2
All of the student teachers discussed building on their students’ prior knowledge as a means to making science and math concepts accessible. As in other categories, the student teachers often demonstrated the ability to build on students’ background in practice although the majority of them did not include their understanding of facilitating knowledge construction in their written portfolio artifacts of teaching.	The majority of student teachers discussed the importance of or gave examples of their use of ‘real world’ examples during science and math lessons, especially when introducing new concepts.	There was not a lot of written evidence to support this area of analysis. However, evidence of modeling in the observations was demonstrated as one student teacher mentioned contributing to science.

### **Prejudice Reduction Analysis**

Prejudice reduction is defined as the teacher’s ability to use a contextual factors approach to build a positive, safe classroom environment in which all students are free to learn regardless of their race/ethnicity, social class, or language. The student teachers in this study illustrated their commitment to building a positive learning environment through native language support (12 of 12), positive student-student interactions (10 of 12), and a classroom-learning environment where students felt safe to participate (9 of 12). The support of CLD students and

their parents' native language was evident throughout the portfolio artifacts of teaching among all student teachers. This aspect of the student teachers' classroom teaching was most evident during the video observations made by the researcher and was noted several times by the clinical instructors and the university supervisor. The student teachers also commented on how important it was to the classroom environment that they were able to communicate with the students and their parents when the need arose.

Each of the student teachers in the study either demonstrated and/or discussed the importance of native language support for their ELL students during science and math instruction. Although not everyone was observed using this strategy during the researcher's video recording of actual teaching, there was mention either by the student teacher during the debriefing or those observing them that native language support was part of how they taught the lessons. A few of the students discussed assisting their cooperating teachers during parent-teacher conferences by providing translation help with Spanish speaking parents. One area where there was explicit mention of native language support was in Entry 2 of the portfolio, the Contextual Factors. As noted in previous chapters, contextual factors are defined as those factors that can affect academic achievement in the classroom: gender, ethnicity/cultural make-up, language proficiency, academic performance/ability, and special needs as well as community and district factors. Student teacher P001 indicated, "They [students] will be allowed to respond in English and in Spanish". Another student teacher included native language as an accommodation in this entry by stating, "Allowing students to speak in their native language during class instruction, or small group work will provide better understanding (P006)." According to another student teacher, language support was essential to learning for the limited English-speaking students so she accommodated them, "By grouping language minority students with native speakers the students are given an opportunity to interact with their peers. Use of small groups to promote multiple perspectives and encourage collaboration among peers also giving opportunity to practice speaking (P004)." One student teacher and her district went as far as to provide supplemental help to a non-English speaking student through classroom language assistance, reading material, and an electronic device.

There is one student in my classroom who requires most of the interaction in Spanish. She was provided with the Spanish version of the reading and Math texts to facilitate instruction at least in these two subjects. She receives most of the directions in Spanish

while she strives to participate in all activities in the classroom. She receives my support whenever possible; I translate instructional activities to Spanish. The district has provided her with a Leap Frog® to work at home; she also receives after school support from a bilingual paraprofessional twice a week (P009).

Each of the student teachers also discussed the importance of his/her ability to communicate with Spanish-speaking parents during parent-teacher conferences as well as everyday interactions with them before and after school. The cooperating teachers, clinical instructors and university supervisors noted each student teacher's ability to aid his/her students and families because of the ability to speak in both English and Spanish. In one instance the clinical instructor noted, "ST reported that she participated in Parent/Teacher conferences and led two conferences where Spanish was the first language. ST indicated that if a parent that speaks only Spanish had questions, that she was the one to conference with that parent (P002)." Several of the student teachers had similar comments with regard to communicating with non-English or limited English-speaking families. Student P006 stated, "...a strength that I portrayed was my ability to speak to all parents in their native language (Spanish/English)." While P001 said, "My strength is being bilingual to help the students and be able to communicate with the parents. My goal is to improve my ability and I will develop connections between communities and families." The parents themselves also sought to interact with the student teachers, even though the district had provided language assistance, as exemplified in the following account documented by the university supervisor,:

The student teacher reported that she had participated in an IEP meeting for one student in the second grade classroom. Because the father knew that she spoke Spanish, he directed his questions at the student teacher (even though a translator was present to provide English-Spanish translations). The parent wanted to hear information directly from the student teacher who was in the child's classroom (P009).

Another aspect of reducing prejudice included positive student-student interactions. As stated in chapter 3, Entry 4 of the portfolio includes an analysis of the classroom learning environment in which the candidate is placed. In this entry candidates analyzed and created "A learning environment that encourages positive social interactions, active engagement in learning, and student self-motivation and responsibility that is built and maintained. The majority (10 of 12) of student teachers discussed the importance of building rapport with the students in order to

create a learning environment free of fear of reprisals from the teacher or their peers. As one student teacher put it, “As teacher it is my responsibility to create a positive relationship between my students and concepts so students do not have a negative perception of learning” (P007). Part of fostering positive student-student interactions is also expecting students to respect each other when learning new material or reviewing old material. Several of the student teachers discussed their expectations regarding how students responded to each other when answering questions or otherwise participating in classroom discussions. Student teacher P005 said, “We also encourage students to respect each others’ comments, even if they are wrong, and students have adapted.” One student teacher in particular asked all of her students to greet each other with a smile when they moved into groups during the lesson. The researcher not only found this detailed in her artifacts of teaching, but also observed it first hand during the video taping of a math lesson towards the end of her student teaching semester. This student teacher saw her role in the classroom as a positive motivator and facilitator and she expected her students to act accordingly, “They [students] were expected to respect each other continually...If I bring in a negative energy to the classroom that’s exactly what I will receive from the students (P003).”

A safe learning environment also was of great importance for the majority (9 of 12) of the student teachers. The discussion of this was most evident in entry 1 and 4 of the portfolio artifacts of teaching. Entry 1, as discussed in chapter 3, is used to illustrate to the evaluator that the student teacher is able to articulate his/her “understanding of the historical, philosophical, and social foundations of education...In addition...beliefs and vision for effectively teaching all students...promoting the well-being of [your] students, their families, and the larger community” (COE, 2007, p. 9). By including all students in the lesson regardless of their cultural background and/or language skills, the participants in this study sought to create a warm, inviting, learning environment where all children felt they belonged. As P008 put it, “I want to provide them with a safe and friendly environment in which they will be able to learn. My classroom will promote respect and cooperation.” This comment is indicative of how many of the participants interpreted a safe learning environment. This safe, positive learning environment was also noted by a cooperating teacher in her final evaluation in which, she noted that the student teacher made, “our classroom feel like a comfortable and safe place for all students to learn” (P004). Another excellent example of this commitment is illustrated by P003, in her philosophy of teaching she stated,

As an educator, I plan to provide a safe and secure leaning environment for my students, in which the learning styles of each are accepted and encouraged. Part of providing meaningful instruction includes providing an environment that fosters learning. Students should feel secure in their surroundings, and not be afraid to take a chance when questions are asked.

Many of the student teachers have similar comments regarding building a safe learning environment. An excellent example of this belief was found in P007's entry 4 artifact of teaching, she stated:

It is necessary to create a safe environment to provide students with a sense of security so they will feel free to participate in classroom activities and feel welcomed in the classroom. Through this way we will promote and increase students' participation and enthusiasm toward school...The rules need to include factors such as respect for learning, respect for the right to make mistakes and the compromise of a whole class to participate in each others learning.

Another student teacher also appeared to grasp the importance of creating this type of learning environment in the classroom as illustrated by the following statement, "As a future teacher I will strive to create an environment in my classroom so that all of my students feel comfortable participating in class (P010)." A clinical supervisor observed one student's efforts in this area and stated, "The classroom is non-threatening to the students because of the warm and caring attitude displayed by [ST]. There is a mutual respect between the teacher and the students. The students understand the expectations of behavior and respond in a positive manner...The classroom atmosphere is one in which learning can and does take place (P011)." According to one student teacher, a safe, welcoming environment includes the celebration of her student's culture or as she puts it, "The classroom needs to be a safe and welcoming place where the students' diverse backgrounds and cultures are celebrated (002)." This safe, positive learning environment was also noted by a cooperating teacher in her final evaluation in which, she noted that the student teacher made, "our classroom feel like a comfortable and safe place for all students to learn" (P004).



**Table 4.3: Counts and Summary of Prejudice Reduction Category**

The use of native language support	Positive student-student interactions	Safe learning environment
12	10	9
All of the student teachers either demonstrated or discussed native language support for their ELL students in contextual factors and/or lesson plans; although, not everyone was observed using this strategy. A few of the students discussed assisting their cooperating teachers during parent-teacher conferences by providing translation help with Spanish speaking parents.	The majority of student teachers discussed the importance of fostering positive student-student interactions in order to create an environment in which students felt free to participate.	The majority of candidates demonstrated a strong ability to create a safe environment. All classrooms appeared very nurturing and open.

### **Social Justice Analysis**

Social Justice is defined as the teachers’ willingness “to act as agents of change” (Villegas & Lucas, 2002), while encouraging their students to question and/or challenge the status quo in order to aid them in “the development of sociopolitical or critical consciousness” (Ladson-Billings, 1995). This category was a challenge to analyze in that, of the 12 participants, only half made statements aligned with the definition of social justice used in this study. One student teacher acted as an agent of change, and six discussed encouraging their students to question and/or challenge the status quo in order to aid them in “the development of sociopolitical or critical consciousness” (Ladson-Billings, 1995). The issue of social justice can be challenging. Like many traditional student teachers, the participants in the current study were concerned with classroom management and content delivery to a large extent. However several of the participants did illustrate their commitment to social justice by modeling how to be good citizens and by advocating for their students inside and outside of the classroom.

Comments related to the social justice category were most evident in the written portion of entry 1 of the portfolio artifacts of teaching, more specifically, the philosophy of teaching statement. There also was evidence that at least one participant saw the need to advocate for her students during the lesson (entry 3) when other adults in the classroom attempted to interfere to the detriment of the student. The Philosophy of Teaching statement each student teacher was required to write in Entry 1 of the portfolio is used to illustrate to the evaluator that the student teacher is able to articulate his/her “understanding of the historical, philosophical, and social

foundations of education...In addition...beliefs and vision for effectively teaching all students...promoting the well-being of [your] students, their families, and the larger community” (COE, 2007, p. 9).

The only examples of the ability to act as agents of change was documented during parent-teacher conferences where all student teachers assisted in translating information to the Spanish-speaking parents about how their children were doing in the classroom. However, this particular activity was part of their teacher education program, thus not really voluntary. There was one student teacher who discussed a specific situation in her Reflection of a Single Lesson document in which she intervened on a student’s behalf:

...during this particular day I had a substitute teacher in the classroom to whom I had indicated not to intervene unless I asked her but unfortunately she decided to address one of the students in a very disrespectful manner during my math lesson. I was confident that she [would] follow my directions as she had done during the morning and I did not notice until I saw her standing by the student. I walked to her and asked her to allow me to handle the student’s behavior myself she was embarrassed but the damage was already done, I was very disappointed. I realize that once I have my own classroom I will be able to prevent those incidents but it was very difficult for me to accept that this had happened. I had anticipated that this particular student was going to expose certain behavior as he usually does when he is presented with challenging material during math class, but I provide him with the proper support and the behavior stops once he feels successful, I will make sure that this incident does not happen ever again. Also, if I know ahead of time that I will have support from other staff members in the classroom, I will be very specific on what their responsibilities are while I am teaching the lesson, and I will be clear in my expectations as far as the classroom environment I want to observe at all times. I really believe in teamwork in order to have all the students succeed, but I believe communication is the key to success (P009).

The majority of the available evidence to support the second component of the social justice definition, encouraging their students to question and/or challenge the status quo in order to aid them in “the development of sociopolitical or critical consciousness” (Ladson-Billings, 1995) was discussed by the participants in a general way. Participant P001 was able to articulate her understanding of education by stating: “I know I will be successful in my teaching when

students tell me that they have learned to see the social world through a new lens and to think more critically,” thus illustrating her understanding of how impactful her lessons can be and how she interacts with the students impacts what her students know and are able to do outside of the classroom. It also exemplifies her desire that her students learn to think critically rather than be accepting of all information as it is presented to them. Another participant stated...”the role of the educational system and teachers to insure our children have all the tools they need to be the best adults and leaders they can be. I want to inspire them to be good, responsible, and committed students as well (P002).” Again, this participant touches on her understanding of what it means to be a teacher and what she wants for her students as they mature into adults. The other four participants who touched on this particular category made similar statements in the philosophy of education statement. P004 stated: “My ultimate goal is student success, to help each one reach their [sic] potential as a member of society”, P006 stated: “One role I have witnessed is trying to turn students into productive and self-motivated community members...providing for students a nurturing school environment that includes social, emotional as well as educationally related facets that encourage academic growth”, and P009 stated that: “they will learn citizenship skills that will help them conduct themselves in a proper manner to maintain a safe environment in the classroom as well as in their community.”

**Table 4.4: Counts and Summary of Social Justice Category**

The teacher’s willingness “to act as agents of change” (Villegas & Lucas, 2002)	Encouraging their students to question and/or challenge the status quo in order to aid them in “the development of sociopolitical or critical consciousness” (Ladson-Billings, 1995): Accomplished through “Modeling”
1	6
One student teacher discussed her need to advocate for a student with another adult figure in the classroom. This was not demonstrated by other student teachers through the data collected.	Only half of the student teachers mentioned aspects of social justice in their portfolio artifacts of teaching. Of those students who did write about this category, the majority talked about helping students to become good citizens.

### **Academic Development Analysis**

For the purposes of this study, academic development was defined as the teacher’s ability to “create opportunities in the classroom” (Villegas & Lucas, 2002) that aid all students in developing as learners to achieve academic success, and the use of research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles. The student

teachers in this study demonstrated their ability to ‘create opportunities in the classroom’ with the use of visuals, hands-on or manipulatives, and grouping during instruction in order to assist their students in meeting the objectives of the science and math lessons. Participants also mentioned several other methods and strategies including: modeling; the use of ‘real world’ models such as rocks, plants, clocks, etc.; and the use of the Sheltered Instruction model as well as the SIOP Model in order to assist their students in making connections between what they were learning in the classroom and what they see outside of the classroom. “Sheltered instruction is a research-based instructional framework that provides clear and accessible content and academic language to ELLs in pre-K–12 grade-level classes (Hanson-Thomas, 2008).” The SIOP Model is an observation protocol used to assess the extent to which teachers use Sheltered Instruction effectively and appropriately. These strategies were most evident in entries 3 (unit planning) and 5 (formal observations) as described in Chapter 3.

Entry 3 is the heart of the portfolio in that the design, implementation, assessment of, and reflections on instructional plans are developed. During student teaching, a multi-week Instructional Unit Plan is developed and taught. All instructional plans must be designed around significant concepts and skills as well as state and national standards in the content area. Entry 5 of the Student Teaching Portfolio includes Formal Observations that provide the evaluator with “evidence of instruction and evidence of competence in all four categories of the KSU Conceptual Framework” (COE, 2007, p. 37). Each candidate was asked to include evidence of the development, implementation, observations of, and reflections on five individual instructional lessons.

Most of the student teachers discussed the need for visuals in Entry 2 of the portfolio artifacts of teaching, and several also included the use of visuals in entry 3 and entry 5. The use of hands-on activities or manipulatives is most evident in entry 3 where the science and math lessons are discussed in more detail. Evidence of the use of visuals was found in the Guiding Questions of a Single Lesson and the Reflections on a Single Lesson sections of entry 5. Student teachers were to use the Guiding Questions to assist them in writing a well thought out lesson plan that included a rationale for any accommodations or modifications necessary for the students in their classrooms. The Reflections on a Single Lesson form was used as a debriefing tool to assist the student teachers in evaluating themselves and the lesson they presented. This

allowed them time to think about what did or did not work in the lesson in order to aid them in future lesson planning events.

As previously noted, entry 2 of the portfolio artifacts of teaching focuses on contextual factors and how they can be used by teachers in the classroom to make learning more accessible to all students regardless of gender, ethnicity, language, level of academic ability, and special needs. As a result the majority of students teachers who discussed the use of visuals in this entry did so as a means to assist second language learners in learning the content while furthering their acquisition of the English language. “Lessons are modified by translating and going back to the lesson to show the visuals and allow them to respond in Spanish when needed (P001).” As another participant stated, “I try to provide as much visuals as possible during instruction to help ELL students understand concepts (P009).” As with native language support discussed previously in the Social Justice category, the use of visuals is used as an aid in helping CLD students to make connections between their native language and the language they are acquiring through the science and math lessons provided by the student teacher. “Students are provided with many visuals to accommodate and make content more responsive to their background knowledge (P005).” In answering guiding question number two: Why are these goals and objectives suitable for this group of students?, participant 007 stated, “...I am using visuals, manipulatives, and vocabulary connections with Spanish and students’ real life experience” Where as participant 009 stated, “Students will have the opportunity to have visuals to illustrate some of the concepts, this will provide the entire class will multiple learning opportunities. This class has a high number of ELL students who benefit from visuals. Also, students who are struggling with some of the concepts addressed in this lesson.” This particular student teacher impressed the university supervisor with her use of visuals as a strategy for teaching as evident in the final evaluation in which she stated, “Intern engaged students with technology-rich activities. Effective visuals and manipulatives facilitated learning for the English language learners and other students in the class who required a more hands-on instructional approach (P009).”

Hands-on activities and the use of manipulatives also were evident in every participant’s student teaching portfolio artifacts of teaching as well as the majority of observations both formal and videotaped. Participant 012 described a second grade science lesson in which she and the students observed and discussed the life cycle of a bean plant. The university supervisor noted in her feedback that, “According to the guiding questions for a single lesson plan, the

targeted objective provides the Second Language Learners, low SES students, and the Hispanic/Latino students with opportunities to view and observe real artifacts of growing plants.” The university supervisor also noted that P012 “...modeled the life cycle of a bean plant using the actual bean plants that the children had planted in baggies. The student teacher also MODELED the drawing of the life cycle for the children...” Other student teachers demonstrated their use of hands-on activities in various ways including, “[the] student teacher represented reptile content by modeling physical objects (turtle shell and shed skin of a snake), visual flip chart models of reptiles and habitats, children’s trade book of “Skin, Shell, and Scale,” and creative drama as students pretended to find a way to shed their snake skin (sock on arm) (P004).” This participant’s science lesson in which she had the students in her classroom pretend to be snakes shedding their skin is indicative of the creative ways some of the student teachers in this study related the content of their lessons to their students background knowledge. Another example of this creativity was demonstrated by participant 008 who was observed during the video observation, representing numbers in a variety of forms to her bilingual kindergarten class. She pointed to several items in the classroom that illustrated how numbers appeared on a calendar, a number line, a matrix, and paper clips. She then chose students to stand along a number line and had them move left (izquierda) and right (la derecha) of a chosen number in order to demonstrate the concept of greater than and less than.

Although all of the student teachers mentioned the use of hands-on activities and manipulatives in entry 2 and 3, a few of them did not utilize them as effectively as they could have as is evident in their reflections. One participant stated,

...I think that it would have be better if I had used the base ten blocks and let the students to use them to make it easier to understand the activity (P007)” in answering reflection question two, which asked “Did the students learn what I had intended (i.e., were my instructional goals and objectives met)?...Was I persistent in helping all students achieve success? What is my evidence? She went on to state, “The concept is very complex, for this reason I think that it will be necessary to plan different hands-on activities, use more visuals, and listening strategies. Also I will use more time, so I would be able to cover in a more complete manner all the concepts needed to understand the concept of estimating additions” in answering reflection question seven. This question asked the student

teacher to respond to the question, “If I had the opportunity to teach this lesson again, what might I do differently (describe at least one thing)? Why?”

Participant 009 encountered a similar situation, but she chose to alter her lesson as it progressed. In response to Reflection question three (Did I alter my goals, strategies, activities, student grouping and/or assessment as I taught the lesson? If so, what changes did I make and why did I make these changes?), the student teacher stated,

Due to the students’ frustration to calculate elapsed time, I decided to encourage them to use a play clock to manipulate and together we solve the problem.” In answer to reflection question six (Was my assessment effective and useful to my students and me? Describe an instance in which my feedback positively affected a student’s learning), she went on to say, “Although this session was not intended to be an assessment, I found out some information that it will help me plan better for the next session. I discovered that some students have not learned certain basic, concepts of time that are needed for the purpose of calculating out elapsed time (P009)

One student teacher mentioned her desire to use information she obtained during a professional development inservice in which she stated, “I will utilize “Everyday Math” teacher’s manual and use it to enhance, and accommodate students when presenting a lesson. This Math inservice helped me to think about how to use manipulatives and every day items to measure and calculate problems using different methods instead of the everyday pencil and paper worksheets (P002).”

Although the types of groups and the rationale each student teacher used varied, grouping was another strategy that all of the participants used to enhance academic development at one point or another during science and/or math lesson instruction. They all used a variety of groups ranging in size from two to whole class groups depending on the lesson activity they were working through. Whole group instruction was used most often to clarify instructions, to reiterate lesson objectives, or to clear up any misunderstandings or misconceptions while the smaller groups were used as a means to facilitate the lesson activity so that all students had the opportunity to participate equally. One participant stated, “Also, the students have been assigned seats in groups of a combination of cognitive levels to allow them to interact with their peers and I use collaborative learning as frequent as possible (P009);” while another stated that she would “Pair up student with peer that is bilingual, for help with lessons and reading” (P002). This use

of cognitive and language proficiency levels was evident throughout the portfolio artifacts of teaching for each student teacher. Participant 004 also used small groups in this way, “Use of bilingual teacher and peers to clarify vocabulary, concepts or procedures in their native language.” This participant went on to state that she used “...heterogeneous groups to provide assistance of the more language-capable peer in academic and social interactions focused on learning” (P004). Still another student teacher stated, “I know there are many techniques that can be used to help all students. Some of these include the following: working in groups, learning by watching someone model the activity, and collaboration... The use of scaffolds, cooperative learning, and individualized attention by the teacher can help a struggling student... Students are frequently paired up to read together with one other student for fluency and comprehension” (P011). Thus illustrating that this particular participant understands the need for grouping and how it can be used to address the diversity of learners in her science and math classrooms.

One university supervisor prompted a participant to explain her use of groups during the lesson observed, “...In reflecting upon choices for small groupings, the student teacher explained WHY small grouping were chosen: interest of children, cultural/ethnicity backgrounds, reading level, and child’s attention to task and ability to persevere with task. These accommodations were not presented in the lesson plan, nor the guiding questions for a single lesson.” This comment by the university supervisor illustrated the challenge the researcher faced in ascertaining the extent to which the participants demonstrated culturally responsive teaching, especially with regard to the written data that was available. Often what was observed either formally by the cooperating teacher, clinical instructor, and the university supervisors, or during the video observation was not found in the written account of the lessons observed.

The use of modeling was mentioned by over half of the participants (7 of 12). However, their use of modeling was in conjunction with the use of visuals when explaining a lesson or, as a demonstration of an activity such as how to perform an experiment. Question number four in the Guiding Questions for a Single Lesson asks, “What difficulties do students typically experience in this area and how do you plan to anticipate these difficulties?” To which one participant replied, “Students usually experience difficulties in apply[ing] new concepts to develop new ideas, for this I am planning to model as much as possible each of the activities (P007).”



Another form of modeling discussed by some of the participants was the use of ‘real world’ models when demonstrating or reinforcing a challenging concept. Again, this type of modeling was used in conjunction with the use of visual and hands-on strategies. During the video observation, one student teacher was observed giving directions to the whole group and then splitting the students into smaller groups to work problems together. The student teacher used math vocabulary terms as she helped the students work through the problem. They first worked the problems alone and used their partner if they needed help, then they checked their work using the bag of play money they were given for that purpose (P003). Another student teacher brought a plant fossil embedded in rock to illustrate a previous lesson on fossils while the class as a whole reviewed how different types of rocks were formed (P006).

Two of the participants also mentioned the use of Sheltered Instruction while planning and carrying out their science and math lessons. As all of the participants matriculated through the teacher education program with an emphasis on English as a Second Language, they were familiar with the Sheltered Instruction model. Four of them also received training in the Sheltered Instruction Observation Protocol (SIOP) through the district where they did their student teaching. “Sheltered instruction is a research-based instructional framework that provides clear and accessible content and academic language to ELLs in pre-K–12 grade-level classes (Hanson-Thomas, 2008).” The SIOP Model is an observation protocol used to assess the extent to which teachers use Sheltered Instruction effectively and appropriately.

Participant 005 stated she was, “implementing SIOP instructions to connect with student’s background knowledge” as a strategy to support the students’ knowledge base. In her summary of category one, the clinical instructor stated, “Overall, she has adapted to planning the math lesson & used the SIOP model to accommodate the lesson to the students level of knowledge” (P005). Another participant stated in entry 2 that, “I will be using a combination of SIOP, Sheltered and other ESL methods to provide my students with the adequate tools in comprehending a new language instruction” (007). Two student teachers discussed the professional development inservice they were able to participate in that gave them strategies for implementing the SIOP model, “I feel very optimistic about SIOP implementation, although teachers provide sheltered instruction on daily basis due to the limited experiences of the majority of the students, it is important to make the students accountable for their learning” (P009); “SIOP Book Study – learned strategies to use when teaching ELL/all students” (P008).

Participant 009 also stated, “Sheltered instruction is part of the plan of improvement we practice on daily basis in the classroom”.

**Table 4.5: Counts and Summary of Academic Development Category**

The teacher’s ability to “create opportunities in the classroom” (Villegas) that aid all students in developing as learners to achieve academic success.	The use of research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles.
12	12
All of the student teachers used a variety of methods to create learning opportunities. The majority of these opportunities took place during class activities when students needed more concrete examples to understand the content.	All of the student teachers discussed the use of visuals, grouping, and hands-on or manipulatives during instruction in order to assist their students in meeting the objectives of the science and math lessons. Several students also mentioned the use of modeling. Other strategies included the use of the sheltered instruction model as well as the SIOP model. At least half discussed the use of real world models such as rocks, plants, clocks, etc. when they introduced new or difficult concepts in science and math lessons. The use of whole and small group collaborations was most evident in entry 3 when classes were discussing the implementation of the actual lesson.

### Summary

Evidence of participant inclusion of major portions from each of the five categories analyzed was presented: (1) content integration, (2) facilitating knowledge construction, (3) prejudice reduction, (4) social justice, and (5) academic development. The findings in each of these categories revealed that the majority of participants demonstrated the use of cultural models as well as their similar backgrounds in order to integrate content while holding high expectations for all students. They facilitated knowledge construction by building on what their students knew and by using real world models to illustrate key scientific and math concepts. All of the student teachers demonstrated their commitment to prejudice reduction through the use of native language support in the classroom as well as when communicating with parents. They also demonstrated techniques meant to foster positive student-student interactions, and build a safe classroom environment. Although the social justice category was a little more difficult to analyze, there was evidence that one student teacher in particular advocated for her student directly, and at least three student teachers saw the need to encourage their students to think critically and socio-culturally. Finally, all of the student teachers in this study demonstrated in writing and in practice their use of visuals, hands-on activities, modeling, and Sheltered

Instruction to illustrate their ability to create opportunities in the classroom and use research-based instructional strategies as evident in the academic development category.

## **Chapter 5 - Conclusions, Discussion, and Implications**

This study explored the extent to which Culturally and Linguistically Diverse (CLD) novice teachers described and demonstrated culturally responsive teaching strategies using their students' cultural and academic profiles to inform practice in classroom science and math instruction. Culturally responsive teaching as defined in Chapter 1 of this study states that the teacher must be knowledgeable with regard to how children learn and how the curriculum impacts each child. The student teachers in the study included 12 Mexican American and primarily place-bound, non-traditional, English language learner, first generation college students who were also the first to participate in a distance-based collaborative teacher education program involving three different campuses and three school districts.

The researcher examined suggested culturally responsive teaching practices of several of the leading researchers in the area of multicultural education and culturally responsive teaching (Banks, 1981; Ladson-Billings, 1995; Gay, 2002; Nieto, 2004; & Villegas & Lucas, 2002). Using a thematic analysis approach the researcher then compiled a framework using key ideas and suggestions from the literature. Qualitative techniques such as thematic analysis can be used "when looking for themes to arise as a result of...active inspections of...raw data" (Shank, 2006). The framework developed by the researcher was then used to operationally define culturally responsive teaching as the teacher's ability to integrate content, facilitate knowledge construction, reduce prejudice, model social justice, and develop students academically to meet the needs of all learners. This operational definition of culturally responsive teaching led the researcher to derive five major categories from which to analyze the data collected throughout the study: 1) content integration which is the inclusion of content from many cultures, the fostering of positive teacher-student relationships, and holding high expectations for all students; 2) facilitating knowledge construction which is defined as the teacher's ability to build on what the students know as they assist them in learning to be critical, independent thinkers who are open to other ways of knowing; 3) prejudice reduction, which is defined as the teacher's ability to use a contextual factors approach to build a positive, safe classroom environment in which all students are free to learn regardless of their race/ethnicity, social class, or language; 4) social justice which is the teacher's willingness "to act as agents of change" (Villegas & Lucas, 2002), while encouraging their students to question and/or challenge the status quo in order to aid them

in “the development of sociopolitical or critical consciousness” (Ladson-Billings, 1995); and 5) academic development, which is defined as the teacher’s ability to “create opportunities in the classroom” (Villegas & Davis, 2008) that aid all students in developing as learners to achieve academic success, and the use of research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles. The data analyzed included student teaching portfolio artifacts of teaching, direct and video observations, final evaluations, and interviews analyzed in accordance with the framework developed by the researcher.

As stated in chapter 3 of the study, in order to develop a holistic perspective of the culturally responsive teaching practices, the researcher used the preservice students’ point of view with the actual teaching behaviors revealed through the analysis of student teaching portfolio artifacts. The perspectives of the students were also captured through individual semi-structured interviews that were conducted and transcribed in order to help in contextualizing the students’ science and mathematics teaching practices throughout the teacher education program. Formal observations and final evaluations completed by cooperating teachers, clinical instructors, and university supervisors along with direct video observations also were included in the analysis. Triangulation of these data is essential for ensuring trustworthiness and an accurate understanding of student experience in this unique context.

The researcher sought to answer the main research question: To what extent do Latino/a novice elementary teacher candidates demonstrate culturally responsive teaching practices during science and mathematics instruction? The qualitative techniques were used throughout this exploratory case study as the researcher investigated the cultural responsiveness of the student teachers as they demonstrated their abilities to: a) integrate content and facilitate knowledge construction; b) illustrate social justice and prejudice reduction; and c) develop students academically during science and mathematics instruction. In this chapter the main research question will be discussed in relation to the analysis of sub-questions related to: (1) content integration, (2) facilitating knowledge construction, (3) prejudice reduction; (4) social justice; (5) academic development. The chapter will conclude with (6) implications for classroom teaching in science and math, and (7) implications for future research.

## Conclusions

The researcher analyzed each student teacher's artifacts of teaching within the portfolio, as well as the formal direct and video observations, final evaluations, and interviews with the framework categories in mind: 1) content integration, 2) facilitating knowledge construction, 3) prejudice reduction, 4) social justice, and 5) academic development. Accordingly the research will describe and discuss conclusions related to each of these five major categories.

The first major category, content integration, was defined by the researcher as the inclusion of content from many cultures, the fostering of positive teacher-student relationships, and holding high expectations for all students. Banks (1981) described content integration as, "the extent to which teachers use examples and content from a variety of cultures and groups to illustrate key concepts, principles, generalizations, and theories in their subject area or discipline". The researcher documented and observed all of the student teachers including aspects of their culture, which was shared by many of the students in their classroom in order to make the content relevant and meaningful. The student teachers were also observed applying this concept to other cultures as well which was exemplified by student teacher P005 who chose to use an alternate book for a student who did not identify with the Halloween holiday and thus would not have benefited from the engage activity she had chosen to introduce her science lesson about pumpkins. In providing the alternative book, this student teacher demonstrated her understanding that the content of the lesson could be presented in ways that are sensitive to her student's beliefs and still provide the instruction necessary for the success of the lesson. This also allowed the student teacher to make connections to the students' everyday lives when presenting or reinforcing the new material and concepts in science which is the very essence of Banks' description of content integration. All of the student teachers included content from other cultures. This category was evident in several of the student teachers' portfolio artifacts of teaching, but was most evident in the formal direct and video observations made by the clinical instructors, university supervisors, and the researcher as well as in the interviews with the project evaluator. Several of the student teachers verbally discussed the need to make connections between their students' home life and the content they were learning, and that they, the student teachers, felt better prepared than traditional student teachers in that they shared a common culture with the children.

The majority of student teachers also felt that it was necessary to build positive relationships with their students, thus allowing the students to feel safe when participating in classroom discussions without fear of reprisals or negative comments from the teacher. This aligns with what Villegas & Lucas (2002) discuss in reference to teachers having an “affirming attitude towards students” (p. 23). In essence, the student teachers see value in their CLD students and use their own similar background and culture to build the positive relationships with them. Several of the student teachers discussed their own experiences as students in the public school system and the teachers who made them feel unwelcome and incapable, this led them to want to provide a much more positive environment for their students. This finding suggests that this desire to build positive relationships with their students is based on their own negative relationships with teachers in the past, and their need to build positive relationships to help students become academically successful. This study supports what Ladson-Billings (1995), found in her study of culturally relevant teachers in that they provided learning environments that were respectful, and developed positive student-teacher interactions through that respect (p. 480).

The concept of having high expectations for all students in the classroom has been discussed in the literature in relation to student success as well. In fact, many researchers found that low expectations of students from diverse backgrounds were a normal occurrence among traditional classroom teachers (Ladson-Billings, 1995; Villegas & Lucas, 2002). The student teacher in this study did not demonstrate this traditional view; they expected all of their students to do well regardless of perceived limitations such as language or cultural background. “They rejected any conclusions that their students were intellectually or academically disadvantaged” (Garcia & Gonzalez, 1995).

Based on the data derived from this category, it can be concluded that the student teachers in this study demonstrated their ability to integrate content by: (1) the inclusion of content from other cultures to enhance learning, (2) building positive teacher-student relationships to aid students in succeeding academically, and (3) holding high expectations for all students to illustrate their belief that all their students are intellectually capable.

Facilitating knowledge construction was defined by the researcher as the teachers’ abilities to build on what the students know as they assist them in learning to be critical, independent thinkers who are open to other ways of knowing. According to Villegas & Lucas (2002), “learners use their prior knowledge and beliefs to make sense of the new ideas and experiences

they encounter in school” (p. 29). All children come to school with funds of knowledge learned at home, in their communities, and through their own explorations of the world around them. This means that they will all construct knowledge in their own way (Villegas & Lucas, 2002).

According to all of the student teachers, building on what the students bring to the classroom is an important part of learning science and math. As a result, the student teachers constantly altered their lesson plans to accommodate the diversity of learning backgrounds and styles students brought to the classroom environment. Many of the student teachers were observed altering either the lesson presentation or the activity they had chosen to reinforce the concepts of the day. The findings from this theme suggests that these preservice teachers were already putting into practice what they had learned through their own experiences and education about how to best meet the needs of their culturally and linguistically diverse (CLD) students. Another way that they demonstrated their knowledge of their students was in the use of ‘real world’ examples to help their students make connections between their lives and the content they were learning. According to Villegas & Lucas (2002), “teachers need to continuously adjust their plans of action to meet students needs while simultaneously building on their strengths (p. 25).” These types of examples were prevalent throughout the artifacts of teaching, the direct and video observations, the final evaluations, and the interviews conducted by the outside evaluator and the Synergy project manager. Examples of the use of ‘real world’ aids in the current study were often found in the activities the classroom students were assigned by the student teacher. In most instances, the examples came about after the student teachers witnessed the students struggling with a new concept or problem.

The final theme to emerge from the facilitating knowledge construction category was the ways in which the student teachers assisted students in learning to be critical, independent thinkers who are open to other ways of knowing. Only a small fraction of the student teachers addressed this theme in the portfolio artifacts of teaching and it has become apparent that there was not sufficient data to draw strong conclusions with regard to this subcategory. One reason may have been the limited evidence available through written data provided by the student teachers themselves. The majority of the data gathered and analyzed was taken from the portfolio artifacts of teaching, namely the first four entries as well as the sections of entry 5 concerning lesson plan development and lesson reflections. Each of these entries involved quite a bit of writing. The fact that the majority of the student teachers in this study limited their



documentation and lesson plan descriptions to lists or bulleted points was not only observed by the researcher during data analysis but by the university supervisor as well. She documented several times that, “Evidence observed in teaching episode is not included in lesson preparation documents” during the formal observations of the student teachers. There may be several reasons for the limited amount of documented data versus what was demonstrated during the observations. The student teachers were all primarily place-bound, non-traditional, English language learner, first generation college students with families, so time limitations may have been a contributing factor. All but one of the student teachers were paraprofessionals prior to the student teaching semester, and likely did not observe the classroom teachers write lesson plans as the student teachers were taught, if at all. Or their level of language proficiency may have been a challenge. However, because these issues are beyond the scope of the current study, the researcher focused on the data available.

Based on the data derived from this category, it can be concluded that the student teachers in this study demonstrated their ability to facilitate knowledge construction by: (1) building on what the students knew to create links between their experiences at home and in the community to what they were learning in the classroom. Since there is not sufficient data to support the student teachers’ abilities to assist students in learning to be critical, independent thinkers who are open to other ways of knowing, no conclusions regarding this subcategory can be drawn.

The researcher defined the prejudice reduction category as the teachers’ abilities to use a contextual factors approach to build a positive, safe classroom environment in which all students are free to learn regardless of their race/ethnicity, social class, or language. The use of native language support was demonstrated by all of the student teachers in the current study. Although the use of native language support was not specifically defined in the researcher’s final definition of the prejudice reduction category, it was evident throughout the data analyzed, including the portfolio artifacts of teaching, the formal and video observations, the final evaluations, and the interviews with the outside evaluator and Synergy project manager. “Teachers who share the cultural and linguistic backgrounds of their students are more likely to understand their special needs...” (Valenciana, C., Weisman, E.M., Flores, S.Y. (2005). The majority of the student teachers utilized their knowledge of their students’ language (Spanish) to facilitate the science and math lessons especially for those students who were still learning English. They all felt it

was an important part of what they brought to the classroom. This is supported by Villegas (1995); she stated, “this aspect of the knowledge base includes developing an understanding of the language development process, different ways of knowing and approaches to learning, and the values and norms of various cultural groups...” (p. 9). The student teachers also discussed their ability to interact with non-English speaking parents and to facilitate the communication between the school and home. “By attempting to communicate with parents in their native language, teachers helped the parents feel at ease” (McAllister & Jordan-Irvine, 2002). Several student teachers recounted incidents in which the parents spoke directly to them rather than to the classroom teacher or the interpreter, which in turn made it possible for the children to receive the necessary educational assistance to be successful.

Another aspect of prejudice reduction, as defined, was the student teachers’ abilities to foster positive student-student interactions along with building positive teacher-student relationships. This finding supports what Monzo & Rueda (2001) found when they studied Latina/o paraprofessionals in the classroom. During their research, they found, “that the ways teachers interact with students, their strategies for encouraging participation, and the ways they do or do not attempt to respect students’ needs, interests, concerns, and preferences have an important impact on motivation, task engagement, and, ultimately, learning” (p. 441). One student teacher insisted that her students greet each other respectfully and with a smile before beginning group work, thus helping to foster positive student-student interactions. The majority of student teachers felt that respect was very important in building relationships with and between their students. The student teachers were observed on several occasions, by the university supervisors as well as the researcher, demonstrating the use of mutual respect during science and math lessons. The researcher did not observe a classroom in which students were allowed to put each other down or make fun of one another. In fact, the students in the classrooms observed were very helpful to each other and appeared to respect the student teachers enough to work cooperatively as a whole, in groups, and as individuals.

One more aspect linked to the prejudice reduction category was the student teachers’ belief that providing a safe learning environment was an essential part of the learning process. The majority of student teachers demonstrated and described various ways in which they provided a safe learning environment. In their eyes, a safe learning environment was less about how the classroom was set up and more about the children feeling confident in participating in

the lesson without fear of reprisals from the teacher or classmates. “Teachers who respect and appreciate the different cultures in the classroom accept, validate, and acknowledge the experiences, language and traditions of linguistically or culturally diverse students. “These students develop not only a sense of belonging but also a realistic and positive self-concept” (Midobuche, 1999). One student teacher in particular discussed her ability to draw on her own experiences as a CLD student in order to relate to her students’ struggles with language and learning. In this way she was able to encourage her students to participate in the lesson thus enhancing their learning and understanding of the science and math content she presented. All of the student teachers in this study were observed providing a safe learning environment throughout the lesson being taught. They used proximity to address behavioral issues and rarely raised their voices at students who misbehaved. The majority of the student teachers were also very attentive when a student addressed them with a concern or question. They made eye contact and did not allow interruptions from others in the room until they were satisfied that the student understood and was able to continue working on the assigned task or lesson.

Based on the data analyzed from the prejudice reduction category, it can be concluded that the student teachers in this study illustrated prejudice reduction by: (1) using native language support to assist students in learning and understanding science and math content, as well as build relationships with Spanish-speaking parents, (2) fostering positive student-student interactions, and (3) creating a safe learning environment where students felt free to participate in classroom discussions and/or science and math lesson activities.

The researcher defined the social justice category as the teachers’ willingness “to act as agents of change” (Villegas & Lucas, 2002), while encouraging their students to question and/or challenge the status quo in order to aid them in “the development of sociopolitical or critical consciousness” (Ladson-Billings, 1995). As mentioned in previous chapters, it was a challenge to find written documentation with regard to the social justice category. The main reason may have been the student teachers’ focus on content and classroom management. Only a few of the students actually discussed their need to advocate for their students and families as well as a desire to help them to develop a social conscious and to be positive members of society.

Advocacy comes in many forms, and according to Villegas & Lucus (2007), “Teaching is an ethical obligation...To meet this obligation, teachers need to serve as advocates for their students, especially those who have been traditionally marginalized in schools”. The way in

which most of the student teachers demonstrated this aspect of social justice was during their interactions with the parents of the children in their classrooms during parent-teacher conferences. However, since this was a role assigned to them as student teachers, it is unclear whether or not they would have chosen to assist parents and teachers in this capacity out of their own sense of advocacy and community. Consequently, this aspect of the social justice category was difficult to support based on the evidence gathered from the portfolio artifacts of teaching, the direct and video observations, the final evaluations, and the interviews conducted by the outside evaluator and the Synergy project manager.

The development of social consciousness can be a challenging task for many teachers, especially those who are new to the classroom. “Not only must teachers encourage academic success and cultural competence, they must help students to recognize, understand, and critique current social inequalities” (Ladson-Billings, 1995, p. 476). Such actions can be daunting to a new teacher concerned about creating controversy in a community where they themselves have been marginalized. The purpose of schools can be defined using two areas of thought: 1) schools are meant to educate and challenge young minds to think critically and to become agents of change themselves, and 2) schools are meant to maintain the status quo. This region of the Midwest tends to hold the later more conservative perspective. The rapidly changing demographics of the community have not always been welcomed. As mentioned previously, these student teachers had worked in the school districts where they student taught and knew the political climate surrounding them. This could have deterred their efforts to advocate for change, especially given their tenuous position as students.

So one barrier to assuming roles as agents of change may have been the student teachers’ lack of experience while another might have been the environment in which these student teachers trained, worked, and lived. Another possible reason social justice was not demonstrated is methodological. The data specifically collected during this study might not have been the best sources of evidence of social justice practices. However, based on the data collected as part of this study, the student teachers’ abilities to illustrate or model social justice during science and math instruction were not demonstrated.

The final category, academic development, was defined by the researcher as the teachers’ abilities to “create opportunities in the classroom” (Villegas & Lucas, 2002) that aid all students in developing as learners to achieve academic success, and the use of research-based

instructional strategies that reflect the needs of a diversity of backgrounds and learning styles. According to Fradd et al. (2001), “The influence of teachers’ backgrounds and prior experiences with science is embedded in decisions about what constitutes instructional effectiveness. Teachers who share the languages and cultures of their students often have background knowledge relevant to their students’ needs and interests” (p. 15). All of the student teachers in the current study demonstrated the importance of including a variety of opportunities for learning during their science and math lessons. As a means of creating opportunities for learning science and math, all the student teachers utilized a variety of instructional strategies in every lesson including: the use of hands-on tools and manipulatives, visuals, modeling, kinesthetic activities, and grouping.

Another way many of the student teachers created opportunities was through the use of ‘real world’ examples as discussed previously. For example, one student teacher used the square tiles on the floor of the classroom to help illustrate different ways to measure area; she chose the tiles, because the examples she worked through on the board used square boxes as a measurement tool. In this way she created an opportunity for the students to see a ‘real world’ application to the problem set they were working through. Another student teacher used play money that students ‘withdrew’ from the bank in order to assist them in calculating change. Again, this student created an opportunity for students to check their work through the use of a relevant example. Student teacher 006 stated that a strength she/he exhibited was in, “understanding some of the academic challenges that students face would allow me to more efficiently use many of the resources that I have available to me”. During the interviews conducted by the outside evaluator, many of the student teachers stated that they felt most comfortable teaching science and math lessons; which they demonstrated during observations conducted by the researcher.

The most successful science lessons involved the use of multiple methods with inquiry as a basis for exploration. This finding is aligned with National Research Council’s (1996) focus on inquiry as a way for students to develop an understanding of the process and nature of science while developing the skills necessary for critical thinking. Although all of the student teachers in this study used a variety of teaching strategies to enhance learning, none of the strategies are unique to science and math instruction. The evidence to support the use of research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles

was limited. Truthfully the strategies that the student teacher included in their portfolio artifacts of teaching and demonstrated during instruction were ones that are discussed in the literature as being effective for all learners. So, although the student teachers did incorporate a variety of strategies the only ones they used that could be specifically geared towards science and math instruction were the use of concrete materials/manipulatives and relevant ‘real world’ examples. Based on the data analyzed from the academic development category, it can be concluded that the student teachers in this study demonstrated their ability to develop students academically by creating opportunities for learning in the classroom through their knowledge of students and to a lesser extent by the use of research-based instructional strategies.

## **Discussion**

In an attempt to answer the main research question, “To what extent do Latino/a novice elementary teacher candidates demonstrate culturally responsive teaching practices during science and mathematics instruction?”, it was necessary to discuss the ways in which the categories and subcategories interacted within the framework. The framework developed by the researcher was taken from an analysis of several multicultural education, culturally relevant pedagogy, and culturally responsive teaching researchers (Banks, 1981, 2004; Gay, 2002; Ladson-Billings, 1995; & Villegas & Lucas, 2002), and combined to form the categories as defined above. As the researcher analyzed the data using the framework categories, it became apparent that the data supporting the subcategories: inclusion of other cultures, building on background knowledge, ‘real world’ experiences, creating opportunities in the classroom and research-based strategies all contained similar evidential statements and examples and so related well to each other. Positive teacher-student relationships, positive student-student interactions, native language support, a safe learning environment, and high expectations also contained evidence that overlapped therefore a discussion of these five subthemes was warranted. The final three subcategories: critical, independent thinkers; socio-political consciousness; and agents of change all touched on similar aspects of the student teachers’ instructional practices and will also be discussed as a whole.

The habits of mind and practice that make the inclusion of other cultures, building on background knowledge, the use of ‘real world’ experiences, creating opportunities in the classroom and the research-based strategies subcategories similarly revolve around the teacher’s

ability to be responsive to the socio-cultural needs and academic learning styles of each student. In essence the knowledge of where their students are from and how that impacts their learning is paramount to educating them successfully (Gay, 2002). Gay (2002) also states that too often “teachers and teacher educators think that their subjects (particularly math and science) and cultural diversity are incompatible” (p. 107). As the researcher has illustrated in the current study, even novice teachers can and often do make these connections for their culturally and linguistically diverse students. The student teachers in this study also have the advantage of being from similar backgrounds, linguistically as well as culturally, as the students they taught and the majority of them infuse that knowledge throughout the science and math lessons presented during their student teaching semester.

Positive teacher-student relationships, positive student-student interactions, native language support, a safe learning environment, and high expectations subthemes center around the relationships each student teacher built with her/his students and the educational environment they created to foster learning. In Brenda Martin’s (1997) review of culturally responsive teaching literature, she concluded, “When the students feel accepted, included and valued, they will feel a sense of community” (p. 28). She went on to say, “Because the teacher’s methods are responsive to their cultural values (motivation, learning styles, and feedback)..., they will be empowered. When students are empowered, they will become motivated learners” (p. 28). Hence, the students teachers’ abilities to build positive relationships with their students, and foster positive interactions between the students by supporting their native language, and holding high expectations for all created a safe learning environment that empowered students so that they were excited about learning.

Gloria Ladson-Billings (1995) stated, “Not only must teachers encourage academic success and cultural competence, they must help students to recognize, understand, and critique current social inequalities” (p. 476). However, the evidence to support the final three subcategories related to this idea: developing critical, independent thinkers; socio-political consciousness; and acting as agents of change, was limited. One reason may have been the fact that these were all student teachers who like all new teachers, were focused on delivering the course content their students needed to be successful academically. As mentioned previously, the framework used in the analysis of data was developed using conclusions drawn from several leading researchers in the fields of multicultural education, culturally relevant pedagogy, and

culturally responsive teaching (Banks, 1981; Ladson-Billings, 1995; Gay, 2002; and Villegas & Lucas, 2002). In each one of their definitions of culturally responsive teaching, the issue of social justice is an integral component. Unfortunately, there was just not enough data to accurately judge whether or not the student teachers illustrated or modeled the need for students to develop socio-political consciousness. The student teachers themselves may not fully be aware of the importance in helping their students become socially conscious. Therefore, it may be that this aspect of culturally responsive teaching must be emphasized during their teacher preparation program. The researcher does not believe that the student teachers fail to see the importance of teaching social justice, but that they lack a thorough understanding of how to effectively instruct students in this particular area of education.

### **Implications**

As of the latest census (U.S Census Bureau, 2011), the number of Hispanic/Latino/a in the United States has reached 16% of the population. Hispanics are now the largest minority group in the country. Given these numbers, there is a need to address the concerns regarding the future economic and social health of the nation (Trent, 1990). The lack of technologically skilled labor educated in science and mathematics is also of concern. Teachers from elementary through high school have become increasingly responsible for helping meet the demands of our technological society by improving science and math instruction. What are needed now are teachers who not only understand the importance of science and math instruction, but also who understand the growing diverse student population. Teacher education programs must develop programs to recruit and prepare CLD students as teachers in addition to developing strategies to educate non-CLD teachers to more effectively meet the needs of diverse learners and to more effectively integrate themselves into the communities where they will teach.

In meeting the demand for culturally responsive teachers who are familiar with the students in their classrooms and the community in which they live, teacher educators and teacher education programs will need to consider the barriers that may hinder their matriculation. Although there is limited research on the impact of Latino/a teachers on Latino/a students (Valenciana, et. al, 2006), the current study lends some insight into their determination to educate all children. There also are implications for how the current framework could be used to re-define culturally responsive teaching in the context of teacher education programs. The



researcher drew information and knowledge from several leading researchers in the fields of multicultural education, culturally relevant teaching, and culturally responsive teaching. Although, the researchers all agreed on some aspects of what a culturally responsive teacher looks like, they did not all agree on how to implement programs centered on culturally responsive teaching; especially with regard to the social justice aspect of their definitions. Most teacher education programs offer and sometimes mandate students to enroll in multicultural education courses; however, the extent to which these courses address issues of social justice is not known. What are needed are courses that do address social justice issues along with methods new teachers can use to deal with injustices in the classroom or school building when they occur. In this way the student teachers will feel better prepared to confront issues of social justice when they occur in the classroom, the school building, or in the community.

### **Future Research**

The extent to which culturally and linguistically diverse teacher effectively demonstrate culturally responsive teaching practices needs to be explored further. A natural research project that could be developed out of the findings of this study would be to examine the framework itself to assess a classroom teacher's ability to deliver culturally responsive lessons for the academic development of their CLD students. The framework could serve as an observation protocol during planning, presentation, instruction, and assessment. The effectiveness could be measured using assessment data to determine student achievement in the classroom. The need to diversify the teaching force for the growing number of diverse students in this country is evident. So, another research project could be to use the framework to determine the effectiveness of native language support from bilingual teachers working with CLD students.

One other possible research project would be to examine the inclusion of the social justice aspect of culturally responsive teaching in the overall definition of what it means to be culturally responsive. If this is indeed an essential component of culturally responsive teaching, then the need to devise alternative ways for teachers to illustrate or demonstrate this category must be explored. One way might be to develop interview protocols that would allow teachers to discuss how they see themselves as advocates. Related research could focus on effective strategies to integrate social justice principles and practices into teacher preparation programs.

## Summary

The focus of this study was to explore the extent to which Latino/a novice elementary teacher candidates demonstrate culturally responsive teaching practices during science and mathematics instruction. The importance of educating all young people to be scientifically and mathematically literate in our ever-changing technological society is unquestioned. The shift in the demographics predicted in the early 1990s has been realized as the latest census data shows. The reality is that as our aging population retires, the ones who will take their place are increasingly diverse both culturally and linguistically. As a result, teachers must make changes in how they teach in order to be effective. One way to ensure that CLD students are challenged and educated effectively is to recruit, retain, and train culturally and linguistically diverse student teachers.

Culturally and linguistically diverse teachers are uniquely qualified to teach CLD students more effectively, because they often share the language and culture of their students. As research has shown, it can take anywhere from five to seven years for non-native speakers of English to master the language at academic levels comparable to native English speakers (Cummings, 1991). So the more support students have in the native language, the better prepared they are content-wise once their mastery of English is acquired. Also, teachers who share the culture of their students and families are more closely tied to the community and thus are able to find resources to support learning outside of the classroom. The presence of culturally and linguistically diverse teachers in the classroom also can serve as a motivator for students, especially when the teachers form positive relationships with their students. According to Gay, Dingus, and Jackson (2003), teachers of color, “are perceived as role models for the educational achievement and career aspirations of minority students; being better able to meet the learning needs of students of color because of shared cultural heritages and orientations; and, if bilingual, helping limited English speaking students overcome language barriers to academic success” (p. 9).

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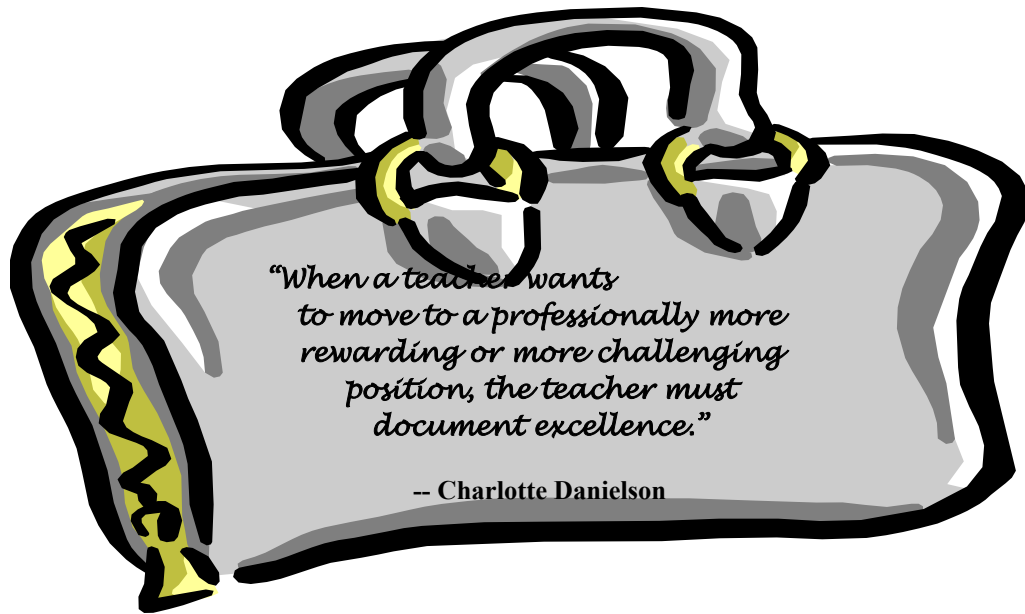
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# Student Intern Portfolio Handbook

Kansas State University

Student Intern

## Portfolio Handbook



*"When a teacher wants  
to move to a professionally more  
rewarding or more challenging  
position, the teacher must  
document excellence."*

-- Charlotte Danielson

**Fall 2007**

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## Portfolio Overview

An educational portfolio is a collection of evidence and reflections documenting one's competence and accomplishments in the teaching field. It may serve many purposes: to address growth (Developmental), to display best works (Showcase), and to showcase during a job search (Professional). The Kansas State University student intern portfolio can serve all three of these purposes, but primarily it is designed to assess your development and competence as a future teacher. You will be able to use the portfolio development process as a tool for continuous reflection and self-evaluation to plan future goals and enhance your teaching. Your cooperating teacher, clinical instructor, and faculty supervisor will use the portfolio to assess your strengths and weaknesses to guide you toward improved teaching and learning. They also will use evidence of your teaching presented in your portfolio as they complete your final student intern evaluation (see Evaluation of Student Teacher form at the end of the Portfolio Handbook). The College of Education will use your portfolio as evidence that you have attained the professional education teaching standards identified by Kansas State University and the Kansas State Department of Education (KSDE). This information will provide critical feedback regarding the strengths and weaknesses of the teacher education program. The Kansas State Department of Education requires a performance assessment of all new teachers conditionally licensed by the state before granting a professional teaching license. This assessment, the Kansas Performance Assessment, must be completed during the first two years of your teaching career to obtain a professional teaching license in the state of Kansas. The KSU student intern portfolio has been designed to prepare you for this Kansas Performance Assessment process. In addition, you are encouraged to use your intern portfolio to showcase your teaching as you begin your search for teaching positions. Using your portfolio during your interview will create opportunities to dialogue with interviewers about your beliefs, experiences, competencies, and accomplishments as an educator.

Your portfolio will include six major entries: (1) Biographical Data, (2) Contextual Factors and Student and Learning Adaptations, (3) Instructional Unit Plan, (4) Analysis of Classroom Learning Environment, (5) Formal Observations, and (6) Professional Logs. You will provide an overview of your teaching and learning accomplishments in **Entry 1** through the presentation of your resume, philosophy of teaching, and current transcripts. You will use **Entry 2** to ensure your teaching is meaningful and appropriate for your classroom context and students' characteristics (background, individual learning needs, developmental level, interests, and approaches to learning). The heart of the portfolio is **Entry 3**, the design, implementation, assessment of, and reflections on a multi-week Instructional Unit Plan. This unit is to be designed around significant concepts and skills and state and national standards in a content area. In **Entry 4** you will analyze and create a learning environment to support student interactions, self-motivation, and active engagement in learning. For **Entry 5** you will include evidence of the development, implementation, observations of, and reflections on five individual instructional lessons. These five lessons must be based on three different subjects and/or three different classroom periods. At least one of these lessons will be from the instructional unit. **Entry 6** will include professional logs to document your interactions with parents and colleagues, your contributions to your school and district, and your professional development activities.

These six entries were designed to assess the knowledge and skills identified in the four categories of the KSU Conceptual Framework (Perspectives and Preparation, Learning Environment, Instruction, and Professionalism – see below). The six entries also align with the Kansas Performance Assessment (KPA) described above. The entries will provide evidence of your ability to: analyze your classroom context and make instructional decisions based on that analysis; design and implement meaningful, coherent, and integrated instruction; design challenging, useful classroom assessments; analyze student achievement and use the results to enhance future teaching and learning; impact student learning; create a positive learning environment; collaborate with different members of your learning community, and analyze and reflect on your experiences to improve your teaching and continue to grow professionally.

## Portfolio Alignment with the KSU Conceptual Framework And the Kansas Performance Assessment

The KSU College of Education Teacher Education Program is designed around a Conceptual Framework that includes professional standards aligned with the Kansas State Department of Education (KSDE) Teaching Standards. These standards are the cornerstone of the Kansas Performance Assessment that will be required of all new teachers during the first two years of their teaching before a professional teaching license is granted by the state. The following chart indicates how each KSU student intern portfolio entry is aligned with the KSU Conceptual Framework and the KSDE Kansas Performance Assessment (KPA) Criterion.

<b>KSU Conceptual Framework Category</b>	<b>Kansas Performance Assessment Criterion</b>
<b>Category 1: Perspectives and Planning:</b>	
Resume	
Philosophy	
College Transcripts	
Contextual Factors and Student and Learning Adaptations	<b>(KPA Criterion 1)</b>
Instructional Unit Plan	
Learning Goals and Objectives	<b>(KPA Criterion 2)</b>
Instructional Design	<b>(KPA Criterion 3)</b>
Demonstration of Integration Skills	<b>(KPA Criterion 4)</b>
Analysis of Assessment Procedures	<b>(KPA Criterion 6)</b>
Instructional Plans for a Single Lesson	
<b>Category 2: Learning Environment:</b>	
Analysis of Classroom Learning Environment	<b>(KPA Criterion 5)</b>
<b>Category 3: Instruction:</b>	
Analysis of Assessment Procedures	<b>(KPA Criterion 6)</b>
Formal Observations	
<b>Category 4: Professionalism:</b>	
Self Evaluation of the Instructional Unit	<b>(KPA Criterion 7)</b>
Reflections on a Single Lesson	
Professional Logs	

# KSU Conceptual Framework for the Preparation of the Professional Educator

The Conceptual Framework for Kansas State University's professional education program serves as a guide for fulfilling our mission of *preparing educators to be knowledgeable, ethical, caring decision makers*. Furthermore, it emphasizes the need to recognize the contributions of diversity, technology, assessment, theory, and research to professional practice. While Professional Studies is described below, **a complete Conceptual Framework document may be found at [www.coe.ksu.edu](http://www.coe.ksu.edu).**

## Professional Studies - Standards and Dispositions by Category

**Introduction** *Courses and field experiences for professional studies are designed to address 13 standards and eight dispositions that are organized into four categories. The student intern portfolio has been designed to assess students' performance in relation to these standards and dispositions. All portfolio entries should address these standards and dispositions.*

### Category 1

#### *Perspectives and Preparation*

**Disposition 1:** The educator demonstrates a belief that all students can learn, has high expectations for all students, and persists in helping all students achieve success.

**Disposition 2:** The educator demonstrates a belief in the inherent dignity of all people, respects the customs and beliefs of diverse groups, and provides equitable opportunities for all students to learn.

#### Foundations of Education

**Standard 1:** The educator is a reflective practitioner who uses an understanding of the historical, philosophical, and social foundations of education to guide his or her educational practices. (KSDE #13; INTASC #9)

**Standard 2:** The educator understands the role of technology in society and demonstrates skills using instructional tools and technology to gather, analyze, and present information, enhance instructional practices, facilitate professional productivity and communication, and help all students use instructional technology effectively. (KSDE #12)

#### Students and Learning

**Standard 3:** The educator demonstrates an understanding of how individuals learn and develop intellectually, socially, and personally and provides learning opportunities that support this development. (KSDE #2; INTASC #2)

**Standard 4:** The educator demonstrates the ability to provide different approaches to learning and creates instructional opportunities that are equitable, that is based on developmental levels, and is adapted to diverse learners, including those with exceptionalities. (KSDE #3; INTASC #3)

#### Content and Pedagogy

**Standard 5:** The educator demonstrates the ability to use the central concepts, tools of inquiry, and structures of each discipline he or she teaches and creates opportunities that make these aspects of subject matter meaningful for students. (KSDE #1; INTASC #1)

**Standard 6:** The educator demonstrates the ability to integrate across and within content fields to enrich the curriculum, develop reading and thinking skills, and facilitate all students' abilities to understand relationships between subject areas. (KSDE #11)

#### Planning

**Standard 7:** The educator plans effective integrated and coherent instruction based upon the knowledge of all students, home, community, subject matter, curriculum standards, and current methods of teaching reading. (KSDE #7; INTASC #7)

**Standard 8:** The educator understands and uses formal and informal assessment strategies to evaluate

and ensure the continual intellectual, social, and personal development of all learners. (KSDE #8; INTASC #8)

### ***Category 2***

#### ***Learning Environment***

**Disposition 3:** The educator takes responsibility to establish an environment of respect and rapport and a culture for learning to enhance social interactions, student motivation and responsibility, and active engagement in learning.

**Standard 9:** The educator uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation. (KSDE #5; INTASC #5)

### ***Category 3***

#### ***Instruction***

**Disposition 4:** The educator is flexible and responsive in seeking out and using a variety of strategies to meet the cognitive, physical, emotional, and social needs of all students.

**Standard 10:** The educator understands and uses a variety of appropriate instructional strategies to encourage and develop various kinds of students' learning including critical thinking, problem solving, and reading. (KSDE #4, INTASC #4)

**Standard 11:** The educator uses a variety of effective verbal and non-verbal communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom. (KSDE #6; INTASC #6)

### ***Category 4***

#### ***Professionalism***

**Disposition 5:** The educator seeks to keep abreast of new ideas and understandings in teaching and learning.

**Disposition 6:** The educator demonstrates collaboration and cooperation with students, families, community, and educational personnel to support student learning and contribute to school and district improvement efforts.

**Disposition 7:** The educator reflects on his/her professional strengths and weaknesses and develops goals and plans to improve professional practice.

**Disposition 8:** The educator accepts responsibility as a professional to maintain ethical standards.

**Standard 12:** The educator is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others (students, parents, and other professionals in the learning community), actively seeks opportunities to grow professionally, and participates in the school improvement process, Kansas QPA. (KSDE #9; INTASC #9)

**Standard 13:** The educator fosters collegial relationships with school personnel, parents, and agencies in the larger community to support students' learning and well-being. (KSDE #10; INTASC #10)



## Portfolio Documentation and Commentary

### What is evidence?

Evidence, as the term is used in teacher assessment, is the factual recording of events. It may include observed, written, or pictorial documentation of teacher and student *actions and behaviors*. It may include lesson plans, reflections, student work samples, observations, written communication, pictures, video tapes and other artifacts prepared by the teacher, students or others. Evidence is selected based on the professional judgment of the observer and/or the teacher. Evidence is a “captured moment“ of what is seen and heard.

### What is an artifact?

An artifact is any piece of evidence used for demonstration purposes. Most items will come from the everyday plans, materials, and student work completed in the classroom. Additional items will come from others (e.g., observation notes, evaluations, notes to/from parents.)

*Caution:* Video tapes, student work samples, and classroom photos may be used for your reflection and self assessment at any time, but may only be shared **publicly** if the student is **not identified** or if **permission has been granted** by the parent/guardian (for students under 18) or by the student (over 18). Therefore, **remove all names** from student work samples and refer to students by **first names only** in any reflection statements. **Never** include any confidential information regarding students or their families in your portfolio. Photos and videotapes of students may be shared publicly in your portfolio only if permission has been granted. Ask your cooperating teacher or Clinical Instructor if the school has permission to publicly use pictures and/or videotapes of students. Guidelines for confidentiality are clearly defined in the Family Educational Rights and Privacy Act (FERPA) of 1974. Confidentiality must be maintained in both written and oral presentation of samples.

### What is analysis and reflection?

Analysis and reflection are critical elements of a portfolio and should be included in each entry. **Analysis** involves interpretation and examination of **why** the evidence or artifacts described are the way they are. **Reflection** is a particular analysis---it suggests **self-analysis** or **retrospective consideration** of one’s teaching practice and its outcomes. Reflection requires educators to think about what they are doing, why they are doing it, what the outcomes are, and how the information can be used for continuous improvement.

Consider this:

Is the focus of your writing on the “**why**” (which is analytical and reflection and not the “**what**,” which is descriptive)?

Does your response provide an explanation and interpretation of **what** happened, **why** it happened that way, and your understanding of what should come **next** or **how** you would change the lesson if you could do it again?

**Your documentation and reflective summaries must paint a picture of your teaching. Each entry should be guided by the standards and dispositions to be met, the questions and prompts listed in the entry explanation and on each entry form, and by the assessment criteria provided with each entry rubric. Reflections should explain, interpret and support the evidence you present. A successful portfolio will have strong documentation and a convincing commentary.**

## Helpful Hints for Developing Your Portfolio

The contents of your portfolio are most significant. These hints are to assist you in developing a “polished” product:

Know what is expected. Read each entry carefully! Study the standards and dispositions to be met, the entry explanation, the questions and prompts provided, and the assessment criteria as described in each entry rubric. Ask questions of your cooperating teacher, clinical instructor or faculty supervisor for clarification.

Make copies of student work as you teach your Instructional Unit Plan. Remove student names from all student work.

Start gathering artifacts as evidence to support the standards and dispositions related to each entry early in the semester. You may decide not to use every artifact you collect, but it will be difficult or impossible to collect or recreate these artifacts at a later time.

Clearly label and briefly describe each artifact as it is collected. You should note what professional teaching standard and/or disposition the artifact relates to and what the artifact demonstrates about your teaching and learning.

Each portfolio entry should include strong evidence and a convincing reflective commentary. Write clearly and to the point. Your interpretations and reflections should support the evidence.

When writing a reflection, be sensitive to ethnicity, gender and children with special needs.

Be honest. Accent your strengths and acknowledge areas for improvement.

Review the questions and prompts listed with each entry explanation and on each entry form. Ask yourself, “Have I answered each question and responded to each prompt”?

Review the rubric levels of performance after you have developed your evidence. Ask yourself, “Have I demonstrated the essential criteria?”

Ask a colleague to review the clarity and content of each entry as it is written.

Word-process everything. That makes changes easier.

Number and date each page. Label your evidence.

## Portfolio Timeline

<u>Entry #</u>	<u>Begin Date</u>	<u>End Date</u>	<u>Entry</u>
1	_____	_____	<p><b>Biographical Data</b> Start developing immediately</p>
2	_____	_____	<p><b>Contextual Factors and Student Learning Adaptations</b> Start describing contextual factors early in the semester and add or modify learning adaptations throughout the semester.</p>
3	_____	_____	<p><b>Instructional Unit Plan</b> You and your cooperating teacher will determine the time frame for designing and implementing your unit plan. It is recommended that you teach shorter instructional sequences before beginning the instructional unit. <b>You must begin Part 4 of this entry, Analysis of Assessment Procedures, before you begin any instruction of the unit.</b></p>
4	_____	_____	<p><b>Analysis of Classroom Learning Environment</b> Begin making observations and planning your learning environment early in the semester. It may not be possible to fully answer each question until you have had greater experience with full time student teaching.</p>
5	_____	_____	<p><b>Formal Observations</b> Formal Observations using the forms provided in Entry #5 should be staggered across the semester. One observation should be included from the teaching of your instructional unit.</p>
6	_____	_____	<p><b>Professional Logs</b> Begin recording Family Interactions, School and District Contribution and Professional Development activities at the beginning of the semester and continue until the semester is completed.</p>

## Entry 1

### Biographical Data

#### Conceptual Framework:

**Standard 1: The educator is a reflective practitioner who uses an understanding of the historical, philosophical, and social foundations of education to guide his or her educational practices.**

**Disposition 1: The educator demonstrates a belief that all students can learn, has high expectations for all students, and persists in helping all students achieve success.**

**Disposition 2: The educator demonstrates a belief in the inherent dignity of all people, respects the customs and beliefs of diverse groups, and provides equitable opportunities for all students to learn.**

#### Entry Explanation:

Your portfolio should begin with biographical information designed to introduce you as a *knowledgeable, ethical, caring decision maker*. Your biographical data should provide evidence of your understanding of educational foundations and essential dispositions through your resume, your philosophy of education, and the most recent copy of your transcripts.

#### Resume:

The first document in your portfolio should be your professional resume. Your resume should be a concise and logically organized narrative that will demonstrate you are a highly qualified educator. Your resume provides a summary of your educational experiences and background. It allows you to showcase your achievements for your evaluators and potential employers. In addition, it gives you an opportunity to present why you would be the perfect person for a given position. Principals and superintendents receive many resumes and will spend an average of 25 seconds scanning each one to determine if a person deserves further consideration. Your resume should stand out and say to a potential employer that you are a person worth pursuing—and that you deserve an interview. When describing your student teaching, you should include pertinent details about the experience beyond the routine responsibilities. Include any work you might have done beyond teaching, lesson planning, and assisting the teacher. Did you assist in tutoring, have contact with parents, work with students on special projects or activities, assist the teacher with computer records, or help coordinate field trips? Perhaps you helped with a career day, the school newspaper, or were actively involved with one of the sports teams. Include these items along with the more typical student teaching activities to let the reader know you are knowledgeable, capable, flexible and willing to take on a variety of tasks in the school.

Remember to **edit and proofread carefully and repeatedly!** Nothing says more to an evaluator and potential employer than typographical errors and poor grammar. Your resume is an example of your writing ability, and if it has errors, you are sending a bad message to evaluators and employers.

Career and Employment Services (100 Holtz Hall) can assist you in writing your resume. By accessing their website, you will find resume writing tips, suggestions for resume headers, a list of action verbs to incorporate, as well as sample resume types.

[http://www.k-state.edu/hr/emp\\_resumewrite.html](http://www.k-state.edu/hr/emp_resumewrite.html)

<http://www.sal.ksu.edu/offices/careerservices/rsamples.htm>.

#### College Transcripts:

Please include the most recent copy of your transcripts. **An unofficial copy of your transcripts is acceptable.** You will need to update these transcripts after you graduate so you can use your portfolio for a job search.

## Philosophy of Teaching

Your philosophy of teaching is a synthesis of your educational perspectives and preparation. It combines your knowledge, beliefs, and values about teaching and learning in your content area into a personal rationale and vision for your teaching. Your philosophy of teaching is based on your understanding of the historical, philosophical, and social foundations of education and how this knowledge guides your educational practices. You have been asked to write your philosophy of teaching as part of earlier coursework, but most likely your philosophy of teaching will be a work in progress. It will change as you are exposed to additional knowledge and experience new challenges in teaching and learning.

Your philosophy of teaching statement should include your perspectives on learning and teaching, your vision for yourself as an educator, the most important principles that guide your decisions and actions, and your plans for continuous growth and improvement. In particular, what ideas or principles about *perspectives and preparation*, *learning environment*, *effective instruction*, or *professionalism* are most important to you? Please consider the following Guiding Questions as you develop your philosophy of teaching statement.

Perspectives and Preparation	Classroom Learning Environment	Effective Instruction	Professionalism
<ul style="list-style-type: none"> <li>• What are the most important foundations of education to consider prior to teaching?</li> <li>• What is your vision for yourself as an educator?</li> <li>• What does it mean to learn?</li> <li>• How do these ideas influence your decisions and actions as a teacher?</li> </ul>	<ul style="list-style-type: none"> <li>• What kind of learning environment best supports the learning of ALL students?</li> <li>• How do you create and maintain a positive learning environment?</li> <li>• What are the roles of the teacher and the learners in promoting this positive environment?</li> </ul>	<ul style="list-style-type: none"> <li>• What principles of effective instruction are most important to you?</li> <li>• What are your values, beliefs, and vision for effectively teaching ALL students.</li> <li>• How can you best promote ALL students' learning of essential knowledge and skills?</li> </ul>	<ul style="list-style-type: none"> <li>• How will you continue to grow and develop as an educator?</li> <li>• What is the role of reflection in professional development?</li> <li>• What is your role in promoting collaboration and the wellbeing of your students, their parents, the school and community?</li> </ul>

### Checklist for Entry 1 (Biographical Data)

No

Yes

In This Entry:	No	Yes
A resume is included	0	1
A transcript is included	0	1
The philosophy of education provides evidence that the teacher believes that all students can learn and has high expectations for all students	0	1
The philosophy of education provides evidence that the teacher believes in the inherent dignity of all people and respects the customs and beliefs of diverse groups	0	1
<b>Total Checklist Score:</b>		<u>        </u> /4

### Rubric for Entry 1 (Philosophy of Education)

<b>Rating →</b>  <b>Indicator ↓</b>	<b>0</b> <b>Performance Not Demonstrated</b>	<b>1</b> <b>Performance Partially Demonstrated</b>	<b>2</b> <b>Performance is Demonstrated</b>
<b>Perspectives and Preparation</b> Knowledge and understanding of the historical, social, and political influences on learning and teaching, the role of the family, cultural and linguistic diversity, and knowledge of students.	The philosophy does not exemplify any knowledge base or understanding of the historical, social, or political influences on learning and teaching, role of the family, cultural and linguistic diversity, and knowledge of students.	The philosophy exemplifies some knowledge base and understanding of the historical, social, or political influences on learning and teaching, role of the family, cultural and linguistic diversity, and knowledge of students, but is unclear, lacks cohesion, and is not developed fully.	The philosophy exemplifies an understanding of the historical, social, and political influences on learning and teaching, role of the family, cultural and linguistic diversity, and knowledge of students.
<b>Classroom Learning Environment</b> The learning environment and the role of the learner and teacher.	The learning environment or the role of the learner and teacher are not stated clearly or are not addressed.	The learning environment and the role of the learner or the role of the teacher are mentioned, but not developed or articulately fully.	The learning environment is a well-articulated part of the philosophy. The role of the learner and the teacher are integrated and articulated clearly in such a way that author's vision is identified.
<b>Instruction</b> The values, beliefs, and vision for effectively teaching ALL students.	The philosophy does not address the teacher's values, beliefs, or vision for effectively teaching ALL students.	The philosophy partially addresses the teacher's values, beliefs, and vision for effectively teaching ALL students.	The philosophy fully addresses the teacher's values, beliefs, and vision for effectively teaching ALL students.
<b>Professionalism</b> Growth as an educator, advocacy for students and families, collaboration with school personnel, parents, and the larger community, ethical behaviors, reflection on practice, and a caring and inclusive regard for humanity.	The philosophy does not reflect continuous growth as an educator, advocacy for students and families, collaboration with school personnel, parents, and the larger community, ethical behaviors, reflection on practice, or a caring and inclusive regard for humanity.	The philosophy partially reflects continuous growth as an educator, advocacy for students and families, collaboration with school personnel, parents, and the larger community, ethical behaviors, reflection on practice, or a caring and inclusive regard for humanity.	The philosophy fully reflects continuous growth as an educator, advocacy for students and families, collaboration with school personnel, parents, and the larger community, ethical behaviors, reflection on practice, and a caring and inclusive regard for humanity.

**Total Rubric Score:** \_\_\_\_\_/8

**Total Score for Entry 1:** \_\_\_\_\_/12

## Entry 2

### Contextual Factors and Student Learning Adaptations

#### Conceptual Framework:

**Standard 3: The educator demonstrates an understanding of how individuals learn and develop intellectually, socially, and personally and provides learning opportunities that support this development.**

**Standard 4: The educator demonstrates the ability to provide different approaches to learning and creates instructional opportunities that are equitable, that are based on developmental levels, and are adapted to diverse learners, including those with exceptionalities.**

**(Aligned with KPA Criterion 1 and Danielson’s FFT Domain 1, Planning and Preparation)**

**Disposition 2: The educator demonstrates a belief in the inherent dignity of all people, respects the customs and beliefs of diverse groups, and provides equitable opportunities for all students to learn.**

**Disposition 4: The educator is flexible and responsive in seeking out and using a variety of strategies to meet the cognitive, physical, emotional, and social needs of all students.**

#### Entry Explanation:

In this entry you will use your understanding of students to identify important contextual factors that impact learning in your classroom. You will use your knowledge of learning to determine how this contextual information should impact your teaching. Use the questions and prompts listed on the attached Contextual Factors and Student Learning Adaptations forms to identify the school and student factors that influence the teaching and learning process in your classroom and the adaptations you will make to enhance the learning of **ALL** of your students. Adaptations might include strategies you use to provide equitable opportunities for all students as well as accommodations and modifications designed to support students with special educational needs (See Glossary of Terms for definitions).

Students’ backgrounds include the school’s socio-economic makeup, the classroom’s gender, ethnic/cultural make-up, and students’ language proficiency needs, academic performance levels, and special educational needs. Student characteristics include the cognitive, physical, emotional, and social development of students, their prior knowledge, and interests. Environmental factors include district, school, classroom, family, and community factors that impact student learning (See Glossary of Terms for examples). These contextual factors may be identified through classroom observations, interactions or communication with students/parents/teachers/school personnel, students’ classroom scores and samples of student work, information found in your students’ cumulative folders, classroom/district/state test scores, individual educational plans, and any other records such as a health history.

Examine the information you have gathered on your students. What does this information tell you about your students, their environment, and their unique learning needs? Think about the needs of your students as a group as well as individually. Consider the following questions as you complete the attached Contextual Factors and Student Learning Adaptations forms. Based on your knowledge of cognitive, physical, emotional, and social development, what specific teaching strategies will you use to address the student characteristics and environmental factors you have identified? What specific strategies will you use to provide equitable learning opportunities for all students regardless of their gender, race/ethnicity, socio-economic status, or language proficiency? What accommodations or modifications will you make to enhance the learning of special needs students and those performing above or below grade level? Begin these forms as soon as possible so you may use the information recorded as you plan and teach all lessons **and** your instructional unit. You may add to the form as you gain additional experiences and insight throughout the semester.

**Checklist for Entry 2 (Contextual Factors and Student Learning Adaptations)**

No Yes

<b>The Teacher Describes:</b>		
Students' socio-economic, gender, and ethnic/cultural make-up	0	1
Students' language proficiency needs	0	1
Students' academic performance levels	0	1
Students with special needs/at risk students	0	1
Students' characteristics: developmental levels, prior knowledge, and interests (all 3 must be described)	0	1
Environmental factors: district, school, classroom, family, and community (all 5 must be described)	0	1
<b>Total Checklist Score</b>		<b>/6</b>

**Rubric for Entry 2 (Contextual Factors and Student Learning Adaptations)**

<b>Rating → Indicator ↓</b>	<b>0 Performance Not Demonstrated</b>	<b>1 Performance Partially Demonstrated</b>	<b>2 Performance is Demonstrated</b>	<b>Score</b>
<b>Knowledge and use of Appropriate Adaptations</b>	Teacher does not describe any strategies for providing equitable opportunities, accommodations, or modifications in relation to classroom contextual factors.	Teacher describes some strategies for providing equitable opportunities, accommodations, or modifications; but, they do not address all students identified under the contextual factors or adaptations are too general and not related to specific student needs or classroom activities.	Teacher describes at least one specific strategy for providing equitable opportunities, accommodations, or modifications for any student identified under each contextual factor.	
<b>Knowledge of student characteristics (developmental levels, prior knowledge, and interests) and <u>implications for planning and instruction.</u></b>	Teacher does not demonstrate knowledge of student characteristics and does not consider the implications for planning or instruction.	Teacher demonstrates knowledge of student characteristics, but does not consider the implications for planning to meet the needs of students.	Teacher demonstrates knowledge of student characteristics and offers reasonable implications that impact plans to meet students' needs.	
<b>Knowledge of environmental factors (district, school, classroom, community, and family) and <u>implications for planning and instruction.</u></b>	Teacher does not demonstrate knowledge of environmental factors or consider the implications for planning instruction.	Teacher demonstrates knowledge of environmental factors, but does not consider implications for planning to meet the needs of students.	Teacher demonstrates knowledge of environmental factors and offers reasonable implications that impact plans to meet students' needs.	
<b>Flexibility and Responsiveness</b>	Teacher does not demonstrate flexibility or responsiveness in seeking out and using a variety of strategies to meet the cognitive, physical, emotional, or social needs of students in his or her classroom.	Teacher demonstrates some flexibility and responsiveness in seeking out and using a few strategies to meet the cognitive, physical, emotional, or social needs of some students in his or her classroom	Teacher demonstrates flexibility and responsiveness in seeking out and using a variety of strategies to meet the cognitive, physical, emotional, and social needs of all students in his or her classroom	

**Total Rubric Score: \_\_\_\_\_/8**  
**Total Score for Entry 2: \_\_\_\_\_/14**



## Entry 2

### Contextual Factors and Student Learning Adaptations

Total Number of Students in the School: \_\_\_\_\_  
 School Socio-Economic Make-Up (i.e., % free and reduced lunches): \_\_\_\_\_

	Class 1	Class 2	Class 3	Class 4	Class 5
<b>Grade Level/Subject Taught</b>					
<b>Number of Students in Classroom</b>					

<b>Contextual Factors:</b> <i>(List the number of students identified in each class you teach and identify the class in which you are teaching your unit)</i>	Class 1	Class 2	Class 3	Class 4	Class 5	<b>Student Learning Adaptations:</b> <i>(Describe at least one example of a strategy to provide equitable opportunities, accommodations, or modifications you attempted for any student identified within each contextual factor)</i>
<b>Gender</b> Number of Females: Number of Males:						
<b>Ethnic/Cultural Make-Up</b> Caucasian/White: African American/ Black: Hispanic/Latino: Asian/Pacific Islander: American Indian/Alaskan Native:						
<b>Language Proficiency</b> Number of English Language Learners (ELL):						
<b>Academic Performance</b> Number of Students Performing Below Grade Level: Number of Student Performing Above Grade Level:						
<b>Students with Special Needs</b> Learning Disabled: Emotionally or Behaviorally Impaired: Attention Deficit Disorder (ADD): Developmentally Disabled/ Mental Retardation: Speech and Language Disorder: Autism/ PDD/Asperger Syndrome: Gifted and Talented: Blind or Visually Impaired (VI): Deaf or Hearing Impaired (HI): Physically Disabled: Other Health Impaired:						

## Contextual Factors and Student Learning Adaptations

(Continued)

### **Student Characteristics:**

Describe developmental characteristics of students in your classroom (Cognitive, Physical, Emotional, Social).

Highlight the prior knowledge and interests of students in your classroom.

### **Environmental Factors:**

Describe district, school, and classroom environmental factors impacting the quality of education for all of your students.

Describe community and family environmental factors impacting the quality of education for all of your students.

### **Instructional Strategies Appropriate for Student Characteristics and Environmental Factors:**

Based on the student characteristics and environmental factors you noted above, describe the instructional strategies you use to meet the unique learning needs of your students.

## **Entry 3**

### **Instructional Unit Plan**

#### **Entry Explanation:**

The heart of the portfolio is the design, implementation, assessment of, and reflection on a **multi-week** instructional unit plan. This third entry is divided into five parts: (1) Learning Goals and Objectives, (2) Instructional Design, (3) Demonstration of Integration Skills, (4) Analysis of Assessment Procedures, and (5) Self-Evaluation of Instructional Unit. It is expected that contextual factors and student learning modifications and adaptations identified in Entry 2 and the learning environment described in Entry 4 will influence the planning of the instructional unit. The unit will be planned and implemented as Entry 3 and at least one lesson from the instructional unit will be observed as part of Entry 5. In addition, it is expected that the planning and implementation of the instructional unit will result in family interactions, school and community contributions, and professional development activities to be noted on the professional logs from Entry 6. Consequently, the instructional unit provides a unifying theme for the entire portfolio.

You should begin to discuss the unit with your cooperating teacher early in the semester. You and your cooperating teacher will mutually determine the topic and time frame for the unit. **You must begin Part 4, Analysis of Assessment Procedures, before you begin any instruction of the unit.** Be sure to select a topic that relates to significant concepts in the content area, that will be meaningful and worthwhile for your students, that can be used to promote enhanced student learning, that accurately demonstrates your teaching competencies, and that is worthy of the time and attention you will devote to it through the development of your portfolio. It is suggested that you spend some time in the classroom becoming familiar with the school, the students, the curriculum, and teaching before you begin your instructional unit.

Use the forms attached to each entry to guide your planning and preparation. You may type your plan directly on the attached forms or you may create your own format or use one suggested by your cooperating teacher, clinical instructor, or university supervisor. Be sure to include all of the information requested on the attached forms if you use a different format.

## **Entry 3, Part 1**

### **Learning Goals and Objectives**

#### **Conceptual Framework:**

**Standard 7: The educator plans effective, integrated, and coherent instruction based upon the knowledge of all students, home, community, subject matter, curriculum standards, and current methods of teaching reading.**

**(Aligned with KPA Criterion 2 and Danielson’s FFT Domain 1, Planning and Preparation)**

**Disposition 1: The educator demonstrates a belief that all students can learn, has high expectations for all students, and persists in helping all students achieve success.**

#### **Entry Explanation:**

For Part 1 of Entry 3, list and describe all of your unit learning goals and objectives. Use high-level objectives, such as those in Bloom’s Taxonomy of Educational Objectives, when possible. In addition, identify which of the State Content Standards these objectives are aligned with, and which of your school’s QPA/NCA Improvement Goals this unit targets.

#### **Keep the following questions in mind when planning:**

What standards are most relevant for your instructional unit? Can you identify the central concepts and skills (the big, important ideas) related to these standards? Based on these central concepts and skills, what are the significant objectives for student learning? That is, what is most important for students to learn and be able to do? Are the objectives appropriate for students’ developmental level and your school and classroom context (Entry 2)? Do the objectives provide evidence that you believe all students can learn and hold high expectations for all students? Do the objectives focus on critical thinking and problem solving? Are they clearly stated, measurable, and described in terms of student performance rather than activities? Remember, “Less is More”. **When planning a unit you will be more successful helping students understand a few central concepts and skills represented by fewer significant goals and objectives rather than superficially covering a broad range of less significant topics and too many goals and objectives.**

**Checklist for Entry 3, Part 1 (Learning Goals and Objectives):**

<b>Learning Goals and Objectives Are:</b>	<b>No</b>	<b>Yes</b>
Clearly stated and measurable	<b>0</b>	<b>1</b>
Focused on what the students will learn and be able to do (not activities)	<b>0</b>	<b>1</b>
Appropriate for developmental level and classroom context (see Entry 2)	<b>0</b>	<b>1</b>
<b>Total Checklist Score:</b>		<b>____/3</b>

**Rubric for Entry 3, Part 1 (Learning Goals and Objectives)**

<b>Rating → Indicator ↓</b>	<b>0 Performance Not Demonstrated</b>	<b>1 Performance Partially Demonstrated</b>	<b>2 Performance is Demonstrated</b>	<b>Score</b>
<b>Alignment of Learning Goals and Objectives</b>	Learning goals and objectives are not aligned with state content standards or QPA goals.	Learning goals and objectives are aligned with state content standards and QPA goals but are not fully integrated into instruction or assessments.	Learning goals and objectives are aligned with state content standards and QPA goals and are integrated into instruction and assessments.	
<b>High Expectations</b>	Learning goals and objectives do not reflect high expectations and include only low-level objectives (simple facts, recall, recognition, identification).	Learning goals and objectives reflect some high expectations but include mostly low-level objectives.	Learning goals and objectives reflect high expectations and include a balance of low and high level objectives <b>or</b> mostly high-level objectives (comprehension, analysis, etc).	
<b>Significance of Learning Goals and Objectives</b>	Learning goals and objectives do not represent central concepts and/or skills in the subject area of importance to students.	Some of the learning goals and objectives represent central concepts and/or skills in the subject area of importance to students.	Most of the learning goals and objectives represent important concepts and/or skills in the subject area of importance to students.	

**Total Rubric Score: \_\_\_\_/6**

**Total Score for Entry 3, Part 1: \_\_\_\_/9**

## Entry 3, Part 1 Instructional Unit Plan

### Learning Goals and Objectives

State Content Standards and School Improvement Goals

Identify:

State Standards, benchmarks and indicators related to this unit

School QPA/NCA Targeted Improvement Goal related to this unit

#### ***Learning Goals and Objectives***

***What will students know and be able to do at the end of this unit?***

***Example:***

***Goal:***

*Students will understand the physical world*

***Objectives:***

1. Given a map, the students will be able to use latitude and longitude to find physical features.
2. Given a map with six distinct geographic features, the student will evaluate the best location for building a new city and justify their reasoning.

*Etc.*

***Goal:***

***Objectives:***

## Entry 3, Part 2

### Instructional Design

#### Conceptual Framework:

**Standard 2:** The educator understands the role of technology in society and demonstrates skills using instructional tools and technology to gather, analyze, and present information, enhance instructional practices, facilitate professional productivity and communication, and help all students use instructional technology effectively.

**Standard 5:** The educator demonstrates the ability to use the central concepts, tools of inquiry, and structures of each discipline he or she teaches and creates opportunities that make these aspects of subject matter meaningful for students.

**Standard 7:** The educator plans effective integrated, and coherent instruction based upon the knowledge of all students, home, community, subject matter, curriculum standards, and methods of teaching reading. (Aligned with KPA Criterion 3 and Danielson's FFT Domain 1, Planning and Preparation)

**Disposition 2:** The educator demonstrates a belief in the inherent dignity of all people, respects the customs and beliefs of diverse groups, and provides equitable opportunities for all students to learn.

**Disposition 4:** The educator is flexible and responsive in seeking out and using a variety of strategies to meet the cognitive, physical, emotional, and social needs of all students.

#### Entry Explanation:

Based on your knowledge of students, the subject matter to be taught, home, school, and community resources, and instructional technology, design and teach a **multi-week** instructional unit. You may type directly on the following planning forms or create your own format to display your unit design. Consider the questions and prompts below as you plan your instructional design.

- 1. Learning Strategies:** Include multiple learning strategies to address the diverse cognitive, physical, emotional, and social needs of all students. Progressively sequence these strategies.
- 2. Meeting the Needs of All Students:** Use contextual factors and pre-assessment/diagnostic information to plan to meet the needs of all your students. Identify strategies to provide equitable learning opportunities and/or adaptations to address the **specific identified needs** of individuals, small groups, and your entire class.
- 3. Active Inquiry, Learner Centeredness, and Meaningful Student Engagement:** Be sure the concepts and skills you are teaching are presented in relevant and meaningful ways to your students. Identify key activities and discussion questions to actively engage students in learning. Be sure to include opportunities to actively engage students in questioning concepts, developing learning strategies, seeking resources, and conducting independent investigations.
- 4. Technology Integration:** Use technology to research, plan, and teach your unit. Integrate instructional technology into your lessons to enhance students' use of technology.
- 5. Use of Community Resources Outside the School Environment:** There are multiple family and community resources available to strengthen connections, provide additional support, and make learning relevant for students. How can you use your knowledge of these resources to enhance your teaching? How can you involve parents, community members, and community agencies in the teaching and learning process? Be sure these additional resources directly relate to your unit goals and learning objectives.

### Checklist for Entry 3, Part 2 (Instructional Design)

<b>Instructional Design:</b>	<b>No</b>	<b>Yes</b>
Is aligned with unit goals and objectives as stated in Entry 3, Part 1	0	1
Is progressively sequenced	0	1
<b>Total Checklist Score:</b>		<u>          </u> /2

### Rubric for Entry 3, Part 2 (Instructional Design)

Rating → Indicator ↓	0 Performance Not Demonstrated	1 Performance Partially Demonstrated	2 Performance is Demonstrated	Score
<b>Multiple Learning Strategies</b>	Only one instructional strategy is used throughout the unit.	A few instructional strategies are incorporated throughout the unit, but they are not designed to meet the diverse cognitive, physical, emotional, and social needs of all students.	Multiple instructional strategies of learning are incorporated throughout the unit to meet the diverse cognitive, physical, emotional, and social needs of all students.	
<b>Adaptations and Equitable Learning opportunities to Meet the Needs of All Students</b>	The teacher does not address implications of contextual, pre-assessment/diagnostic information in planning instruction and assessment; no adaptations are considered (beyond referring a student to a specialist).	Adaptations and equitable learning opportunities are too general and do not address the <b>specific</b> contextual factors, pre-assessment/diagnostic information identified.	Adaptations and equitable learning opportunities are designed to address the <b>specific</b> contextual factors, pre-assessment/diagnostic information identified.	
<b>Active Inquiry, Learner Centered, and Meaningful Student Engagement</b>	The unit design includes no opportunities for active inquiry. The instruction is teacher centered and not meaningful.	The unit design includes opportunities for engaging students only in passive forms of inquiry that are not meaningful and/or are teacher controlled (e.g. specific set exercises, a prescribed product).	The unit design includes opportunities that meaningfully engage students in active inquiry (questioning concepts, developing learning strategies, seeking resources, and conducting independent investigations).	
<b>Technology Integration</b>	The unit design does not include technology.	Technology is used only by the teacher and/or is used without regard to learning outcomes (i.e., an add-on just to fulfill the requirement).	The teacher integrates technology into planning and instruction. The students use technology to enhance their learning.	
<b>Community Resources</b>	The teacher does not attempt to use <i>community resources</i> to foster learning.	The teacher uses <i>community resources</i> to foster learning, but they are not related to the objectives of the unit.	The teacher uses <i>community resources</i> to foster learning and it is directly connected to the unit's objectives.	

**Total Rubric Score:**           /10  
**Total Score for Entry 3, Part 2:**           /12



**Entry 3, Part 2**  
**Instructional Unit Plan**  
**Instructional Design**

***1. Learning Strategies:***

Using your goals and objectives from Entry 3, Part 1 create a table (example below) of the daily sequence of instructional strategies used to teach to these goals and objectives (this should include approximately two weeks of daily instruction).

Day/Date	Objective(s)	Instructional Strategies

Explain how you included multiple learning strategies to address diverse cognitive, physical, emotional, and social needs of all your students.

**Entry 3, Part 2**  
**Instructional Unit Plan**  
**Instructional Design**

**2. Adaptations to Meet the Needs of All Students:**

Explain how your instructional strategies were designed to address the contextual factors and pre-assessment/diagnostic assessment information gathered on your students. What strategies did you use to provide equitable opportunities for all students? What adaptations did you make to address varied reading levels and/or students with special needs?

**3. Active Inquiry, Student Centered, and Meaningful Student Engagement:**

Justify in what ways this unit is student centered. Describe how students were meaningfully engaged in active inquiry (i.e. questioning concepts, developing learning strategies, seeking resources, and conducting independent investigations).

**4. Technology Integration:**

How did you use technology to plan and teach your unit?

How did student's use technology to enhance their learning?

**5. Community Resources:**

What community resources did you use to achieve your unit goals and objectives and foster student learning?

## Entry 3, Part 3

### Demonstration of Integration Skills

**Standard 6: The educator demonstrates the ability to integrate across and within content fields to enrich the curriculum, develop reading and thinking skills, and facilitate all students' abilities to understand relationships between subject areas.**

**(Aligned with KPA Criterion 4 and Danielson's FFT Domain 1, Planning and Preparation)**

#### Entry Explanation:

Based on your unit plan, list and describe how you will integrate across and within content fields to enrich the curriculum, develop thinking strategies; reading strategies, and facilitate all students' abilities to understand relationships between subject areas. Discuss how the instruction creates an integrated learning experience. Describe the integrated strategies that you will use in delivery of the instructional unit. Include suggestions and guidelines for student use of textual materials related to the subject. Address each of the following areas on the form for Entry 3, Part 3:

#### Rubric for Entry 3, Part 3 (Demonstration of Integration Skills)

Rating → Indicator ↓	0 Performance Not Demonstrated	1 Performance Partially Demonstrated	2 Performance is Demonstrated	Score
<b>Integration Across and Integration Within Content Fields</b>	The teacher presents no evidence that he/she is integrating knowledge, skills, or methods of inquiry across or within content fields.	The teacher provides evidence that he/she is integrating knowledge, skills, or methods of inquiry across or within content fields, but this integration does not help students understand relationships between subject areas.	The teacher provides evidence that he/she is integrating knowledge, skills, or methods of inquiry across and within content fields to help students understand relationships between subject areas.	
<b>Integration of Critical Thinking Strategies</b>	The teacher presents no evidence that critical thinking strategies have been integrated into the unit.	The teacher provides evidence that critical thinking strategies have been integrated into the unit, but does not apply those strategies to help students learn the concepts and skills being taught.	The teacher provides evidence that critical thinking skills have been integrated into the unit and applies those strategies to help students learn the concepts and skills being taught.	
<b>Integration of Reading Strategies</b>	The teacher presents no evidence that reading strategies have been integrated into the unit.	The teacher presents evidence that only one or two reading strategies have been integrated into the unit. These strategies provide support for a limited range of reading concerns and abilities.	The teacher presents evidence that three or more reading strategies have been integrated into the unit. These strategies provide support for a wide range of reading concerns and abilities.	

**Total Rubric Score: \_\_\_\_\_/6**

**Total Score for Entry 3, Part 3: \_\_\_\_\_/6**

**Entry 3, Part 3**  
**Instructional Unit Plan**  
**Demonstration of Integration Skills**

<i>Integration Across and Within Content Fields:</i>	<i>Integration of Critical Thinking Strategies:</i>	<i>Integration of Reading Strategies:</i>

## **Entry 3, Part 4**

### **Analysis of Assessment Procedures**

#### **Conceptual Framework:**

**Standard 8: The educator understands and uses formal and informal assessment strategies to evaluate and ensure the continual intellectual, social, and personal development of all learners. (Aligned with KPA Criterion 6 and Danielson’s FFT Domain 1, Planning and Preparation)**

**Disposition 1: The educator demonstrates a belief that all students can learn, has high expectations for all students, and persists in helping all students achieve success.**

#### **Entry Explanation:**

For Part 4 of Entry 3, you will describe your instructional unit assessment plan and your analysis of student performance in relation to your instructional goals and objectives. You also will discuss how you use student performance data to plan and adjust your instruction. **Begin this task BEFORE you begin your unit instruction.** Provide information, data, and summary results as called for using written descriptions, copies of instruments used, and tables and charts. Copies of instruments should be included in the portfolio. Do not include any student work.

For this entry, you will need to prepare and implement (1) pre-assessment/diagnostic assessment instruments (before you begin your unit), (2) at least two formative assessments (as you teach your unit), and (3) a summative assessment (at the end of your unit). Each learning objective should be assessed before, during, and at the end of your unit through these instruments. You also will need to develop assessment criteria for each objective and each assessment instrument. These assessment criteria must be measurable, comprehensive, and specify the minimal level of performance for students to successfully meet the learning objectives. When establishing your assessment criteria, remember to keep your expectations high yet reasonable. In addition, you will need to collect and analyze the data from each of your instruments, disaggregate the data, and discuss the results. You will be asked to describe how you used assessment data for instructional planning and decision-making. Be sure to include evidence that you are persistent in helping all your students succeed. As you plan your assessments, be sure to use a variety of formats (more than two). Example formats include multiple choice, short answer, essay, performance assessment, portfolios, observations, etc. Be sure to address each of the following prompts:

#### **1. Pre-Assessment/Diagnostic Assessments**

Prepare Pre-Assessment/Diagnostic Assessments: For the unit’s instructional objectives, prepare both a formal and informal assessment of your students’ readiness to engage in the instruction.

Informal Assessment: Consider both information from school records, external assessment data, and your own observations of the students relying on measures you have used in previous instruction and your observations of the class. Document the sources used to assess student readiness.

Formal Assessment: Prepare a pre-assessment/diagnostic instrument that will assess each of your unit objectives. This assessment should be an appropriate pre-measure of your students’ readiness to engage in the unit’s instruction. This assessment can also be used as a point for measuring student growth at the end of the unit and determining the overall success of the unit design.

Describe the format and content (objectives) assessed through each assessment instrument. Include a copy of the pre-assessment/diagnostic instrument in the portfolio.

Implement Pre-Assessment/Diagnostic Assessments and Collect Data: Use the Informal and formal assessment strategies you have chosen/developed and collect assessment data on your class. Present these data in a chart or table.

Analyze your Pre-Assessment/Diagnostic Assessment Results: Disaggregate the data you collected based on students' prior knowledge and readiness skills. To do this, identify students who already have considerable knowledge of the unit objectives, those who may have "prior knowledge" deficits, and those who are ready for instruction as you have it planned. In addition, disaggregate your class results to reveal subgroup differences (i.e., males and females or ELL and native speakers) for at least two groups of students within your classroom (i.e., gender and language proficiency)

Plan for Instruction: Describe specifically how you used pre-assessment/diagnostics data to proceed with instruction for the identified groups of students. Address the specific objectives evaluated, and discuss instructional strategies for those with different prior knowledge and readiness skills (i.e., in need of remediation, ready for instruction, advanced). In addition, discuss instruction strategies for the two identified groups (i.e., gender, ELL, and students with special needs).

## **2. Formative Assessments**

Prepare Formative Assessments: Prepare at least two informal and/or formal formative assessment tools to use during the period of the unit's instruction. Discuss the format and content (objectives) assessed through each assessment instrument. Include a copy of the formative instruments in the portfolio.

Implement Formative Assessments and Collect Data: Use the formative assessment strategies you have chosen/developed and collect assessment data on your class. Present these data in a chart or table.

Analyze your Formative Assessment Results: Discuss the results in terms of your learning goals and objectives. Are students learning what you intended for them to learn? Identify individual students and/or subgroups in need of remediation and/or modifications/adaptations to successfully meet the unit learning objectives.

Plan for Instruction: Describe how you used these interim results to re-direct, re-teach, and otherwise inform your plan for instruction. Be persistent in helping all students achieve success.

Report Information to Students: Present assessment information to students to help them become responsible for their own learning. How did your students use this information to enhance their own learning?

## **3. Summative Assessment**

Prepare Summative Assessment: Prepare an end-of-unit (summative) assessment that will assess each of your unit objectives. Use at least two different test formats (e.g., multiple choice, short answer, essay, performance assessment, portfolios, observations, etc.). Use this assessment as your final measure of student learning and to determine the success of your unit design. For **each specific objective** establish reasonable minimal levels of performance (What would the student need to do to demonstrate they have met the objective). In addition, for **each assessment instrument**, establish reasonable minimal levels of

performance (grade decision points/passing scores). Keep your expectations high yet reasonable. Discuss the format and content (objectives) assessed through each assessment instrument. Include a copy of the summative instruments in the portfolio.

Implement Summative Assessment and Collect Data: At the end of the unit’s instruction, administer the unit’s summative assessment and collect student results. Present results/data that describe the level of student performance on the unit’s objectives in a table or chart.

Analyze your Summative Assessment Results: Discuss the results in terms of your learning goals and objectives. Were your objectives achieved? Did students learning what you intended for them to learn? Describe the level of student performance on each unit objective. Were all parts of the objective met? In addition, include the percentage of students who achieved each unit objective. Disaggregate your class results to reveal differences in achievement based on prior knowledge and readiness skills (i.e., students in need of remediation, ready for instruction, advanced) and based on the groups identified in your pre-assessment/diagnostic assessment (gender, ELL, students with special needs, etc.). This is done, by organizing and reporting the data to show the achievement of one subgroup compared to the achievement of another subgroup (i.e., males compared to females, ELL compared to native speakers, and/or students in need of remediation compared to students ready for instruction etc.). Were some groups of students less successful than others?

Plan for Instruction: Describe how you will use these results to plan future instruction. What will be your next steps? What changes in instruction should be made to help all groups of students be successful. Discuss at least one specific intervention to be used in future instruction for any subgroup performing lower than the rest of the class.

**Checklist for Entry 3, Part 4 (Analysis of Assessment Procedures)**

<b>The Teacher:</b>	<b>No</b>	<b>Yes</b>
Documents informal sources of student readiness to engage in the unit	<b>0</b>	<b>1</b>
Documents format and content (objectives) of formal pre-assessment/diagnostic assessment instruments	<b>0</b>	<b>1</b>
Presents pre-assessment/diagnostic assessment data in a table or chart	<b>0</b>	<b>1</b>
Documents format and content (objectives) of the formative assessments	<b>0</b>	<b>1</b>
Presents formative assessment data in a table or a chart	<b>0</b>	<b>1</b>
Reports formative assessment data to students	<b>0</b>	<b>1</b>
Documents format and content (objectives) of the summative assessment instrument	<b>0</b>	<b>1</b>
Presents summative assessment data in a table or chart	<b>0</b>	<b>1</b>
Lists the level of student performance on each objective	<b>0</b>	<b>1</b>
Lists percentages of students who achieved unit objectives (overall class results)	<b>0</b>	<b>1</b>
Provides evidence of disaggregation of data based on student prior knowledge/readiness skills and at least two additional classroom subgroups	<b>0</b>	<b>1</b>
<b>Total Checklist Score:</b>		<b>/11</b>

**Rubric for Entry 3, Part 4 (Analysis of Assessment Procedures)**

Rating Indicator → ↓	0 Performance Not Demonstrated	1 Performance Partially Demonstrated	2 Performance is Demonstrated	Score
<b>Pre-Assessment/ Diagnostic Assessment is Utilized for Planning and Instructional Decision-Making</b>	No pre-assessment/diagnostic data are collected, or the data/information collected is not appropriate for (aligned with) unit objectives.	Appropriate student pre-assessment/diagnostic assessment data are collected, but not used for planning or instructional decision-making.	Appropriate student pre-assessment/diagnostic assessment data are collected and used in planning and instructional decision-making before the unit is taught.	
<b>Formative Assessment is Utilized for Planning and Instructional Decision-Making</b>	No formative assessment data are collected, or the data/information collected is not appropriate for (aligned with) unit objectives.	Appropriate formative student assessment data are collected, but not used for planning or instructional decision-making to help all students achieve success.	Appropriate formative student assessment data are collected and used in planning and instructional decision-making as the unit is taught to persistently help all students achieve success.	
<b>Summative Assessment is Utilized for Planning and Instructional Decision-Making</b>	No summative assessment data are collected, or the data/information collected is not appropriate for (aligned with) unit objectives.	Appropriate summative student assessment data are collected, but not used for planning or instructional decision-making to enhance future success.	Appropriate summative student assessment data are collected and used in planning and decision-making to enhance future success.	
<b>Multiple Formats for Assessment</b>	Only one assessment format is used, or procedures and formats are very limited.	There is more than one assessment format used.	A variety of assessment formats (more than two) are used (e.g., multiple choice, short answer, essay, performance assessment, portfolios, observations, etc.)	
<b>Alignment of Objectives and Assessment</b>	The learning objectives are not aligned with assessment.	Some, but not all, of the learning objectives are assessed	Each of the learning objectives is assessed.	
<b>Assessment Criteria</b>	Assessment contains no clear criteria for measuring student progress.	Assessment criteria have been developed, but they are not clear and/or they include only 1 or 2 of the following characteristics: <b>Measurable-</b> All criteria for assessment are described in measurable terms. <b>Comprehensive-</b> Covers essential content and skills from those covered during instruction. Does not assess irrelevant content or skills. <b>Criteria Level-</b> Specifies the minimal level of performance at which students successfully meet the learning objective (demonstrates high yet reasonable expectations).	Assessment criteria are clear and include the following characteristics: <b>Measurable-</b> All criteria for assessment are described in measurable terms. <b>Comprehensive-</b> Covers essential content and skills from those covered during instruction. Does not assess irrelevant content or skills. <b>Criteria Level-</b> Specifies the minimal level of performance at which students successfully meet the learning objective (demonstrates high yet reasonable expectations).	

**Total Rubric Score: \_\_\_\_\_/12**  
**Total Score for Entry 3, Part 3: \_\_\_\_\_/23**



**Entry 3, Part 4**  
**Instructional Unit Plan**  
**Analysis of Assessment Procedures**  
**Documentation of Assessment Instruments**

Complete the following chart based on the **unit learning objectives**

<p><b>Learning Objectives</b>  <i>List each learning objective. All learning objectives must be assessed through pre-assessment/diagnostic assessment, formative and summative assessments.</i></p>	<p><b>Type of assessment</b> (pre-assessment/diagnostic assessment, formative, or summative). List the assessments in the order they are to be given. Be sure to include all 3 types of assessments</p>	<p><b>Format of Assessment</b> (e.g., multiple choice, short answer, essay, performance assessment, portfolios, observations, etc.) Be sure the format for each assessment is appropriate for measuring student performance levels in relation to each objective.</p>	<p><b>Assessment Criteria</b>  <b>For each objective</b> establish measurable, comprehensive, minimal levels of performance (What would the student need to do to demonstrate they have met the objective? Be sure the minimal levels of performance are based on high yet reasonable expectations.</p>

Respond to the following prompts based on **each required assessment instrument**.

1. For each assessment instrument, listed above, establish minimal levels of performance (grade decision points/passing scores).

*Pre-Assessment/Diagnostic Assessment Instrument:*

*Formative Assessment Instruments (at least two):*

*Summative Assessment Instrument:*

Attach a copy of your pre-assessment/diagnostic assessment, formative, and summative assessments. Attach a copy of all supporting documents—for example, a rubric used to evaluate student performance.

**Entry 3, Part 4**  
**Instructional Unit Plan**  
**Analysis of Assessment Procedures**  
**Presentation and Analysis of Assessment Data**

***Pre-Assessment/Diagnostic Assessment Data***

(Be sure to include informal sources of readiness data and results from formal assessment instruments.)

Unit Learning Objectives

Level of Student Performance on **each Objective**

**Assessment Instrument:**

Percentage of students who achieved unit objectives on this assessment (overall results) \_\_\_\_\_

1. How did you use this information to proceed with unit instruction?

***Formative Assessment Data***

(Be sure to include results from at least two formative assessments.)

Unit Learning Objectives

Level of Student Performance on **each Objective**

**Assessment Instrument:**

Percentage of students who achieved unit objectives on this assessment (overall results) \_\_\_\_\_

1. Describe how you used this information to re-direct, re-teach, and otherwise inform your plan of instruction. Provide evidence that you are persistent in helping all your students succeed.
2. How did you report these results to your students to help them become more responsible for their own learning?
3. How did your students use this information to enhance their own learning?

***Summative Assessment Data***

Unit Learning Objectives

Level of Student Achievement on **each Objective**

**Assessment Instrument:**

Percentage of students who achieved unit objectives on this assessment (overall results) \_\_\_\_\_

1. Discuss these results in terms of your learning goals and objectives. Did students learn what you intended them to learn? Specifically describe your evidence.
2. Describe how you would use these results to plan for future instruction. What are your next steps?

**Entry 3, Part 4**  
**Instructional Unit Plan**  
**Analysis of Student Achievement**  
**Presentation and Analysis of Disaggregated Data**

	<i>Pre-Assessment/ Diagnostic Assessment</i>	<i>Summative Assessment</i>	<i>Percentage of Students Who Achieved Unit Objectives</i>
<i>Whole Class Mean:</i>			
<i>Subgroup Means:</i>			
<i>Students Ready for Instruction</i>			
<i>Students in Need of Remediation</i>			
<i>Male Mean</i>			
<i>Female Mean</i>			
<i>ELL Mean</i>			
<i>Native Speakers Mean</i>			
<i>Ethnic/Cultural Groups Mean</i>			
<i>Majority Groups Mean</i>			
<i>Identified Students (IEP) Mean</i>			
<i>Non-Identified Students Mean</i>			

- 1. Explain your interpretation of the disaggregated data:** Did all students learn what you intended them to learn (were your objectives achieved)? Specifically describe your evidence.
- 2. Describe how you used these results for planning and instructional decision-making. Pre-Assessment/Diagnostic Assessment:** How did you use these data to proceed with instruction for the identified subgroups to plan for the success of all students?
- 3. Summative Assessment:** Discuss at least one intervention to be used in future instruction for any subgroup performing lower than the rest of the class. What changes should be made in this unit to help all students be successful the next time it is taught?

## Entry 3, Part 5 Self-Evaluation of the Instructional Unit

### Conceptual Framework:

**Standard 12: The educator is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others (students, parents, and other professionals in the learning community), actively seeks opportunities to grow professionally, and participates in the school improvement process (Kansas Quality Performance Accreditation [QPA]).**

**(Aligned with KPA Criterion 7 and Danielson’s FFT Domain 4, Professional Responsibilities)**

**Disposition 7: The educator reflects on his/her professional strengths and weaknesses and develops goals and plans to improve professional practice.**

### Entry Explanation:

It is important that each teacher is a reflective practitioner who continually assesses his or her teaching and its impact on student learning and uses this information to plan future learning opportunities. For Entry 3, Part 5, use the questions on the attached form to help you reflect on your instructional unit as it is taught.

### Rubric for Entry 3, Part 5 (Self-Evaluation of the Instructional Unit)

Rating → Indicator ↓	0 Performance Not Demonstrated	1 Performance Partially Demonstrated	2 Performance is Demonstrated	Score
<b>Effects of Decisions on Student Learning</b>	Teacher provides no evidence or reasons to support conclusions regarding why students did or did not meet learning objectives.	Teacher provides some data or evidence but offers simplistic or superficial reasons or hypotheses to support conclusions regarding why students did or did not meet learning objectives.	Teacher uses evidence and data to support conclusions. He or she explores multiple hypotheses for why students did or did not meet learning objectives.	
<b>Effects of Decisions on Instruction and Assessment</b>	Teacher provides no rationale for why some activities or assessment were more successful than others.	Teacher identifies successful and unsuccessful activities and assessments but only superficially explores reasons for their success or lack of success.	Teacher identifies successful and unsuccessful activities and assessments and provides plausible reasons for their success or lack of success.	
<b>Communication with Students, Families, and Educational Personnel</b>	Teacher provides no information on communication with students, families, or other educators in support of student learning.	Teacher provides some evidence of communication with students, families, or other educators in support of student learning.	Teacher provides evidence of frequent communication with students, families, and other educators in support of student learning.	
<b>Information from QPA Process</b>	Teacher provides no information about the QPA process.	Teacher provides evidence of knowledge of the QPA process in the school <u>or</u> a description of his/her role in the QPA process.	Teacher provides evidence of knowledge of the QPA process in the school <u>and</u> a description of his/her role in the QPA process <u>or</u> explains why he/she has no role in the process.	
<b>Implications for Future Teaching of this Unit</b>	Teacher provides no suggestions for redesigning learning goals, instruction, or assessment.	Teacher provides suggestions for redesigning learning goals, instruction, or assessment but offers no rationale for why these changes would improve student learning.	Teacher provides suggestions for redesigning learning goals, instruction, or assessment and explains why these changes would improve student learning.	
<b>Implications for Professional Development/ Continuous Learning</b>	Teacher provides no professional learning goals or goals that are not related to the strengths and weaknesses revealed by teaching this unit	Teacher presents fewer than 2 professional learning goals, or presents goals that are not related to the strengths and weaknesses revealed by teaching this unit	Teacher presents at least two professional learning goals that clearly emerge from the strengths and weaknesses revealed by teaching this unit	

**Total Rubric Score: \_\_\_\_\_/12**

**Total Score for Entry 3, Part 5: \_\_\_\_\_/12**

**Entry 3, Part 5**  
**Instructional Unit Plan**  
**Self-Evaluation of the Instructional Unit**

Name: \_\_\_\_\_ School: \_\_\_\_\_

1. Select the learning objectives where your students were the most successful. Provide two or more reasons for this success (Be specific and provide evidence). Consider your objectives, instruction, and assessment along with student characteristics and other contextual factors under your control.
  
2. Select the learning objectives where your students were least successful. Provide two or more reasons for this lack of success (Be specific and provide evidence). Consider your objectives, instruction, and assessment along with student characteristics and other contextual factors under your control. Explain any mid-unit adaptations you made to enhance learning for all students. Discuss what you could do differently or better in the future to improve your students' performance.
  
3. Discuss how and in what context you have communicated with students, parents, and other professionals about your decisions regarding students' learning and assessment. You must address all three.
  
4. Demonstrate that you understand the *QPA* process in use in your school and explain how your efforts as a professional fit into it. How can you contribute to achieving the school's *QPA* goals?
  
5. Reflect on possibilities for professional development. Describe at least two professional learning goals related to your professional strengths and weaknesses revealed by teaching this unit. Identify two specific activities you will undertake to improve your performance as a teacher in the critical areas you identified.

## Entry 4

### Analysis of Classroom Learning Environment

**Conceptual Framework:**

**Standard 9: The educator uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.**

**(Aligned with KPA Criterion 5 and Danielson’s FFT Domain 2, The Classroom Environment)**

**Disposition 3: The educator takes responsibility to establish an environment of respect and rapport and a culture for learning to enhance social interactions, student motivation and responsibility, and active engagement in learning.**

**Entry Explanation:**

A learning environment that encourages positive social interactions, active engagement in learning, and student self-motivation and responsibility is built and maintained by: (1) creating an environment of respect and rapport, (2) establishing a culture for learning, (3) managing classroom procedures, (4) encouraging appropriate student behavior, and (5) organizing the physical environment. For entry 5 you will analyze your classroom learning environment based on these five components. As part of this analysis, determine how these five components can be used to build and/or maintain a positive learning environment. All five of these components are supported by an understanding and application of individual and group motivation and student behavior. Be sure to discuss principles of motivation and student behavior as you analyze your classroom learning environment. Include specific examples from your teaching. Use the prompts listed on the attached form to help you complete this entry.

**Checklist For Entry 4 (Analysis of Classroom Learning Environment)**

<b>The Teacher Describes:</b>	<b>No</b>	<b>Yes</b>
Principles of individual and group motivation as they apply to the 5 components of the classroom learning environment	0	2
Principles of student behavior as they apply to the five components of the classroom learning environment	0	2
<b>Total Checklist Score:</b>		_____/4

## Rubric for Entry 4 (Analysis of Classroom Learning Environment)

Rating Indicator → ↓	0 Performance Not Demonstrated	1 Performance Partially Demonstrated	2 Performance is Demonstrated	Score
<b>Creating an Environment of Respect and Rapport</b>	The teacher did not provide evidence of strategies for establishing an environment of respect and rapport or the strategies were not appropriate for promoting positive verbal and non-verbal communication or positive social interactions.	The teacher only partially described strategies for establishing an environment of respect and rapport, or the strategies were not specific, or not appropriate for promoting both positive verbal and non-verbal communication and positive social interactions.	The teacher fully described appropriate strategies for establishing an environment of respect and rapport to promote both positive verbal and non-verbal communication and positive social interactions.	
<b>Establishing a Culture for Learning</b>	The teacher did not provide evidence of strategies for establishing a culture of learning or the strategies were not appropriate for encouraging active engagement in learning, student responsibility for learning, commitment to the subject, high expectations, and student pride in work.	The teacher only partially described strategies for establishing a culture for learning to encourage some of the following: active engagement in learning, student responsibility for learning, commitment to the subject, high expectations, and student pride in work or the strategies were not appropriate.	The teacher fully described appropriate strategies for establishing a culture for learning to encourage all of the following: active engagement in learning, student responsibility for their own learning, students' commitment to the subject, high expectations for achievement, and student pride in work.	
<b>Encouraging Appropriate Student Behavior</b>	The teacher did not provide evidence of a classroom management plan or the plan did not include standards of conduct, strategies to monitor student behavior, or appropriate and respectful responses to student misbehavior.	The teacher described a classroom management plan that established standards of conduct, strategies to monitor student behavior, and responses to student misbehavior; but the standards were vague, or strategies and responses were not specific, not fully developed or not appropriate and respectful.	The teacher described a classroom management plan that established clear standards of conduct, specific strategies to monitor student behavior, and appropriate and respectful responses to student misbehavior.	
<b>Managing Classroom Procedures</b>	The teacher did not provide evidence of specific classroom procedures or procedures were not established to promote student responsibility, smooth operation of the classroom, or efficient use of time.	The teacher described classroom procedures to promote student responsibility, smooth operation of the classroom, or efficient use of time; but the procedures were not specific, not fully developed, or not appropriate.	The teacher described specific classroom procedures that promote student responsibility, smooth operation of the classroom, and efficient use of time	
<b>Organizing the Physical Environment</b>	The teacher does not provide evidence of a plan to organize the physical space in their classroom or the plan does not promote student access to learning or does not address potential safety concerns.	The teacher described a plan to organize the physical space in their classroom to promote student access to learning, ensure the furniture supports learning activities, and to address potential safety concerns; but the plan was not specific, not fully developed, or not appropriate.	The teacher described a specific plan to ideally organize the physical space in their classroom to optimize student access to learning, ensure the furniture supports learning activities, and to address potential safety concerns.	
			<b>Total Rubric Score:</b>	<u>        </u> / 10
			<b>Total Score for Entry 4</b>	<u>        </u> / 14

## **Entry 4**

### **Analysis of Classroom Learning Environment**

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#### **Creating an Environment of Respect and Rapport**

Explain how you established and maintained an atmosphere of trust, openness and mutual respect in your classroom. Describe specific strategies used to encourage:

- Positive student verbal and non-verbal communication skills
- Positive student social interactions

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#### **Establishing a Culture for Learning to Encourage Student Engagement and Responsibility**

Describe how you created a culture for learning in your classroom. Describe specific strategies used to encourage:

- Active engagement in learning
- Student responsibility for their own learning
- Student commitment to the subject
- High expectations for achievement
- Student pride in work

---

#### **Managing Classroom Procedures**

Describe your classroom routines and procedures. Include specific procedures used to promote:

- Student responsibility
- Smooth operation of the classroom
- Efficient use of time (e.g., organizing and managing groups of students, distribution and collection of materials, use of student helpers, transition between activities, etc.)

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#### **Encouraging Appropriate Student Behavior**

Describe your classroom management plan. Include specific classroom management strategies used to:

- Establish clear expectation of conduct
- Monitor student behavior
- Respond to behavior that does not meet your expectations

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#### **Organizing the Physical Environment**

Attach a simple sketch of the arrangement of the physical space of your classroom. Design a plan to:

- Make learning accessible to all students
  - Address safety concerns
  - Arrange the furniture to support typical learning activities
-



## Entry 5 Formal Observations

### Conceptual Framework:

**Standard 10: The educator understands and uses a variety of appropriate instructional strategies to encourage and develop various kinds of students' learning including critical thinking, problem solving, and reading.**

**Standard 11: The educator uses a variety of effective verbal and non-verbal communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom. (Aligned with Danielson's FFT Domain 3, Instruction)**

**Disposition 1: The educator demonstrates a belief that all students can learn, has high expectations for all students, and persists in helping all students achieve success.**

**Disposition 3: The educator takes responsibility to establish an environment of respect and rapport and a culture for learning to enhance social interactions, student motivation and responsibility, and active engagement in learning.**

**Disposition 4: The educator is flexible and responsive in seeking out and using a variety of strategies to meet the cognitive, physical, emotional, and social needs of all students.**

### Entry Explanation:

Formal observations are another major component of your portfolio. The major focus of this entry is to provide evidence of instruction; however, formal observations also provide evidence of competence in all four categories of the KSU Conceptual Framework. The teaching process, as captured through formal observations, documents your abilities to integrate Perspectives and Preparation (Category 1), The Classroom Learning Environment (Category 2), Instruction (Category 3) and Professionalism (Category 4). Therefore, even though the two standards listed for this entry focus on instruction, the Evidence/Feedback Form and the Professional Progress Form included in this entry assess all four categories of the KSU Conceptual Framework. You will be observed by your cooperating teacher, your clinical instructor and your faculty supervisor. From these observations select five to include in your portfolio. **At least three of the documented observations need to be from different subjects or class periods and at least one needs to be from your instructional unit.** For each of the five formal observations you will include (1) An instructional plan and Guiding Questions for a Single Lesson (to be completed before the observation) and (2) Reflections on a Single Lesson (to be completed after the lesson). In addition you should include any Evidence/Feedback Form (to be used by the observer during the lesson) and any Professional Progress Forms (to be completed at least once mid-way through the semester and again at the end of the semester) that have been completed based on observed lessons. **Some supervisors may choose to use one Evidence/Feedback Form for more than one observation.** You should also provide a copy of the Contextual Factors and Student and Learning Adaptations form (Entry 2) to the person observing you for each of your five formal observations.

### Checklist for Entry 5 (Formal Observations)

<b>The Teacher Included:</b>	<b>No</b>	<b>Yes</b>
Five instructional plans and <i>Guiding Questions for a Single Lesson</i>	0	1
Five <i>Reflections on a Single a Lesson</i>	0	1
<i>Evidence/Feedback Forms</i> from five observed lessons (one <i>Evidence/Feedback Form</i> may be used for more than one observation)	0	1
<i>Professional Progress Forms</i> based on observed lessons	0	1
Evidence that <i>Contextual Information</i> from Entry 2 is used in instructional decisions	0	1
<b>Total Checklist Score:</b>	_____/5	

### Rubric for Entry 5 (Formal Observations)

The following rubric assess the standards and dispositions related to Entry 5 and the teacher's completion of the requirements for entry 5. The rubric designed to assess all standards and dispositions related to student teaching is included as part of the Professional Progress Form to be included in this entry.

<b>Rating Indicator</b> → ↓	<b>0</b> <b>Performance Not Demonstrated</b>	<b>1</b> <b>Performance Partially Demonstrated</b>	<b>2</b> <b>Performance is Demonstrated</b>	<b>Score</b>
<b>Multiple Instructional Strategies to Promote Learning</b>	The teacher does not use a variety of strategies and does not provide evidence of student learning.	The teacher uses a few strategies but does not provide evidence linking these strategies to student learning, or does not maintain high expectations, or does not persist in helping all students achieve success.	The teacher consistently uses a variety of appropriate strategies, links these strategies to student learning, maintains high expectations, and persists in helping all students achieve success.	
<b>Effective Verbal and Non-Verbal Communication</b>	No evidence is provided that effective verbal and non-verbal communication among students was taken into account.	The teacher provides some evidence of the importance of positive communication but does not provide opportunities for students to practice communication techniques.	The teacher encourages verbal and non-verbal communication and provides evidence of specific learning activities leading to the development of positive communication.	
<b>Fosters Active Inquiry</b>	The teacher does not actively engage students or encourage active inquiry.	The teacher understands the importance of active engagement and inquiry techniques but does not develop learning activities that build on inquiry learning.	The teacher actively engages students in inquiry learning activities. Specific examples of inquiry learning are provided.	
<b>Supportive Classroom Interactions</b>	The teacher does not encourage student interaction in learning activities.	The teacher promotes positive interactions among students but does not provide specific learning activities that encourage interactions.	The teacher promotes positive interactions among students and provides specific learning activities that encourage positive interactions.	

**Total Rubric Score:** \_\_\_\_\_/8

**Total Rubric Score for Entry 5:** \_\_\_\_\_/13

**Entry 5**  
**Formal Observations**  
**Guiding Questions for a Single Lesson**

Name: \_\_\_\_\_ School: \_\_\_\_\_

Grade Level/Subject Area: \_\_\_\_\_ Date of Lesson: \_\_\_\_\_  
(The following form is adapted from Danielson, 1996, and the KSU Student Teaching Handbook)

1. What are your goals and objectives for the lesson? What do you want the students to learn and be able to demonstrate?
  
2. Why are these goals and objectives suitable for this group of students? What evidence do you have that you have high but reasonable expectations for your students? (Refer to Contextual Factors in Entry 2)
  
3. How do the goals and objectives build on previous lessons and how do they lead to future planning?
  
4. What difficulties do students typically experience in this area and how do you plan to anticipate these difficulties?
  
5. How do these goals and objectives align with a.) National and/or state standards, b.) District standards, goals, or scope and sequence, c.) School QPA/NCA Targeted Areas of Improvement?
  
6. How do you plan to engage students in the content? What will you do? What will the students do?
  
7. What instructional materials, resources, and technology will you use?
  
8. How do you plan to assess student achievement of the goals?

***Guiding Questions for a Single Lesson (cont.)***

Lesson Plan Format: Use the lesson plan format that suits your situation. As you do so, consider the following elements:

*(You may choose to write your notes on this document or use it as a check sheet for your planning.)*

- a. Instructional Strategies: (Include a variety of strategies, questions, and discussion prompts to encourage learning and meet diverse needs.)

Rationale:

- b. Grouping of Students: (Individual? Small group? Whole group?)

Rationale:

- c. Sequence of activities: (Indicate on your plan the time allotted for each. You may simply attach the plan from which you teach.)

Rationale:

- d. Strategies to promote equitable opportunities for all students and adaptations to address different student backgrounds, interests, approaches to learning and/or special educational needs. (Refer to Contextual Factors from Entry 2).

Rationale:

Are there any special circumstances of which the observer should be aware?

**Entry 5**  
**Student Teaching Formal Observations**  
**Evidence/feedback form**

**Teacher Candidate:** \_\_\_\_\_ **Observer:** \_\_\_\_\_  
**School:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**Grade/Subject:** \_\_\_\_\_ **Time/Length:** \_\_\_\_\_

CATEGORY 1: Perspectives and Preparation	EVIDENCE
<b>Demonstrating Knowledge of Content and Pedagogy</b> <ul style="list-style-type: none"> <li>• Content</li> <li>• Prerequisite relationships</li> <li>• Content-related pedagogy</li> </ul>	
<b>Demonstrating Knowledge of Students</b> <ul style="list-style-type: none"> <li>• Age group</li> <li>• Varied approaches to learning</li> <li>• Skills and Knowledge</li> <li>• Interests and cultural heritage</li> </ul>	
<b>Selecting Instructional Goals</b> <ul style="list-style-type: none"> <li>• Value</li> <li>• Clarity</li> <li>• Suitability for diverse students</li> <li>• Balance</li> </ul>	
<b>Demonstrating Knowledge of Resources</b> <ul style="list-style-type: none"> <li>• Resources for teaching</li> <li>• Resources for students</li> </ul>	
<b>Designing Coherent Instruction</b> <ul style="list-style-type: none"> <li>• Learning activities</li> <li>• Instructional materials</li> <li>• Resources and technology</li> <li>• Instructional groups</li> <li>• Lesson and unit structure</li> </ul>	
<b>Assessing Student Learning</b> <ul style="list-style-type: none"> <li>• Congruence with instructional goals</li> <li>• Criteria and standards</li> <li>• Use for planning</li> </ul>	
Summary of Performance in Category 1           	

Source: Adapted from Danielson, Charlotte. (1996). *Enhancing Professional Practice: A Framework for Teaching*. Alexandria, VA: Association for Supervision and Curriculum Development

## Evidence/Feedback Form

<b>CATEGORY 2: Classroom Environment</b>	<b>EVIDENCE</b>
<p><b>Creating an Environment of Respect and Rapport</b></p> <ul style="list-style-type: none"> <li>• Teacher interaction with students</li> <li>• Student interaction</li> </ul>	
<p><b>Establishing a Culture of Learning</b></p> <ul style="list-style-type: none"> <li>• Importance of content</li> <li>• Quality of student work</li> <li>• Expectations of learning</li> </ul>	
<p><b>Managing Classroom Procedures</b></p> <ul style="list-style-type: none"> <li>• Instructional groups</li> <li>• Transitions</li> <li>• Materials and supplies</li> <li>• Non-instructional duties</li> <li>• Supervision of volunteers and paraprofessionals</li> </ul>	
<p><b>Encouraging Appropriate Student Behavior</b></p> <ul style="list-style-type: none"> <li>• Expectations</li> <li>• Monitoring of student behavior</li> <li>• Response to student behavior</li> </ul>	
<p><b>Organizing the Physical Environment</b></p> <ul style="list-style-type: none"> <li>• Safety and arrangement of furniture</li> <li>• Accessibility to learning and use of physical resources</li> </ul>	
<p><b>Summary of Performance in Category 2</b></p>          	

## Evidence/Feedback Form

<b>CATEGORY 3: Instruction</b>	<b>EVIDENCE</b>
<p><b>Communicating Clearly and Accurately</b></p> <ul style="list-style-type: none"> <li>• Directions and procedures</li> <li>• Oral and written language</li> </ul>	
<p><b>Using Questioning and Discussion Skills</b></p> <ul style="list-style-type: none"> <li>• Quality of questions</li> <li>• Discussion techniques</li> <li>• Student participation</li> </ul>	
<p><b>Engaging Students in Learning</b></p> <ul style="list-style-type: none"> <li>• Representation of content</li> <li>• Activities and assignments</li> <li>• Grouping of students</li> <li>• Instructional materials and resources</li> <li>• Structure and pacing</li> </ul>	
<p><b>Providing Feedback to Students</b></p> <ul style="list-style-type: none"> <li>• Quality: accurate, substantive, constructive, specific</li> <li>• Timeliness</li> </ul>	
<p><b>Demonstrating Flexibility and Responsiveness</b></p> <ul style="list-style-type: none"> <li>• Lesson adjustment</li> <li>• Response to students</li> <li>• Persistence</li> </ul>	
<p><b>Summary of Performance in Category 3</b></p>	

## Evidence/Feedback Form

CATEGORY 4: Professional Responsibilities	EVIDENCE
<b>Reflecting on Teaching</b> <ul style="list-style-type: none"> <li>• Accuracy</li> <li>• Use in future teaching</li> </ul>	
<b>Maintaining Accurate Records</b> <ul style="list-style-type: none"> <li>• Student completion of assignments</li> <li>• Student progress in learning</li> <li>• Non-instructional records</li> </ul>	
<b>Communicating with Families</b> <ul style="list-style-type: none"> <li>• Information about the instructional program</li> <li>• Information about individual students</li> <li>• Engagement of families in the instructional program</li> <li>• Instructional materials and resources</li> </ul>	
<b>Contributing to the School District</b> <ul style="list-style-type: none"> <li>• Relationships with colleagues</li> <li>• Service to the school</li> <li>• Participation in school and district projects</li> </ul>	
<b>Growing and Developing Professionally</b> <ul style="list-style-type: none"> <li>• Enhancement of content knowledge and pedagogical skill</li> <li>• Service to the profession</li> <li>• Persistence</li> </ul>	
<b>Showing Professionalism</b> <ul style="list-style-type: none"> <li>• Service to students</li> <li>• Advocacy</li> <li>• Decision-making</li> </ul>	
<b>Demonstrating Positive Personal Habits</b> <ul style="list-style-type: none"> <li>• Tardy/absent</li> <li>• Clothing</li> <li>• Hygiene</li> </ul>	
Summary of Performance in Category 4          	



**Entry 5**  
**Formal Observations**  
**Reflections on a Single Lesson**

Name: \_\_\_\_\_ School: \_\_\_\_\_

Grade Level/Subject Area: \_\_\_\_\_ Date of Lesson: \_\_\_\_\_  
(The following form is adapted from Danielson, 1996)

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1. As I reflect on the lesson, what did I do to actively engage the students? What evidence do I have (based on observations of students) that students were actively engaged?
  
2. Did the students learn what I had intended (i.e., were my instructional goals and objectives met)? Were my expectations high yet reasonable? Was I persistent in helping all students achieve success? What is my evidence?
  
3. Did I alter my goals, strategies, activities, student grouping and/or assessment as I taught the lesson? If so, what changes did I make and why did I make these changes?
  
4. Were my strategies and activities effective? What is my evidence?
  
5. To what extent did the classroom environment (Respect and Rapport, Culture for Learning, Classroom Procedures, Encouraging Appropriate Student Behavior, and the Physical Environment) contribute to student learning? What is my evidence?
  
6. Was my assessment effective and useful to my students and me? Describe an instance in which my feedback positively affected a student's learning.
  
7. If I had the opportunity to teach this lesson again, what might I do differently (describe at least one thing)? Why?

## Entry 5

# Student Teaching Formal Observations Professional Progress Form

Teacher Candidate: \_\_\_\_\_ School: \_\_\_\_\_

Grade Level: \_\_\_\_\_ Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_ Pre: \_\_\_\_\_ Post: \_\_\_\_\_

### CATEGORY 1 Perspective and Preparation

COMPONENT	UNSATISFACTORY	BASIC			PROFICIENT			DISTINGUISHED
	1	2	3	4	5	6	7	
Demonstrating Knowledge of Content and Pedagogy	Teacher displays little understanding of the subject or structure of the discipline, or of content related pedagogy.	Teacher's content and pedagogical knowledge represents basic understanding but does not extend to connections with other disciplines or to possible student misconceptions.			Teacher demonstrates solid understanding of the content and its prerequisite relationships and connections with other disciplines. Teacher's instructional practices reflect current pedagogical knowledge.			Teacher's knowledge of the content and pedagogy is extensive, showing evidence of a continuing search for improved practice. Teacher actively builds on knowledge of prerequisites and misconceptions when describing instruction or seeking causes for student misunderstanding.
<b>Demonstrating Knowledge of Students</b>	Teacher makes little or no attempt to acquire knowledge of students' backgrounds, skills, or interests, and does not use such information in planning.	Teacher demonstrates partial knowledge of students' backgrounds, skills, and interests, and attempts to use this knowledge in planning for the class as a whole.			Teacher demonstrates thorough knowledge of students' backgrounds, skills, and interests, and uses this knowledge to plan for groups of students.			Teacher demonstrates thorough knowledge of students' backgrounds, skills, and interests, and uses this knowledge to plan for individual student learning.
<b>Selecting Instructional Goals</b>	Teachers' goals represent trivial learning, are unsuitable for students, or are stated only as instructional activities, and they do not permit viable methods of assessment.	Teacher's goals are of moderate value or suitability for students in the class, consisting of a combination of goals and activities, some of which permit viable methods of assessment.			Teacher's goals represent valuable learning and are suitable for most students in the class; they reflect opportunities for integration and permit viable methods of assessment.			Teacher's goals reflect high-level learning relating to curriculum frameworks and standards; they are adapted, where necessary, to the needs to individual students, and permit viable methods of assessment.
<b>Demonstrating Knowledge of Resources</b>	Teacher is unaware of school or district resources available either for teaching or for students who need them.	Teacher displays limited knowledge of school or district resources available either for teaching or for students who need them.			Teacher is fully aware of school and district resources available for teaching, and knows how to gain access to school and district resources for students who need them.			Teacher seeks out resources for teaching in professional organizations and in the community, and is aware of resources available for students who need them, in the school, the district, and the larger community.
<b>Designing Coherent Instruction</b>	The various elements of the instructional design do not support the stated instructional goals and engage students in meaningful learning, and the lesson or unit has no defined structure.	Some of the elements of the instructional design support the stated instructional goals and engage students in meaningful learning, while other do not. Teacher's lesson or unit has a recognizable structure.			Most of the elements of the instructional design support the stated instructional goals and engage students in meaningful learning, and the lesson or unit has a clearly defined structure.			All of the elements of the instructional design support the stated instructional goals, engage students in meaningful learning, and show evidence of student input. Teacher's lesson or unit is highly coherent and has a clear structure.
<b>Assessing Student Learning</b>	Teacher's approach to assessing student learning contains no clear criteria or standards, and lacks congruence with the instructional goals. Teacher has no plans to use assessment results in designing future instruction.	Teacher's plan for student assessment is partially aligned with the instructional goals and includes criteria and standards that are not entirely clear or understood by students. Teacher uses the assessment to plan for future instruction for the class as a whole.			Teacher's plan for student assessment is aligned with the instructional goals at least nominally, with clear assessment criteria and standards that have been communicated to students. Teacher uses the assessment to plan for groups of students or individuals.			Teacher's plan for student assessment is fully aligned with the instructional goals, containing clear assessment criteria and standards that are not only understood by students but also show evidence of student participation in their development. Teacher's students monitor their own progress in achieving the goals.

(Highlight all statements on this rubric where evidence was found to support the statements.)

### Summary of Progress in Category 1

## CATEGORY 2 Classroom Environments

COMPONENT	UNSATISFACTORY	BASIC			PROFICIENT			DISTINGUISHED
	1	2	3	4	5	6	7	
Creating an Environment of Respect and Rapport	Classroom interactions, both between the teacher and students and among students, are negative or inappropriate and characterized by sarcasm, putdowns, or conflict.	Classroom interactions are generally appropriate and free from conflict but may be characterized by occasional displays of insensitivity.			Classroom interactions reflect general warmth and caring, and are respectful of the cultural and developmental differences among groups of students.			Classroom interactions are highly respectful, reflecting genuine warmth and caring toward individuals. Students themselves ensure maintenance of high levels of civility among members of the class.
Establishing a Culture for Learning	The classroom does not represent a culture for learning and is characterized by low teacher commitment to the subject, low expectations for student achievement, and little student pride in work.	The classroom environment reflects only a minimal culture for learning, with only modest or inconsistent expectations for student achievement, little teacher commitment to the subject, and little student pride in work. Both teacher and students are performing at the minimal level to “get by.”			The classroom environment represents a genuine culture for learning, with commitment to the subject on the part of teacher and students, high expectations for student achievement, and student pride in work.			Students assume much of the responsibility for establishing a culture for learning in the classroom by taking pride in their work, initiating improvements to their products, and holding the work to the highest standard. Teacher demonstrates a passionate commitment to the subject.
Managing Classroom Procedures	Classroom routines and procedures are either nonexistent or inefficient, resulting in the loss of much instruction time.	Classroom routines and procedures have been established but function unevenly or inconsistently, with some loss of instruction time.			Classroom routines and procedures have been established and function smoothly for the most part, with little loss of instruction time.			Classroom routines and procedures are seamless in their operation, and students assume considerable responsibility for their smooth functioning.
Managing Student Behavior	Student behavior is poor, with no clear expectations, no monitoring of student behavior, and inappropriate response to student misbehavior.	Teacher makes an effort to establish standards of conduct for students, monitor student behavior, and respond to student misbehavior, but these efforts are not always successful.			Teacher is aware of student behavior, has established clear standards of conduct, and responds to student misbehavior in ways that are appropriate and respectful of the students.			Student behavior is entirely appropriate, with evidence of student participation in setting expectations and monitoring behavior. Teacher’s monitoring of student behavior is subtle and preventive, and teacher’s response to student misbehavior is sensitive to individual student needs.
Organizing Physical Space	Teacher makes poor use of the physical environment, resulting in unsafe or inaccessible conditions for some students or a serious mismatch between the furniture arrangement and the lesson activities.	Teacher’s classroom is safe, and essential learning is accessible to all students, but the furniture arrangement only partially supports the learning activities.			Teacher’s classroom is safe, and learning is accessible to all students; teacher uses physical resources well and ensures that the arrangement of furniture supports the learning activities.			Teacher’s classroom is safe, and students contribute to ensuring that the physical environment supports the learning of all students.

(Highlight all statements on this rubric where evidence was found to support the statements.)

### Summary of Progress in Category 2

### CATEGORY 3 Instruction

COMPONENT	UNSATISFACTORY 1	BASIC 2 3 4	PROFICIENT 5 6 7	DISTINGUISHED
Communicating Clearly and Accurately	Teacher's oral and written communication contains errors or is unclear or inappropriate to students.	Teacher's oral and written communication contains no errors, but may not be completely appropriate or may require further explanations to avoid confusion.	Teacher communicates clearly and accurately to students, both orally and in writing.	Teacher's oral and written communication is clear and expressive, anticipating possible student misconceptions.
Using Questioning and Discussion Techniques	Teacher makes poor use of questioning and discussion techniques, with low-level questions, limited student participation, and little true discussion.	Teacher's use of questioning and discussion techniques is uneven, with some high-level questions, attempts at true discussion, and moderate student participation.	Teacher's use of questioning and discussion techniques reflects high-level questions, true discussion, and full participation by all students.	Students formulate many of the high-level questions and assume responsibility for the participation of all students in the discussion.
Engaging Students in Learning	Students are not at all intellectually engaged in significant learning, as a result of inappropriate activities or materials, poor representations of content, or lack of lesson structure.	Students are intellectually engaged only partially, resulting from activities or materials of uneven quality, inconsistent representations of content, or uneven structure or pacing.	Students are intellectually engaged throughout the lesson, with appropriate activities and materials, instructive representations of content, and suitable structure and pacing of the lesson.	Students are highly engaged throughout the lesson and make material contributions to the representation of content, the activities, and the materials. The structure and pacing of the lesson allow for student reflection and closure.
Providing Feedback to Students	Teacher's feedback to students is of poor quality and is not given in a timely manner.	Teacher's feedback to students is uneven, and its timeliness is inconsistent.	Teacher's feedback to students is timely and of consistently high quality.	Teacher's feedback to students is timely and of consistently high quality, and students make use of the feedback in their learning.
Demonstrating Flexibility and Responsiveness	Teacher adheres to the instruction plan in spite of evidence of poor student understanding or of students' lack of interest, and fails to respond to students' questions; teacher assumes no responsibility for students' failure to understand.	Teacher demonstrates moderate flexibility and responsiveness to students' needs and interest during a lesson, and seeks to ensure the success of all students.	Teacher seeks ways to ensure successful learning for all students, making adjustments as needed to instruction plans and responding to student interests and questions.	Teacher is highly responsive to students' interests and questions, making major lesson adjustments if necessary, and persists in ensuring the success of all students.

(Highlight all statements on this rubric where evidence was found to support the statements.)

### Summary of Progress in Category 3

## CATEGORY 4 Professional Responsibilities

COMPONENT	UNSATISFACTORY	BASIC	PROFICIENT	DISTINGUISHED
	1	2 3 4	5 6 7	
Reflecting on Teaching	Teacher does not reflect accurately on the lesson or propose ideas as to how it might be improved.	Teacher's reflection on the lesson is generally accurate, and teacher makes global suggestions as to how it might be improved.	Teacher reflects accurately on the lesson, citing general characteristics and makes some specific suggestions about how it might be improved.	Teacher's reflection on the lesson is highly accurate and perceptive, citing specific examples. Teacher draws on an extensive repertoire to suggest alternative strategies.
Maintaining Accurate Records	Teacher has no system for maintaining accurate records, resulting in errors and confusion.	Teacher's system for maintaining accurate records is rudimentary and only partially effective.	Teacher's system for maintaining accurate records is efficient and effective.	Teacher's system for maintaining accurate records is efficient and effective, and students contribute to its maintenance.
Communicating With Families	Teacher provides little or no information to families and makes no attempt to engage them in the instructional program.	Teacher complies with school procedures for communicating with families and makes an effort to engage families in the instructional program.	Teacher communicates frequently with families and successfully engages them in the instructional program.	Teacher communicates frequently and sensitively with families and successfully engages them in the instructional program; students participate in communicating with families.
Contributing to the School and District	Teacher's relationships with colleagues are negative or self-serving, and teacher avoids being involved in school and district projects.	Teacher's relationships with colleagues are cordial, and teacher participates in school and district events and projects when specifically requested.	Teacher participates actively in school and district projects, and maintains positive relationships with colleagues.	Teacher makes a substantial contribution to school and district events and projects, assuming leadership with colleagues.
Growing and Developing Professionally	Teacher does not participate in professional development activities, even when such activities are clearly needed for the development of teaching skills.	Teacher's participation in professional development activities is limited to those that are convenient.	Teacher participates actively in professional development activities and contributes to the profession.	Teacher makes a substantial contribution to the profession through such activities as action research and mentoring new teachers, and actively pursues professional development.
Showing Professionalism	Teacher's sense of professionalism is low, and teacher contributes to practices that are self-serving or harmful to students.	Teacher's attempts to serve students based on the best information are genuine but inconsistent.	Teacher makes genuine and successful efforts to ensure that all students are well served by the school.	Teacher assumes a leadership position in ensuring that school practices and procedures ensure that all students, particularly those traditionally underserved, are honored in the school.
Demonstrating Positive Personal Habits	Is often late and/or tardy. Does not perform minimum required tasks. Clothing does not allow teacher to complete required duties without interference. Hygiene does not allow students and peers to work with teacher without being offended.	Teacher is regularly in attendance and seldom if ever tardy. Generally clothing is clean and allows teacher to perform required tasks without interference. Hygiene generally allows students and peers to work with teacher without being offended.	Shows dedication by working beyond basic requirements. Is absent only when necessary. Clothing is clean and neat and allows the teacher to perform required tasks without interference. Hygiene allows students and peers to work with teacher without being offended.	

(Highlight all statements on this rubric where evidence was found to support the statements.)

### Summary of Progress in Category 4

Source: Adapted from Danielson, Charlotte. (1996). *Enhancing Professional Practice: A Framework for Teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.

## **Entry 6 Professional Logs**

### **Conceptual Framework:**

**Standard 12: The educator is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others (students, parents, and other professionals in the learning community), actively seeks opportunities to grow professionally, and participates in the school improvement process (Kansas Quality Performance Accreditation [QPA]).**

**Standard 13: The educator fosters collegial relationships with school personnel, parents, and agencies in the larger community to support students' learning and well-being.**

**(Aligned with KPA Criterion 7 and Danielson's FFT Domain 4, Professional Responsibilities)**

**Disposition 5: The educator seeks to keep abreast of new ideas and understandings in teaching and learning.**

**Disposition 6: The educator demonstrates collaboration and cooperation with students, families, community, and educational personnel to support student learning and contribute to school and district improvement efforts.**

**Disposition 7: The educator reflects on his/her professional strengths and weaknesses and develops goals and plans to improve professional practice.**

**Disposition 8: The educator accepts responsibility as a professional to maintain ethical standards.**

### **Entry Explanation:**

Professional responsibilities help to make teachers true professional educators. They encompass the roles assumed outside of and in addition to those in the classroom with students. Students rarely observe these activities; parents and the larger community observe them intermittently. But the activities are critical to preserving and enhancing the profession, both in the impact made to the teacher as well as to other teachers, students and parents.

Professional responsibilities include a wide range of activities from self-reflection and professional growth, to contributions made to the school and district, to contributions made to the profession as a whole. The components also include facilitation of 2-way interactions with the families of students, contacts with the larger community, the maintenance of records and other paper work, and advocacy for students. Teachers who excel in professional responsibilities are highly regarded by colleagues and parents. They can be depended on to serve students' interests and the larger community, and they are active in their professional organizations, in the school, and in the district.

Keep track of these professional responsibilities using the attached forms.

**Rubric for Entry 6 (Professional Logs):**

Rating Indicator → ↓	0 Performance Not Demonstrated	1 Performance Partially Demonstrated	2 Performance is Demonstrated	Score
<b>Professional Log Reflections</b>	Teacher does not identify professional strengths and weaknesses revealed by keeping professional logs or does not describe any professional learning goals or professional plans based on these goals.	Teacher may describe some professional strengths and weaknesses revealed by keeping professional logs or identify goal and plans related to the professional logs; but does not describe all three components on all three logs.	Teacher describes strengths and weaknesses revealed by keeping professional logs, identifies one or more professional learning goals on each of the three professional logs, and describes specific plans to meet these goals.	
<b>Communication with Families, Community, and Educational Personnel</b>	Teacher provides no evidence of interactions with families, community, or other educators in support of student learning.	Teacher provides little evidence of interactions with families, community, or other educators in support of student learning.	Teacher provides evidence of frequent interactions with families, community, and other educators in support of student learning.	
<b>Participation in the School Improvement Process</b>	Teacher provides no evidence of participation in or contributions to school or district improvement efforts.	Teacher provides little evidence of participation in and/or contributions to school and/or district improvement efforts.	Teacher provides evidence of frequent participation in and contributions to school and/or district improvement efforts.	

**Total Rubric Score: \_\_\_\_\_/6**

**Total Score for Entry 6: \_\_\_\_\_/6**

**Entry 6**  
**Professional Logs**  
**Interactions with Families, Community, and Educational Personnel**  
**To Support Student Learning**

Name: \_\_\_\_\_ School: \_\_\_\_\_

Date	Person Interacted With	Type of Interaction	Purpose	Impact on Teaching and Student

Based on your experiences and information from this log, (1) identify your professional strengths and weaknesses in terms of your ability to interact with families, community, and other educational personnel to support student learning, (2) at least one professional goal for continuing to grow professionally in your area of weakness, and (3) plans for achieving this goal.



**Entry 6**  
**Professional Logs**  
**Involvement in and Contributions to School and District Improvement**

Name: \_\_\_\_\_ School: \_\_\_\_\_

<b>Date</b>	<b>Event (E.g., committee meeting, QPA/NCA activity)</b>	<b>Contribution / Insight</b>	<b>Impact on You, Other Teachers, Students, Parents</b>

Based on your experiences and information from this log, (1) identify professional strengths and weaknesses related to your participation in and contributions to school and district improvement, (2) at least one professional goal for continuing to grow professionally in your area of weaknesses, and (3) plans for achieving this goal.



**Kansas State University • College of Education • Bluemont Hall**  
**Preparing Educators to be Knowledgeable, Ethical, Caring Decision Makers**  
**University Supervisor**  
**Evaluation of Student Teacher**

Student Name \_\_\_\_\_ Soc. Sec. No. \_\_\_\_\_ Semester \_\_\_\_\_ Year \_\_\_\_\_  
 Name of School \_\_\_\_\_ Full Name of Evaluator \_\_\_\_\_  
 City and State \_\_\_\_\_ Subject(s) \_\_\_\_\_ Grade Level(s) \_\_\_\_\_

In the boxes written on the back of this form or the ones in the handbook, underline those words which best describe your student teacher. Then place a check in the cell under the appropriate number (below) depending on which rubric box has the most underlined words.

Generally the average of underlined words in the rubric will be selected to determine the numerical score (from 1 through 7) which best represents your student teacher's performance. For example if underlined words are:  
 (1) all in basic cell, check 3  
 (2) mostly in basic cell with some in proficient cell, check 4

**My signature below indicates that I have had an opportunity to read and discuss this evaluation with my university supervisor. It does not necessarily indicate that I agree with the evaluation.**

- I do want this evaluation as part of my placement file.
- I do not want this evaluation as part of my placement file.

\_\_\_\_\_  
 (Signature of Student Teacher)

<b>Category 1/Domain I PERSPECTIVES &amp; PREPARATION</b>	1	2	3	4	5	6	7
1. Demonstrating Knowledge of Content and Pedagogy							
2. Demonstrating Knowledge of Students							
3. Selecting Instructional Goals							
4. Demonstrating Knowledge of Resources							
5. Designing Coherent Instruction							
6. Assessing Student Learning							
<b>Category 2/Domain II LEARNING ENVIRONMENT</b>							
7. Creating an Environment of Respect and Rapport							
8. Establishing a Culture of Learning							
9. Managing Classroom Procedures							
10. Managing Student Behavior							
11. Organizing Physical Space							
<b>Category 3/Domain III INSTRUCTION</b>							
12. Communicating Clearly and Accurately							
13. Using Questioning and Discussion Techniques							
14. Engaging Students in Learning							
15. Providing Feedback to Students							
16. Demonstrating Flexibility and Responsiveness							
<b>Category 4/Domain IV PROFESSIONALISM</b>							
17. Reflecting on Teaching							
18. Maintaining Accurate Records							
19. Communicating with Families							
20. Contributing to the School and District							
21. Growing and Developing Professionally							
22. Showing Professionalism							
23. Demonstrating Positive Personal Habits							

- Credit
- No Credit

\_\_\_\_\_ Portfolio Score

### Category 1/Domain 1: PERSPECTIVES AND PREPARATION

COMPONENT	UNSATISFACTORY	BASIC	PROFICIENT
	1	2 3 4	5 6 7
Component 1a: Demonstrating Knowledge of Content and Pedagogy	Teacher displays little understanding of the subject or structure of the discipline, or of content related pedagogy.	Teacher's content and pedagogical knowledge represents basic understanding but does not extend to connections with other disciplines or to possible student misconceptions.	Teacher demonstrates solid understanding of the content and its prerequisite relationships & connections with other disciplines. Teacher's instructional practices reflect current pedagogical knowledge.
Component 1b: Demonstrating Knowledge of Students	Teacher makes little or no attempt to acquire knowledge of students' backgrounds, skills, or interests, and does not use such information in planning.	Teacher demonstrates partial knowledge of students' backgrounds, skills and interests, and attempts to use this knowledge in planning for the class as a whole.	Teacher demonstrates thorough knowledge of students' backgrounds, skills, and interests, and uses this knowledge to plan for groups of students.
Component 1c: Selecting Instructional Goals	Teachers' goals represent trivial learning, are unsuitable for students, or are stated only as instructional activities, and they do not permit viable methods of assessment.	Teacher's goals are moderate of moderate value or suitability for students in the class, consisting of a combination of goals and activities, some of which permit viable methods of assessment.	Teacher's goals represent valuable learning and are suitable for most students in the class; they reflect opportunities for integration and permit viable methods of assessment.
Component 1d: Demonstrating Knowledge of Resources	Teacher is unaware of school or district resources available either for teaching or for students who need them.	Teacher displays limited knowledge of school or district resources available either for teaching or for students who need them.	Teacher is fully aware of school and district resources available for teaching, and knows how to gain access to school and district resources for students who need them.
Component 1e: Designing Coherent Instruction	The various ELEMENT of the instructional design do not support the stated instructional goals and engage students in meaningful learning, and the lesson or unit has no defined structure.	Some of the ELEMENT of the instructional design support the stated instructional goals and engage students in meaningful learning, while other do not. Teacher's lesson or unit has a recognizable structure.	Most of the ELEMENT of the instructional design support the stated instructional goals and engage students in meaningful learning, and the lesson or unit has a clearly defined structure.
Component 1f: Assessing Student Learning	Teacher's approach to assessing student learning contains no clear criteria or standards, and lacks congruence with the instructional goals. Teacher has no plans to use assessment results in designing future instruction.	Teacher's plan for student assessment is partially aligned with the instructional goals and includes criteria and standards that are not entirely clear or understood by students. Teacher uses the assessment to plan for future instruction for the class as a whole.	Teacher's plan for student assessment is aligned with the instructional goals at least nominally, with clear assessment criteria and standards that have been communicated to students. Teacher uses the assessment to plan for groups of students or individuals.

### Category 3/Domain 3: INSTRUCTION

COMPONENT	UNSATISFACTORY	BASIC	PROFICIENT
	1	2 3 4	5 6 7
Component 3a: Communicating Clearly and Accurately	Teacher's oral and written communication contains errors or is unclear or inappropriate to students.	Teacher's oral and written communication contains no errors, but may not be completely appropriate or may require further explanations to avoid confusion.	Teacher communicates clearly and accurately to students, both orally and in writing.
Component 3b: Using Questioning and Discussion Techniques	Teacher makes poor use of questioning and discussion techniques, with low-level questions, limited student participation, and little true discussion.	Teacher's use of questioning and discussion techniques is uneven, with some high-level questions, attempts at true discussion, and moderate student participation.	Teacher's use of questioning and discussion techniques reflects high-level questions, true discussion, and full participation by all students.
Component 3c: Engaging Students in Learning	Students are not at all intellectually engaged in significant learning, as a result of inappropriate activities or materials, poor representations of content, or lack of lesson structure.	Students are intellectually engaged only partially, resulting from activities or materials of uneven quality, inconsistent representations of content, or uneven structure or pacing.	Students are intellectually engaged throughout the lesson, with appropriate activities and materials, instructive representations of content, and suitable structure and pacing of the lesson.
Component 3d: Providing Feedback to Students	Teacher's feedback to students is of poor quality and is not given in a timely manner.	Teacher's feedback to students is uneven, and its timeliness is inconsistent.	Teacher's feedback to students is timely and of consistently high quality.
Component 3e: Demonstrating Flexibility and Responsiveness	Teacher adheres to the instruction plan in spite of evidence of poor student understanding or of students' lack of interest, and fails to respond to students' questions; teacher assumes no responsibility for students' failure to understand.	Teacher demonstrates moderate flexibility and responsiveness to students' needs and interest during a lesson, and seeks to ensure the success of all students.	Teacher seeks ways to ensure successful learning for all students, making adjustments as needed to instruction plans and responding to student interests and questions.

### Category 2/Domain 2: LEARNING ENVIRONMENT

COMPONENT	UNSATISFACTORY	BASIC	PROFICIENT
	1	2 3 4	5 6 7
Component 2a: Creating an Environment of Respect and Rapport	Classroom interactions, both between the teacher and students and among students, are negative or inappropriate and characterized by sarcasm, putdowns, or conflict.	Classroom interactions are generally appropriate and free from conflict but may be characterized by occasional displays of insensitivity.	Classroom interactions reflect general warmth and caring, and are respectful of the cultural and developmental differences among groups of students.
Component 2b: Establishing a Culture for Learning	The classroom does not represent a culture for learning and is characterized by low teacher commitment to the subject, low expectations for student achievement, and little student pride in work.	The classroom environment reflects only a minimal culture for learning, with only modest or inconsistent expectations for student achievement, little teacher commitment to the subject, and little student pride in work.	The classroom environment represents a genuine culture for learning, with commitment to the subject on the part of both teacher and students, high expectations for student achievement, and student pride in work.
Component 2c: Managing Classroom Procedures	Classroom routines and procedures are either non-existent or inefficient, resulting in the loss of much instruction time.	Classroom routines and procedures have been established but function unevenly or inconsistently, with some loss of instruction time.	Classroom routines and procedures have been established and function smoothly for the most part, with little loss of instruction time.
Component 2d: Managing Student Behavior	Student behavior is poor, with no clear expectations, no monitoring of student behavior, and inappropriate response to student misbehavior.	Teacher makes an effort to establish standards of conduct for students, monitor student behavior, and respond to student misbehavior, but these efforts are not always successful.	Teacher is aware of student behavior, has established clear standards of conduct, and responds to student misbehavior in ways that are appropriate and respectful of the students.
Component 2e: Organizing Physical Space	Teacher makes poor use of the physical environment, resulting in unsafe or inaccessible conditions for some students or a serious mismatch between the furniture arrangement and the lesson activities.	Teacher's classroom is safe, and essential learning is accessible to all students, but the furniture arrangement only partially supports the learning activities.	Teacher's classroom is safe, and learning is accessible to all students; teacher uses physical resources well and ensures that the arrangement of furniture supports the learning activities.

### Category 4/Domain 4: PROFESSIONALISM

COMPONENT	UNSATISFACTORY	BASIC	PROFICIENT
	1	2 3 4	5 6 7
Component 4a: Reflecting on Teaching	Teacher does not reflect accurately on the lesson or propose ideas as to how it might be improved.	Teacher's reflection on the lesson is generally accurate, and teacher makes global suggestions as to how it might be improved.	Teacher reflects accurately on the lesson, citing general characteristics and makes some specific suggestions about how it might be improved.
Component 4b: Maintaining Accurate Records	Teacher has no system for maintaining accurate records, resulting in errors and confusion.	Teacher's system for maintaining accurate records is rudimentary and only partially effective.	Teacher's system for maintaining accurate records is efficient and effective.
Component 4c: Communicating With Families	Teacher provides little or no information to families and makes no attempt to engage them in the instructional program.	Teacher complies with school procedures for communicating with families and makes an effort to engage families in the instructional program.	Teacher communicates frequently with families and successfully engages them in the instructional program.
Component 4d: Contributing to the School and District	Teacher's relationships with colleagues are negative or self-serving, and teacher avoids being involved in school and district projects.	Teacher's relationships with colleagues are cordial, and teacher participates in school and district events and projects when specifically requested.	Teacher participates actively in school and district projects, and maintains positive relationships with colleagues.
Component 4e: Growing and Developing Professionally	Teacher does not participate in professional development activities, even when such activities are clearly needed for the development of teaching skills.	Teacher's participation in professional development activities is limited to those that are convenient.	Teacher participates actively in professional development activities and contributes to the profession.
Component 4f: Showing Professionalism	Teacher's sense of professionalism is low, and teacher contributes to practices that are self-serving or harmful to students.	Teacher's attempts to serve students based on the best information are genuine but inconsistent.	Teacher makes genuine and successful efforts to ensure that all students are well served by the school.
Component 4g: Demonstrating Positive Personal Habits	Is often late and/or tardy. Does not perform minimum required tasks. Clothing does not allow teacher to complete required duties without interference. Hygiene does not allow students and peers to work with teacher without being offended.	Teacher is regularly in attendance and seldom if ever tardy. Generally clothing is clean and allows teacher to perform required tasks without interference. Hygiene generally allows students and peers to work with teacher without being offended.	Shows dedication by working beyond basic requirements. Is absent only when necessary. Clothing is clean and neat and allows the teacher to perform required tasks without interference. Hygiene allows students and peers to work with teacher without being offended.

**Kansas State University • College of Education • Bluemont Hall**  
*Preparing Educators to be Knowledgeable, Ethical, Caring Decision Makers*  
**Cooperating Teacher**  
 Evaluation of Student Teacher

Student Name \_\_\_\_\_ Soc. Sec. No. \_\_\_\_\_ Semester \_\_\_\_\_ Year \_\_\_\_\_  
 Name of School \_\_\_\_\_ Full Name of Evaluator \_\_\_\_\_  
 City and State \_\_\_\_\_ Subject(s) \_\_\_\_\_ Grade Level(s) \_\_\_\_\_

<p>In the boxes written on the back of this form or the ones in the handbook, underline those words which best describe your student teacher. Then place a check in the cell under the appropriate number (below) depending on which rubric box has the most underlined words.</p> <p>Generally the average of underlined words in the rubric will be selected to determine the numerical score (from 1 through 7) which best represents your student teacher's performance. For example if underlined words are:          (1) all in basic cell, check 3          (2) mostly in basic cell with some in proficient cell, check 4</p>	<p><b>My signature below indicates that I have had an opportunity to read and discuss this evaluation with my university supervisor. It does not necessarily indicate that I agree with the evaluation.</b></p> <p><input type="checkbox"/> I do want this evaluation as part of my placement file.  <input type="checkbox"/> I do not want this evaluation as part of my placement file.</p> <p style="text-align: center;">_____</p> <p style="text-align: center;">(Signature of Student Teacher)</p>
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**Unsatisfactory Basic Proficient**

	1	2	3	4	5	6	7
<b>Category 1/Domain I PERSPECTIVES &amp; PREPARATION</b>							
1. Demonstrating Knowledge of Content and Pedagogy							
2. Demonstrating Knowledge of Students							
3. Selecting Instructional Goals							
4. Demonstrating Knowledge of Resources							
5. Designing Coherent Instruction							
6. Assessing Student Learning							
<b>Category 2/Domain II LEARNING ENVIRONMENT</b>							
7. Creating an Environment of Respect and Rapport							
8. Establishing a Culture of Learning							
9. Managing Classroom Procedures							
10. Managing Student Behavior							
11. Organizing Physical Space							
<b>Category 3/Domain III INSTRUCTION</b>							
12. Communicating Clearly and Accurately							
13. Using Questioning and Discussion Techniques							
14. Engaging Students in Learning							
15. Providing Feedback to Students							
16. Demonstrating Flexibility and Responsiveness							
<b>Category 4/Domain IV PROFESSIONALISM</b>							
17. Reflecting on Teaching							
18. Maintaining Accurate Records							
19. Communicating with Families							
20. Contributing to the School and District							
21. Growing and Developing Professionally							
22. Showing Professionalism							
23. Demonstrating Positive Personal Habits							

\_\_\_\_\_  
 (Signature of Evaluator)

### Category 1/Domain 1: PERSPECTIVES AND PREPARATION

COMPONENT	UNSATISFACTORY	BASIC	PROFICIENT
	1	2 3 4	5 6 7
Component 1a: Demonstrating Knowledge of Content and Pedagogy	Teacher displays little understanding of the subject or structure of the discipline, or of content related pedagogy.	Teacher's content and pedagogical knowledge represents basic understanding but does not extend to connections with other disciplines or to possible student misconceptions.	Teacher demonstrates solid understanding of the content and its prerequisite relationships & connections with other disciplines. Teacher's instructional practices reflect current pedagogical knowledge.
Component 1b: Demonstrating Knowledge of Students	Teacher makes little or no attempt to acquire knowledge of students' backgrounds, skills, or interests, and does not use such information in planning.	Teacher demonstrates partial knowledge of students' backgrounds, skills and interests, and attempts to use this knowledge in planning for the class as a whole.	Teacher demonstrates thorough knowledge of students' backgrounds, skills, and interests, and uses this knowledge to plan for groups of students.
Component 1c: Selecting Instructional Goals	Teachers' goals represent trivial learning, are unsuitable for students, or are stated only as instructional activities, and they do not permit viable methods of assessment.	Teacher's goals are moderate of moderate value or suitability for students in the class, consisting of a combination of goals and activities, some of which permit viable methods of assessment.	Teacher's goals represent valuable learning and are suitable for most students in the class, they reflect opportunities for integration and permit viable methods of assessment.
Component 1d: Demonstrating Knowledge of Resources	Teacher is unaware of school or district resources available either for teaching or for students who need them.	Teacher displays limited knowledge of school or district resources available either for teaching or for students who need them.	Teacher is fully aware of school and district resources available for teaching, and knows how to gain access to school and district resources for students who need them.
Component 1e: Designing Coherent Instruction	The various ELEMENT of the instructional design do not support the stated instructional goals and engage students in meaningful learning, and the lesson or unit has no defined structure.	Some of the ELEMENT of the instructional design support the stated instructional goals and engage students in meaningful learning, while other do not. Teacher's lesson or unit has a recognizable structure.	Most of the ELEMENT of the instructional design support the stated instructional goals and engage students in meaningful learning, and the lesson or unit has a clearly defined structure.
Component 1f: Assessing Student Learning	Teacher's approach to assessing student learning contains no clear criteria or standards, and lacks congruence with the instructional goals. Teacher has no plans to use assessment results in designing future instruction.	Teacher's plan for student assessment is partially aligned with the instructional goals and includes criteria and standards that are not entirely clear or understood by students. Teacher uses the assessment to plan for future instruction for the class as a whole.	Teacher's plan for student assessment is aligned with the instructional goals at least nominally, with clear assessment criteria and standards that have been communicated to students. Teacher uses the assessment to plan for groups of students or individuals.

### Category 3/Domain 3: INSTRUCTION

COMPONENT	UNSATISFACTORY	BASIC	PROFICIENT
	1	2 3 4	5 6 7
Component 3a: Communicating Clearly and Accurately	Teacher's oral and written communication contains errors or is unclear or inappropriate to students.	Teacher's oral and written communication contains no errors, but may not be completely appropriate or may require further explanations to avoid confusion.	Teacher communicates clearly and accurately to students, both orally and in writing.
Component 3b: Using Questioning and Discussion Techniques	Teacher makes poor use of questioning and discussion techniques, with low-level questions, limited student participation, and little true discussion.	Teacher's use of questioning and discussion techniques is uneven, with some high-level questions, attempts at true discussion, and moderate student participation.	Teacher's use of questioning and discussion techniques reflects high-level questions, true discussion, and full participation by all students.
Component 3c: Engaging Students in Learning	Students are not at all intellectually engaged in significant learning, as a result of inappropriate activities or materials, poor representations of content, or lack of lesson structure.	Students are intellectually engaged only partially, resulting from activities or materials of uneven quality, inconsistent representations of content, or uneven structure or pacing.	Students are intellectually engaged throughout the lesson, with appropriate activities and materials, instructive representations of content, and suitable structure and pacing of the lesson.
Component 3d: Providing Feedback to Students	Teacher's feedback to students is of poor quality and is not given in a timely manner.	Teacher's feedback to students is uneven, and its timeliness is inconsistent.	Teacher's feedback to students is timely and of consistently high quality.
Component 3e: Demonstrating Flexibility and Responsiveness	Teacher adheres to the instruction plan in spite of evidence of poor student understanding or of students' lack of interest, and fails to respond to students' questions; teacher assumes no responsibility for students' failure to understand.	Teacher demonstrates moderate flexibility and responsiveness to students' needs and interest during a lesson, and seeks to ensure the success of all students.	Teacher seeks ways to ensure successful learning for all students, making adjustments as needed to instruction plans and responding to student interests and questions.

### Category 2/Domain 2: LEARNING ENVIRONMENT

COMPONENT	UNSATISFACTORY	BASIC	PROFICIENT
	1	2 3 4	5 6 7
Component 2a: Creating an Environment of Respect and Rapport	Classroom interactions, both between the teacher and students and among students, are negative or inappropriate and characterized by sarcasm, putdowns, or conflict.	Classroom interactions are generally appropriate and free from conflict but may be characterized by occasional displays of insensitivity.	Classroom interactions reflect general warmth and caring, and are respectful of the cultural and developmental differences among groups of students.
Component 2b: Establishing a Culture for Learning	The classroom does not represent a culture for learning and is characterized by low teacher commitment to the subject, low expectations for student achievement, and little student pride in work.	The classroom environment reflects only a minimal culture for learning, with only modest or inconsistent expectations for student achievement, little teacher commitment to the subject, and little student pride in work. Both teacher and students are performing at minimal level to "get by."	The classroom environment represents a genuine culture for learning, with commitment to the subject on the part of both teacher and students, high expectations for student achievement, and student pride in work.
Component 2c: Managing Classroom Procedures	Classroom routines and procedures are either non-existent or inefficient, resulting in the loss of much instruction time.	Classroom routines and procedures have been established but function unevenly or inconsistently, with some loss of instruction time.	Classroom routines and procedures have been established and function smoothly for the most part, with little loss of instruction time.
Component 2d: Managing Student Behavior	Student behavior is poor, with no clear expectations, no monitoring of student behavior, and inappropriate response to student misbehavior.	Teacher makes an effort to establish standards of conduct for students, monitor student behavior, and respond to student misbehavior, but these efforts are not always successful.	Teacher is aware of student behavior, has established clear standards of conduct, and responds to student misbehavior in ways that are appropriate and respectful of the students.
Component 2e: Organizing Physical Space	Teacher makes poor use of the physical environment, resulting in unsafe or inaccessible conditions for some students or a serious mismatch between the furniture arrangement and the lesson activities.	Teacher's classroom is safe, and essential learning is accessible to all students, but the furniture arrangement only partially supports the learning activities.	Teacher's classroom is safe, and learning is accessible to all students; teacher uses physical resources well and ensures that the arrangement of furniture supports the learning activities.

### Category 4/Domain 4: PROFESSIONALISM

COMPONENT	UNSATISFACTORY	BASIC	PROFICIENT
	1	2 3 4	5 6 7
Component 4a: Reflecting on Teaching	Teacher does not reflect accurately on the lesson or propose ideas as to how it might be improved.	Teacher's reflection on the lesson is generally accurate, and teacher makes global suggestions as to how it might be improved.	Teacher reflects accurately on the lesson, citing general characteristics and makes some specific suggestions about how it might be improved.
Component 4b: Maintaining Accurate Records	Teacher has no system for maintaining accurate records, resulting in errors and confusion.	Teacher's system for maintaining accurate records is rudimentary and only partially effective.	Teacher's system for maintaining accurate records is efficient and effective.
Component 4c: Communicating With Families	Teacher provides little or no information to families and makes no attempt to engage them in the instructional program.	Teacher complies with school procedures for communicating with families and makes an effort to engage families in the instructional program.	Teacher communicates frequently with families and successfully engages them in the instructional program.
Component 4d: Contributing to the School and District	Teacher's relationships with colleagues are negative or self-serving, and teacher avoids being involved in school and district projects.	Teacher's relationships with colleagues are cordial, and teacher participates in school and district events and projects when specifically requested.	Teacher participates actively in school and district projects, and maintains positive relationships with colleagues.
Component 4e: Growing and Developing Professionally	Teacher does not participate in professional development activities, even when such activities are clearly needed for the development of teaching skills.	Teacher's participation in professional development activities is limited to those that are convenient.	Teacher participates actively in professional development activities and contributes to the profession.
Component 4f: Showing Professionalism	Teacher's sense of professionalism is low, and teacher contributes to practices that are self-serving or harmful to students.	Teacher's attempts to serve students based on the best information are genuine but inconsistent.	Teacher makes genuine and successful efforts to ensure that all students are well served by the school.
Component 4g: Demonstrating Positive Personal Habits	Is often late and/or tardy. Does not perform minimum required tasks. Clothing does not allow teacher to complete required duties without interference. Hygiene does not allow students and peers to work with teacher without being offended.	Teacher is regularly in attendance and seldom if ever tardy. Generally clothing is clean and allows teacher to perform required tasks without interference. Hygiene generally allows students and peers to work with teacher without being offended.	Shows dedication by working beyond basic requirements. Is absent only when necessary. Clothing is clean and neat and allows the teacher to perform required tasks without interference. Hygiene allows students and peers to work with teacher without being offended.

## Glossary of Terms

*For the purpose of the KSU Intern Portfolio, the following terms have these definitions:*

**Academic Performance Levels:** Evidence that students understand the concepts and skills being taught in a given grade, subject, or unit of instruction. When completing entry 2, Contextual Factors and Student Learning Adaptations, the teacher is asked to determine the number of students performing above grade level and below grade level in an effort to enhance the learning of all students. The academic performance levels of students is also to be determined prior to, during, and after the instructional unit is taught as part of the unit assessment to help all students achieve success.

**Active Inquiry:** A teaching/learning strategy in which the students are active in the pursuit of knowledge. They are asking questions, researching, and answering their own and each other's questions. The teacher is a facilitator and guide but not the chief instructional agent. The use of inquiry does not have to be in every lesson, but it should occur often enough that it is a strong instructional component in the teaching of the unit.

**Accommodations:** An accommodation does not alter, in any significant way, the standards or goals of instruction or the ultimate outcome or expectation of instruction (i.e. assignments or tests) but provides needed support through the delivery of instruction (i.e. timing, formatting, setting, scheduling, modes of delivery, and opportunities to respond).

**Adaptations:** Those adjustments in preparation and delivery of instruction and monitoring the learning environment that are made by a teacher to provide more equitable learning opportunities by meeting the unique learning needs of any student. Adaptations also include adjustments deemed necessary to provide fair treatment of students during the assessments of learning. Adaptations include strategies used to provide *equitable learning opportunities* for all students and *accommodations* and *modifications* designed to support students with special educational needs.

**Affective Domain:** The affective domain includes objectives that emphasize feeling and emotion, such as interests, attitudes, appreciation, and methods of adjustment. At the lowest level, students simply attend to a certain idea. At the highest level, students take an idea or a value and act on that idea. Five basic objectives make up this domain: Receiving, Responding, Valuing, Organization, and Characterization by Value (developed by Krathwohl, Bloom, and Masia).

**Assessment Criteria:** Assessment criteria should be established for every objective and assessment instrument a teacher designs or uses. These criteria should be measurable (i.e., all criteria for assessment are described in measurable terms), comprehensive (i.e., essential content and skills should be assessed rather than irrelevant content or skills), and specify the minimal level of performance at which students successfully meet the learning objective (i. e., what the students need to do to demonstrate they have met the objective). The minimal levels of performance should be based on high yet reasonable expectations for student learning.

**Assessment Formats:** There are multiple formats possible for assessment instruments (i.e., multiple choice, short answer, essay, performances, portfolios, observations, etc.) The use of a wide variety of formats for assessment provides additional opportunities for diverse learners to demonstrate what they know and can do. The format for each assessment should be appropriate for measuring student performance levels of the objective being assessed.

**Classroom Environment:** Information related to issues of culture, safety, classroom management, physical environment, and socio-personal interaction that have potential to influence the learning environment.



**Cognitive Domain:** The cognitive domain includes objectives that emphasize intellectual outcomes, such as knowledge, understanding, and thinking skills. This domain is important to all areas of study. It provides a system for teachers to develop lessons that require students to move beyond memorization of facts at the knowledge level to the development of higher level thought processing skills at the synthesis and evaluation levels. The six major categories include: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation (Bloom).

**Collaboration:** The deliberate use by the teacher of educational strategies that require students to work together in pairs or other groupings to solve problems, accomplish tasks, or to achieve learning *goals*. Collaboration may include, but is not limited to, formal cooperative learning strategies.

**Community:** The individuals, families, organizations, businesses, etc living and/or functioning within and surrounding the district attendance center. The community is a critical component of the *environmental factors* to which the teacher ought to consider and use in planning and delivering instruction to build relationships and create an expanded network to support student learning.

**Community Resources:** These would include institutions, agencies, organizations, industry, students' family members with expertise/knowledge, etc. Examples would include community resources such as individuals, library, museum, hospital, local media, local businesses, or farms and community groups such as Four H or Kiwanis, etc. Community resources can be used to help make the curriculum more relevant and meaningful and to help students feel more connected to parents and the community.

**Contextual Factors:** The contextual information that is described in entry 1 Contextual Factors and Student Learning Adaptations (e.g., gender, ethnicity/culture, SES, language proficiency, academic performance levels, special needs, developmental levels etc.).

**Critical Thinking/Problem Solving:** Critical thinking/problem solving requires higher cognitive processing (e.g., using information in new ways, analyzing information/concepts and/or breaking into sub-parts or sub-concepts, making evaluations and judgments supported by appropriate rationales, creating new constructs, processes or products, etc.). Critical thinking does not include tasks which rely simply on rote learning, list making, recitation, or on simplistic manipulation of numbers, facts, or formulae.

**Developmental Characteristics:** The cognitive, physical, emotional, and social developmental levels of students. Objectives, assessments and activities should be aligned with the skills, abilities, maturity, as well as the intellectual and emotional or behavioral characteristics of the typical student at the grade or level at which one is teaching.

**Disaggregation of Data:** Organizing and reporting data from the *pre-assessment/diagnostic assessment* and *summative assessments* to show the achievement levels for *groups* present in the classroom (gender, SES, ELL, students with disabilities, ethnicity, low and high achievers, etc.)

**Equitable Learning Opportunities:** Specific strategies used to provide an equal opportunity to participate in and learn from the planned curriculum and instruction regardless of gender, ethnicity/culture, socio-economic status, language proficiency. These strategies might include maintaining high expectations for all students, use of non-biased/fully inclusive curricular resources, enhancing relevancy and building connection between the curriculum and each student's diverse background, and providing equal opportunities to participate, interact, receive academic feedback, use technology, and explore with manipulatives. Strategies might also include the use of sheltered instruction for English Language Learners and techniques to enhance academic language for students at risk of failure related to a variety of academic and social issues.



**Environmental Factors:** Circumstances or conditions in the district, school, classroom, community, and/or family that might affect the students and their learning. Environmental factors may include: type of community (e.g. urban, suburban, rural), socio-economic conditions, or district transience in the community; family considerations (e.g., large number of military families, deployed parents, highly transient families, etc.); district policies or regulations (e.g., use of curricular resources, field trip policies etc.); school practices or grade configurations (e.g., K-5, K-6, K-8, 6-8, 7-8,7-9,7-12, 9-12, 10-12); and classroom setting (e.g., multi-age, self-contained, etc.) or physical attributes of the classroom.

**Ethnic/Cultural Make-up:** The diversity of races, languages, religions, beliefs and practices of the students in your classroom. Cultural practices might include dress, typical foods, and special customs.

**Formative Assessment:** Those assessments of student performance, formal or informal, done during the unit to give both the teacher and the student feedback regarding learning and the possible need for either enrichment or remediation.

**Goals:** General learning standards or outcomes. Goals are supported by more specific learning objectives.

**Group and Subgroup:** A group is a number of students in a broad category – e.g. gender. A *subgroup* refers to a subordinate group within the group – e.g. males or females.

**Instrument:** An assessment or test for the purpose of measuring student learning or performance level.

**Integration:** The teacher has the knowledge and ability to import appropriate content, information or processes from other disciplines (subjects) as a means of expanding student thinking, and/or understanding and showing relation and relevance between subject fields i.e., a social studies teacher integrates math skills into a geographic map lesson, an English teacher incorporates history lessons into a Renaissance Literature unit, an elementary teacher integrates math, science, social studies, and language arts into a unit.

**Language Proficiency:** A student's fluency with the English language. There are a variety of terms educational organizations use to describe students who are not native speakers of English (i.e., ESL students, ESOL students, CLD students etc.). In the student teaching portfolio, the term English Language Learners (ELL) is used.

**Learner-centered Instruction:** Classroom learning activities in which the learner and not the teacher is the center of focus. The teacher may serve as facilitator but not as presenter or director. The student works independently or in a small *group* that is in charge of the learning sequence, timing, goal setting, and production of evidence of learning.

**Learning Context:** Information about the school, community, or individual students that should impact the manner in which the teacher plans, executes, and assesses learning for all students in the class.

**Low and High Level Objectives:** When Bloom (1956) originally presented his *Taxonomy of Educational Objectives*; he described six cognitive objectives as hierarchically arranged from low-level (knowledge, comprehension) to high level (application, analysis, synthesis, evaluation), with higher-level objectives building on the lower ones. Bloom's cognitive objectives can be used when planning instruction and assessment. True/false, matching, multiple-choice, and short answer items are often used to assess knowledge and comprehension (low-level objectives). Essay questions, class discussions, projects, position papers, debates, student work products, and portfolios are especially good for assessing application, analysis, synthesis, and evaluations (high level objectives).

**Modification:** A modification is an adjustment in the ultimate standard, goal, outcome, or expectation of instruction (i.e. a change in the standard the assignment or test is designed to measure). A student may complete part of a standard or a revised goal. He or she may complete an alternative assignment or test that has been aligned with the revised goal to more appropriately meet his or her learning needs. Appropriate modifications are usually described in a student's IEP.

**Non-Verbal Communication Among Students:** The use of positive non-verbal strategies could include, but is not limited to the following: using hand or body movements to indicate understanding, showing answers, raising hands up, nodding, using eye contact, smiling etc. These non-verbal strategies fall generally into the categories of active listening and will complement such things as use of body language, paying attention, facing the speaker, etc.

**Objective:** A statement of what students should be able to do as a result of instruction. Objectives must be specific, observable and measurable. They should be focused on the outcomes expected from the instruction and not on the activities done as a part of instruction.

**Pre-Assessment/Diagnostic Assessment:** This is given before instruction to identify the students' performance levels, skills, or knowledge about the topic that is about to be taught. The teacher uses this assessment to determine students' previous knowledge in order to prepare or adjust objectives appropriately.

**Psychomotor Domain:** The psychomotor domain is concerned with motor skills and the performance of the skill. This domain is important to sciences, family and consumer science, technology, physical education, art, and music teachers. The major categories range from perception at the lowest level to origination at the highest level. The seven major categories include: Perception, Set, Guided Response, Mechanism, Complex Overt Response, Adaptation, and Origination (developed by Simpson,).

**Quality Performance Accreditation (QPA):** A process by which schools are assigned a status based upon performance and quality criteria established by the state board. The performance criteria include meeting state requirements on assessments, attendance, and for high schools, graduation rates. There are eleven quality criteria that include a school improvement plan, a staff development plan and having fully qualified staff. Schools may be assigned one of four levels of accreditation status ranging from "Accredited" to "Not Accredited".

**Readiness:** Student readiness is the students' previous knowledge, skills and understanding of concepts related to the unit objectives. It includes the knowledge that is foundational to achievement of the current unit's objectives as well as previous knowledge of the concepts to be taught.

**Reading:** Understanding the communication of written ideas through skills taught by every teacher across the curriculum. Every teacher should reinforce important reading skills by incorporating them into instruction every day. Some teaching strategies include vocabulary building; using content-based reading material to help students identify main ideas and supporting information; providing questions to generate interest in a reading passage; and many developed systems to teach reading skills such as QAR, SQ3R, and KWL, which all involve questioning and reviewing.

**Rubric:** An assessment tool that defines quality of performance as well as identifying skills, knowledge, or concepts possessed by the student.

**Special Needs:** A description of students with special needs should not be limited to IEP's. Students with social, familial, emotional, cognitive, language and/or other needs should also be addressed. Students who are functioning below grade level or who have difficulty in reading could be included in the special needs area.

**State/District Standards or Local Curriculum Outcomes:** Objectives should be aligned with state standards. These are available online at <http://www.ksde.org/outcomes/siacurrstds.html>. However, for areas where there are no state standards, teachers should use district standards or local curriculum outcomes.

**Subgroup:** A group is a number of students in a broad category – e.g., gender. A *subgroup* refers to a subordinate group within the group – e.g. males or females.

**Summative Assessment:** A comprehensive test given at the end of the unit of instruction to check the level of student learning.

**Taxonomy of Educational Objectives:** The Taxonomy of Educational Objectives is a three-domain scheme (cognitive, affective, and psychomotor) for classifying instructional objectives. Each domain is organized in hierarchical order, ranging from low-level categories to high-level categories. The system is based on the assumption that learning outcomes can be described in terms of changes in student performance. Therefore, the taxonomy provides a structure for writing instructional objectives in performance terms (Gronlund).

**Technology:** Technology includes a wide range of technological tools that a teacher can use to enhance instruction. Examples would include audio-visual devices, computers, calculators, cameras (video and still), adaptive technology, robotics, etc. As part of the unit instructional design, teachers should use technology for researching, planning, and teaching their lessons and students should use technology to develop technological capabilities and to enhance their learning of the content.

**Unit Learning Goal:** The primary goal set by the teacher to guide the learning. The unit learning goal is stated in terms of student performance. It will be further subdivided into subordinate tasks or unit objectives.

## Resources

Bridges, N., DeNoon, D., Fridell, J., (2002). *K-State Intern Portfolio Instructions*. Manhattan, KS: Kansas State University College of Education.

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Danielson, C. (1996). *Enhancing Professional Practice: A Framework for Teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.

Dunn, C., Zolnerowich, B. (2002). *Student Handbook, EDSEC 102, Teaching as a Career*. Manhattan, KS: Kansas State University College of Education.

*Framework Observation Program*. (2001). Princeton, N.J.: Educational Testing Service.

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*The Kansas Performance Assessment.* (2004) Topeka, KS: Kansas State Department of Education.

*National Board Certification: A Guide for Candidates.* (2000). Washington, D.C.: American Federation of Teachers.

*Student Teacher's Portfolio Handbook.* (2000). PDK Ball State University Teachers College. Published and distributed by Phi Delta Kappa International Center for Professional Development and Services, Bloomington, IN

## Culturally Responsive Teaching Definitions & Theories

Banks (1980 & 2004)  (Multicultural Education)	Sonia Nieto (2004) pp. 346-361  (Multicultural Education )	Gloria Ladson- Billings (1992)  (Culturally Responsive Teaching)	Geneva Gay (2000)  (Culturally Responsive Teaching)	Villegas & Tamara (2002)  (Culturally Responsive Teaching)	Synthesis
<b>Content Integration</b>					
Content integration – the extent to which teachers use examples and content from a variety of cultures and groups to illustrate key concepts, principles, generalizations, and theories in their subject area or discipline.	<i>Pervasive</i> – it permeates everything: the school climate, physical environment, curriculum, and relationships among teachers and students and community. Multicultural education is a philosophy, a way of looking at the world, not simply a program or a class or a teacher. (p. 354)	conceptions regarding self and others; they cajoled,... the student to work at high intellectual levels; teachers made a conscious decision to be part of the community from which their students come; attempt to support and instill community pride	Is multidimensional – encompasses curriculum content, learning context, classroom climate, student-teacher relationship, instructional techniques, and performance assessments	(2) developing an affirming attitude towards students from culturally diverse backgrounds; acknowledge the existence and validity of a plurality of ways of thinking, talking, behaving, and learning. p. 23	Content integration is the inclusion of content from many cultures, the fostering of positive teacher- student relationships, holding high expectations for all students, and the use of research-based instructional strategies that reflect the needs of a diversity of backgrounds and learning styles.
	<i>Critical pedagogy</i> – it acknowledges rather than suppresses cultural and linguistic diversity...it reflects on multiple and contradictory perspectives to understand reality more fully. p. 359	conceptions regarding social relations; teacher-student relationships are equitable and reciprocal; encourage a community of learners rather than competitive, individual achievement			

**Facilitating Knowledge Construction**

<p>Knowledge construction – the extent to which teachers help student understand, investigate, and determine...biases... influence...knowledge</p>	<p><i>Basic education</i> – at the very least we would expect all students to be fluent in a language other than their own, aware of the literature and arts of many different peoples, and conversant with the history and geography not only of the US but also of African, Asian, Latin American, and European countries.</p>	<p>conceptions regarding knowledge; knowledge was about doing; teachers helped their students engage in a variety of forms of critical analyses</p>	<p>Is emancipatory – liberating in that it releases the intellect of students of color from the constrains of mainstream ways of knowing</p>	<p>(4) understanding the constructivist foundations of culturally responsive teaching; To support students’ construction of knowledge, teachers must help learners build bridges between what they already know and believe about the topic at hand and the new ideas and experiences to which they are exposed. p. 25</p>	<p>Facilitating Knowledge Construction is defined as the teacher’s ability to build on what the students know as they assist them in learning to be critical, independent thinkers who are open to other ways of knowing.</p>
				<p>(6) cultivating culturally responsive teaching practices.” (p. 27); create classroom environ. to encourage students to make sense of new ideas, rather than memorize information p. 28</p>	

**Prejudice Reduction**

<p>Prejudice reduction – focuses on the characteristics of students’ racial attitudes and how they can be modified by teaching methods and materials.</p>	<p><i>Antiracist education</i> – pays attention to all areas in which some students are favored over others: the curriculum, choice of materials, sorting policies, and teachers’ interactions and relationships with students and their</p>	<p>a willingness to nurture and support cultural competence, while maintaining cultural integrity</p>	<p>Is transformative – defies conventions of traditional education; it is explicit about respecting the cultures and experiences of ethnic students of color and uses these as worthwhile resources for teaching and learning</p>	<p>(1) gaining sociocultural consciousness; an understanding that people’s ways of thinking, behaving, and being are deeply influenced by such factors as race/ethnicity, social class, and language. ...[they must come to]</p>	<p>Prejudice reduction is defined as the teacher’s ability to use a contextual factors approach to build a positive, safe classroom environment in which all students are free to learn regardless of their race/ethnicity, social class, or language.</p>
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	families			understand their own sociocultural identities but also come to recognize the intricate connection between schools and society. p. 22	
	<i>important for all students</i> – Multicultural education is by definition inclusive. ...it is about all people, it is also for all people, regardless of their ethnicity, social class, language, sexual orientation, religion, gender, race, or other difference...students from the dominant culture need ME more than others because they are...the most miseducated about diversity.				
<b>Social Justice</b>					
Empowering school culture – examination of grouping, labeling, sports participation, disproportionality in achievement, and the interaction of the staff and the students across ethnic and racial lines...	<i>education for social justice</i> – developing a multicultural perspective means learning how to think in more inclusive and expansive ways, reflecting on what we learn, and applying that learning to real situations. p. 355	the development of sociopolitical or critical consciousness; helping students to recognize, understand, and critique current social inequalities	Is validating – using the cultural knowledge to make learning encounters more relevant and effective	(3) developing the commitment and skills to act as agents of change;	Social justice is the teacher’s willingness “to act as agents of change” (Villegas), while encouraging their students to question and/or challenge the status quo in order to aid them in “the development of sociopolitical or critical consciousness”

					(Ladson-Billings)
<b>Academic Development</b>					
Equity pedagogy – exists when teachers modify their teaching in ways that facilitate...achievement of students from diverse racial, cultural, and social class groups.	<i>Is a process</i> – it is ongoing and dynamic, it involves primarily relationships among people, it concerns intangibles.	an ability to develop students academically,	Is comprehensive – teach the whole child; high expectations, skill instruction, interpersonal relationships built;	(5) learning about students and their communities; last paragraph p. 27...strategies to help preservice teachers create opportunities in the classroom...	Academic development is defined as the teacher’s ability to “create opportunities in the classroom” (Villegas) that aid all students in developing as learners to achieve academic success.
			Is empowering – enables students to be better human beings and more successful learners; encourages students to take risks in learning		