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# Math, Science, and Social Studies Teachers' Attitudes toward Diversity and Accommodation of Diversity With Reference to Culturally and Linguistically Diverse Seventh, Eighth, and Ninth Grade Students in a Mid-South State

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MATH, SCIENCE, AND SOCIAL STUDIES TEACHERS' ATTITUDES TOWARD  
DIVERSITY AND ACCOMMODATION OF DIVERSITY WITH REFERENCE TO  
CULTURALLY AND LINGUISTICALLY DIVERSE SEVENTH, EIGHTH, AND NINTH  
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GRADE STUDENTS IN A MID-SOUTH STATE

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy in Curriculum and Instruction

By

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## **ABSTRACT**

The purpose of this study was exploring seventh, eighth, and ninth grade teachers' attitudes and beliefs in response to classroom diversity and how that is reflected on their instruction, learning styles, communication patterns, instrumental materials, and assessment patterns in math, science, and social studies subject areas. In this mixed-method research, the designed survey consisted of 59 questions based on Likert scale and obtained information of ten demographic factors. The survey was delivered in two formats (online link and hard copy) to the participating schools in three urban school districts in a Mid-South State. The survey data were analyzed by using both frequency distribution to report descriptive statistics and percentages, and analysis of variance (ANOVA) techniques to identify possible significant differences related to the demographic factors.

Face-to-face semi-structured interview and classroom observation instruments were employed to collect the data provided by teachers who completed the survey and agreed to be interviewed and observed in practice. The interview instrument consists of ten open-ended questions, while the interviews and observations were transcribed and coded for further analysis and presented under each theme in order to provide more comprehensive data and better understanding of the teachers' attitudes and beliefs.

The results showed the attitudes reported by the participant teachers on seven main themes namely value student's culture and language, inclusion, teachers' beliefs, teachers' expectations, training and preparation, learning needs, and teaching methods/teacher-student communication patterns. These themes were developed and modified essentially to serve the purpose of this research that were found to be effective as suggested by literature and previous researches.

The analyzed results identified the teachers' positive and negative attitudes. The participants exhibited positive attitudes reflected their awareness, understanding, and appreciation of culturally and linguistically diverse (CLD) students' cultures, experiences, and language. They welcomed CLD students' inclusion in their subject area classrooms, and held high expectations for all of their students. Simultaneously, they exhibited negative attitudes towards integrating multicultural contents, assessment patterns, utilizing students' first language, applying different learning styles, using different communications patterns, and meeting the different learning needs of CLD students. Additionally, the results identified some significant differences related to the demographic factors.

In conclusion, the research findings identified some possible issues behind teachers' negative attitudes to serve this population of students. In addition, limitations and suggestions for future research were presented.

**Keywords:** Cultural/Language competent, Classroom observation, Communication patterns, Culturally and linguistically diverse students (CLD), Diversity, Inclusion, Learning needs, Learning methods, Middle/Junior high grades, Mixed methods, Social constructivism theory, Subject area teachers, Teacher attitudes, Teacher expectations, Teaching methods, Qualitative data analysis, Quantitative data analysis.

**This dissertation is approved for recommendation  
to the Graduate Council.**

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## DISSERTATION DUPLICATION RELEASE

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## **Chapter One**

### **Introduction**

The cultural and linguistic diversity of the student population in the United States schools is increasing, while the diversity of the teaching force is decreasing (Simpson et al., 1993; Turnbull et al., 1999). Between 1972 and 2004 the percentage of students of color increased from 22% to 43% of the schools population (Dillon, 2006; Banks, 2009). According to the U.S. Census 20.4% of the population of the United States between the ages of 5 and 17 speak a language other than English at home (U.S. Census, 2012). There are, approximately, 400 languages spoken by English language students in grades K-12 across the U.S. today (Kindler, 2002).

The learning process should be as diverse and unique as students themselves. Cultural and linguistic diverse (CLD) students present unique challenges that affect teacher attitudes towards them and the learning environment (Gollnick and Chin, 2009). The phrase “cultural and linguistic diverse students” is used here to refer to students in the United States who are usually from the families of African American, Asian, Latin, and Native Americans, or others. The term also refers to speakers of a home language other than standard American English.

Although, teachers play an important role in the teaching process, they often face challenges when trying to determine how best to support these diverse learners in a way that allows them to reach their potential. Their attitudes, therefore, should be directed towards adaptation of new educational strategies in which students’ cultures and languages are used to develop effective classroom instruction and environment. These educational strategies will certainly help CLD students to learn the content area and the skills that are an integral component of school curriculum (Gollnick and Chin, 2009).

The teachers' aptitude to successfully teach students who come from cultures other than their own crucially requires developing certain personal and interpersonal sensitivities. In addition, it necessitates developing certain bodies of cultural knowledge to raise the learning achievement of CLD students as a consequence (Diller and Moule, 2005). Teachers should have the ability to integrate and transform their knowledge about CLD students into specific standards, policies, practices, and attitudes used in appropriate cultural settings to increase the quality of teaching and to enhance CLD students' learning. The assumptions of multicultural education and ethnic studies, however, have affected the integration of some ethnic content in the curriculum. Teachers should understand that the inclusion of content related to CLD students culture and language is essential (Banks, 2009).

The integration of diverse cultural content in the curriculum could be accomplished by teachers through four levels/approaches as Banks (2009) recommends. In the contribution approach (first level), the author argues that teachers focus on heroes, holidays, language, and other cultural elements. In the additive approach (second level) teachers add content concepts, themes, and perspectives without changing the basic structure, purpose and characteristics of the curriculum. In the transformative approach (third level) teachers make changes in curriculum structure to enable students to view concepts, issues, events and themes from the perspective of CLD students. In the social action approach (fourth level) students are asked to make decisions on important social issues and take actions to help solve these problems (Banks, 2009).

Other research, however, indicates that teachers do not fully recognize that their CLD students come from very different backgrounds, and that customs, thoughts, ways of communicating, values, traditions, and institutions vary greatly among mainstream students and CLD students. Teachers do not understand that the choices that individual students make are

powerfully affected by their own culture (Tatto, 1996; Diller and Moule, 2005). Teachers' beliefs influence their teaching practices, and these beliefs are often resistant to change (Kagan, 1992; Kennedy, 1990; Weinstein, 1989). The cultural self-assessment process might aid teachers to see how their actions and attitudes affect students who come from cultures other than their own (Diller and Moule, 2005).

I propose that teachers' attitudes towards diversity and the accommodation of diversity are related to the existence of CLD students in the mainstream classroom and social interactions between teachers and CLD students that occur on a daily basis. However, teachers' beliefs, training skills, understanding of cultural diversity and the accommodation of that diversity affect their attitudes towards CLD students. Teachers' attitudes, however, are entrenched in their previous communication patterns, their classroom instructions, students' learning styles, students' cultures, instrumental materials and their assessment patterns.

Because of these complex social interactions, the conceptual framework of this study will be based on social constructivist theory which will be discussed broadly herein.

The social constructivist theorists view success and failure in the learning process as collaborative social activities of school systems, teachers, students, communities, and families (McDermott and Gospodinoff, 1981). Therefore, giving more consideration to issues of culture, primary language, and social class is crucial to increase CLD students learning achievement (Reyes, 1991). From their perspective, research on poor CLD students' academic achievement should be explained in terms of the societal conditions that created and sustained over time through students' daily school interactions and experiences. The ability of CLD students to speak standard English and the extent to which they are able to participate in classroom discussions and activities have an important impact on the reality created by the teacher (Au, 1998). The main

objective of this study is exploring teachers' attitudes towards diversity and the accommodation of diversity regarding CLD students learning achievement.

Lachat (2003) indicates that many quantitative research surveys have been used to measure teacher beliefs and attitudes. There are fewer qualitative or mixed method studies exploring the effects of teacher attitudes and practices on learning achievement in mainstream classrooms (Lachat, 2003). This study will utilize a survey, interviews, and classroom observation instruments intended to gauge teacher attitudes. With this study I hope to add to the body of knowledge regarding CLD students' achievement in mainstream classrooms.

### **Statement of the Problem**

Due to the homogeneity of the teaching force and the increasing diversity of the student population, it is urgent to have an understanding of and knowledge about different cultures (Dooly, 2003). It is important to know the depth of inter-cultural understanding that teachers bring to the classroom and to understand the role that research plays in changing the picture to ensure social justice for all students. Teachers are a major element in promoting social justice in education (Hollins and Guzman, 2005; Phuntsog, 1999). Social justice teaching occurs when the process is based on students' ability, needs, and cultural values that foster a lasting educational foundation on all students regardless of their backgrounds. When teachers possessing the ability and skills developing lesson plans and units to improve knowledge for all students (Vaughn et al., 2007). It also involves building a curriculum which acknowledges and reflects all students experiences (Nieto, 2004). As a result a curriculum and teaching practices that match students' diverse backgrounds (Vaughn et al., 2007).

Because teachers play such an important role in the teaching process, both in terms of what content is taught and what methods are used to teach it, studying the underlying attitudes of

teachers with CLD students in mainstream classrooms would help educators better understand the types of experiences that both CLD students and their teachers have, as well as existing teacher-student social interactions within the classroom.

One of the most critical challenges facing teachers today is how to provide a high quality of education for all students in all types of diversity settings. Social justice starts from this point. To improve the learning achievement of all students, regardless of cultural or linguistic background, society should ensure that teachers be capable of teaching a diverse student population (Hollins and Guzman, 2005). Research indicates that the valuation of diversity is not clearly evident in teacher attitudes, instructional practices, curricula, and school policies (Curran, 2003; Everhart and Vaughn, 2005; Gibson, 1984; Tatto, 1996). Teaching attitudes and practices have received less attention in the research literature, in part because they tend to be more difficult to measure or quantify (Palardy and Rumberger, 2008). Boute in (2008) indicates that teachers in general do not pay much attention to cultural and linguistic diversity issues in the teaching and learning process. It is critical, therefore, for teachers to understand that students' cultural, social background and language is linked to the poor performance of the CLD students. Furthermore, teachers must consider issues of diversity and equity to ensure that social justice for all students is attained (Boutte, 2008).

Teacher attitudes must reflect an understanding and appreciation of other cultures that are different from their own. They should judge each student through the student's particular cultural norms. Teachers must be enabled to be culturally responsive in order to narrow the gap between students and school culture. This would play a critical role in enhancing student academic achievement (Kambutu and Thompson, 2005; Nelson, 2008).



However, the academic performance of CLD middle scholars in math, science social studies and other content area improved dramatically during the 1970s and 1980s. The achievement gap reached its narrowest in 1990 between CLD students and mainstream students. Gap achievement narrowing continued until 1992. After 1992 the achievement gap starts widening rapidly (Haycock, 2001). A few research studies are found with a main focus on promoting science learning and achievement of students from culturally and linguistically diverse backgrounds (Ku et al., 2004).

Math and science education, however, have generally been ignored in multicultural education literature, while issues related to students' culture and first language have been addressed poorly in small-scale studies (Lee, 2005). Variety of measures, including large-scale standardized test scores in science indicate to a significant degree achievement gaps between students from culturally and linguistically diverse backgrounds (Ku et al., 2004).

### **Purpose of the Study**

The purpose of this study is to explore the attitudes of seventh, eighth, and ninth grade math, science and social studies teachers who have culturally and linguistically diverse students in their mainstream classrooms, measure the effect of teacher attitudes towards inclusion of culturally and linguistically diverse students, and gauge their attitudes toward accommodation of that diversity on CLD students' learning achievement in their content area classrooms. The study area comprises 16 middle/junior high schools within three schools districts. A representative sample of participating teachers, seventh, eighth, and ninth grade were chosen for this research.

The focus on seventh, eighth, and ninth grade teachers could be attributed to different justifiable reasons such as: (a) Seventh grade considered being the first school year in which students have different teachers for each of their subject areas (i.e. different groups of teachers)

namely math, science and social studies. (b) Helping the researcher enlarging the sample pool of participants. (c) Compare between the three groups of teachers based on their subject teaching areas and grade levels (seventh, eighth, and ninth grade). Beside other predictors to investigate the significant difference in their attitudes towards diversity and the impact on CLD mainstreamed students' academic achievement. (d) Middle and/or junior high schooling is a critical academic period for CLD students in such grade levels as it should prepare them successfully transferring to high school. Although, the dropout rate among CLD middle school students is currently on the rise, unfortunately very little has been done to solve such a dilemma (Rumberger, 1995).

One of the main factors that lead CLD middle school students developing a low self-esteem and frustration are primarily low literacy skills and the schools have not been culturally and linguistically sensitive to the diverse needs of this population of students. Nevertheless, middle schools are still being unsuccessful addressing the educational needs of CLD students. Also, schools are failing to work on keeping these students enrolled and not dropping out (Brewster and Bowen, 2004; Mcbay, 1989; Okazawa-Rey, Anderson and Traver, 1987; Rumberger, 1995; Schmid, 2001; Clotfelter et al., 2012).

For the purpose of this investigation, seven general areas in teachers' attitudes towards diversity and the accommodation of diversity were addressed. These areas are:

(1)Valuing CLD Students' Cultures and Languages, (2) Attitudes towards Inclusion, (3) Teachers' Beliefs about CLD Students Enrolled, (4) Teachers' Training, (5) Teachers' Expectations, (6) Teachers' attitudes towards CLD Students' Needs, and (7) Teaching Methods and Teacher-Student Communications.

## **Research Questions**

What are the attitudes of math, science, and social studies subject area teachers towards diversity and accommodation of diversity that are employed in classroom to meet the needs of seventh, eighth, and ninth grade culturally and linguistically diverse students' learning? In crafting the answer for the main research question, I am focusing on four sub-questions:

1. What are the attitudes of math, science, and social studies subject area teachers towards having seventh, eighth and ninth grade culturally diverse students in their mainstream classroom?
2. What are the attitudes of math, science, and social studies subject area teachers towards having seventh, eighth and ninth grade linguistically diverse students in their mainstream classroom?
3. What are the attitudes of math, science, and social studies subject area teachers towards accommodation of diversity that are used in classroom to meet the needs of seventh, eighth, and ninth grade linguistically diverse students' learning?
4. What are the attitudes of math, science, and social studies subject area teachers towards accommodation of diversity that are used in classroom to meet the needs of seventh, eighth, and ninth grade culturally diverse students' learning?

## **Conceptual Framework**

The foundation of this theoretical framework will be built on social constructivism and its application to research on teacher attitudes towards diversity and learning achievement.

Consistent with the social constructivist approach this study will explore the major explanations of teachers' attitudes regards having CLD students in their mainstream classrooms. How teachers' accommodation of diversity, however, translated into teachers' communication

patterns, instructions patterns, assessment patterns, students' learning styles, instrumental materials, students' language skills, and students' cultures in order to meet CLD students' needs.

Social constructivism is based on the premise that learning occurs through interactive communication and social activities. It is defined as learning within a social context (Stage et al., 1998), and holds that establishing an appropriate pattern of communication with students is fundamental for effective teaching.

From the constructivists point of view the learning process is a process where students connect their prior knowledge with the new knowledge, construct their own understanding and make new discoveries (Garcia, 1999; Tharp and Gallimore, 1988). CLD students' development and learning increase when their constructing knowledge happens in a meaningful cultural, linguistic, and cognitive environment that connects their prior knowledge with the new knowledge (Ku et al., 2004).

Social constructivists view reality as a process of meaningful social interaction and knowledge is the product of this interaction (Au, 1998; McMahon, 1997). From the social constructivists' view teachers construct some "reality" based on their attitudes towards having CLD students in their classrooms. The ability of CLD students to speak Standard English and to participate in classroom activities has an important impact on that reality. The cultural role, therefore, is essential in constructing knowledge (Driver et al., 1994; Derry, 1999; McMahon, 1997). In other words, they emphasize the process of knowledge construction by the social group and the intersubjectivity established through the interactions of the group (Au, 1998).

From the social constructivist's point of view success and failure in the learning process are the result of collaborative social activities of school systems, communities, teachers, students, and families (McDermott and Gospodinoff, 1981). Research on poor CLD students learning

achievement, therefore, should be explained in terms of societal conditions that created it and sustained it over time through students' daily interaction and experiences in school (Au, 1998). Social constructivists believe that the dilemma of poor CLD students learning achievement can be treated by giving more consideration to issues of culture, primary language, and social class (Reyes, 1991).

From the social constructivists' perspective teaching strategies should align well with teaching methods. Teachers can use different strategies and methods to ensure that all students have equal opportunities to learn. Teaching strategies are ways that teachers utilize to explain to their students the subject of interest (Borich, 2006). Methods of instruction from constructivists view support learning processes by involving cognitive activities, instructional guidance and curricular focus (Savery and Duffy, 2001). Social constructivists believe that using classroom activities with different learning styles is essential to meet the needs of diverse students and helps all students retain information and strengthen understanding (Borich, 2006). Culturally responsive teaching methods should utilize students' cultures and experiences as resources for teaching and learning rather than as a deficit (Cummins, 2000; Valenzuela, 1999). The teaching process should be more student directed in lesson instructions and assessment than rely on teacher control (Solomon, 2005). This model of teaching, however, may encourage seventh, eighth, and ninth grade teachers seriously considering the significance of using students' cultures, and primary language as teaching resources to increase CLD students learning achievement.

Teachers play a significant role in the education process. Such a role is clear in terms of what subject matter is taught and what instruction and methods are used in the teaching process. I assume that studying teacher' attitudes towards CLD students from different perspectives will

assist educators to better understand the different experiences of teachers and students, communication patterns and social interaction in the classroom.

Au (1998) argues that the continuation of poor CLD students' achievement is related to linguistic differences, cultural differences, discrimination or societal racism, poverty, and inferior education. In this research study my main focus will be on linguistic differences and cultural differences. Social constructivists believe that achievement gap between CLD students and mainstream students is because of exclusion or limited use of CLD students' first language in instruction (Snow, 1990). Many teachers undervalue students' home language and consider it as a deficit (Au, 1998). Teachers, however, must change their attitudes and actions towards CLD students. Teachers should redefine their roles and design pedagogy that encourages CLD students to use their first language to connect their prior knowledge with their new knowledge and construct their own understanding (Cummins, 2000). Cummins also argues that modifying assessment patterns should be done by integrating culturally responsive instructional and assessment practices, to assure equity and diversity in the evaluation of CLD students (Cummins, 2000).

### **Summary**

This chapter presented the introduction of the research problem, the statement of the problem, and the purpose of the study. However, the research questions and the conceptual work related to the investigated subject (teacher attitudes towards culturally and linguistically diverse students), they were also discussed and justified here.

## **Chapter Two**

### **Introduction**

This chapter will provide a review of the literature that informed my study about the effect of teacher attitudes towards culturally and linguistically diverse students on their learning in middle/junior high schools mainstream classrooms. The literature review is grouped under three interrelated headings: teacher attitudes towards value of culturally diverse students' cultures and languages, teacher attitudes towards the inclusion of linguistically diverse students, teacher attitudes towards modification of instruction and assessment patterns. To justify this research discussion and results, each of these headings is related to the research question and sub-questions through several specific studies and findings that have comparable answers and results. The topic of accommodation of diversity is implied through the discussion of modification of instruction, assessment patterns, learning styles, instrumental materials, communication.

### **Literature Review**

The relationship between teachers and student learning began to be recognizing in past research several decades ago. Coleman (1966), for instance, examined teacher background characteristics, including years of experience, education level, and performance on a vocabulary test. Coleman reports that teacher background characteristics had a larger effect on student achievement than any other general class of school effects except student body composition (Coleman, 1966). Since then, many studies have been conducted on the relationship between various aspects of teacher quality and student learning. Three aspects that have primarily received the most attention are teacher background characteristics, teacher attitudes, teacher beliefs, and teacher instructional practices (Palardy and Rumberger, 2008).

The continuation of the achievement gap between culturally and linguistically diverse students generated a large amount of studies on improving learning experiences and performance of culturally diverse students. Achievement gap as a term refers to the variation in student academic achievement as based on standardized tests. The term achievement gap describes the difference of students' achievement between culturally, linguistically and economically disadvantaged diverse students and mainstream middle-class students (Ladson-Billings, 2006). Regarding standardized tests results, schools are ranked in comparison to other schools. Although, since the 1990s standardized tests and their implications are the primary, if not the only, tool of evaluation in public schools. Students' high performance on these tests is critical since budgetary decisions as well as sanctions are tied to standardized tests outcomes as dictated by the No Child Left Behind (NCLB) legislation. Unluckily, schools categorized as low-performing are usually the schools with a high percentage of CLD students (Oakes, 2002). Johnson (2002) emphasizes the importance of standardized tests as an evidence of the persistent gaps in student academic achievement among African American, Latino and Native American students on one hand, and White and Asian students on the other hand.

For a period over 20 years the National Assessment of Educational Progress examined the achievement gap between students of culturally and linguistically diverse backgrounds and mainstream students. The results indicate that the achievement gap is narrowing to some extent. However, students of diverse backgrounds are not learning as well as their white peers (Mullis and Jenkins, 1990).

According to Gay (2000) the cultural disconnect between CLD students' home and school culture is another factor which grounds the achievement gap between CLD students and mainstream students in schools (Gay, 2000). Minimizing the achievement gap in today's schools



requires implementing a culturally responsive curriculum represents cultural differences of all students (Gay, 2000). Culturally responsive teaching is critical to reduce the gap in achievement between CLD students and mainstream students. Teachers need to utilize different teaching methodologies to assess students' strengths and use diverse strategies for teaching and learning (Delpit, 2006). In general, teachers need to be well prepared to have the abilities and the skills to develop a culturally responsive curriculum, diverse teaching strategies, and alternative assessments, to develop themselves into a culturally responsive teachers, in order to increase learning performance for all students and reduce the achievement gaps in urban schools (Delpit, 2006; Ladson-Billings, 2006).

### **Teacher Attitudes towards valuing culturally and Linguistically Diverse Students (CLD)**

In today's classrooms, it is normal to find three or more different languages and cultures represented. Therefore, it is challenging for teachers to offer an excellent education to culturally and linguistically diverse students (CLD) who came from different background and experiences (Colarusso and O'Rourke, 2010). Maxwell-Jolly (2008) adds that meeting the needs of CLD students and understanding how diversity affects students' learning is crucial, however, this creates a challenge for teachers. Nieto and Bode (2008) argues that culturally diverse students are often suffering at school. Teachers with negative attitudes often unfairly stereotype students as students at risk of failure in school based on their economic status, speaking a language other than standard English, and coming from cultures different than the dominant culture. Such stereotyping within the classroom prevents CLD students from reaching their potential (Nieto and Bode, 2008).

Several research studies assert that teachers' lack of exposure or interaction with students from diverse cultural backgrounds is behind the poor CLD students' performance (Darling-

Hammond and Berry, 1999; Schultz et al., 1996). Many teachers have never been in a school or lived in a culturally diverse neighborhood (Capella-Santana, 2003). For the most part, they have no knowledge about their students past experiences or their cultural background to bring into the classroom (Barry and Lechner, 1995; Darling-Hammond and Berry, 1999; Gilbert, 1995; Larke, 1990; Schultz et al., 1996). Teachers in today's classroom generally are not prepared with proper multicultural education or with appropriate training and skills to teach in diverse settings (Banks, 1991; Calderon, 2006; Echevarría et al., 2008; Everhart and Vaughn, 2005; Gay, 2010; Nieto and Bode, 2008).

Teachers, in general, enter the teaching profession with a preference to teach students similar to their own educational experiences (Terrill and Mark, 2000). Teachers, however, need to learn and to rethink their mission as educators. They need to understand that their lack of multicultural experience is one of the main factors which sustain CLD students' poor academic performance (Shakespeare et al., 2003; Fuller, 1992). Sobel and Tylor (2001), however, argue that meeting the educational needs of all the students in today's diverse classrooms is a call for teachers to put more efforts to make that happen. Building positive attitudes towards CLD students' ability of learning is urgent. It is based on teachers' beliefs and understanding that all culturally and linguistically diverse students can do well in academic endeavors when their culture, language, and experiences are valued and used to facilitate their learning and development (Gay, 2000; Nieto, 1999; Valenzuela, 1999). Teachers' aptitude of developing culturally responsive instructions, therefore, is based on building such positive attitudes (Sobel and Taylor, 2001). Guyton and Wesche (2005) and Tucker et al. (2005) argue that teachers become effective and culturally responsive teachers when they become conscious of their own cultural identity and the cultural identities of others.

Ogbu (1992) and Nieto (2000) both argue that teachers' negative attitudes towards culturally diverse students should be changed through a self-educating process about their students' cultures. Teachers can make that happen on one hand by observing children's behavior in the classroom and on the playground. Teachers may ask their students about their cultural practices and preferences. On the other hand, they can communicate with CLD students' families in order to build a deep understanding base of their students' knowledge and experiences through observations and conversations with CLD students and family members. While using this gained knowledge to meet CLD students academic needs and increase their learning (Nieto, 2000; Ogbu, 1992). They can also do some research on various ethnic groups with their students and read some published works about different cultures (Ogbu, 1992). Further, they can show their appreciation, for instance by learning a few basic phrases in each language existing in the classroom (Youngquist and Martinez-Griego, 2009).

Colarusso and O'Rourke in 2010 indicate that when teachers learn how to be responsive and sensitive to the issues of diversity in learning, they will create a positive educational classroom environment that increases all students learning (Colarusso and O'Rourke, 2010). Teachers also must understand that CLD students came from cultures may have different norms and values than their cultures. Therefore, teachers should learn about students' cultures and experiences and how to show their care about who their students are and not who they can be (Colarusso and O'Rourke, 2010). Also, the more the teachers know about their students the more they will acknowledge what are their strengths, experiences, and skills and abilities. They can then use this knowledge to develop a culturally relevant pedagogy. In addition, it opens the door to know more about their students' interests and skills to increase knowledge about science, math, social studies and other learning subjects (Colarusso and O'Rourke, 2010).

Indeed, researchers call for cultural awareness in teaching, to reach that awareness teacher should have the skills to build upon the experiences that CLD students bring with them and then interpreting that into a meaningful instruction that increases students' participation in classroom activities. Although, showing them the importance of their cultures will develop better welcoming learning environment and increase their learning opportunities (Carreira, 2007; Ladson-Billings, 2000, 2009; Moll 1992). By designing assignments, lesson plans, and classroom activities teachers give CLD students the chance to share their language and culture with other students in the classroom (Colarusso and O'Rourke, 2010). What CLD students bring with them into the classroom is their culturally influenced cognition, behavior and personality and that is their cultural identity. CLD students will be more self confident, more comfortable, and feel more connected with learning process, and they will bring in their developing identity into the classroom (Colarusso and O'Rourke, 2010). Therefore, to be a culturally responsive teacher means to understand how your CLD students expected to go about learning may differ across cultures. For that reason, teachers should value and develop a deep understanding of all of the different cultures represented in their classrooms (Colarusso and O'Rourke, 2010).

### **Teacher Attitudes' towards having Linguistically Diverse Students (LDS)**

The rapidly changing demographics of the United States recently have increased the attention to linguistically diverse students (LDS). According to Diaz-Rico and Weed (2006) one of every six school age children speaks a home language other than English (Diaz-Rico and Weed, 2006). Research studies indicate that this population of students often has a little or no opportunities to succeed in mainstream classrooms (Bricker, 1995; Harper, 1998).

According to Reeves (2006), 71.1% of surveyed teachers believed that LD students should be able to learn English within two years. Another survey of 729 teachers in a school

district in which 30% of students were LD students found that 52% of teachers believe speaking one's first language at home inhibited English language development. Thirty two percent of teachers believed that if students are not able to speak standard English, they are also unable to understand it (Karabenick and Clemens Noda, 2004). Several research studies with the main focus on teacher attitudes and LD students revealed that teachers, who take adequate multicultural education training, attitudes shift positively toward this population of students (Bartolomé, 2002; Karabenick and Clemens Noda, 2004; Lee and Oxelson, 2006; Phuntsog, 2001).

Teachers with negative attitudes are teachers who are lacking the skills and the ability to adapt their curriculum and teaching practices. They lack the ability to design their instruction in a socio-cultural context, linguistically and cognitively meaningful to the student to increase students learning participation and achievement (Byrnes et al., 1997; Youngs and Youngs, 2001; Garcia, 2002). This is not surprising considering the limited number of teachers with formal LD training. According to McCloskey (2002) only 12% of K-12 teachers nationwide have a formal training to work with LD students (McCloskey, 2002). Diaz-Rico and Weed (2006) found that 18% of teachers believe that LD students did well in school. Sixteen percent of teachers believe that LD students came from countries with educational systems not as good as the education system in the United States. Seventy percent of teachers were not interested in having LD students in their classroom. Seventy eight percent of teachers never had any professional development or training to teach LD students. Sixty two percent of teachers believe their schools were welcoming to LD students and seventy eight percent believe LD students brought valued diversity to their school (Diaz-Rico and Weed, 2006). A mixed methods study conducted by Walker et al. (2004) investigated both elementary and secondary teachers' attitudes towards CLD

students in their subject area classrooms. The researchers conducted a survey at three different schools with diverse students' demographics in the Midwest. Also, interviews with six teachers were utilized. One of the schools had low number of mainstreamed CLD students, the second has a high number of CLD students and the third school serves only immigrant students. The study found that the majority of the teachers reported that CLD students perform poorly in academic areas. More than half of the teachers also reported that they are not interested to receive any further training to meet the learning needs of CLD students. In addition, the authors found that the teachers at the school with low number of CLD students had more positive attitudes towards CLD students than the teachers who teach at schools with high numbers of CLD students. In the discussion of the findings the focus was on teachers who have poor training to serve CLD students and their capabilities to teach this population of students (Walker et al., 2004).

Dooly (2005) argued about the effect of teacher attitudes towards language and diversity in their assessment on linguistically diverse students, for example, the way students react and respond to school, how students are assigned to ability groups and on the psychological state of the student. Woolfolk (2007) adds that teachers' teaching attitudes affect students' self confidence and performance. She builds her case around real situations happening in today's classrooms. One of these situations, for example, is between a teacher with a negative attitude and a student who speaks non-standard English dialect. According to Woolfolk (2007) the student language was frequently labeled by the teacher as using "incorrect" or "lazy speech". The student's self-confidence was affected to a level which made her believe that she would never be able to learn how to speak the standard English dialect. She also expected that she would be scolded at school for using her home dialect. The student also believed that no matter how much effort she puts to succeed in school she is not going to make it (Woolfolk, 2007).

There are many similar situations in U.S. schools today. They happen for speakers of non-Standard English dialects as well as non-native English speakers.

A research study by Haig and Oliver (2003) revealed that many teachers look at diverse dialects in one of two ways as a language difference or language deficit. Wolfram et al. (2006) add that teachers have no particular reason to believe that the standard English linguistic system is inherently better than other linguistic systems and using a particular dialect different than standard English is a kind of inherent deficit. Ford (2012) found that teachers assess students who speak Spanish influenced-English lower in writing ability, intelligence, social status, effective communication and confidence than those who speak standard English. The author in conclusion found that the teacher's low expectations of students who speak non standard-English are critical factors behind poor achievement, self concept and aspiration of this particular population of students.

Garcia (2002) argues that teacher's attitude, knowledge, skills, and disposition are as crucial in serving CLD students as content knowledge, practice skills and integration of the students' values, beliefs, and experiences (Garcia, 2002). Therefore, teachers should realize that every student in their classroom brings their own unique background, personal history, learning styles and personality (Dooly, 2005). According to Curran (2003) teachers should see and deal with students' backgrounds and experiences as rich resources to promote multilingualism and multiculturalism of all students and teachers. Curran agrees with Woolfolk, Garcia and Dooly that teachers' attitudes play a critical role in enhancing LD students' performance. Teachers with positive attitudes make students feel more comfortable and positively connected to the learning settings. Teachers with negative attitudes make students feel like the "other" and create the fear of failure or rejection (Curran, 2003).

Diaz-Rico and Weed (2006) reported that there is a strong relationship between LD students learning and teachers' attitudes in the classroom. According to the researchers a successful teacher is a teacher who understands his/her responsibility to nurture students learning and development. A teacher with high expectations for all of the students, who believe that all students are able to learn and they will learn no matter what their language or their background is, who understands that student self-efficacy is intertwined with his/her language and have the will to allow students to use their home language from time to time.

### **Teacher Attitudes towards Variation of Instructions and Assessment Patterns**

Several research studies argue about the importance of integrating CLD students' real life experiences and home culture in the instruction as a crucial element in learning process (Baker and O'Neil, 1995; Garcia and Pearson, 1994; Winfield, 1995). Providing adequate instruction to accommodate CLD students' needs in mainstream classrooms, however, requires teachers with skills and experiences of designing a variety of curricular and instructional strategies (Karabenick and Clemens Noda, 2004). Designing effective instructions that integrate students' personal and cultural knowledge and helping them to reach beyond their culture, though, is one of the biggest challenges facing teachers in today's classroom (Banks and Banks, 1993). Modifying teaching styles and instruction in a way that accommodate CLD students' academic needs is critical (Banks and Banks, 1995). Aronson and Gonzalez (1988) found that utilizing cooperative teaching activities in instruction and strategies increased African American and Mexican American students' achievement significantly (Aronson and Gonzalez, 1988). Another study conducted by Lee and Fradd (1998) argue that using students' home languages in a proper way to provide effective instructions by the teacher promotes students' understanding of



instruction. Encouraging students to use their first language sometimes, however, create more efficient teacher-student and student-teacher communication patterns (Lee and Fradd, 1998).

Maxwell-Jolly (2008) argues that teachers who have CLD students in their mainstream classes should face the challenge of educating these students. Teachers, therefore, need different training, skills and aptitudes to embrace instruction and a curriculum that emphasizes children's strengths and accommodates their needs. Teachers should recognize that applying a curriculum which utilizes students' home language and cultures engage and encourage all students equally is critical to increase CLD students learning achievement (Maxwell-Jolly, 2008). However, utilizing student culture and home language in appropriate teaching styles empowers teachers to work with students in different ways helps students to learn both their home language and standard English (Darling-Hammond and McLaughlin, 1995).

Banks (2008) discusses the importance of developing a multicultural curriculum which draws students' attention to viewing events and situations from different disciplines. Integrating multicultural education content and examples from different cultures help teachers show key concepts, generalizations, and issues within their subject matter. Utilizing well-planned units, lessons, and activities which are designed to develop knowledge and understanding of different cultures, at the same time, encourage students to build positive attitudes that value other cultures' experiences. Also, lead students to conduct and reflect on their prior knowledge and experiences at the same time conduct their new knowledge and discoveries with the real world. Using instrumental materials (e.g. magazines, books, videos), which reflect people's experiences and cultures from different perspectives (Banks and Cochran-Smith, 2005).

Banks (1996) argues, however, that integrating different cultural contents into a curriculum without changing the structure of lesson plans creates a problem. Without changing

the structure of lesson plans CLD students will have a feeling that their histories and the American history are separate parts and they are not an integral part of the mainstream society (Banks, 1996). Therefore, structure, assumptions and perspectives in the curriculum should be changed in a way shifts the focus from only on the mainstream culture to a curriculum that reflects the perspectives and the experiences from different disciplines. Consequently, the curriculum should be focused on events, issues or concepts from different perspectives and points of view. Utilizing events, issues and concepts related to culturally and linguistically diverse groups from different aspects in the curriculum is crucial for all students. It helps students developing a complete understanding of the experiences of culturally and linguistically diverse populations (Banks, 2008).

Beegle (2007) argues that increasing CLD students learning achievement depends on the kind of relationship teachers are willing to have with their students. Establishing cultural respect in the environment of the classroom, however, eases integrating students' cultural backgrounds into instruction and leads to improvement in students' learning achievement (Chenoweth, 2007). Talking about what was learned and how it was learned is really important to create a learning environment based on conversation and dialogue that shape students attitudes and enthusiasm for learning (Banks and Cochran-Smith, 2005).

Banks and Cochran-Smith (2005) indicate that teachers should have the ability to value and understand their students' cultures and communities in order to facilitate their students' learning in active, learner-centered, and community-focused classrooms. As learning is based on prior knowledge, teachers should provide learning experiences that expose inconsistencies between students' current understandings and their new experiences. Teachers should have appropriate skills and qualification to work together with their students to make decisions about

how they will learn, how they will assess and evaluate what they have learned, and how they will use what they learned in meaningful ways (Banks and Cochran-Smith, 2005). Utilizing flexible and multiple assessment patterns involve CLD students' cultural preferences and allow them to communicate ideas in different ways will increase their learning achievement (Darling-Hammond, 1994; Garcia and Pearson, 1994). Teachers, however, need to be aware of how to differentiate between CLD student ability to write and read using standard English language and their competence in subject matter being taught (Merino, 2007; Garcia, 1996).

### **Summary**

The chapter reviewed what the previous research says about the effect of teachers' attitudes and beliefs towards diversity and the accommodation of diversity about culturally and linguistically diverse students learning achievement. For the most part, however, the studies reviewed here are centered on four interrelated headings that provide the framework for this study: attitudes towards inclusion of culturally diverse students, teacher attitudes towards the inclusion of linguistically diverse students, teacher attitudes towards modification of instruction and assessment patterns, teacher attitudes and the achievement gap.

In conclusion, the findings of teachers' attitudes research studies showed that teachers' negative attitudes and propensity to blame CLD students' culture and language as a main aspect of why students fail to achieve. Teachers usually do not recognize, however, the importance of communicating high expectations, and monitor their classroom interactions with students ensuring they communicate expectations for high achievement. Teachers need to understand that linguistic diversity is an important resource for the enrichment of communication and assist the learning process in math, science and social studies.

The research studies in the literature review also, heighten the impact of teacher attitude, beliefs, background, and culture on teaching. Research however, revealed that teachers encountered difficulties to develop a philosophy of teaching that may enable them to accommodate multiple worldviews, values and belief systems. A philosophy enables them to learn from and about their students' culture, language, and learning styles. Research on the achievement gap demonstrates that the achievement gaps in math, science and social studies between CLD students are widening subsequently. Teachers need to implement a culturally responsive curriculum represents cultural differences of all students that may lessen the achievement gap in today's classroom. Chapter Three will outline the research methods that will be used in this study.

## **Chapter Three**

### **Methodology**

This chapter describes the methods of data collection and procedures that I used in this research study. This research study employs a mixed methods research design using quantitative and qualitative research methods. The methods and procedures are designed to answer the following questions:

What are the attitudes of math, science, and social studies subject area teachers towards diversity and accommodation of diversity that are employed in classrooms to meet the needs of seventh, eighth, and ninth grade culturally and linguistically diverse students' learning? In crafting the answer for the main research question, I am focusing on four sub-questions:

- 1- What are the attitudes of math, science, and social studies subject area teachers towards having seventh, eighth and ninth grade culturally diverse students in their mainstream classrooms?
- 2- What are the attitudes of math, science, and social studies subject area teachers towards having seventh, eighth and ninth grade linguistically diverse students in their mainstream classroom?
- 3- What are the attitudes of math, science, and social studies subject area teachers towards accommodation of diversity that are used in classroom to meet the needs of seventh, eighth, and ninth grade culturally diverse students' learning?
- 4- What are the attitudes of math, science, and social studies subject area teachers towards accommodation of diversity that are used in classroom to meet the needs of seventh, eighth, and ninth grade linguistically diverse students' learning?

Using mixed method research techniques increases the number of factors that have been examined, thereby increasing the scope of the study (Mores, 2010). In addition, conducting mixed methods studies will enhance the validity and reliability of the research results. Using mixed methods allows for the exploration of contradictions that may be found between the quantitative and qualitative results (Abowitz and Toole, 2010).

In this research study the sample for the qualitative part was drawn from middle/junior high school math, science, and social studies school teachers in three urban school districts. The qualitative part of the data provides richer details about the same issues from different dimensions to link qualitative data with quantitative data through triangulation. By that the researcher assesses the validity and reliability of the research study findings (Hesse-Biber, 2010). Mixed methods, therefore, are an appropriate design to be used in this study because it includes both quantitative and qualitative instruments. The instruments that have been applied are survey, interview, and classroom observation.

The quantitative part of this study employs a survey instrument that has been designed by the researcher. The quantitative inquiry surveys a sample of 137 math, science and social studies teachers (seventh, eighth, and ninth grade). The survey data was gathered to measure math, science and social studies seventh, eighth, and ninth grade teachers' attitudes and beliefs in response to classroom diversity and how that is reflected in their instruction, learning styles, communication patterns, instrumental materials, and their assessment patterns in three subject areas namely math, science, and social studies.

The qualitative part of the study explores four middle and junior high math, science, and social studies teachers' personal experiences and beliefs towards having CLD students in their mainstream classrooms and explores to what extent their attitudes to respond to classroom

diversity are reflected in their instruction, their communications patterns, students learning styles, instrumental materials, and their assessment patterns. Face-to-face, semi-structured interview and classroom observation instruments were employed to collect the data of the qualitative part of this research study. Prior to contacting participants or distributing surveys for research purposes and prior to conducting classroom observations or teacher interviews the Institutional Review Board (IRB) approval was gained (IRB Protocol #:11-04-599) Appendix A, (p.149).

### **Participants**

Participants in this study were drawn from a population of middle school/junior high teachers. The three school districts of this study are located in a Mid-south State. The data for the quantitative part of the study were collected from 16 schools, six middle schools (sixth and seventh grade) and ten junior high schools (seventh, eighth, and ninth grade). There were approximately 175 math, science and social studies teachers in these 16 schools. Teachers were asked to complete a survey if at the time of the study they had culturally and linguistically diverse (CLD) students in their subject area classrooms. The survey respondents are 137 teachers from the three urban school districts of the study.

The qualitative sample included four different subject areas teachers from three schools (three math teachers, and one social studies teacher). Face-to-face semi-structured interviews and classroom observations instruments were employed to collect the data from four middle and junior high math, science, and social studies teachers.

### **Instrumentation**

For the purposes of this study, three instruments were used that comprise survey, interview, and observation.

## **Quantitative instrument.**

### ***Survey.***

A survey instrument is developed based on reviewing previous studies (see Appendix D, p.166). These studies measure the impact of teachers' attitudes and teaching practices on CLD students' academic performance.

It is important for the survey to be reliable and valid and the population receiving the survey to be a good representation of the population studied (Hesse-Biber, 2010). To achieve this, a pilot study of the survey was performed using a teacher population with similar demographic characteristics as the study's target population. A pilot study helped the researcher to anticipate any possible problems in the methodology that needed to be corrected before starting the study (Lancaster et al., 2004). The survey was edited based on the findings that emerged from the pilot sample.

For data collection the survey was distributed through electronic mail and was provided in two formats including an online link utilizing the web-based "Qualtrics Survey Research Suite" through their website at ([www.qualtrics.com](http://www.qualtrics.com)) which is managed by this University's Research Data Services, and a hard copy to the participating school districts in a cross-sectional timeframe. Before starting the study at each school, the superintendents of the three school districts granted permissions to conduct this study in their middle/junior high schools. Each school principal received a letter of permission and a request to assist the researcher to contact the teachers and encourage them to participate in this study. Each school principal was contacted by email to confirm their consent to carry out the study. The initial communication about the survey instrument informed participants of the voluntary nature of their participation and their right to stop their participation at any time. They also informed potential participants that the



data report would not use any real names of schools or individuals to maintain confidentiality of the participants.

A 59-question survey using a Likert scale was designed to collect responses related to teacher attitudes towards diversity and the accommodation of diversity. Survey questions are designed on the basis of the literature review. These survey statements addressed the following themes: (1) Valuing students' culture and language, (2) The impact of inclusion of CLD students in subject area classrooms, (3) Teachers' beliefs towards CLD students enrolled in their subject area classrooms, (4) Teachers' training and preparedness to meet CLD students learning needs, (5) teachers' expectations, (6) Teachers' attitudes towards CLD students learning needs, and (7) Teaching methods and teacher-student communications (using effective communication patterns with CLD students, modifying of instruction, using appropriate assessments patterns, using different learning styles, using different instrumental materials).

Section A (p.159) of the survey asks respondents to read a statement and check the box which most closely represented the statements that describe their degree of agreement: strongly agree, agree, disagree, and strongly disagree (see Appendix B, p.154). The first part of section A has seven items (questions 1-7) designed to examine the attitudes of subject area teachers towards valuing students' cultures and languages by discussing their perceptions and beliefs. The second part has five items (questions 8-12) designed to examine teachers' adequate training and preparedness to teach CLD students in their mainstream classrooms by discussing their level of training and preparedness. The third part has six items (questions 13-18) designed to examine teachers' expectations of their CLD students' academic performance by discussing the effect of teacher learning expectations of students academic performance. The fourth part has five items (questions 19-23) designed to examine teacher attitudes and strategies that may have employed

with the inclusion of CLD students in their subject area mainstream classes by discussing the impact of that on teachers and teaching process. The fifth part has 22 items (questions 24-46, questions 33-46). The survey asks respondents to choose one of the provided responses that indicates the extent to which each statement apply in their classes: never or rarely, some of the time, and most of the time, was designed to examine teachers classroom practices by discussing their potential strategies and practices that they may have employed with CLD students to utilize their learning achievement. The items' main focus was on teachers' attitudes towards employing different learning styles, different instrumental materials, modification of instruction, assessment patterns, integrating multicultural content, modification of class work, utilizing student's first language, and employing different communication patterns to meet CLD students learning needs.

Section B of the survey asked respondents to read a statement and check the box which most closely represented the statements that describe their degree of agreement: strongly agree, agree, disagree, and strongly disagree. Section B, (p.158) has three items (questions 47-49) designed to examine science, math, and social studies teachers' attitudes and strategies that they implemented to integrate a multicultural perspectives into their lesson plans by discussing their beliefs and perception about utilizing a variety of cultural perspectives that reflect the ways that people from different cultures and groups have contributed to the development and problem solving of scientific and mathematical knowledge.

The survey also elicited information on ten demographic factors, these items are: (50) teacher's gender, (51) teacher's race and ethnic group, (52) teacher's age, (53) teacher's subject area of teaching, (54) teacher's level of education, (55) teacher's total years of teaching, (56) teaching grade level, (57) teacher's first language, (58) speaking second language, and (59) level of proficiency of the second language.

Section C, p.158 of the survey asks respondents to identify themselves by choosing one of the provided answers. Section C has 10 items designed to assist in the demographic categorization of the respondents (questions 50-59, Appendix B, p.158).

### **Qualitative instruments.**

#### ***Interviews.***

The interviews are semi-structured in nature, a set of specific questions asked by the researcher set through a basic conversational guide (see Appendix C, p.161). The conversational guide designed around themes identified in the survey instrument section and rapport building techniques were used before the interview takes place (Johnson, 2001; Lincoln and Guba, 1985). In this study the survey was used before interviews to help the researcher identify topics or themes that will be explored in depth during the interviews. In this research study the goal of conducting interviews with the study participants in addition on to the survey and classroom observation was to examine the participants' answers and collect "deep" information that might expand the survey answers and increase the data validity of the study because interviewees' responses could be directly clarified by the researcher. Also, this increased the possibility of identifying attitudes and applications that affect CLD students' learning that may not be identified by using only a survey instrument.

Questions were asked to determine knowledge, personal perception, experiences, and attitudes (Patton, 2001). However, the qualitative interviews could have been utilized as the primary data collection strategy; they are used in combination with other instruments such as observation, document analysis, and/or other techniques (Bogdan and Biklen, 2007). The interview setting allows the researcher to ask for clarification and expansion of the questions to gain more in-depth information. For this purpose many of the interview questions were similar to

the questions on the survey. Before starting communicating with the study participants, the school principals were contacted by email to confirm their consent to carry on the study. The participants are assigned a code number for this study to assure confidentiality. A permission form was prepared to conduct the study. The participant has the right to stop participating in the interview at any time. The interviewees were asked for permission to audio tape in order to achieve implied consent. The researcher jotted notes during the interviews to help facilitate later analysis.

The data for this study include face-to-face semi-structured interviews with four participants; time averaged approximately 30 minutes to 45min in length. Moreover, the interviews conducted with three math teachers and with one social studies teacher who have CLD students mainstreamed in their subject area classes based on their agreement to be interviewed. All interviews were digitally recorded with implied consent (Appendix C, p.159). Explicit consent of participants was gained at the beginning of each interview. The audio tape data are transcribed and coded, then memos were developed which helped me analyzing the data.

This approach allowed me to understand how teachers' attitudes and beliefs towards having and teaching CLD students in their subject area classes impact students' learning (Patton, 1998) and hopefully empower both these teachers and others to look for potential ways to improve and change the current reality of an achievement gap between CLD students and mainstream students.

### ***Classroom observations.***

In this research study observations were employed to collect data to provide deeper understanding because it provides knowledge of the context in which events occur, and may enable the researcher to see things that participants themselves are not aware of, or that they are

unwilling to discuss (Hatch, 2002). Observational data are used for the purpose of description-of settings, activities, people, and the meanings of what was observed from the perspective of the participants (Patton, 1990). The researcher maintained a passive presence, being as unobtrusive as possible (Schatazman and Strauss, 1973).

The observation relies on a tool (see Appendix C, p.164) created by faculties from a large public school district and university faculties to evaluate and mentor teachers' aptitudes and capabilities to address issues of diversity in their classrooms (Sobel et al., 2003). The observation tool was modified and its main focus is on diversity elements in classroom (e.g., culture, language, abilities, and learning). The observer's role is to observe the participant in practice by taking notes on the observation tool guide to ensure that all aspects of interest are addressed. The observation includes issues related to teachers' attitudes toward CLD students and their abilities to learn such as differentiating instruction, assessments patterns, modifying curriculum, teacher-student and student-student social interactions within the classroom, teacher understanding and appreciation of other cultures and languages, and teachers' efforts to promote equity for all students.

### **Sampling**

A purposeful sampling seeks information-rich cases which can be studied in depth. Thus, in this research study purposeful sampling was used to select cases which would illuminate the research questions (Patton, 1990). Patton (2002) emphasizes that the power of purposive sampling based on selecting a particular set of people related to the main issue and interest of the study to collect in-depth and detailed data that assist the researcher obtaining more in depth analysis. In this study, the qualitative participants were drawn from those who volunteered to be interviewed and observed. I am particularly interested in the attitude towards diversity of

seventh, eighth, and ninth grade teachers who have at least five CLD students or more in their mainstream classroom. Therefore, purposeful sampling was an appropriate method of sampling to select the participants for purpose of this research study (Patton, 2002).

The survey sample included 137 math, science, and social studies seventh, eighth, and ninth grade teachers in the districts of the study who at the time of the study have culturally and linguistically diverse students in their subject area classrooms and who volunteered to participate in this study. Teachers were asked to complete a survey if they at the time of the study have CLD students mainstreamed in their subject area classes. A sample of four math, and social studies seventh, eighth, and ninth grade teachers (three math teachers, and one social studies teacher) are drawn from the survey respondents who agreed to be interviewed. Further, classroom observations were conducted with a sample of the same four interview participant teachers who agreed to be observed in practice.

### **Credibility**

The credibility in mixed method inquiry depends on the techniques and on the methods of data gathering and analyzing processes to ensure the integrity, validity, and accuracy of the findings. Credibility is defined as obtaining the best possible study design to produce useful findings that are, valid, reliable and believable within the real world (Lincoln and Guba, 1985).

Internal validity is the extent to which one's findings display an isomorphism with reality. There are number of credibility issues are used to check internal validity and the accuracy of the findings; first triangulation of data, which can be described as a form of comparative analysis that strengthens the data reliability. Triangulation of sources is used by collecting the data through multiple sources; a survey, semi-structured interviews and classroom observations. Using triangulation as a technique helped to check the consistency of what the people on my

sample said about the same issues of their experiences and comparing these experiences from different perspectives. Helps to validate the information obtained through the survey by corroborating what interviews respondents report and class observations reveal (Lincoln and Guba, 1985).

Reliability is defined as synonymous with dependability, stability, consistency, predictability, and accuracy of the study. Reliability is tested by replication. So, the interpretative research is reliable in terms of methods should be written well and conceptually sound and other researchers can reproduce these methods. In this sense, the research will be methodologically objectively and subjectively sound (Lincoln and Guba, 1985).

Member check is the most crucial tool to guarantee the trustworthiness of the study and to establish credibility (Lincoln and Guba, 1985). Member checks took place in this study by giving the transcribed interviews to the interviewees for their review, which gave me the opportunity to correct errors of facts and challenge what were perceived to be wrong interpretations. The findings and the conclusions that drew from the data were shared with the interviewees. The recorded material provided a kind of benchmark against data analyses and interpretations to test data adequacy, to achieve neutrality, and to demonstrate objectivity through showing the isomorphism between the data of the study and reality.

Peer debriefing was used to guarantee credibility and reliability of information that I collected. Peer debriefing defined by Lincoln and Guba (1985) as a process of exposing by sharing the collected information with colleagues and other knowledgeable people. My goal is to confirm if the gathered information is accurate and the findings are grounded in the data. The data collected were previewed by my advisor and by another professor.

## **Qualitative Data Analyses Procedures**

Qualitative data analysis is a process to search for the meaning in the collected data and to communicate what has been found and learned to others. It is based on the assumption that the important information is embedded in the data. Revealing the important data could be reached by asking the right questions of the data (Hatch, 2002). Also, the analysis of the data collection process was started from the beginning of data collection; it helped the researcher based on what kind of information was found and what it needs to be found to shape the research data collection in order to obtain deeper information (Hatch, 2002).

The qualitative process of data analysis steps adapted in this research were as follow:

1. Interviews transcriptions.
2. Initial coding stage (sections of the transcripts that reflect a theme were identified then replicated for each theme).
3. Creating focus codes that defined the identified themes and break up the data for the purpose of further analysis.
4. The findings were interpreted after dividing and coding the data under each theme.
5. Write quotes that best illustrate the meaning of each category to make sure that they reflected the participants' views and experiences.

Field notes of classroom observations had been examined and sorted by the same analysis procedures.

After the data gathering process, the interviews were transcribed and coded for the purpose of analysis. The coding process helped to assemble and organize the data under the identified analytical themes and categories, which helped make logical sense of the data (Charmaz, 2003) and to show how themes and categories hang together (Becker, 1996). Two



types of coding were used to analyze the data: (1) the initial codes, and (2) the focus codes. The initial codes are a process used to break down, examine, compare, and conceptualize the data (Strauss and Corbin, 1998). The initial codes are line-by-line analysis that identifies keywords or actions, ideas and words to help in integrating categories, which emerge from the data (Charmaz, 1995). In this study the initial codes are used to organize and classify the collected data to be placed where they belongs under the focused codes. Focus codes are the selected core categories and themes that were identified earlier in this study (Strauss and Corbin, 1998). Focus coding is used to clarify codes and connect them to theoretical informed ideas, which are presented in memos (Charmaz, 1995; Strauss and Corbin, 1998). Data coding example is displayed in Appendix E, p.169.

To form the theory and confirm a relationship, a direct and purposeful integration of categories is employed in an attempt to develop a rough storyline, relate supplementary categories around a core category, and confirm the categories against the data. Therefore the data were organized under different patterns, a pattern of similarities (attitudes that have been repeated in the same way), pattern of difference (attitudes that happen from time to time in variety of ways), and a pattern of frequency (attitudes that have been repeated often, or sometimes) as Hatch (2002) suggests to think how to find different repetitive patterns of actions and not only a steady regular facts.

Memo writing is the intermediate step between coding and the first draft of the competed analysis. Memo writing consists of taking the categories apart by breaking them into their components and defining the category as carefully as possible (Charmaz, 1995). Lofland and Lofland (1995) describe the memos as labeled ideas that are created to assist the researcher in narrating, identifying the relationships between categories and themes, and further developing

new categories. I wrote my memos after coding the collected data to investigate implicit, unstated and condensed meanings (Charmaz, 1995).

The data collection main focus was on obtaining a rich description of teachers' attitudes and on understanding the attributes of their negative or positive attitudes from their own point of view. However, by using a purposeful sample collection and by using triangulation strategy involves using multiple data sources to collect the data a deep understanding of teacher attitudes was achieved and embedded in the data analysis (Bogdan and Biklen, 2007; Corbin and Strauss, 2008; Denzin and Lincoln, 2005; Hatch, 2002).

### **Quantitative Data Analysis Procedures**

To perform the data analyses, each response in the Likert scale to the survey questions for sections A, B, and C are coded using a numeric value.

In section A and B, the coding is as follow: strongly agree = 1, agree = 2, neither agree nor disagree = 3, disagree = 4, and strongly disagree = 5. For the second part of section A of the survey, the following coding scheme was used: never or rarely = 1, some of the time = 2, and most of the time = 3. Each participant's set of responses for these two sections was entered into the statistical program Statistical Program for the Social Sciences (SPSS) using the values described above in order to conduct all statistical analyses.

In section C, the demographic responses is coded for item 50 as male = 1 and female = 2. Responses to item 51 is coded as White=1, African American = 2, Asian = 3, Hispanic = 4, and other = 5. Responses to item 52 is coded as 20-29 = 1, 30-39 = 2, 40-49 = 3, 50-59 = 4, 60-over = 5. Responses to item 53 is coded as math = 1, science = 2, and social studies = 3. Responses to item 54 is coded as BA = 1, BS = 2, BSE = 3, MA = 4, M.ED. = 5, MAT = 6, Ed.S. = 7, Ph.D. = 8, and Ed.D. = 9. Responses to item 55 is coded as 1-4 = 1, 5-9 = 2, 10-14 = 3, 15-19 = 4, 20-24

= 5, and 25-over = 6. Responses to item 56 will be coded seventh grade = 1, eighth grade = 2, and ninth grade = 3. Responses to item 57 is coded as yes = 1 and no = 2. Responses to item 58 is coded as yes = 1 and no = 2. Responses to item 59 is coded as beginner = 1, intermediate = 2, and advanced = 3. Frequencies and percentages were calculated for the questions in section C.

The survey data were analyzed by using frequency distribution to report descriptive statistics, percentages. Analysis of variance (ANOVA) techniques were used to analyze and interpret the data.

Reliability of the survey instrument was achieved by examining how precisely the measuring instrument (in this case, the survey) consistently measures what it is intended to measure. Therefore, the survey instrument is designed to have more than one question to be answered regarding the same theme to examine the consistency in the type of answers collected by the survey instrument.

### **Summary**

This chapter presented the methods of data collection in order to answer the research questions. Mixed methods instruments including survey, interviews, and observations were used to obtain input information and were presented along with the techniques employed to statistically analyze the research data and demographic information about the participants.

The survey data was analyzed by using frequency distribution and analysis of variance (ANOVA) techniques. While, the interviews and classroom observations data were analyzed by using qualitative methods techniques such as codes, memos, and themes. Mixed method techniques were used to identify the similarities and contradictions between the survey, the interviews, and the classroom observations findings in order to increase the reliability and credibility through data triangulation.

## **Chapter Four**

### **Introduction**

The purpose of this chapter is analyzing the data collected through a survey consisting of 59 items, four interviews, and four classroom observations and presenting results in order to answer the research question and sub-questions. The chapter starts with presenting the survey return rates, demographics of survey participants, and demographics of qualitative participants.

In this study, seven themes developed by reviewing of previous studies. The survey, the observation tool, and the interview instruments were assembled around these seven themes. The seven themes presented are in order as below:

(1) Valuing CLD (culturally and linguistically diverse) Students' Cultures and Languages, (2) Attitudes towards Inclusion, (3) Teachers' Beliefs about CLD Students, (4) Teachers' Training, (5) Teachers' Expectations, (6) Teachers attitudes towards CLD Students' Needs, and (7) Teaching Methods and Teacher-Student Communications.

In order to gather the quantitative data survey an online link through the university website was sent by electronic mail to the middle/junior high schools principals in the three participating school districts. Also, qualitative data were gathered in the spring of 2011-2012 school year from four teachers who agreed to be interviewed and observed in their classrooms. Two of the teachers were seventh grade math teachers, a seventh grade Algebra teacher, and a ninth grade social studies teacher.

The primary question and sub-questions that guided this study are:

What are the attitudes of math, science, and social studies subject area teachers towards diversity and accommodation of diversity that are employed in the classroom to meet the

needs of seventh, eighth, and ninth grade culturally and linguistically diverse students' learning?

1. What are the attitudes of math, science, and social studies subject area teachers towards having seventh, eighth and ninth grade culturally diverse students in their mainstream classroom?
2. What are the attitudes of math, science, and social studies subject area teachers towards having seventh, eighth and ninth grade linguistically diverse students in their mainstream classroom?
3. What are the attitudes of math, science, and social studies subject area teachers towards accommodation of diversity that are used in classroom to meet the needs of seventh, eighth and ninth grade linguistically diverse students' learning?
4. What are the attitudes of math, science, and social studies subject area teachers towards accommodation of diversity that are used in classroom to meet the needs of seventh, eighth and ninth grade culturally diverse students' learning?

All statistical analysis results are depicted in tables and listed in Appendix F, p. 171.

ANOVA results were recorded in tables that reflect the frequency and mean score results and followed by the Tukey's Post Hoc Test results for each of the survey's themes, were appropriate.

### **Return Rates**

Seventh, eighth and ninth grade math, science and social studies teachers who at the time of the study had CLD students mainstreamed in their subject area classrooms and were teaching at the three participating school districts were asked to take the survey. The study surveys (N = 175) were provided in two formats including an online link and a hard copy. The completed and returned surveys (n = 137) amount to 78.2% of the participant teachers responding to the

provided survey (137 completed out of 175 sent out surveys). The 112 online surveys were completed utilizing the web-based “Qualtrics Survey Research Suite” through their website at ([www.qualtrics.com](http://www.qualtrics.com)) which is managed by the University Research Data Services. The 50 hard copies of the survey were distributed by the school principals to ensure that teachers who preferred to complete the survey in this way had an access to that. Out of 50 hard copy surveys, only 25 were completed by hand and collected from four different schools within the three school districts. As a result, 18% of the surveys were completed on hard copies and 82% of the surveys were completed online ( $112 + 25 = 137$ ).

The survey data were collected anonymously. Therefore, there was no way to identify any names of the participants or in which schools they are teaching. The link was sent to each school principal and was distributed to the teachers via emails.

Some of the principals were not interested or willing to cooperate to encourage their teachers to participate in the research. In addition, other principals claimed that their teachers were too busy during the day and did not have the time for taking any surveys. Some other principals expressed concern that immense numbers of researchers affiliated with the university were researching in their schools during the last few years putting too much pressure on the teachers and the school administration; hence, the teachers have no extra time (i.e. time to waste) taking any additional surveys online. One other major problem was not having access to email the teachers directly to encourage them to participate in the survey, thus had to send individual requests through the schools principals. Only two principals were very cooperative who emailed me the teachers’ email list within their schools. Nonetheless, I had very good cooperation from the district administrators who encouraged their principals and teachers to cooperate.

## Demographics of Survey Participants

In this study survey ten demographic questions were used to measure the difference between the means by gender, race, age, subject area, level of education, years of experience, grade level, English as a first language, speaking a second language, and level of proficiency of speaking the second language. In this section the demographic survey participants' data and Table (Appendix F, p.171) are presented.

Of the 137 survey participants in Table 1, (p.171) shows, 23.4% (n = 32) reported their gender as males, and (76.6%, n = 105) as females. The majority, 90.5%, (n = 123) of the participants reported their race as White, 1.5% (n = 2) as African American, 1.5% (n = 2) as Asian, 3% (n = 4) as Hispanic, and 4% (n = 6) as others. Demographic data showed that 16.1% (n = 22) of the participants reported their age as between 20-29, 24.8% (n = 34) as between age 30-39, 26.3% (n = 36) as between age 40-49, 26.3 % (n = 36) are between age 50-59, and 6.6% (n = 9) are at age 60 and over. Also, there were 29% (n = 40) reported themselves as math teachers, 36.5% (n = 50) as science teachers, and 34.3% (n = 47) as social studies teachers. About 29.2% (n = 40) of the participants reported that they have a bachelor's degree, (36.5%, n = 50) have a master's degree, and 33.6% (n = 47) have an educationalist's special degree.

However, 15.3% (n = 21) of participants reported that they have one to four years of teaching experience, 21.2% (n = 29) have five to nine years of experience, 16.1% (n = 22) have 10-14 years, 16.8% (n = 23) have 15-19 years, 11.7% (n = 16) have 20-24 years, and 18.9% (n = 26) have 25 years and over. About one fourth 25.5% (n = 35) of the participants reported themselves as seventh grade teachers, 15.73% (n = 21) as eighth grade teachers, and 59.1% (n = 81) as ninth grade teachers.

The Majority, 97.1% (n = 133) of the participants reported that standard English is their first language, and 2.9% (n = 4) standard English is not their first language. Less than one fourth 22.6% (n = 31) of the participants reported that they speak a second language, and more than three fourths 77.4% (n = 106) reported that they do not speak any other language beside standard English. Slightly less than one third, 30% (n = 9) of the participants who speak second language reported themselves as beginners, one third 33% (n = 10) as intermediate, and 37% (n = 11) as advanced speakers.

### **Demographics of Qualitative Participants**

In this study the researcher completed four face-to-face open-ended interviews and four classroom observations with four of the participants who agreed to be interviewed and observed in their classrooms. Two of the participants were seventh grade math teachers, a seventh grade Algebra teacher, and a ninth grade social studies teacher. In this section the demographic data of qualitative participants are presented below and were focused on four aspects; participants' subject area, schools they taught in, number of CLD students, and nature of training for working with CLD students. For demonstration purposes, all observed classrooms were sketched to illustrate the classrooms layout and arrangements. The physical classroom plans were produced using Sweet Home 3D program, and all figures are presented in Appendix G, (p.192).

#### **Participant 1**

Participant 1 had a bachelor's degree in Journalism, Master of Arts in Teaching (MAT) degree in social studies and had nine years of teaching experience. Participant 1 had taught eighth grade social studies and Journalism, and ninth grade government classes, and had four CLD students in her classroom. Participant 1 had only a basic training for working with CLD



students that was provided by the school district, and what was required for the MAT program degree. Participant 1 said;

I have taught for nine years, and I teach social studies for eighth graders, I teach government and yearbook for ninth graders, and journalism for eighth graders. So, I teach all of these subjects, journalism and social studies. I have bachelors in Journalism, and MAT in secondary social studies. I've only taught in ... all nine years and my training for language diversity is pretty basic, it was the school district has provided me and what was required for the MAT. So, right now I have four English language learners in all of my classes. I have a total of 97 kids, but my two journalism classes are very small now, my yearbook staff is only seven because I have to try out for that and my journalism classes limited to 15. So, those two classes are small (participant 1, February 2, 2012).

## **Participant 2**

Participant 2 had a bachelor's and master's degrees in Mathematics, had 13 years of teaching experience. However, two years of Participant 2 teaching experience were overseas at the elementary level. Participant 2 had taught math, science, computer and reading classes in four different schools. Participant 2 had some training provided by the school district about working with ESL students and their needs.

I taught here at ... middle school for about seven or eight years and before here when I was at my master's in mathematics degree I taught at the university and I also taught high school math down in ... and I started teaching overseas in ... for two years in an elementary school over there with the Peace Corps. So, I have taught probably all together for maybe 12 or 13 years. I teach math and I have a

reading class now, and I've also taught science and I've also taught a computer class at the school down in .... So, I've taught probably all together in this school and the school in ..., the university and then the primary school in .... So, I've taught in four different schools.

Probably all my CLD students that I have in my room are able to read English, and are able to speak English at a pretty high level. I might have ten students that are ESL students that they have English is not their first language. But I do not have any student's right now that are not fluent in English, some of them are not perfectly fluent but they can all communicate with me and their peers just fine in English (Participant 2, May 2, 2012).

### **Participant 3**

Participant 3 had a bachelor's degree in history and a MAT degree in secondary social studies. Also, Participant 3 taught for one year in health education, two years as seventh and sixth grade science teacher, and five years as seventh grade math teacher also worked on ESL endorsement program and had an ESL endorsement.

Okay, so I got Bachelor's degree in history from the University of Arkansas then I went and did the MAT program from 2004-2005 at the University of .... in secondary social studies. After that, I went to work for .... public schools with a grant program for health education, so teaching health for a year. Then after that or during that time I got certified to teach middle level grades fourth through eighth in math, science, reading, and social studies. After a year of working with Public Schools I got a job here in .... and I've been here ever since. So this is my sixth year here in .... I have taught seventh grade science that was my first two

years here, then I taught sixth grade science and now I am teaching seventh grade math. So I taught science and math which have nothing to do with the social studies degree that I got. But I really enjoyed it and always loved math and science, so any way. I've been here in school I have worked with Dr. .... on ESL endorsement program the project Teach Them All so I did that. So I have my ESL endorsement, we do a lot of professional development and things like that for CLD students and things like that. I would say most of my training for CLD students was through the project Teach Them All with Dr. .... (Participant 3, March 5, 2012).

#### **Participant 4**

Participant 4 is a certified teacher in secondary mathematics who also had a middle school endorsement, taught sixth and seventh grades math/algebra. However, Participant 4 never had any professional training related to work with CLD students.

I've been teaching seventeen years. In the seventeen years, I've taught seventh grade and sixth grade math. I am certified four through twelve in secondary mathematics, and I have my middle school endorsement. I've taught remedial math, regular math, pre-algebra, and Algebra 1. I've been employed at three different schools all in the same school district though. Right now about 40% of my students are CLD students. I've never had any formal training besides the professional development offered through the school year to our entire staff by the school district (Participant 4, March 6, 2012).

## **Results**

In order to answer sub-questions one and two, the data from three of the sixth themes are presented and analyzed in order. These themes are: (1) Valuing Cultures and Languages, (2) Attitudes towards Inclusion, (3) Teachers' Beliefs about CLD Students Enrolled, (4) Teachers' Training. In this section the researcher presents and analyzes the data of the theme of valuing students' culture and language.

### **Valuing Students' Culture and Language**

#### **Survey**

There are seven variables used to measure students' culture and language as it shows in the frequency Table 2, (p.172). The data from Table 2 indicate that most of the teachers 93.5% (n = 128) believed that each one of their students' way of thinking, behaving, and being is influenced by their cultural experiences and languages and that impacts the way they learn. Therefore, knowing, valuing and using students' cultures and experiences in the context of teaching and learning have a significant impact on their learning performance. The vast majority of teachers 93.5% (n = 128) believed that CLD students bring richness and benefits to all students in their classrooms. Also, 98.6% (n = 135) of the respondents believed that every student in their classes is a unique combination of his/her cultural background, language, home and experiences. More than four fifths of the respondents, 84% (n = 114) feel that their understanding of their students is not influenced by their own cultures. At the same time, less than two fifths of the respondents, (38.2%, n = 52) considered that CLD students should be encouraged to modify and to adapt to the mainstream culture, slightly above one fourth of the respondents, 25.7%, (n = 35) disagreed with that.

According to the data the majority, 92.7% (n = 126) of the respondents believed that respecting and valuing CLD students language and dialects is part of their job. Over half of the respondents 54% (n = 74) considered students' first language and dialects have a strong influence on the way that students learn standard English. Therefore, they agreed it is their responsibility as a teacher to utilize CLD student's dialects and first language to help in boosting their learning standard English language. However, slightly over one fourth, 26.3% (n = 36) of the respondents disagreed with that.

The ANOVA results in Table 4, (p.173) indicate that there is a significant difference between the dependent variables of teachers valuing CLD students' cultures and languages in their subject area classrooms and the independent variable of teacher gender at the 95% confidence level ( $F = 9.16$ ,  $p = 0.003 < 0.05$ ,  $\alpha = 0.56$ ,  $\eta^2 = 0.06$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.06, which means that the factor gender by itself accounted for only 6% of the overall (effect + error) variance. The data indicate that female teachers were more concerned about students' culture and background than male teachers (see Figure 1, p.191).

Results also signify that a significant difference existed between the dependent variables and the independent variable of teacher race ( $F = 5.17$ ,  $p = 0.002 < 0.05$ ,  $\alpha = 0.56$ ,  $\eta^2 = 0.08$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.08, which means that the factor gender by itself accounted for only 8% of the overall (effect + error) variance. The further statistical analysis using the Tukey post-hoc follow up test, Table 5, (p.174) indicates that a statistically significant difference exists between teachers from Hispanic background and African American teachers. Teachers from Hispanic background were more concerned about CLD students' cultures and languages.

Also, the ANOVA results suggested that there is a significant difference between the dependent variables and the independent variable of teacher years of experience at the 95% confidence level ( $F = 3.46$ , and  $p = 0.004 < 0.05$ ,  $\alpha = 0.56$ ,  $\eta^2 = 0.12$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.12, which means that the factor race by itself accounted for only 12% of the overall (effect + error) variance.

Further statistical analysis using the Tukey post-hoc follow up test, Table 6, (p.175) indicates that a statistically significant difference exists between teachers who had 15-19 years of teaching experience and teachers who had 25 years of teaching. Teachers who have 25 years of teaching experience and more were less concerned than teachers who have 15-19 years of teaching experience about CLD students' culture and language.

Additionally, the ANOVA Table 4, (p.173) indicates that there is a significant difference between the dependent variables and the independent variable of English as a first language at the 95% confidence level ( $F = 7.48$ ,  $p = 0.00 < 0.05$ ,  $\alpha = 0.56$ ,  $\eta^2 = 0.05$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.05, which means that the factor of English as a first language by itself accounted for only 5% of the overall (effect + error) variance. The results show that teachers who are speaking English as a second language were more responsive to CLD students' culture and language than teachers who are speaking English as first Language.

Furthermore, the data suggested that there is a significant difference between the dependent variables of teachers valuing CLD students' culture and language in their subject area classrooms and the independent variable of teacher level of proficiency of speaking a second language at the 95% confidence level ( $F = 4.53$ ,  $p = 0.01 < 0.05$ ,  $\alpha = 0.56$ ,  $\eta^2 = 0.07$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.07, which means that the factor of proficiency of speaking a second language by itself accounted for only 7% of the overall (effect

+ error) variance. Further statistical analysis using the Tukey post-hoc follow up test indicates that a statistically significant difference exists between teachers who have advanced proficiency level of speaking second language and teachers who have an intermediate proficiency level of speaking second language.

## **Interviews**

**Culture.** Under the theme of valuing CLD students' cultures the four interview participants were asked to characterize their attitudes towards having CLD students in their classrooms and their commitment to principles of equity and diversity. Three of the participants' attitudes towards having CLD students in their mainstream classrooms were positive. One of the participants had negative attitude towards having CLD students in mainstream classroom compared to the other participants. At the same time, they were all complaining about adequate training and support from their schools to have the opportunity to be more responsive towards diversity.

Three of the participants agree that having CLD students benefit all the students in their classrooms. For Participant 1 having CLD students enriched classrooms with new experiences that could benefit other students who never have had the chance to be exposed to CLD students. Therefore, including CLD students in mainstream classes should be appreciated and valued. Also, Participant 1 believed that the more the teachers know and learn about their CLD students' background and culture the more they understand how to meet their learning needs based on their life contexts and ways of learning.

In my eighth grade social studies class our first semester is world studies and I love having diverse students because obviously they bring their personal experience to that content and something I know nothing about. I've had students

who grew up in China, this year we have a young lady who grew up in Mexico she still goes back every year and they are very willing to share and they've had different experiences that my students who's lived in ... their whole lives have not had. So, I think it enriches what you are teaching a great deal if they are willing and comfortable to share their personal experience. Because it is something not all of us can do. So, I love to have that, because it is especially for world studies because it ties it in, plus it gives validity to the fact that we need to learn about the whole world we don't just need to about know about the United States. We need to learn about everybody and how we are going to function together. We talked a lot about globalization and why that is important and why we all need to get along and cooperate and support each other, so I think that is good (Participant 1, February 2, 2012).

Participant 2 believed that CLD students bring strength and tolerance to the society in general. Also, as a nation of immigrants everyone should understand that diversity always will be the case. Therefore, teachers need to have more tolerance and more understanding.

The second thing is I think teachers need to value this diversity in their classrooms. Certainly we are a nation of immigrants so we've always have diversity and it is commonly believed I think that because we are a nation of immigrants we are stronger than just a homogeneous society. So, teachers need to have tolerance (Participant 2, May 2, 2012).

However, Participants 1 and 3 both talked about their concern for the lack of "family programs" in their schools. Because the number of CLD students in their schools is not big enough to include such programs. Therefore, the opportunity to reach and interact with CLD



students' families in order to become more knowledgeable about their backgrounds and to increase understanding and expectations is not available.

I am trying to say this diplomatically, we don't really embrace those opportunities to learn from them and include them, and I think that's unfortunate. I think that part of the problem here is we do have very diverse students from lots of different countries but the sheer number is not as large as maybe in ... where the Hispanics and Marshallese numbers are just significantly larger. So, we do not have a lot of outreach programs for our families and I think that would've helped the teachers too if we had more opportunity to interact with the families and get to know them and know what their expectations are. Because they may be different than what we are used to from students we typically have (Participant 1, February 2, 2012).

We've had that where we've had parents' nights, but we could do a lot better and that is one thing our school does not do well and that is get other parents involved. Because we have some parents who are automatically involved that we do not need to pull those other parents in because we can get everything done already but we are doing them a disservice because we really should invite them in a lot more and I think this is unfortunate and I think this is how our school lags. We do not have such programs because our CLD students' number is not as high as other schools in ..... (Participant 3, March 5, 2012).

Inviting a guest speaker from time to time is a strategy used by Participant 3 to reach CLD students' parents and families. As Participant 3 indicated that this strategy didn't work well as it was planned since none of the CLD students' parents ever responded to the invitations. That reason could be as Participant 3 believed that families from ethnic/racial groups might be

uncomfortable speaking while a student is translating what they are saying. If they do not speak English they are not going to be able to participate in such events. Also, the invitation might be not clear enough. Participant 3 didn't know how to make CLD students' parents feel comfortable with that and be open to share their experiences with the class.

I think one thing I am doing having guest speakers next week so parents who are involved in architecture or construction and engineering can come and speak to my class about what they do. So that's a way but usually the CLD students and the Spanish speaking parents they are not going to come, because they are not feeling comfortable, and how you can make them feeling comfortable I do not know. Because I am inviting them but they may not understand the invitation and they might not come and feel comfortable talking in Spanish and other students translate (Participant 3, March 5, 2012).

For participant 2, diversity managed by making sure that each student is included, respected, and treated equally and got past individual differences. Also, to teach students to accept and treat their peers with respect for whom they are, regardless of their culture or background that they came from. The aim is to make sure that all the students feel that they are in a safe and a comfortable learning environment.

But as far as culturally diverse students I do not know that I can show much to demonstrate my commitment to diversity other than when I ever talk to the students I am always mindful of who's in the classroom and I am always mindful of making sure of trying to include everyone in the classroom in all of my comments. So if I see anybody who picked on or made fun off, I do try to stop that as quickly as I can or I talk to the student about how is that is not right. Just

because someone has a different background doesn't mean that we should treat them any differently than everybody else (Participant 2, May 2, 2012).

For Participant 1, culture is central to learning and encouraging students to learn by building on the experiences, knowledge, and skills that each one of them brings to the classroom. CLD students were encouraged to share their experiences with the class whenever they feel ready to do that. Sharing experiences as Participant 1 declared is a good chance to learn and understand many of the CLD students' experiences and their needs which in turn will assist the teacher to know how to meet these needs.

I encourage kids who come from a different background or a different life experience to share if they are comfortable, I always want to hear about that and know about that (Participant 1, February 2, 2012).

Participant 2 shared an incident that happened once in a classroom illustrates the amount of tolerance that CLD students could bring as a group.

In middle school we are barely so very receptive to that. Our middle students, that one time that I just found that all the middle school students in my classroom is a very diverse group of students from socio-economically background. They were just a very diverse group of kids they were all kind of united and they were all united against me, but it is nice to see, because in middle school they do have a fair level of tolerance and what they might write on facebook or what they might say to each other just when they are in friend groups is one thing. But when they are in the whole pack of kids and they are all stand around they have a very amazing amount of tolerance for diversity and differentness (Participant 2, May 2, 2012).

For Participant 3, teaching in a diverse classroom was a big challenge while most of the teachers started teaching in a classroom with mainstream students and had never been exposed or interacted in a culturally diverse environment. In order to appropriately assess CLD students who came from culturally different backgrounds Participant 3 makes efforts all the time to learn more about them through developing a good rapport with them based on caring, respect, and understanding.

A lot of people they teach the way they learned and so the way that most teachers' learned was in a classroom environment full of native speakers. So, I think that this is the first difficulty is getting past that, which is a challenge in itself. The ways I meet these challenges, most importantly for me I get to know my students as best as I can and I try to have a good rapport with them because students who are struggling are much more likely to talk to a teacher that they think likes them or cares about them than they are to a teacher they do not respect or they do not care about them. So that is the first thing I tried to do (Participant 3, March 5, 2012).

Participant 1 supposed that there is a need of a diversity competent person that teachers can communicate with and can back them up whenever they need assistance to understand and learn how to meet CLD students' different needs in schools.

But I do think we need someone who is a liaison or someone who is very well-versed in the needs of culturally diverse students to be onsite at all times so we have a resource to go to (Participant 1, February 2, 2012).

After 17 years of teaching experience Participant 4 considered CLD students' conditions in today's classroom are much better than it was before. The interaction between students is

more than it has been ever. Students in today's classrooms share many things and activities they are interested in with other students and on a daily base. Also, they are not isolating themselves from others like it used to be a few years ago.

The things they are interested in, different foods to different activities outside of school, make a huge difference in the classroom interaction and in the community. CLD students have to interact with each other and not separating themselves out. Their input needs to be respected just as any other students would be. From sports being offered to activity centers to restaurants to retail stores, an impact in our school district and our city has definitely occurred in the past 10 years (Participant 4, March 6, 2012).

However, Participant 4 had a negative experience, attitude and beliefs about CLD students. Participant 4 considered students' background doesn't matter and having a connection with them is really important. Also, Participant 4 supposed that CLD students in general do not respond to the teacher regardless what their culture or background are.

.... schools have a different diversity as the surrounding school systems. The majority of our culture is either Hispanic or white. There is a large Marshallese population also. We have a very few translators for Marshallese. So it is hard to make connections with non-English speaking students. I feel it doesn't matter where they are from and what connection they can make, the first connection has to be between the two of you (Participant 4, March 6, 2012).

Most students are not going to respond regardless of their culture and their background if they don't respond to you on a personal level (Participant 4, March 6, 2012).

Participant 4 in some way was judging some cultures without deeply understanding that particular culture throughout her conversation. Participant 4 didn't seem to have an adequate cultural awareness and understanding.

I had difficulty with some students where women are not respected in their culture so it is very hard for them to have a respect for a female teacher and that one was hard to get passed because the majority of the teachers are female. That one was a struggle that one was very difficult (Participant 4, March 6, 2012).

Participant 4 indicated that they do celebrate diversity in class, for instance in one of their class activities students were asked to write a paper about their families' traditions and their favorite holidays. As Participant 4 believed, applying such activities assist teachers in learning more about CLD students' cultures and background.

We have done different activities were they have to write about their family traditions like a favorite holiday. We see a lot of cultural diversity in these papers because they are all on a personal level. (Participant 4, March 6, 2012).

In math class things are more complicated and it is hard to apply activities relating students to their cultures or background as Participant 4 acknowledged. Since students in this level are learning essential math skills Participant 4 was expected to see some diversity in one of the classroom activities (survey activity) students were working on since each students had to choose his own subject to conduct the survey.

With math, it is harder to see because what we do at this level is just the basic skills of math. At times, it is hard to relate culture to it. Tomorrow we are going to do a survey they are going to pick something to survey about. In an

assignment like that I will see more diversity in the results I get (Participant 4, March 6, 2012).

**Language.** Under the theme of valuing CLD students' first language the four interview participants were asked to characterize their attitudes towards allowing CLD students to use their first language in their classrooms as a part of their commitment to principles of equity and diversity.

In general, the four participants had different opinions specifically concerning whether or not students should be allowed to use their native languages in the classroom.

Participant 1 was excited for having a full time ELL teacher for the first time in their school and considered that as very promising.

For the first time this year, our ELL teacher she is here full-time, it's the first time in the nine years I've been here she is been full-time in the building, so I think that's positive. (Participant 1, February 2, 2012).

Having a full time ESL teacher is important to assist CLD students to develop their second language speaking, reading, and writing abilities and to bridge the learning gap between CLD students and other main stream students. Also, the school was able to offer school summer sessions to work with CLD students and that helped much to get over the problem of learning standard English as a second language.

We have an excellent English language teacher here our ESL teacher and she is very good about working on with us. Just in the summer we have one session in the summer, where she worked with us on strategies for reading, strategies for kind of bridging together the gap that students may have because they came from a different background. But our trainings like I said are very limited, and I guess

that is due to time or maybe some of the lower numbers in classes that some of us have (Participant 1, February 2, 2012).

Participant 2 perceived that all CLD students who were attending the class can read and communicate very well in English. Therefore English is the only Language used in classroom.

Probably all my CLD students that I have in my room are able to read English, and are able to speak English at a pretty high level. I might have 10 students that they are ESL students that they have English is not their first language. But I do not have any student's right now that are not fluent in English, some of them are not perfectly fluent but they can all communicate with me and their peers just fine in English (Participant 2, May 2, 2012).

Participant 3 allowed and encouraged CLD students to use their first language to assist them in the learning process if that makes them feel more comfortable. Participant 3 believed that allowing CLD students to use their first language in class will encourage those students who speak the same language to communicate and help each other to make a connection in their learning. Also, helps the teacher to communicate with those who are lower level learners.

So for instance one way I let my students come in, they want to speak in Spanish, they want to speak in .... I have no problem with it, I will encourage them to do that. Because I want them to feel comfortable, so that's another way to, hey what you just did say. And just that like for me, I spent some time in Latin America and different places and I took some Spanish in college, so one of the thing I know how to talk to them a little bit. And so, you know I will say how do you say house, how do you say whatever we are working on. So I try to communicate with them a little bit, they laugh and think it is fun (Participant 3, March 5, 2012).



Participant 4 believed that CLD students need to learn English language basics until that they will keep struggling in class and be behind.

Again until they have some very basic vocabulary, they are continuing to struggle.

The need for the basic vocabulary is why I think that the new arrival is crucial for new language learners to succeed (Participant 4, March 6, 2012).

## **Classroom Observations**

### **Culture.**

#### ***Participant 1 classroom observation, on February 2, 2012.***

The ninth grade Journalism class, the teacher was observed two times in two different classes. The first observation conducted in the school library. There were 4 CLD students (African American female, Asian female, two Hispanic one male and the other is female) and the rest were mainstream students. The second observation was in the classroom and it was an advising session for a group of ninth grade students. In the advising session most students were mainstream female students and there were only two CLD female students (one Hispanic, and one African American).

The classroom (see Fig. 6, p.193) was situated in a traditional row and column style of seat layout; students' desks were positioned in five columns and four rows respectively facing the teacher coaching area and the windows in the back. The room in the aisles and behind desks was enough for the students to enter their desks and move around freely and to get in and out easily. It is also gave the teacher enough room to walk around the classroom and to help students as they needed assistance. The row and column arrangement puts students facing the instructional area. It is also a convenient configuration when students need to work independently. The classroom situated in a way makes moving desks easy and flexible to

rearrange desks in different ways as needed to utilize various activities and the teacher could quickly and easily change groupings. There was a round table set aside to the left corner close to the teacher station. It could be used for different purposes such as one group working or an individual working. Two whiteboards were utilized in the classroom, one behind the teacher main desk which was situated in the middle facing the opposite side of the students' desks close to the classroom entrance. The second board was situated on the right wall close to the teacher coaching area in the front. The teacher has access to the internet and there is a projector and two main computers in the classroom.

The class was decorated with signs and symbols pertaining to education, encouragement, and discipline quotes. There were some posters incorporating some social facts about the state. There were no quotes or posters or anything that promote diversity and incorporate multicultural themes in the classroom. However, teacher's attitude and interaction with students was based on courtesy and respect. The teacher was very friendly with all students and called each student with his/her first name, appeared to have good rapport and relationship with all of the students. The teacher's attitude was not overbearing or authoritative. Standard English was the only language used during the class.

In the library students were working as pairs and each pair had an access to the internet. The teacher managed to reinforce attitudes valuing and promoting understanding of diversity. Participant 1 had respect for students' ideas, questions, and contributions, allowed students to exercise sense of control of the task. Students stayed on task most of the time. The CLD students and mainstream students were working together, sharing ideas, and helping each other to finish the assigned activity.

***Participant 2 classroom observation, on May 2, 2012.***

In the seventh grade Algebra, in this class the teacher was observed once. There were 6 CLD students (three Hispanic, two Asians, and one African American) in this class. In general, the appearance of the classroom doesn't reflect the diverse needs of CLD students. The class was decorated with signs and symbols pertaining to education, encouragement, and discipline quotes. The only thing that incorporates multicultural themes in this classroom was a big picture hanging on the wall showing children of different cultures and backgrounds sitting together. But the teacher was attentive to the benefits of creating an environment that is advantageous for all students with no exceptions. He managed to reinforce attitudes valuing and promoting understanding of diversity. Called each student with his/her first name, appeared to have good rapport with all of his students. The use of names shows that the teacher has an interest for his students as individuals. Students were seated, (Fig. 7, p.194) in mixed gender and racial (Asian, Black, Hispanic, and White) groups in classroom. Students were directed easily to work together in a small groups (two to four) or individually. The teacher skillfully managed his time to help each individual student and check on his/her work.

This classroom was positioned in straight lines. The desks were situated in three rows of four lines. Each had two students, and each table had two portable computers (a computer for each student). There were three white cupboards one positioned in the front, one in the back and one in the right side wall. The teacher's main table was at the front and, in the middle used mostly for administrative tasks. The teacher had another table in the right side of the classroom, on the table there were a computer, a projector, and students' homework and lessons plans. The space behind the tables and in the aisles wasn't big enough to give a comfort room for both the teacher and the students to move around freely.

After students entered the class the teacher saluted each student by calling his/her first name. The first thing the teacher did after the students sat on their seats was introducing me to the class which made me and made his students more comfortable with my presence. The teacher had a very patient and calm attitude and was not overbearing or authoritative. Participant 2 managed to create an inclusive, supportive, and caring environment. The teacher had a sense of humor, made students laugh many times and have fun learning. It was noticeable that students were comfortable with him as well as with each other. The teacher demonstrated respect for students' diverse abilities, and experiences while paying attention to all students as individuals. Students were treated fairly when they were asking questions or trying to participate throughout the class. A fair chance was given for each student to participate. However, two students didn't contribute much like the rest of the class; one of them was a CLD student (Hispanic) because they were the most restless.

***Participant 3 classroom observation, on March 5, 2012.***

Participant 3 was observed once in class, a required math class for seventh graders. In class the teacher had 10 CLD students, two Asian female students, two African American male students, two Hispanic females, and three Hispanic male students. Participant 3 started class by introducing me to the class. During observation, the first 15 minutes were utilized in putting the last details on their hands-on activity students had started work on at previous two or three classes. The rest of the time was utilized to learn and practice solving some problems they started in a previous class.

The teacher was using hands-on architectural activities to do math. The hands-on activity was designed to help students practice and comprehend geometry and measuring dimensions. The teacher used resources to support diverse student learning. This activity was chosen wisely

since most of his students' family members are involved in the construction business in one way or another. Students were allowed to have some choice and decision-making. Each group made their own decisions about the size, design, coloring and decorating of the modules they built. The teacher created a comfortable and caring environment for all the students, and seemed really interested in whether students are learning. The students were having fun learning.

The classroom arrangement plan, (Fig. 8, p.194) was different from the other three classes I observed. The classroom environment was dynamic, exciting, some décor that was stimulating with hammer shaped balloons hanging from the ceiling. Instructions included application to real life situations or issues. The room was situated in a creative way since the number of students is big compared to the size of the classroom. This classroom was positioned in a semi irregular oval shape. The desks were situated in three rows of angled lines facing three opposite rows of angled lines. Students were able to see and communicate with each other and with the teacher. There were three whiteboards, one in the front, one in the back and one on the right wall. The teacher has two desks one on the right side close to the whiteboard, the other one is in the front close to the door, and there was a round table set aside to the right. The class was crowded in some way the students' works were stacked on two tables at the left side of the class. The space was not sufficient enough for students to move between the tables. Students were seated in mixed gender and racial groups in classroom.

The teacher was able to cover all students and make sure that they understand, allowing more one-on-one time with all of the students in the class. The teacher called almost all of the students by name during the class, whether to ask a student to answer a question, to praise for a good job. By using names the teacher showed an interest for students as

individuals. He was friendly towards all of his students. The teacher was paying attention to each student when he/she was speaking.

***Participant 4 classroom observation, on March 7, 2012.***

The seventh grade math class, the teacher was observed once. In this classroom, half the students were White and the other half were CLD students approximately evenly divided between Hispanics and Marshallese. The students saluted the teacher by saying good morning and sat in their seats. In the beginning of the class the teacher introduced me to the students as an observer from the university. The only place available to sit and take my notes was a chair sitting beside the teacher's desk. The spaces in the classroom weren't managed very well to make students or any visitor to feel comfortable. The classroom was situated in a very classical way, (see Fig. 9, p.195) four lines of desks placed together in rows, facing forward (each row had nine students except the first row had three students). When all the students were facing forward, there was less talking, less interaction, less communications among the students and the focus of the class was always on the teacher. The room behind the tables was enough for the students to get in and out easily and for the teacher to walk between. The teacher's table was placed in the corner not directly in front of the students.

The class environment wasn't created in a way that engaged more students, or where students can talk and share ideas freely and comfortably. Tables were arranged in a way that limited the flexibility that teacher's need to quickly and easily change groupings. However, Students were seated in mixed gender and racial (Hispanic, Marshallese, and White) groups in the classroom of each row were considered as a group.

There was only one whiteboard on the front wall. The classroom was very neat and organized. There were some encouraging quotes presented in different colorful flower shapes on

the classroom walls. There were two big posters with pictures, some are the teacher pictures with family members, and the other pictures are pictures of the students at different occasions and different places at school. The pictures were the only thing that incorporates multicultural themes in the classroom. There were no signs in this classroom connecting students with the real world and/or honor students' families, culture, and language. The teacher didn't call any student with his/her first names during the class. However, there was an organizer that has pockets containing calculators with students' names written on each pocket on the wall near the classroom entrance. The teacher was authoritative and the teacher's way of teaching was teacher centered more than student centered. At the same time, the teacher was friendly, moving around and making eye contacts with the students, and answering students' questions. She was managing the class very well.

**Language.** In Participants' 1, 2, and 4 classes, standard English was the only language used during the class. None of their CLD students used his/her first language during the class. I noticed that CLD students' seemed fine with that. In Participant 2's class there were two Hispanic students chatting together, the conversation was in English. In Participant 3's class the students were encouraged to use their native language as a way to boost the acceptance of CLD students while fostering important learning for all students, as well the other students also seemed interested to learn a new language. The teacher did use some Spanish words during the class.

### **Teacher Attitudes towards Inclusion of CLD Students in Subject Area Classes**

In this section the researcher is presenting and analyzing the data of the theme of teacher attitudes towards inclusion of CLD students in the subject area classroom. Under this theme, there are three subthemes will be presented in order below. The subthemes are: negative attitudes

towards inclusion, positive attitudes towards inclusion, and beliefs towards CLD students' enrolled in subject area classrooms.

### **Teachers' Negative Attitudes towards CLD Students' Inclusion**

**Survey.** There are three variables used to measure teachers' negative attitudes towards CLD students' inclusion as it shows in the frequency Table 8, (p.176).

Table 8 suggests that more than half, 61% (n = 83) of the respondents indicated that the inclusion of CLD students in their classrooms do not necessarily increased their workload. Less than one fifth, 17.7% (n = 23) of the respondents considered the inclusion of CLD students increased their workload. For about half, 50.7% (n = 69) of the respondents believed that having CLD students in their mainstream classrooms didn't require more time than other students required. Less than one fourth, 23.5% (n = 32) of the respondents believed that CLD students do require more time than others. Slightly over half 52.9% (n = 72) of the respondents considered that the inclusion of CLD students had slowed the academic progress of the entire class. Only less than one fifth, 16% (n = 22) of the respondents disagreed with that.

The ANOVA results in Table 10, (p.177) indicate that there is only a significant difference between the dependent variables of teachers' negative attitudes towards inclusion of CLD students in their subject area classrooms and the independent variable of teacher's grade level at the 95% confidence level ( $F = 6.55$ ,  $p = 0.001 < 0.05$ ,  $\alpha = 0.72$ ,  $\eta^2 = 0.05$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.05, which means that the factor teacher's grade level by itself accounted for only 5% of the overall (effect + error) variance.

The Further statistical analyses using the Tukey post-hoc follow up test in Table 11, (p.178) indicate that a statistically significant difference exists between respondents who teach seventh grade and respondents who teach ninth grade. The Post hoc test suggests that



respondents who teach ninth grade had more positive attitudes towards inclusion of CLD students' in their mainstream subject area classes than respondents who teach seventh grade.

**Interviews.** Participant 3 believes that all children are capable of learning but as family transmit cultural skills, values, and styles to their children and influence their decision of the importance of education and that may impact their achievement in school.

I think ultimately that the most important thing about culture is there wherever the culture is in their view of education. So that if you are not in a culture or environment that views education as important then you're not going to view education as important. So until you either break free from that culture and say you know what education is important for my child and for my family and we are going to make it important then that child is not going just automatically think that education is important. So I think that regardless of what culture we are talking about if that is a major problem for us. In some homes education is not considered important, because the family didn't need education to get where they are or what have or what they are doing, so why does their kid need it. Now not everybody are not interested but there are some, but really that is more of an environment issue, it is not necessarily a cultural issue but it is an environment issue based on how they were growing up. And so, education has to be considered important (Participant 3, March 5, 2012).

The time is one of the most critical issues in CLD students' learning as Participant 3 indicated.

You know the other thing that I think is, we need more time because for CLD students and for us to catch up CLD students because that's ultimately what we

are trying to do, we are trying to get them on grade level, on the same real level. There is no way, there is no way that in the time that we are given that students, because they are constantly will be a little bit further, a little bit behind, a little behind ( Participant 3, March 5, 2012).

Participant 4 considered having CLD students in class is a big challenge and the teacher needs to use a lot of effort.

I would say the biggest challenge with working with these kids is that many of them have never been in school. They come to us not being able to speak the language or understand the language fluently. Many also come to us having never attended school. This means they have never been in a school environment and are not used to the rituals that go along with being in school. Having to focus, sit, and do activities become a big challenge (Participant 4, March 6, 2012).

**Classroom observations.** Two of the participants considered having CLD students in their subject area classrooms as a big challenge. Participant 3 claimed that the time was not enough. During the class observation Participant 3 managed to spend time working with and supporting each student. But the remarks about time were because CLD students are pulled out from math classes to attend ESL classes and that's why CLD tended to be behind in math class.

The teacher also managed to keep all students on task all the time with positive reinforcements. CLD students were treated with respect and dignity. The time was enough to cover the lesson as it was planned by the teacher. Participant 3 had a positive attitude towards having CLD students and managed the time very well during the observation. CLD students were on task as mainstream students. I noticed that grouping strategy gave CLD students a very

positive experience to learn in different ways and they were comfortable and communicating very well with other students in class.

Participant 4 considered having CLD students a big challenge. During the activity in class students asked few questions and the teacher managed to answer all the questions. The time was managed well to cover the target of the class. At the same time the students were working individually and trying to collect the data on time, as I noticed not all of them finished on time. With no grouping strategy students were under pressure to finish their assignment. During the class observation the teacher spent time working and supporting few students, only the ones who ask for help. When compared to the other participants Participant 4's attitude towards CLD students' needs is relatively negative.

### **Teachers' Positive Attitudes towards CLD Students' Inclusion**

**Survey.** There are two variables used to measure teachers' positive attitudes towards CLD students' inclusion.

Table 12, (p.178) suggests that the majority, 81.7% (n = 112) of the respondents considered the inclusion of CLD students in their subject area classroom brings benefits for all of their students. Only 2.2% (n = 3) disagreed with that. More than three fourths, 77.4% (n = 106) considered that the inclusion of CLD students creates a positive classroom environment. Only 1.4% (n = 2) disagreed with that.

In Table 14, (p.179) ANOVA test shows that there is no statistically significant difference between the two dependent variables of positive teacher attitudes towards inclusion of CLD students in their subject area classrooms and any of the independent variables at the 95% confidence level ( $\alpha = 0.05$ ).

**Interviews.** The participants agreed that the inclusion of CLD students is needed in today's classrooms. It is providing opportunities to all students to increase their learning and social skills experiences by interacting and learning about others and to better understand how things could be done in different ways. It also gives students a chance to learn about different languages, cultures, and views that may not necessarily match the media or their parents' views about different cultures.

I think that as teachers we have to look at a diverse student obviously equally that every student has equal ability to achieve if we provide the tools they need. But also those students who come from a diverse background have a lot more to offer something different to offer like I talked about earlier because they are going to have had personal experiences that we are not going to have had, so they can enrich your classroom and add to it (Participant 1, February 2, 2012).

Teachers need to promote greater tolerance, understanding, and appreciation of diversity in their classroom as Participant 3 indicated.

I think they add all kind of things but what is the most important I think they add a need for tolerance and for understanding and for education to not be ignorant of cultures or people groups. And that is a constant battle in .... and in northwest ..., and in the world. People they hear about some cultures and groups but never learn about it. I think the most important thing my CLD students bring is first of all their kind, they are good, they are sweet kids and then other people get to know them and they are like yeah they are okay. And then they become normal, it becomes normal part of our culture here in .... So I think that is really important is that student see that or what I see on the news or what I hear from

my parents or what I hear from whoever is not necessarily true. So I mean this a huge deal (Participant 3, March 5, 2012).

Participant 2 believes that CLD students bring a different perspective of learning and alternative ways of doing math that benefit other students.

They have a different perspective; I think that is nice for our students to know. We talked about long addition a minute ago; some students do their math while I am teaching math. Some of the CLD students do math differently and that is nice for our students to see. Of course for our high level kids, if you can have a higher level student understand an alternative way of doing their assignment it really helps that a higher level student thinking to be able to see other two different ways to do this and that there is a second method of doing this. So, those kind of things I think contribute to the academic success of all students and for more culturally diverse students in the classroom with them (Participant 2, May 2, 2012).

I don't know if I can answer this directly, but I am having the overseas teaching experience and I do feel like diversity is important. I talk to my students, often about travel and about seeing what other people are like and what other countries are like, but how these experiences by itself, I do not know that I can answer that question right (Participant 2, May 2, 2012).

The good instructor believes in his students and gives them the opportunity to succeed and achieve as Participant 3 indicated.

I think in my classroom the people that excel the most in my classroom are often not the normal students that excel the most in a normal math classroom. So, a lot

of my CLD students do very well here because we use hands on and because they can succeed in my classroom. And they know they can and so they do. I mean yes if anything I have seen that CLD students if they are given the opportunity they will do very well (Participant 3, March 5, 2012).

**Classroom observations.** The participants 1, 2, and 3 had set ground rules for the way students behave and interact with each other. As a group students were listening to each other and respecting what they say and collaborative discussions inside the groups were encouraged. Students were communicating in different ways, some of them were showing each other how the assigned problem could be solved by writing the steps, others were explaining that verbal and body language was used by many of them. Students were encouraged to follow class rules and to give each other the chance to speak and share their ideas. The participants each in his/her class were moving around mentoring and guiding the groups' discussions and gave students some hints when it was needed.

Participant 4's class used a different strategy. Students were working individually, each responsible for his/her work. Students were moving around trying to interview each other to collect the data for their assignments. They were communicating with each other and collaborating to get the data done. At the same time they were not discussing their ideas to figure it out as a group but as individuals. In this class the teacher's mission was answering the students' questions and mentoring their behavior and interacting with each other. The students were working alone there was no direct interaction with the teacher. The teacher was standing in front of the class observing the students, a few students only two or three had questions to ask.

## **Teachers' Beliefs about CLD Students Enrolled in their Subject Area Classes**

There are six variables used to measure teachers' beliefs towards CLD students' inclusion.

### **Survey**

Table 15, (p.180) shows that most, 87.6% (n = 120) of the respondents believed that all the students in their classrooms should be taught in the same way regardless of their diverse backgrounds. Only 5.8% (n = 8) of the respondents believed that students should be taught in different ways according to their background. More than half, 58.6% (n = 78) of the respondents believed that they do not have the sufficient time to respond to the needs of their CLD students in class. About 22.6% (n = 30) of the respondents believed that class time was sufficient to respond to the needs of their CLD students. More than two fifths, 44.8% (n = 62) of the respondents believed that their CLD students' class participation was less than other students. Slightly more than one third, 33.8% (n = 46) of the respondents believed that CLD students class participation was as much as other students participation. Slightly more than three fifths, 62.5% (n = 85) of the respondents believed that CLD students' first language should not be utilized in class. Only 8.8% (n = 12) of the respondents believed that CLD students' first language should be utilized in class. More than half 54% (n = 73) of the respondents believed that CLD students should acquire standard English language within two years of enrolling in school. About 17.1% (n = 23) of the respondents disagreed with that. About half 53.3% (n = 83) of the respondents believed that CLD students should not be enrolled in general education classes until they attained a minimum level of standard English proficiency. Only 22% (n = 30) of the respondents disagreed with that.

The ANOVA test Table 16, (p.181) indicates that there is only a significant difference between the dependent variables of teachers beliefs about CLD students that were enrolled in

their subject area classrooms and the independent variable of gender at the 95% confidence level ( $F = 6.38$ ,  $p = 0.01 < 0.05$ ,  $\alpha = 0.62$ ,  $\eta^2 = 0.05$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.05, which means that the factor of gender by itself accounted for only 5% of the overall (effect + error) variance.

The data suggested that male respondents displayed more positive beliefs about CLD students enrolled in their subject area classrooms when compared to female respondents (see Figure 11, (p.196).

### **Interviews**

In general the participants believed that equity and fairness between all students are very important.

So, I think it is our job as the adults to model the behavior that everyone is equal that everyone can achieve and succeed and some people have had some unique experiences to their life that they can add even more to ours than we can realize and we should embrace that and enjoy it and appreciate it (Participant 1, February 2, 2012).

Also, Participant 1 believes that learning about everybody is crucial to understand the world around us, to collaborate together and to function better.

We need to learn about everybody and how we are going to function together. We talked a lot about globalization and why that is important and why we all need to get along and cooperate and support each other, so I think that is good (Participant 1, February 2, 2012).

For Participant 2 equity between all the students is a critical issue but when it is appropriate for them.



You know just a couple of exams I have you know is one we've always with equity now is tell the students that fair is not the same as equal. So I give them an example, if someone needs to use a wheel chair for a month then they should be able to use a wheel chair they should not have not to use a wheel chair, they should use whenever is appropriate for them to be able to participate in whatever everyone else is doing. So, in math some students have calculators and some students do not. Some students come with their times tables and some students cannot. And generally about once a year I have to address the entire, all of my students, and say fair or/and equal are two different things. Just because someone has the opportunity to use a calculator doesn't mean that they can lag up but it might mean that for them it takes a very long time just to do the multiplication tables in their head and by the time they are done with the multiplication tables in their head they have forgotten what they were doing. So, that is one think that I do and I use different language with that with the students (Participant 2, May 2, 2012).

The participants believe that CLD students not only need to like their teacher but also must sense that the teacher cares for them by creating an environment that make them feel comfortable and motivated to succeed in school.

I take pride for the fact that my students like to come to my class and I do not care who they are, I want them to be feel comfortable. So it is a definite commitment to me because I see the lack of, when I see my students grow up and a large amount of them get lost, I attribute a lot of that to them not feeling comfortable at school anymore. For whatever reason, but I am committed to that. So, if anything

I think that my students before they finish could look back and say I really loved Mr. ...'s class but now I hate high school. So, I find it difficult because if I am not regrettable because students if they can find one reason to come to school they will come. If they can find one teacher to care about them, they will come, but it is difficult (Participant 3, March 5, 2012).

Class size is also one of the critical issues in education; there is a big difference between big and small size classes and achievement as Participant 3 elaborated.

Well, to me the most obvious one is the class size. I have in one class about 20 students and the rest of them 28 to 30 students. It is night and day the difference between 20 and 30 it's amazing. People talk about the state of education in America that is one of the biggest problems the class size, it is almost too difficult for any one person to manage and so if I can make a proposition it will be lower the class sizes that will be the first one (Participant 3, March 5, 2012).

CLD students should have some very basic vocabulary before enrolling in mainstream classes as Participant 4 indicated.

Again until they have some very basic vocabulary, they are continuing to struggle. The need for the basic vocabulary is why I think that the new arrival is crucial for new language learners to succeed (Participant 4, March 6, 2012).

For Participant 4 one of the effective ways to arrange CLD students learning to help them achieve is the exchanging vocabulary learning strategy.

Especially with those students that don't know how to speak English, I try to teach them a word and then I allow them to teach me a word. Using a student translator or another translator to ask them about their family or where they are

from helps develop a social relationship. I think building a personal relationship helps with CLD students (Participant 4, March 6, 2012).

### **Classroom Observations**

During class, Participants 1, 2, and 3 modified instructions to increase CLD students' participation and learning. Also, during group work, the teachers reviewed content information many times to keep students interested and on task. The instructions were repeated in different ways, on the board and verbally to meet the needs of all students. More wait time was allowed, teachers gave students the time to process the questions in class and they gave them the time to respond and answer the questions. CLD students were interacting and collaborating with other students. Everyone stayed on task, one student was allowed to speak at a time when a question posed by the teacher or a student.

Language wasn't considered as a problem, CLD students were collaborating with other students and they were allowed to use their first language if they needed. All the conversations and discussions were in English. CLD students were comfortable and had a good rapport with the teacher and the other students. Teachers showed their support and enthusiasm for teaching and helping all students to work to their potential.

All the participants were positively dealing with the inclusion of CLD students in their classrooms. Their classes reflected welcoming environment for all students based on respect and dignity. CLD students appeared comfortable and interacting actively in class. Also, the teachers managed to respond to all students in class equally.

Participant 4 had a different situation. It was hard to see if CLD students are learning or being ignored. When grouping or cooperative learning strategies are not applied, it is hard to see a clear picture of student-student or teacher-student interaction. The teacher reviewed the

instructions and the content information on the board, and then asked if there are any questions. Students started working on their assignments. It wasn't much to observe in her class. The teacher was the center of information. Students weren't taking a real part in their learning in this activity (survey).

### **Teachers' Training**

There are five variables used to measure teachers' training and preparation as it shows in Table 17, (p.181).

#### **Survey**

The data in Table 17 indicate that almost three fifth, 58.1% (n = 79) of the respondents believed that they had been adequately trained and prepared to teach CLD students. Above one fourth, 25.7% (n = 35) of the respondents believed that they had not been adequately prepared to teach in a diverse classroom. About two thirds, 65.9% (n = 105) of the respondents were interested to receive more training as they need to learn more specific skills to work with CLD students in their subject area classrooms. Also, about three fourths, 72.3% (n = 99) of the respondents considered themselves adequately prepared to develop, integrate and implement multicultural contents into the curriculum. Only 9.5% (n = 13) of the respondents believed that they were not ready to infuse any multicultural content. At the same time, more than three fifths, 63.5% (n = 81) of the respondents perceived that they had adequate experience to implement different multicultural perspectives in their subject area lesson plans, and only 12.4% (n = 17) believed that they were not prepared to teach with multicultural perspectives. However, all the respondents, 100% (n = 137) believed that they had the skills to teach with different learning styles that allowed them to competently meet the needs of the CLD students in their subject area classrooms.

ANOVA Table 19, (p.182) shows that there is no significant difference between the dependent variables of teacher training and any of the independent variables.

## **Interviews**

All the participants in this study had agreed that most of their training to work with culturally and linguistically diverse (CLD) students is very basic and not adequate to handle the diversity in their subject area classrooms.

Participant 2 had only the training that had been required by the public school district and it wasn't adequate training to deal with the diversity in classroom.

The training that I've had for those students is mostly some training provided by the ... public schools about working with ESL students and the kinds of accommodations that those students need. But that is all the training I've had for them (Participant 2, May 2, 2012).

I was a math graduate student and all of my university course work has been in math. I am not taking any education courses. I did when I was in Florida when I first started teaching I had an alternative; I went through an alternative path to become a teacher. So, I had to pick up a few education courses, so I did take a few education courses at the University of South Florida, but I wasn't required to take any courses regarding CLD students. These courses were just teaching math and just general education courses, and sociology, and sociological foundations of education (Participant 2, May 2, 2012).

Participant 2 also believed that teachers need to know and understand how to be a culturally responsive teacher.

The third one is I think that culturally responsive teachers need to have some sort of training, some sort of examples, of what a culturally responsive teacher looks like. I feel like I need to be more culturally responsive teacher but I really do not know what that looks like. But I would appreciate more suggestions on how to do that. I think so; an example of culturally diverse classrooms and a culturally responsive teachers (Participant 2, May 2, 2012).

Participant 1 has similar training opportunity as Participant 2 besides one class that was required for the MAT program. However, because their training was very limited in these classes it was not enough to approach teachers how to meet CLD students learning needs in classroom.

Because we do not get a lot of training, I mean some of these questions were hard to answer because we do not have a lot of training, just not very much. During my MAT I only had to have one class, for my doctorate I only had to have one class about multicultural education, so that is not very much. Unfortunately, trial-and-error once you get into your classroom to see what it works and what doesn't, plus every student is very, very different and that goes for the students who were born here or who were not (Participant 1, February 2, 2012).

Participant 1 perceived that teachers received more training to work with students with exceptionality like gifted, physical and mentally disabled students or students with autism to meet their needs than they received to work with CLD students that they are dealing with much more.

But it is pretty; it is kind of basic we are trying to do whatever works because we don't have a lot of training. I felt kind of bad when I read your questions. We

have far more training to work with students with exceptionalities, whether students are gifted or physically disabled, or mentally disabled, or autism. We have a lot of training to work with those students than we do culturally diverse students and students who have a different language. So, we have a lot more of training in that area than we do (Participant 1, February 2, 2012).

Pretty simple things I mean basic nothing to elaborate about that our training are very limited so probably I am not doing anything miraculous (Participant 1, February 2, 2012).

For Participant 3 the major problem is teachers are not prepared adequately to serve CLD students, also most of the teachers never been in school that have diversity. Therefore it is kind of hard to do all the work without being trained well to do that.

Okay, so I think several things, I think that first of all it is difficult. It is difficult for most teachers because they weren't trained to work with CLD students. And in a lot of ways I would say most teachers were not taught even growing up even in elementary and junior high and high schools the majority of teachers in the United States were not taught about CLD trained teachers because everybody was the same in most part. In the past twenty years ago you know there is been a much larger CLD students population and so the focus has shifted in roughly so I think that is a major problem (Participant 3, March 5, 2012).

Participant 3 learned about CLD students learning needs thorough ESL endorsement he took earlier.

I did the ESL endorsement were we learn about CLD students needs and you know there is ESL office in ... that we can go to for help and there are several

ESL students here in our school I go to for help or advice. So we can use that, and I think that students, their own culture and their own language definitely impact their performance (Participant 3, March 5, 2012).

Participant 4 demonstrated that they do have a lot of training to work with culturally and linguistically diverse (CLD) students in their school but the problem is they sit and listen to different suggestions and strategies and it is just never applied. However, Participant 4 tried to apply some of the strategies they learned to help CLD students to succeed, but in math the suggestion and strategies do not always work.

Taking ownership in the district training that we've gone through would be one example. And a lot of times you just listen and it goes on you know but I really have taken heart with the CLD students and the suggestions that they offer for us, I really do try to come back and use them. Applying the technique and strategies has helped the students feel more successful. Hands-on activities, vocabulary charts, and activities that involve communication with one another have become a priority in my lesson planning. In teaching math they don't always work. So I always just try the suggestions that they give us (Participant 4, March 6, 2012).

In order to answer sub-questions 3 and 4, the data from 3 of the 6 themes is presented and analyzed in order. These themes are: (4) teachers' expectations, (5) teachers' attitudes towards CLD students' needs, (6) teaching methods and teacher-student communications.

In this section the researcher is presenting and analyzing the data of the theme of teacher expectations.



## Teachers' Expectations

### Survey

There were six variables used to measure teachers' expectations as it shows in Table 20, (p.183).

Table 20 indicates that most, 94.8 % (n = 129) of the respondents believed that having a high expectation for all of their students regardless of their diverse cultures or languages helped them get the maximum effort and potential and best academic performance. Only 0.7 % (n = 1) of the respondents had a doubt that high expectations had any influence on student achievement. Also, The majority, 93.4 % (n = 128) of the respondents had no doubt that all students in their subject area classes can and will learn and perform regardless of their diverse cultures or languages. Only 1.5 % (n = 2) of the respondents disagreed with that.

Also, the data revealed that 93.4 % (n = 128) of the respondents believed that high expectation of CLD students enabled them to develop positive attitudes, perceptions, and a high self-efficacy of academic ability of each student in their subject area classrooms. Slightly over three fifths, 62.2 % (n = 84) of the respondents had never expected that all students should come to their subject area classes with particular experiences in essential skills. Less than one fifth, 17.8% (n = 24) of the respondents are expecting from all the students to come to their classrooms with such experiences and essential skills. Thus, more than three fifths, 63.7% (n = 86) of the respondents perceived that students' efforts shouldn't be connected to who is going to succeed in class or who is going to fail. No more than 10.2% (n = 14) of the respondents expect that students who do not make enough effort may fail in their classes. More than one half, 50.4% (n = 69) of the respondents expect some of their students to fail no matter how much effort the

teacher puts forth. While more than one fourth, 29.9% (n = 41) of the respondents expect that all of their students will succeed in their classroom.

The ANOVA Table 22, (p.184) indicates that there is only a significant difference between the dependent variables of teacher expectation and the independent variable of teacher gender at the 95% confidence level (  $F = 4.30$ ,  $p = 0.04 < 0.05$ ,  $\alpha = 0.61$ ,  $\eta^2 = 0.03$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.03, which means that the factor of gender by itself accounted for only 3% of the overall (effect + error) variance. The data show that male teachers in this study have a higher expectation for their CLD students when compared to female teachers.

### **Interviews**

All the interviewed participants believe that they have a high expectation for all of their students. For Participant 1, high expectation means understanding, appreciating, praising and knowing each student background and his/her learning style. Although, expecting every student to gain knowledge and make progress and move forward. However, Participant 1 believed that students should be treated equally and each student should have an equal ability to achieve if provided with the appropriate tools to meet his needs.

I have high expectations for everyone of my students I do not care who they are or what they are or where they came from. You also on the flip side of that have to have a realistic expectations, because everyone has a unique learning style, everyone is going to have personal challenges whether it is going to be their home life or they have a learning disability or they just do not like this particular content area if they are resistant to it or they come from a completely different culture. But I have high expectations for everybody, I do not care who you are or what

you are, you can succeed and achieve in my class but I am also realistic about that. I also think that it is my job to reflect upon what we are learning and reflect upon the activity we are doing, and make sure that everyone actually understands that they are gaining some knowledge and moving forward in their progress. Not just we have checked on that activity and moved on but that they actually understood what we talked about and what activity we did and why we did it, why it is important, why it matters like when we are talking about chemistry earlier it is more than just checking that off your list and saying I took chemistry and moving on. Why you have to learn chemistry in your college, why you have to take it, why that is a requirement of the college, what's the purpose. And that is what we talk a lot about in our classes, why do we have to learn about ... history, why do we have to learn to write a sentence, why did those things matter. So, my expectations are high for everyone but I am also realistic about what challenges they face, where they are coming from and what we can realistically achieve and help them be successful (Participant 1, February 2, 2012).

For Participant 2 always the intention is to encourage all the students to learn and be successful. Therefore, there is a need to start with them wherever they are, and that's different from one student to another. Also, to let them know that they need to move forward and to see their grade going up. Participant 2 pointed out that high expectations should be combined with good instruction and planning.

In the years past within the normal seventh grade math class, we've had one class were all the really bright kids are gathered, and in the other classes are just everyone mixed up. But this year and last year all of our bright kids were

scattered throughout all the classes. So, in any one of my classes I have got a huge diversity of math ability and when you look at their scores it is just obvious that a very huge diversity. But I do tell all the students when they come in that this is how I feel about them when a new student walks in, I will meet you where you are but I do want you to raise your understanding while you are here. And I realize that some students will go from a 90 to a 100 and that is awesome and I realize some students will go from a 50 to a 75 and that is also awesome. But I do tell everybody that I need to see their scores increase throughout the year. And I do know with math there are some students that they don't love math and they don't like spending time doing it and they don't feel good at it. But I still tell them that I am expecting them that are we, the society, expects them to learn and improve themselves throughout the good instructions that we provide and all the practice that they have and all the support that they have at home and all those things. So, I do understand that there are students that are at different levels on the skills, attainment, and spectrum but I expect everybody to move forward (Participant 2, May 2, 2012).

For Participant 3 high expectations means knowing the students and their capabilities, therefore expectation should not be equal for everyone. Expectations could change from student to student however it is still high for every one of them.

High expectations for me is that I get to know my students so that I know what they are capable of doing. So, my high expectation is not the same for every student. So, I expect them all to succeed; I expect them all to do well. But my level of expectation changes because there are some students who need more time

and if I do not give them more time then I can't expect them to finish and at the same amount of time as another student, or get students who do not pay attention to details. So, their house is not going to look the same as the students who is all over the details and very creative and very artsy. So, I mean my expectation changes but they are high for each student according of what they are capable of. So, there are a lot of students who I expect different things of in different ways. So my expectations for my students are different, but I hold them all to a high standard. But I do not expect them all to do the exact same thing. So, ultimately, my expectations are high and my students know that because they know me and they trust me. So, that ultimately comes down to my relationship with them as well. My students perform to an expectation because they like me, because they like my class, and they respect me, not because I am giving them this expectation, it is because they have belief that Mr. ... has asked to do this and I trust Mr. ... or I like Mr. ...'s class. So, I want to make him proud of me. So, that is where I think my ultimate expectations remain high is by the way I treat my students. So, ultimately they perform to those expectations because they want to (Participant 3, March 5, 2012).

For Participant 4, high expectations mean that all student work to their potential and always attempt and try. Participant 4 believes that high expectations also depend on how long students lived in the USA and on their level of understanding and their ability to communicate.

All of my students give me the best work. I expect that of all my students. Even with CLD students who are struggling in learning the language, I always expect them to attempt the work. It might not be completed, it may not be correct but it

needs to be attempted. That's my high expectation. The longer the student has been in the US, my expectations become little higher. By knowing their level of understanding and their ability to communicate, I can set my learning expectations to meet their needs (Participant 4, March 6, 2012).

### **Classroom Observations**

Participants 1, 2, and 3 had high expectation for all of their students and that was clear from their attitudes in class. Teachers' expectations in the three classes were class-centered. Each of the teachers adapted and created strategies for individual student needs and situations. They provided their students with a lot of feedback during the class. They challenged students with higher order questions. It was noticed that each of the three teachers had established a culture of learning. In their classes students were sharing some of the class decisions and they were part of their learning. During the class observation, students in class were helped to learn and reach their educational goals by the teacher as facilitator. The class environment was built on trust and respect and that was clear, the interactions between teacher-student, and student-student were based on respect and understanding. CLD students were working in groups with other students helping each other and learning from each other and the teacher was facilitating their learning. They motivated and stimulated their students in different ways during the class, such as positive reinforcement, questions, etc.

The activities were designed in a way to challenge all students and to motivate them to do their best. They connected their students with real life through well designed activities. Teachers expected that the achievement of their students will increase and that was noticed in class. They gave each student the needed time to understand the subject they were teaching. They had passion for the subject they were teaching and for teaching. CLD students were

involved as other students, and instructions were designed for individual students. Different learning methods were applied. Students were having fun learning and participating actively.

Participant 4's class was different. The students were not served equally, only few students asked for help. The teacher was watching and managed to control class behavior, students were interacting with each other with respect. The teacher was guiding the students and providing the information to them. Instructions were designed for all students, in class students were absorbing the information, the teacher wrote the information on the board and the students were expected to follow the directions to do the survey, then students start working. The teacher used competitive learning more than cooperative learning strategies in this class.

### **Teachers' Attitudes towards CLD Students' Needs**

In this section the researcher is presenting and analyzing the data of the theme of teachers' attitudes towards CLD students' needs.

#### **Survey**

There are six variables used to measure teachers' attitudes towards CLD students' needs as it shows in the Table 23, (p.185).

Table 23 signifies that the majority, 93.4% (n = 128) of the respondents believed that knowing the background and the experiences of CLD students is a major element to increase their learning achievement. Also, 91.2% (n = 125) of the respondents considered utilizing different instruments of teaching (formal, symbolic, media) as part of their responsibility, to help convey important information, values, and actions about cultural and linguistic diversity. Most of the respondents, 92.7% (n = 127) agreed that meeting the individual needs of all their students is an important part of their lesson plans.

The data from Table 23 indicate that more than three fourths, 76.8% ( n = 86) of the respondents believed that math and science materials should help students to understand the ways in which people from a variety of cultures and groups have contributed to the development of scientific and mathematical knowledge. About two thirds, 65.5% ( n = 76) of the respondents agreed that math and science materials should help students to understand the ways in which assumptions, perspectives and problems within these fields are often culturally-based and influenced. Only 3.5% ( n = 4) did not agree with that. However, more than four fifths, 83.5% ( n = 86) of the respondents agreed that social studies materials should help students to understand the American society, history, and culture from diverse ethnic and cultural perspectives. Only 1.9% ( n = 2) disagreed with that.

In Table 25, (p.186) the possible significant differences between teachers' attitudes towards CLD students' needs in their subject area classrooms and the 10 demographic variables (gender, race, age, subject area, level of education, years taught, grade level, English as first language, speaking second language, and level of proficiency was tested by ANOVA at 0.05 level.

The ANOVA results indicate that there is a significant difference between the dependent variables of teacher attitudes towards CLD students' needs in their subject area classrooms and the independent variable of subject area at the 95% confidence level (  $F = 3.52$ ,  $p = 0.03 < 0.05$ ,  $\alpha = 0.72$ ,  $\eta^2 = 0.05$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.05, which means that the factor of teacher attitudes towards CLD students' needs by itself accounted for only 5% of the overall (effect + error) variance.

Further statistical analysis using the Tukey post-hoc follow up test Table 26, (p.187) indicates that a statistically significant difference exists between social studies and science



teachers' respondents. Social studies teachers' respondents had more positive attitudes towards CLD students' needs when compared to science teachers' respondents. Findings in Table 25 indicate that there is a statistically significant difference between teacher respondent attitudes towards CLD students' needs and the respondents' subject area of teaching.

ANOVA test Table 25 also shows that there is a significant difference between the dependent variables and the independent variable of years of experience at the 95% confidence level ( $F = 3.60$ ,  $p = 0.00 < 0.05$ ,  $\alpha = 0.72$ ,  $\eta^2 = 0.01$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.01, which means that the factor years of experience by itself accounted for only 1% of the overall (effect + error) variance.

Further statistical analysis using the Tukey post-hoc follow up test Table 27, (p.188) indicates that a statistically significant difference exists between the respondents who had five to nine years of teaching experience and teachers who had 25 years and more of teaching experience. Teachers who have taught for five to nine years had more positive attitudes towards CLD students' needs when compared to the respondents who had 25 years and more of experience. Although, the findings indicate that there is a statistically significant difference between the respondents' attitudes towards CLD students' needs and years of experience

## **Interviews**

Participant 2 perceived that knowing students' background and experiences allow teachers to learn more about their students' differences which they can use to refine lessons plans for them depending on their background.

I think the first thing is the students and the teachers need to be aware that the students come from a different background. Some teachers have the same lesson plans they use year after year after year and they do not tailor those lesson plans

to their classrooms. So the first proposition that the teachers needs to be aware of the nature of the students' backgrounds in their classroom (Participant 2, May 2, 2012).

Participant 1 added that teachers should differentiate treatment for each group of students, not everything teachers apply previously should be appropriate for every group of students. Different interactions and different ideas should be infused all the time according to students' background.

Because every group of kids you get is different and what you did last year may completely fail with your kids this year, so you have to find out something else to do. And that's one thing I like to have interns in my class a lot, because they are always bringing different new ideas that keeps me thinking and keeps me on my toes and I try to serve on. We have a lot of different kinds of committees in our district and we have committees in our building and I always try to serve on the different committees and the things that I can because that is how you learn, I meant that is how you get new ideas, and grownups needs to collaborate too. That keeps me thinking and keeps busy and that's what I am liking about working on my doctorate because I am around a completely different group of people when I go to class and have different interactions and get different ideas so that is important too (Participant 1, February 2, 2012).

Participant 3 believed that the benchmark test is unfair for both teachers and for the new CLD students who just started. The new CLD students who do not have any English language skills are required to take the exam as well as any mainstreamed student. When CLD students do poorly in the test the teachers get punished. Participant 3 alleged that it is neither the teacher nor

the new CLD students' fault if they performed poorly on the test. Participant 3 complained that the insufficient time that is given to teachers to work with CLD students as well as the requirement of the benchmark test are both pulling the teachers back from making a real improvement in their CLD students' learning.

I think the Benchmark is absurd what they are asking some of these CLD students to do. How can these kids who just moved here, he doesn't speak English he doesn't read and you make him take a test it doesn't make sense. And then you are going to punish us because he can't perform at that level, even though we didn't have the opportunity we just barely started. It is unfair, it is an unfair, for districts like ours it is unfair, but yes I will say the Benchmark does pull us back. Because you can't gauge hands on collaborative learning on the Benchmark, you can't do that (Participant 3, March 5, 2012).

Participant 3 also commented that CLD students are pulled out from their regular classes to attend an ESL class therefore they are always a little behind than other students. Teachers' need more time to deal with CLD students' learning needs.

Not anything about saying anything about them, but just the amount of time that we have, so because then what happened is okay they need to focus on reading, they need to focus on math. So they pull them from the science class, they pull them from the keyboarding class, and they pull them from wherever they are. So, they lose this part to try to supplement this part and so there is just not enough time because we are trying to do so many other things, and we try to prepare them for benchmark, we trying to prepare them for such other thing. So if we can have more time with them that would be ideal (Participant 3, March 5, 2012).

Participant 4 perceived that the new CLD students' arrival he/she needed to be put in a new arrival center for a couple of weeks in order to help them learn standard English before placing them in regular classes as some other schools in the district do.

We have many resources in our district that can help us. Some of the schools in our district have a new arrival center which allows them to be submerged in learning basic English for about nine weeks. Then they are placed in a regular classroom situation which helps them apply and begin using the new language. My school doesn't offer that which I think is a disservice to the students. I wish we had that at our building (Participant 4, March 6, 2012).

### **Classroom Observations**

All the participants seem to know their students' strengths and weaknesses. Hands-on activities were applied in the four participants' classes. The lesson in each class was well planned and instructions built on different learning methods that meet the needs of CLD students and mainstream students. All the participants tried to help CLD students to understand the concepts and perspectives of the subject they were teaching by using different learning methods. One of the successful ways was grouping; grouping the students in different ways was based on the teacher's knowledge of the background of his/her students. Also they managed to create a culturally positive environment in which all students were treated with respect and understanding. Students first language wasn't used much to meet the needs of CLD students learning. The classes were based on the teachers' belief that all students are able to learn. Although all students were provided with an equal access of information but how each of the participants presented the information was based on individual student's needs in each class.

## **Teaching Methods and Teacher-Student Communications**

In this section the researcher is presenting and analyzing the data of the theme of teaching methods and teacher-student communications.

### **Survey**

There are 14 variables used to measure teaching methods and teacher-student communication as it shows in Table 28, (p.189).

The data in Table 28 show that more than three fifths, 66.4% (n = 91) of the respondents indicated that only competitive learning techniques had been applied in their subject area classroom. Slightly less than one third, 32.8% (n = 45) of the respondents indicated that they had used learning competitive techniques more often compared than cooperative techniques. Less than 0.7% (n = 1) of the respondents had used cooperative learning techniques more often than competitive. However, about three fourths, 74.8% (n = 101) of the respondents had included content related to their students' diverse background in their lesson plans but infrequently. Slightly less than one fifth, 19.3% (n = 26) of the respondents never had included any content relates to that in their lesson plans. Only 5.9% (n = 8) of the respondents had most of the time included such content in their lesson plans.

The data also indicate that more than three fourths (77.9%, n = 106) of the respondents never had integrated any activities that require different learning styles to meet the needs of all their students, about one fifth, 21.3% (n = 29) of the teachers occasionally did so. Merely 0.7% (n = 1) of the respondents had frequently incorporated different teaching activities based on student learning styles.

More than one half, 54.7% (n = 75) of the teachers had encouraged the students to work independently more often than team work. More than two fifths, 43.1% (n = 59) of the

respondents had encouraged team work once in a while, and only 2.2% (n = 3) of the teachers had encouraged team work on a regular basis. Slightly over one half, 51.1% (n = 70) of the respondents had simplified coursework for CLD students once in a while. Less than one third (32.1%, n = 44) of the respondents had simplified coursework for CLD students on a regular basis, and only 16.8% (n = 23) of the respondents never had simplified any coursework for CLD students.

Almost three fifths, 55.9% (n = 76) of the respondents indicated that they do allow CLD students to have more time to complete coursework from time to time. Less than one third, 30.9% (n = 42) of the respondents had never allowed CLD students to have any extended time. Only 13.2% (n = 18) of the participants indicated that they do allow CLD students to have more time to complete their coursework all the time.

More than one half, 52.9% (n = 72) of the respondents had modified assignments for CLD students that enrolled in their subject area classes from time to time. More than one fourth 28.7% (n = 39) of the respondents never had modified any assignment to meet the CLD students needs. The data revealed that only 18.4% (n = 25) of the respondents had frequently modified the assignments for the CLD students.

However, around three fifths 62.5% (n = 85) of the responders provided materials for CLD students in their first languages as well as in English more often than not. Less than one third, 30.1% (n = 71) of the respondents had provided materials in other languages beside standard English at sometimes, and only 7.4% (n = 10) of the respondents had provided their class materials in standard English language all the time. More than three fifths, 63.2% (n = 86) of the respondents had never matched any of their instructional techniques with their students' learning styles to meet their needs. Slightly more than one third, 35.3% (n = 48) of the

respondents had matched their instruction to meet their students' learning styles for sometimes. Only 1.5% (n = 2) of the respondents had frequently matched their instruction with their students learning styles.

The data indicate that more than four fifths, 87.6 % (n = 120) of the respondents' revealed that their classroom decisions had never been made based on the needs of all their students. Less than one fifth 11.7 %, (n = 16) of the respondents' classroom decisions were made based on the need of all their students at times, and only 1% (n = 0.7) of the respondents do so often. Over one half of the respondents in this study 51.9 % (n = 70) considered that students' efforts are sometimes more important to them than achievement when they grade CLD students. However, slightly more than one third, 34.1 % (n = 46) of the respondents had never considered that. Only 14.1 % (n = 19) of the respondents had frequently considered that when they grade CLD students.

The data also indicate that less than three fourths of the respondents, 71.5% (n = 98) had faced a big challenge in meeting the needs of CLD students in their classrooms at times. Less than one fifth (18.2%, 25) of the respondents had faced such challenges more often than not. Only 10.2 % (n = 14) of the respondents never had students that presented any challenge for them in their classrooms.

Frequency Table 28, (p.189) suggests that slightly more than two thirds, 66.9 % (n = 91) of the respondents had used different cross-cultural communications patterns to communicate with their students to promote their learning at times. However, less than one fifth (19.1 %, n = 26) of the respondents had never used any cross-cultural communications patterns. Only 14% of the responded had used cross-cultural communication patterns frequently. Over three fifths, 61.3% (n = 84) of the respondents never had any students that they couldn't communicate with.

Around two fifths, 38% (n = 52) of the respondents at sometime had few difficulties to communicate with some of their CLD students. Only 0.7% (n = 1) of the respondents had always some difficulties to communicate with CLD students as the data indicated.

The ANOVA results in Table 30, (p.191) show that there is a significant difference between the dependent variables of teaching methods-communication patterns and the independent variable of gender at the 95% confidence level (  $F = 11.46$ ,  $p = 0.001 < 0.05$ ,  $\alpha = 0.66$ ,  $\eta^2 = 0.07$ ), the effect size was small to modest. The partial  $\eta^2$  was just 0.07, which means that the factor of gender by itself accounted for only 7% of the overall (effect + error) variance. Also, there is a significant difference between the dependent variables of teaching methods and communication patterns and the independent variable of grade level ( $F = 3.90$ ,  $p = 0.02 < 0.05$ ,  $\alpha = 0.66$ ,  $\eta^2 = 0.10$ ). Further statistical analysis using the Tukey post-hoc follow up test Table 31, (p.191) indicates that a statistically significant difference exists between seventh and eighth teachers' respondents and ninth grade teachers' respondents. Both seventh and eighth grade teachers' respondents had more responsive attitude towards differentiating teaching methods and communicating with CLD students when compared to ninth grade respondents. The findings indicate that there is a statistically significant difference between teaching methods and grade level.

## **Interviews**

**Teaching methods.** All the participants agreed that grouping is the most effective strategy that helps students learn from each other, build community, and teach cooperation. It builds their communication skills, and helps them learn how to respectfully hold each other accountable. Heterogeneous grouping is the best type of grouping strategy and has a successful learning outcome. Also, it allows the teacher more



time to work with students more intensely in small groups and to get to know them better and paying more attention to them as individuals.

Working individually and collaborative work learning strategies are both used in Participant 1 classroom.

Sometimes we work individually a little awhile and then for the last 15 minutes we collaborate (Participant 1, February 2, 2012).

Collaborative work is used frequently in classroom. However, paying careful attention to the way students should be grouped to work together is critical. Participant 1 believed that Students have to be setup together to work as a group by the teacher and the students shouldn't have the choice to choose their partners. Thoughtfully students were assigned to work together by random draw through picking a number rather than allow students to select each other. Groups should be rearranged all the time so each student gets the opportunity to work with a different student or students each time.

Probably things like everyone has done different grouping with students, we do a lot of collaborative work. So, we try to mix everybody so you work with different kids all the time. In my class I do not allow the kids to pick their own partners or pick their own group when we do collaborative work because they will end with the same group every time that you are comfortable with. So, we mix ourselves up a lot, any time we collaborate we mix up the groups we randomly draw, or we pick a number or and we number off or whatever the case may be, so that's pretty common (Participant 1, February 2, 2012).

Modifying existing instruction or assignments for CLD students has been an effective way to increase their learning as Participant 1 demonstrated.

I think for me personally and again I do not have a large number, but are just individuals working with them individually and modifying some of the questions that might not culturally make any sense for that student that may have, especially if they are new here, they may not have any understanding about or giving alternative assignments, giving different kind of assignments that might make more sense. But it is pretty; it is kind of basic we are trying to do whatever works because we don't have a lot of training (Participant 1, February 2, 2012).

Heterogeneous grouping strategy to group students in different ways is a basic teaching strategy in Participant 2 classroom. Participant 2 perceived that grouping students in pairs such as a CLD student with a mainstream student or a CLD student with another CLD student who has a stronger performance had a very effective way to increase all students learning, communication and cooperation.

Sometimes I will pair up one of these CLD students with a partner that is not CLD, sometimes I have paired them up with a partner that is also CLD but perform stronger, sometimes I have arranged for extra tutoring, and sometimes I have asked the parents to come in and make some extra time for the students to do some work. But really the most effective strategy that I've seen is letting the students work with other students if they are CLD or not. But letting them have some more time to verbalize, more time to interact, more of that social time to rather than just setting and listening to the teacher go on and on and on about the topic (Participant 2, May 2, 2012).

Also, Participant 2 believed that being very responsive to the students' different learning styles means changing and modifying teaching strategies based on what is happening in class on

a daily basis. Some teamwork strategies may not work and there is always a need to think about a strategy that works with all students different learning styles. A strategy that helps them to communicate with each other and understand what it means to work as a team.

Every day is based on what happened the day before and I think I am very responsive to learning styles. Last week we gave a lesson that allow the students to socialize with each other and they were each completing half of the work sheet and they were passing the work sheet back and forth and they were talking about what they were doing, so they were practicing what the math was with relevant math questions but they were passing it back and forth. So, there was very interactive with each other. And it was a disaster, I mean they just had no idea of how to cooperate with each other, they had no idea and they didn't get far at all and they really didn't learn what we needed to learn. So, the very next day I have to change our lesson to find some other way to get this information to them so that they could learn it and we can move on. So, I do modify based on their learning styles and to the need to the classroom (Participant 2, May 2, 2012).

Pictures that are related to content material are another teaching method used by Participant 2 to support students' learning. Kinesthetic methods of learning in which the students learn by using their bodies as well as their minds to explain content they are learning is also utilized in Participant 2 class.

We do all kinds of pictures in my classroom. We have vocabulary sheets; I let students borrow a native language vocabulary book if they need it, I just have one in Spanish if they want to borrow it they can borrow it. I do try to do the total physical response were the students have to do some sort of action that is

associated with whatever we are doing were they have to explain it in pictures or they have to explain it with their bodies through movement or something like that (Participant 2, May 2, 2012).

Collaborative grouping is a very important strategy that Participants 3 and 4 employ in their classrooms and encourage their students to engage in. For the Participants group working means each student has a partner to work with. Also, students learn different skills from each other, some students are visual learners and the others are auditory learners, so when working together they help each other out to enhance their understanding and learning of the subject material.

The easiest one, the one that's stands out the most to me is just group work, having a partner that is huge. And it is not like they are just the only one having a partner, everybody has a partner. So, that is an excellent strategy just to have them work with someone. Because what ends up happening they end up working with someone that may have different skills so one of them may understand me better or the other one may be able to visualize, one is visual learner and one is auditory learner. So, I will say collaborative grouping where students get to work together. My entire class is based on that, because this is what we are doing. In my class this is the goal to build a house; my class is unique on that. So that's one, another strategy that we do and I use hands on learning like what we talked about (Participant 3, March 5, 2012).

In the same regard to classroom activities, Participant 4 reported:

In my classroom I do a lot of hands on activities. I'll do partner pairing. They are usually paired with someone who can speak English that can often explain with a

different strategy, one-on-one. We do picture vocabulary, and then we also have for math a computer program that translates it into Spanish. However, that's the only language it translates into in the program right now. So that helps the Spanish native speakers because they can hear it in English and can translate it into Spanish. This will increase their vocabulary with the repetition (Participant 4, March 6, 2012).

At this age group, the 12-13 years old think it's so important to develop peer interaction. I think having a partner peer is probably the best language tool that can help them during most of the class. By visually seeing terms, words, and academic vocabulary, the content means so much more. That's the most successful things that I've seen in working with these kids (Participant 4, March 6, 2012).

Different types of hands-on activities are frequently used in Participant 3's classroom to meet the students' different learning needs to comprehend the content material.

The second thing that we do obviously in my classes there is a lot of hands on activities that we do, I mean obviously you can see what we do. A lot of my CLD students, they can do that because I show them and that is what I do, I use a lot of examples and I use a lot of visual aids, this is how you do this. So even if they may not totally understand the words that I am saying they can see, they can visualize what I am trying to show them so I use that a lot. We also have a lot of you know of I guess aids or resources in ... that we can use. (Participant 3, March 5, 2012).

So that's one, another strategy we do I use hands on learning as I talk about.

I try to show student how to use all those different colored markers to emphasize here is this part and then this part that's looking at the board and say okay that's different than that, that's a kind of a strategy I use (Participant 3, March 5, 2012).

In Participant 3's class a visual hands-on is used as another teaching strategy to meet the needs of all different type of learners in class.

I use this big inch model ruler; we call it Ms. Islay, as visual hands on, it is an inch that has been blown up then each one you can see. We spend a lot of time on this in the beginning of class working on measurement so they can see it, visualize it. I am trying to think of a specific strategy I used and we have a list of them that we can use (Participant 3, March 5, 2012).

Math journals are part of Participant 3's classroom daily routine. The teacher asks the question and students write it down in their journals. Participant 3 used math journals as a learning strategy that helps students understand the process that is used to find the answer for a problem. When students sharing their work with peers they learn from each other, and find out that there are different ways to approach the problem and there are several methods that can be used to solve it.

One other strategy I use is we use a journal; we didn't use it today. But we have a journal, so I will ask a question and they can write it down, they write down what they think the answer is or have they think they would answered it. Then I talk about it at their table and then we share out as a group, so they think right, pair, share, compare and that kind of thing. So, what I encourage them to do is if they don't know the answer, if they didn't know the answer they write it down and they listen to the conversation and pay attention as I am drawing it and writing it

or showing them how to work it. So they can get the right answer, so this is another strategy. But to be honest I am not the best strategy person (Participant 3, March 5, 2012).

Also, technology is used as a part of hands-on learning strategy to engage CLD students and other students in the learning process and improve their outcomes. Today's students are digital natives therefore students respond to a technology based approach faster and easier as Participant 3 demonstrated.

... is behind technology constantly, and technology it is going to be constantly a problem, because it constantly changes and will always be an expense but it is vital. The technology I use in my classroom you didn't see much of it today but we use it a lot, we've used laptops we've used Elmo and the projector and all those different things. But ultimately if students get some of this technology in their hand that's new, especially CLD students they can pick it up because it's hands on, they can do it, they can see it, and they can visualize it. And so it is a lot easier for them to learn using technology because the technology for them is too simple to use because they know it and they can pick it up faster. Because they use it to play some games they are use to it. So, those two main things will be huge, that's pretty basic (Participant 3, March 5, 2012).

Furthermore, another hands on activities that Participant 3 utilized strategies to connect students with their real world, and makes their experience to be connected to their home culture.

In this project there are a lot of my students their parents, fathers mostly, are involved directly in construction of houses and buildings and things like that. So that to me is very culturally applicative to what they are doing or what they see

every day. I mean it doesn't matter what culture you come from. I mean a house is a part of that culture for the most part. I mean they may not be the same type of house or same size of houses but they understand the concept of a house and kitchen, and a living room, and a bathroom. So those are all things that we could directly apply that really don't have that much to do with culture but what we found out and what is really cool is then they start to decorate, when they were allowed to bring their culture in so they are bringing magazines and pictures, they built a soccer room and they decorated with different favorite soccer's teams. All of those things if you allow students to bring in their culture they can teach teachers and other students about their cultures. So, that is a huge missed opportunity that a lot of teachers do not allow students to bring in their culture (Participant 3, March 5, 2012).

Participant 4 believed that using technology has great benefits for both the students and the teachers.

I think the computer and internet is such a huge resource for us now because it does allow for you to collect things quickly, such as visuals, and allows me to translate if it needs to be in different languages. I think that is the most beneficial resource but it's not always available though (Participant 4, March 6, 2012).

However, technology helps CLD students learning the language and to understand mathematical concepts as Participant 4 stated.

We also have for math a computer program that translates it into Spanish. However, that's the only language it translates into in the program right now. So that helps the Spanish native speakers because they can hear it in English and can



translate it into Spanish. This will increase their vocabulary with the repetition (Participant 4, March 6, 2012).

**Communication.** CLD students must have the sense of belonging and that they are accepted. Fairness, kindness, feeling safe, empathy, and respect are playing an important role to start a teacher-student relationship, and student-to student relationship. When that happened CLD students will be more comfortable to share their background experiences as Participant 1 confirmed.

I think the biggest thing you do even with students who grew up here their whole lives that you have to create a safe environment. You have to let them know that when they come into your classroom they are safe here. It doesn't matter if they are green, purple, square, round, tall, short, it doesn't matter, everybody is safe and everybody is treated equally and people are going to be kind to each other and respect each other and I think that is the first thing you do especially in junior high level that everybody is safe and we are going to be kind and enjoy each other and we can laugh and play and have fun but it is still is a safe environment and everybody is safe in here. So, I think if you create that comfort level then they'll feel more comfortable to share their personality and share their experiences with me and with their classmates (Participant 1, February 2, 2012).

Participant 2 believed that teachers should learn about their CLD students' culture background through searching different resources to find the communication techniques that work best for their students.

I had a student several years ago from a different culture and I really didn't understand some of his body language. So I tried to look up some information

about body language from that culture and I found a blog that tourists had written, an American tourist, who had passed through and encountered the same kind of problems. What he interpreted was one meaning really had another meaning altogether. So I have done some research on that and I've also dialogued with our ESL teacher about when the student does this, what really does that mean. So, I've talked to teachers and I've done some research as well (Participant 2, May 2, 2012).

Participant 3 believes that bridging the gap between the teacher and CLD students by trying talking to them, learning some of their language in order to build trust and make them feel better to talk and share about their experiences. When teachers can communicate with their students and make them feel comfortable to share, then teachers will have a basic source that they can learn from about their CLD students' culture and background. Also, it helps to build a successful communication pattern with them.

I tried to learn the language, I tried to learn little sayings that I can say. Even like when they are wearing a T-shirt and a lot of Marshallese kids wear T-shirts had some saying on it, I say what does that means and what is funny is that I don't know, half of them they can't read it, they can speak it but they cannot read it, or things like that. But I try asking them questions and I try to engage with them. You know I've traveled a lot, so I can talk to them about different places I've been. And the other thing too again I encourage them to talk, and then eventually they will tell me about themselves, they will tell me about their culture, and about what they do. But so I try to reach out just trying to learn their language or asking

questions about their clothing or what they are wearing, or what that means and things like that (Participant 3, March 5, 2012).

Participant 4 indicated that building a relationship between the teacher and the students is very important while building a relationship between CLD students and other students is also critical.

One of the most important things I've done is to establish a relationship, even with non speaking English students, is to develop a personal relationship with them, one where they feel comfortable. I think that is the most important. They can use the computer. Partner pairing with an English speaking student has also been successful (Participant 4, March 6, 2012).

Exchanging learning of words with CLD students has been a good strategy for Participant 4 to build some relation with them.

Especially with those students that don't know how to speak English, I try to teach them a word and then I allow them to teach me a word. Using a student translator or another translator to ask them about their family or where they are from helps develop a social relationship. I think building a personal relationship helps with CLD students (Participant 4, March 6, 2012).

Also, Participant 4 perceived that teachers should have a sort of way to communicate with their CLD students. Teachers need to communicate with their students to help them do the right assessment of their knowledge and not judge them without understanding their way of comprehending the subject they are learning.

I think it helped to see you know you can't always grade everything just in white or black gray, especially when it comes to project and group activity you have to a

kind of assesses what you are doing and look at a result and have a communication with them sometimes because their idea of what you want may be different than the idea you want. So, just to have that communication and just give them an F or D or C because it wasn't what you thought it will be. Because sometimes their ideas are different but still good but not something I will think of. I think that is the biggest impact that had me think more how I assist their knowledge I think it helped to see you know you can't always grade everything, especially when it comes to projects and group activities. You have to differentiate the lesson to meet the needs of the CLD student. Assess what you want the child to learn and look at the results. Have communication with the student to understand their mental processing. Sometimes their idea of what you want may be different than the idea you had started with in planning the lesson. Their ideas are different but many times not strategies I would think of. Communication and feedback is the biggest impact on how I assess their knowledge (Participant 4, March 6, 2012).

### **Classroom Observation**

**Participant 1.** In Participant 1's ninth grade journalism class, students were allowed to exercise a sense of control on the task. In this activity, computer-based activity was used to develop students' skills in using the computer and the internet to build and organize a reference list. Students were not depending on their teacher all the time, waiting for instructions, words of approval, correction, advice, or praise. Students were enjoying and completely engaged in their assignment activity. They were working with each other in non-like groups, communicating, listening to each other's contributions, helping, and learning from one another by comparing and

discussing their work. Some students had some difficulties finishing their work. They asked the teacher for help after they had tried several times and the teacher helped them to figure it out. Students stayed on task most of the time.

The CLD students and mainstream students were working together, sharing ideas, and helping each other to finish the assigned activity. The CLD students were provided with opportunity developing their oral skills. They were speaking with each other and with other mainstream students and they were engaged in discipline-specific language use. Students were trying to explain to each other their ideas relating to the assignment of the reference list they are working on. CLD students were less concerned about looking foolish, about being beginners, about not being fluent in the language and discipline.

Students were encouraged to accommodate themselves to each other's perspectives, strategies, and approaches, to complete the assignment. The teacher was encouraging the students to seek help from their peers and accept tutoring from their peers. Students were working in pairs and that represents a very effective form of interaction. All students were engaged with their partners during the class. The students were learning to communicate with each other and with their teacher. Students were formulating their ideas, discussing them, receiving immediate feedback and responding to questions and comments by their partners and from the teacher. Students were learning from one another by watching and replicating a working strategy to finish the activity.

On one hand this computer based activity had provided students with in-class time and opportunities for independent practice of a newly learned activity. On the other hand the teacher was monitoring students' understanding by frequently checking of the groups work throughout

the class. While students were working together, the teacher was walking around to give them feedback, offer suggestions, make corrections, and answer questions.

**Participant 2.** During the observation of Participant 2's Algebra class, the class was a continuation of a previous day's lesson-solving equations involving like terms. The teacher had the confidence and the ability of teaching the content also the lesson was adapted for individual students. The instructional strategies that had been used were consistent with the interactive approach. The interactive instruction strategy was used, and that was clear as students were arranged in mixed small groups (four students in each group). Problem-solving techniques in group situations were used while relying on showing, explaining, sharing, and discussing with the students how to solve different types of equations involving like terms. Also, class discussion and participation to go through solving the problem step by step was employed in the class. Students were provided with information and experiences to make connections that made them able to connect both knowledge and skills at the same time. Feedback, reflection and discussion were continually applied in Participant 2's class. Also, in class the teacher used questioning strategies to enhance the development of a student's conceptual understanding of solving this kind of equation problems by utilizing questions that allow for student's thinking. When students were confused or weren't sure, or their answers weren't accurate, the teacher provided them with some hints to get to the right answer (which got most students willing to answer), and then the teacher went through the problem again to clarify it and make sure every student understood all the procedures. The students were intellectually engaged with the ways that had been implied and explained to solve the problem. Participant 2 was asking questions that encouraged the students to come up with explanations, justifications, clarification, and summarization of the subject they were learning.

In this lesson problem solving activities were designed to encourage students to work together as groups, questioning their work, and discussing as a group. Students were encouraged to think and to come up with different ideas to solve the problem or to answer the questions the teacher proposed. The teacher was challenging their ideas or answers to make sure that all the students comprehended the concepts they were learning. There was a climate of collaborative working relationship between the teacher and the students. The students were allowed to explain, discuss, and justify their understanding of the subject they are learning in a positive learning environment. The interaction between the students and the teacher and between students to students was mentored and managed. The students were motivated and more curious about the subject and the respect for students' diverse abilities and experiences was promoted. The teacher gave students adequate wait time to summarize what they learned in two ways by oral contribution or by writing on the board and in their notebooks.

Students were allowed to think aloud and they were working together and helping each other to solve each of these problems. The teacher was moving around the classroom and making eye contact with the students. Then answered each question and helped students to solve each assigned problem while managing to distribute attention to all students equally.

Participant 2 didn't move to the second problem before being sure all students completely understood what to do to solve the problem they were working on. Technology was utilized in the classroom. Each student had a computer to work on. In general Participant 2 class had a good level of courtesy and respect for all students with no exceptions.

**Participant 3.** In Participant 3's math class a hands-on architectural activity to do math was used. In this class most of the students' family members are involved in construction business in one way or another. The hands-on activity was employed to make sense of the world

around the students and to encourage them to be part of their learning. In class math was experienced to be understood and that allowed mainstream and CLD students to be actively engaged in the manipulation of everyday objects and materials from the real world. Also, the resources had been used to support diverse student learning. Each group had the choice to make their own decisions about the size, design, coloring and decorating of the module they were building. The hands-on activity was designed to help students practice and comprehend geometry and measuring dimensions. Students were exploring shapes, proportion, and measurement through this activity. Solving real-world problems that include calculating area and surface area through designing and making a house in three major steps, these steps are a blue print plan, converting it to two dimensions, and then to a three dimensional building were accomplished in this class. The teacher was able to cover all students, CLD and mainstream students, and make sure that they understand, allowing more one-on-one time with all of his students.

Participant 3 was using cooperative learning strategies. Students were working together in non-like groups (CLD students/mainstream students) explaining and reinterpreting instructions to each other. Students were listening to each others' thoughts and explanations about their reasoning. One of the groups had made less progress in their hands-on activity compared to the other groups. When the teacher checked what they accomplished, they had hardly finished the two dimensional part of the activity. Even though, the teacher was encouraging them and praising what they accomplished.

The second activity was a continuation of the previous day's lesson. The teacher explained how to solve the problem on the board and was able to ask a lot of questions to guide students step by step to get through solving the problem. Then directed the class to work in pairs



for the rest of the class period and solve a different problem to ensure they understood the concept. As the groups worked, the teacher circulated among the students. Students were engaged in solving the problem through student and teacher discussions. In this class students were communicating to learn mathematics, each group was expected to talk with each other to solve the problem and to share their results and thinking with the class. They were thinking how to solve the problems, responding to the teacher questions, discussing, elaborating, asking questions and listening to each other respond and to the teacher explanations. Even with wrong answers Participant 3 was able to find positive reinforcement. The teacher was able to pay attention to all the students equally and respond to their questions in a manner of respect of the students' different experiences and abilities.

**Participant 4.** Participant 4 reviewed the content from the previous lesson about survey techniques. The students were listening, the teacher asked if there are any questions, nobody responded. The teacher asked the students to start collecting their data. Students had the survey questions ready from a previous class, their job in this part was collecting the appropriate data by asking other students to answer the questions. Each student had chosen a topic to work on. The teacher encouraged each student to think about his or her own personal experience to learn about the subject they were covering. The entire class was engaged in the same activity at the same time. Students were working individually while working in their survey activity, followed specific instructions to engage on the activity. In this activity students were learning through experimentation and communication (writing, speaking).

The instructional strategies of this activity did reflect some attention to issues of access, equity for students (i.e. the use of wait-time, language-appropriate strategies/materials). The activity allowed students to construct their own understanding of the survey techniques and how

to collect the data. Conducting the activity was appropriate to the purpose of the lesson and provided students with opportunities to discover concepts of their own. The teacher was observing the students and making eye contact with the students. The teacher managed to answer each question and helped students.

Participant 4 used the traditional methods of teaching and no grouping techniques were used. Students were communicating and interviewing each other in order to collect the required data for their research papers. Students were having fun, engaged and active in this learning activity. Students were following classroom rules and the interaction of student-student was based on respect. Attention was distributed equally to all students by the teacher. All students appeared understanding and able to carry out the procedures for this activity.

### **Summary**

The results from qualitative and quantitative sections indicated that the majority of the participants exhibited positive attitudes reflecting their awareness, understanding, and appreciation of CLD students' cultures, and believed that CLD students bring benefits and richness to all students. Further, allowing CLD students to use their first language to elevate their self esteem and increase their learning was highly promoted by most. However, some of the participants showed evidence of negative attitudes and stated that they were against using the first language in class or for the instructional purposes. Also, modifying CLD students' behavior to adapt the main stream culture was moderately encouraged. Furthermore, the findings showed that some differences in the respondents' attitudes were based on their gender. Eventually, female teachers were significantly more responsive to the students' cultures and languages when compared to male respondents.

Additionally, the findings illustrated that the majority disagreed that the inclusion of CLD students increase their class workload, or slowed the progress of the entire class. However, the participants considered the inclusion of CLD students as providing opportunities to all students to increase their learning and social skills experiences. Nevertheless, some of the participants believed that family culture and the lack of value that parents place on education are responsible for their students' poor academic progress.

The quantitative findings demonstrated that teachers rarely incorporated different learning styles to match their students' learning diverse background needs; on the contrary the results from the qualitative sections showed that using different learning methods to meet students' different individual learning needs were highly supported. In addition, high number of the respondents believed that class time is not sufficient to respond to all CLD students learning needs, CLD students should be able to acquire standard English within two years of enrolling in school, and they should not be enrolled in general education classes until they attained a minimum level of standard English proficiency. However, the findings from the qualitative sections didn't correspond completely with the survey, most of the participants didn't agree with all that. The data also suggested that male respondents displayed significantly more positive beliefs about CLD students enrolled in their classes when compared to female respondents; however the effect size was small.

Further, the findings showed that a high number of the respondents believed that they adequately trained and prepared to teach CLD students, to develop, integrate and implement multicultural contents into the curriculum, and to implement different multicultural perspectives in their lesson plans. While the qualitative findings didn't corroborate the survey results in this point since all the participants still felt ill equipped for teaching CLD students since their training

was very basic and poor. Overall, the participants displayed their interest to receive more training. In general, all the participants believed they have the skills to teach with different learning styles to competently meet the needs of CLD students. The majority of participants reported having high expectations and positive attitudes toward CLD students, expecting the students working to their potential and make progress in their learning. On the contrary, the majority still exhibited negative perception toward some CLD students; they continued to believe that some of CLD students lack the ability achieving appropriate learning progress to make it in class.

The majority of the participants illustrated acceptance and understanding of CLD students' learning needs. They considered knowing the background and the experiences of CLD students are major elements to increase their learning, and it helps teachers to learn more about their students' differences and use it to refine lessons plans. Also, utilizing different instruments of teaching is part of their responsibility, and meeting the individual needs of all students is an important part of their lesson plans. In addition, they acknowledged that math and science materials should help students understanding the ways in which people from a variety of cultures and groups have contributed to the development of scientific and mathematical knowledge, and help students to understand the ways in which assumptions, perspectives and problems within these fields are often culturally-based and influenced. Ultimately, social studies materials should help students to understand the American society, history, and culture from diverse ethnic and cultural perspectives. The results also suggested that social studies teachers responded with significantly more positive attitudes towards CLD students' needs when compared to science teachers' respondents, and respondents who have five to nine years of teaching experience had

more positive attitudes towards CLD students' needs when compared to the respondents who had 25 years or more of experience.

Additionally, the survey findings showed a high level of support for the use of competitive learning methods more than cooperative; while the qualitative findings showed a high level of support for the use of cooperative leaning methods. Further, including contents related to CLD students' diverse backgrounds in lessons plans were rarely used. However, the quantitative findings showed that integrating activities requiring different learning styles, and teamwork techniques weren't highly promoted, while it was highly promoted by the qualitative participants. Furthermore, simplifying, modifying, and allowing CLD students more time to complete the coursework on a regular basis wasn't highly utilized, while it was utilized by the qualitative participants. Quantitative and qualitative findings also suggested that providing materials for CLD students in their first language as well as in English were provided often. However, the quantitative findings indicated that matching instructional techniques with students' learning styles, and having classroom decision based on the needs of all students were never conducted, however; it was conducted in qualitative participants' classrooms.

Furthermore, considering students' efforts more important than achievement when grading CLD students were not highly supported as the findings suggested. Also the majority agreed that meeting CLD students' needs is a big challenge sometimes. On the other hand, using different cross-cultural communication patterns to communicate with CLD students weren't highly supported by the majority, although they rarely had any communications difficulties with CLD students. The results also suggested that male respondents were significantly more responsive towards differentiating teaching methods and communicating with CLD students when compared to female respondents, and both seventh and eighth grade teacher respondents

were significantly more responsive when compared to ninth grade respondents. Nevertheless, the effect size was small.

## **Chapter Five**

### **Summary**

This chapter exhibits the summary, discussion of the findings, the conclusion, limitations of this study, and recommendations for future studies.

The scope of this study is to examine middle and junior high schools' subject area teachers' attitudes and classroom practice regarding the learning needs of mainstreamed culturally and linguistically diverse students (CLD). The main question guiding this study is: what are the attitudes of math, science, and social studies subject area teachers towards diversity and accommodation of diversity that are employed in classroom to meet the needs of seventh, eighth, and ninth grade culturally and linguistically diverse students' learning? To answer this question a mixed methods inquiry was employed and comprised a survey of 137 middle and junior high math, science, and social studies school teachers, and a qualitative inquiry incorporated an interview of four subject area teachers, in addition to four classroom observations.

Seven themes identified from reviewing the studies related to teachers' attitudes regarding culturally and linguistically diverse students learning needs. The identified research themes are: (1) Valuing students' culture and language, (2) Inclusion of CLD students in subject area classrooms, (3) Teachers' beliefs, (4) Teachers' training and preparedness, (5) Teachers' expectations, (6) Learning needs, and (7) Teaching methods and communication. Attitudes related to each theme are investigated through the survey, the interviews, and the observations. The survey consists of 59 questions designed to measure teachers' attitude regarding each category of the seven themes.

The first three themes are designed to measure teachers' attitudes towards culturally and linguistically diverse (CLD) students mainstreamed in their subject area classrooms. The findings from the survey and qualitative inquiry suggested that the subject area teachers exhibit positive attitudes towards the value of students' culture and language. Generally, standard English was the only language used in the classrooms; however, the participants have positive attitudes regarding allowing CLD students to use their first language during class if needed. Nevertheless, the teachers emphasized the importance of learning standard English to succeed in school overall. Female teachers show significantly more positive attitudes to students' cultures and languages when compared to male respondents. Also, the majority of teachers showed negative attitude towards inclusion of CLD students, the only statistically significant difference that exists is between grade levels. Ninth grade teachers showed more appreciation for the inclusion of CLD students in their classrooms when compared to seventh grade teachers as is suggested by the post hoc test. Further, teachers in general have positive beliefs about their CLD students' language learning abilities and the time needed to serve this population of students. The only statistically significant difference that exists is by gender, male teachers expressed relatively more positive beliefs when compared to female teachers.

The following four themes are designed to measure teachers' attitudes regarding classroom practices. On the one hand, the findings from the survey and the qualitative inquiry suggest teachers do not have effective training and experience to meet CLD students' learning needs. On the other hand, the results show teachers have high learning expectations for all of their students regardless of their background and experiences. The results also show that male teachers exhibited relatively more positive attitudes towards expectations of their students learning abilities when compared to their counterpart female teachers. Despite the fact that the



majority of teachers agree that knowing their students' background and experiences are critical to increase their learning, they say they rarely employ different learning styles that match their students learning, or modify assignments, or integrate cultural content, and unlikely to make classroom decisions based on their CLD students learning needs. Predominantly, teacher participants do not use different cross-cultural communication patterns to communicate with their students to promote their learning on a regular basis. In general, teachers exhibit negative attitudes towards accommodation of diversity in their subject area classrooms. Social studies' teachers showed more positive attitudes when compared to math and science teachers. Besides, teachers with fewer years of teaching experience (five to nine years of experience) have more positive attitudes when compared to teachers with longer teaching experience (25 years or over).

As a conclusion, the study findings show that reasons behind teachers' negative attitudes are their insufficient experience and inadequate training to meet CLD students learning needs. Teachers lack of receiving appropriate support from their schools or school district administrations to serve this population of students may lead to such negative attitudes. Finally, teachers in general feel frustrated and show low self-efficacy because of the current accountability system that blames and punishes teachers and their schools if their students scored low on standardized tests, without looking back to the real reasons behind students failing to score well and try supporting the teachers' cause with appropriate means and tools.

### **Discussion**

This study had a particular focus on middle and junior school subject area teachers' attitudes towards CLD students as this period is a transitional period that may affect CLD students positively or negatively and determines their academic and social futures.

The shifts of the roles and duties of the teachers in today's mainstream classrooms are challenging. We must consider differences in teachers' responsiveness to value and integrate CLD students' cultures and languages in meaningful classroom instruction and curricula. Because teachers as individuals are different from each other their responses to culture and language issues are not the same. This study shows that it is unrealistic to assume that the majority of teachers will not be able to implement what they learned during the training sessions that were offered by their schools or school districts or in teacher education programs to engage CLD students in the learning process and increase their learning. This study suggests that understanding the issues behind the formation of teachers' negative attitudes is important before considering teachers' attitudes being negative towards CLD students. It is necessary to employ practical strategies that assist teachers in positively adjusting to the challenges of increasing CLD students learning in subject area classrooms. As the study results indicate teachers are facing many challenges during the day, as having students pulled out throughout the day limiting the needed time to meet CLD students individual learning needs especially in areas like math and science. However, there is too much pressure on teachers to employ appropriate learning strategies, modifying the contents, and designing instruction to help their CLD students pass the Benchmark tests. Further, because of the accountability system any failure of students to score well on the standardized tests is tied to teachers and school evaluation. Furthermore, lacking the appropriate training and time needed to educate these students are increasing the pressure and pushing teachers to create negative attitudes of feeling frustrated and unappreciated. These challenges may create feeling of low efficacy and any needed changes or adaptations of classroom instruction or curricula can become a challenge (Dong, 2006).

Teachers report of the lack of adequate preparation and field experiences with CLD students are supported in previous findings (Darling-Hammond and Berry (1999); Fuller (1992); Schultz et al. (1996); Shakespear et al., 2003). Also, the literature indicates that generally teachers lack the preparation to teach CLD students and increase their learning (Banks, 1991; Banks and Banks, 2005; Calderon, 2006; Echevarría et al., 2008; Everhart and Vaughn, 2005; Gay, 2010; Nieto, 2008; Waxman et al., 2006).

Another indication of lack of experience to teach CLD students is viewing all students as students regardless their color, culture, or language as it shows in this interview quote: “It doesn’t matter if they are green, purple, square, round, tall, short, it doesn’t matter, everybody is safe and everybody is treated equally and people are going to be kind to each other and respect each other and I think that is the first thing you do especially in junior high level.” That is what Nieto (2000) called “color blindness.” In fact even if teachers view looks fair and unbiased it could turn to a negative response to accept differences between students. However, teacher rejection of acceptance is a message of ignoring an important part of CLD students’ identity and who they are. That also could mean that the teacher may assign the same work for all students without any accommodation based on their differences and backgrounds (Ladson-Billings, 2009).

According to Nieto (2000) and Ogbu (1992) there are many different ways teachers can use to know adequate information about their students’ background and experiences. Participant observation is example of a meaningful way to understand and interpret student’s behavior in his or her cultural context. Though, are teachers prepared to conduct that appropriately? The results of this study imply that most of the teachers are not prepared. In general, they do not have the means or the skills or the adequate knowledge to conduct that appropriately. In fact, observation

is a very effective tool to gather information about student behavior and interaction with others but it takes practice, skill and persistence, also finding enough time to conduct observations can present a challenge for teachers. However, the study also indicates that teachers do not have a prior experience of where and how to search for adequate information about cultures, hence they will be easily misinformed. For instance, a quote of one of the interview participants “So I tried to look up for some information about body language from that culture and I found a big blog that tourists had written, American tourists, to pass through the same kind of problem.” The participant used some of the American tourist sites as a source to know more about a particular culture. He could obtain faulty information or interpretation about that culture as the gathered information are from tourists’ points of view and not from cultural scholars, he could be easily deceived with a stereotyped point of view and faulty information.

My point is schools and educators in teacher education programs should understand the need of cultural specialists to provide teachers with appropriate skills to help them reach the culturally correct educational resources to update and learn about their students’ backgrounds adequately and on a regular basis. Also, having an ethnographer in school would assist access to CLD students’ families and communities, and help to build a trusting environment that brings benefits to teaching these students fairly and responsibly.

This study suggests that having at least one skilled cultural ethnographer in each school, or at least one in each school district is critical, to assist teachers to learn adequately about their students’ background and experiences and it is what teachers are asking for as it shows in this quote of another participant in this study: “But I do think we need someone who is a liaison or someone who is very well-versed in the needs of culturally diverse students to be onsite at all times so we have a resource to go to.” Teachers need to learn how to interpret the cultures of

their students as insiders to that culture and not as outsiders if they want to be culturally competent. As a result, this may help teachers and schools to build a positive welcoming cultural learning environment for CLD students. Workshops or training sessions could be designed and organized on a regular basis by the cultural specialist to update teachers with efficient information about each culture represented in their classrooms. In addition, provide teachers with resources and tools that encouraging learning about their students' cultural identities in a meaningful cultural context.

Teacher participants in this study agree that their students' different cultures and languages are valuable assets in the classroom while that doesn't concur completely with the literature (Nieto, 2000, Lands-Billings; Walker et al. 2004). In addition, they know that differentiating instruction matching students need is critical to help students succeed in the classroom. However, only few of the participants use a variety of learning methods or cooperative learning strategies that emphasize collaboration and group work, and or modify assignments to help CLD students learn on a regular basis, and that was supported in previous findings (Byrnes et al., 1997; Youngs and Youngs, 2001; Garcia, 2002; Banks, 1991; Banks, 2004; Banks and Banks, 2005; Calderon, 2006; Echevarría et al., 2008; Everhart and Vaughn, 2005; Gay, 2010; Nieto, 2008; Waxman et al., 2006), while the majority praises their students when they try hard and when they accomplish. Therefore, there is a need for teachers to acknowledge that they should put more effort to learn how to make this understanding a reality through utilizing the circumstances for all of their students equally to have better educational experiences that help them literally to learn. However, most of the participants in this study reported that they have high expectations for all of their students and they value the richness of experiences students bring to the classroom and that does not necessarily concur with previous findings (Rom and

Falbo, 1996; Ladson-Billings (1994); McDonough, 1997; Webb and Crosbie, 1994). From the teaching perception high expectations and valuing students' experiences is the cornerstone of culturally responsive teaching (Ladson-Billings, 2009).

Teachers' attitudes could change from positive to negative attitudes when teachers are feeling frustrated and overwhelmed because of the insufficient and inadequate training and support. On the one hand, it is important that teachers' negative attitudes be challenged. Because if it continued to be unchallenged for sometime it will turn to unacceptable behaviors and continue to be unchallenged maybe for a long time. On the other hand, teachers' negative attitudes should be challenged in a positive way that makes teachers less resistant to the change. While, it is unlikely teachers will be able to maintain a constant positive attitude, it is possible to make them feel positive and confident practically every day with motivation and continued training. As the majority of the teachers in this study are willing to have more training. Also, teachers understand that being culturally responsive is critical for the interest of all of their students though they need to receive more effective training and have models to follow as one of the participants quote indicates: "The third thing that I think teachers need some sort of examples, some sort model of how a responsive teacher looks like." One of the teachers interviewed confirmed this "because I want to be a responsive teacher but I do not know how or what that looks like. I will appreciate more suggestions about how to do that. We need an example how to be culturally responsive teachers." Therefore, teachers need to see models of success; it could be by arranging visits to classrooms of some skilled teachers who have successful experience with teaching CLD students in their subject area classrooms. Moreover, by providing teachers with authentic resources they can count on to develop their own culturally competent skills.

We have to understand that teachers are also students who need to keep learning and updating their knowledge, especially subject area teachers like math, science, and social studies. Teachers should be provided with the tools and the knowledge they need to obtain the situation and to have chance to grow and develop their cultural skills and understanding.

Teachers need motivations, and tips that enable them to step forward and feel that they are not alone and they are appreciated for their efforts. Punishment and throwing all the responsibility on their shoulders is not the answer and it is unfair. Also, we should understand that we should stop blaming teachers because of who they are, and try to find a different means to change their negative attitudes without accusing them of being biased by their own culture. This will definitely not be beneficial because it will reinforce their negative beliefs as their culture is blamed and thus cause for forming more negative attitudes.

The results from this study indicate that there is a window of opportunity to help teachers develop positive attitudes towards CLD students. It is promising as teachers are in general receptive to having more professional training to increase their awareness and skills to teach CLD students as this study results indicate, this didn't concur with other studies (Walker et al., 2004). Though, again a cultural anthropologist (ethnographer) would be a big help for teachers to gain new experiences and to grow from these new changes and increase their self efficacy as they feel challenged and supported at the same time.

### **Conclusion**

In conclusion, subject area teachers in today's classrooms need to have more training and field experiences that help them develop their cultural competence. Changing teachers' negative attitudes towards serving CLD students appropriately is an ongoing process of training and preparation that needs a continued support and assistance from the school administration and

schools districts. Also, there is a need for more research that encourages teacher education program planners to provide more training and field experiences that tackle teachers' professional needs in their classrooms in a collaborative learning environment.

There is a need for a range of measures of teacher effectiveness that bring more meaningful teacher evaluation. Teacher evaluation processes should be followed up and not be limited to one structured classroom observation or a brief timed classroom visit, in order to help develop teachers skills and abilities to serve CLD students adequately. Teacher's abilities to teach and adapt teaching methods and instructions that involve CLD students in the learning process and increase their learning outcomes do not necessarily show up in standardized tests. It is critical to examine the effectiveness of their teaching to meet CLD students individual learning needs. Considering the CLD students' perspective also is as important as it is to assist teachers to evaluate their success in teaching this population of students. Therefore, student evaluations should be an integral part of a larger teaching evaluation process. Yet, we have to consider that the evaluation by students could be very useful as it may give a clearer picture of culturally responsive daily practices of mainstream teachers in their subject area. Therefore, designing culturally responsive observation tool that involve students as one of the primary resources in teacher practices evaluation will be very helpful to develop a culturally responsive curricula in schools. However, it may help subject area teachers to design a classroom intervention strategy that is more beneficial for their CLD students. Further, it may help also teacher education programs designers to consider such information to evaluate the effectiveness of their programs, and asses in designing more effective programs based on different perspectives that makes teacher education programs more effective in developing teachers' cultural skills. However, teachers should be challenged and assisted in shifting their attitudes from negative to positive attitudes towards



serving CLD students appropriately. It is a long and continuing process that requires effort and enthusiasm from the teachers, the schools and the school district administrations.

Furthermore, schools districts rely heavily on outside experts to conduct professional development. Having a cultural expert as an inside expert may help and assist teachers and schools to grow and develop their cultural awareness as he/she will be aware of their exact needs and as he/she will be more connected to the teachers and the students than an outside expert. The inside cultural expert will be more familiar with teachers and schools specific needs to develop a culturally competent environment in classrooms and at the school in general. Additionally, being available whenever teachers need help and support. Finally, there is a need for more research investigating teachers' assessment strategies in evaluating CLD students learning outcomes in the subject area classroom.

### **Study Limitations**

This research had limitations that may have affected the results of the study. It is imperative to understand that this study was conducted with a very specific population of middle and junior high teachers of math, science, and social studies and have CLD students mainstreamed in their subject area classrooms. The findings and conclusions, therefore, are targeted to this group of teachers and school populations at three school districts; it may be difficult to generalize the results to other populations of schools. In spite of this limitation, it is recommended that similar longitudinal studies be conducted with larger groups of schools and with a larger qualitative sample pool to find out whether different results are obtained. There are number of differences in this study compared to the literature and could be summarized as the following:

(1) Most of the teachers in this study considered their students' different cultures and languages are valuable assets in the classroom, (2) Participants in this study reported that they

have high expectations for all of their students, and (3) Teachers are in general interested in having more professional training to increase their skills to work with CLD students.

Another limitation was that in the three school districts, not all school principals granted permission for the study to be conducted in their schools. It took some time to convince them to let their teachers take the survey. It was also hard to make immediate contact with the teachers to enlarge the qualitative pool sample. Therefore, the data collection took almost one year to be collected and the number of teachers who agreed to be interviewed and to conduct classroom observation was lower than planned. A larger sample of teachers would have yielded a richer picture of math, science, and social studies mainstream teachers' attitudes towards CLD students in their subject area classrooms.

### **Recommendations for Future Studies**

A longitudinal mixed method study on teachers' attitudes towards CLD students and their learning achievement with a larger sample pool would provide more rich information about the subject. There is a need for more research focusing on teacher assessment strategies to evaluate CLD students' learning progress. Finally, other research focusing on teacher attitudes may be conducted from both students and teachers' perspectives; a qualitative study could be designed to interview students that might provide more rich information about teachers' cultural competence and teaching practices towards this population of students.

Based on the analysis of this study, negative attitudes and classroom practices could possibly change with more understanding of teachers' attitudes and perceptions towards mainstreamed CLD students. Further, mixed method studies focusing on the lived experiences of middle school subject area teachers would provide schools districts, school administration, and teacher education programs with additional facts about teachers' needs in order to support their

development to be culturally competent. Consequently, such studies offer educators with in-depth information regarding the teachers' needs and potentials and in turn positively support teachers to be more confident serving all CLD students fairly and helping this particular population of students to feel accepted and succeed in increasing their self-esteem and learning skills.

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## Appendix A

### Institutional Review Board Form (IRB)



120 Ozark Hall • Fayetteville, Arkansas 72701 • (479) 575-2208 • (479) 575-3846 (FAX)  
Email: [irb@uark.edu](mailto:irb@uark.edu)

#### Research Support and Sponsored Programs Institutional Review Board

May 2, 2011

#### MEMORANDUM

TO: Nadia Khrais  
Michael Wavering

FROM: Ro Windwalker  
IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 11-04-599

Protocol Title: *Math, Science, and Social Studies Teachers' Attitudes towards Diversity and Accomodation of Diversity with Reference to Culturally and Linguistically Diverse Seventh, Eighth, and Ninth Grade Students in a Mid-South State*

Review Type:  EXEMPT  EXPEDITED  FULL IRB

Approved Project Period: Start Date: 04/29/2011 Expiration Date: 04/24/2012

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Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Compliance website (<http://www.uark.edu/admin/rsspinfo/compliance/index.html>). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

**This protocol has been approved for 225 participants.** If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior* to implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or [irb@uark.edu](mailto:irb@uark.edu).

The University of Arkansas is an equal opportunity/affirmative action institution.



**INSTITUTIONAL REVIEW BOARD  
UNIVERSITY OF ARKANSAS  
PROTOCOL FORM**

The University Institutional Review Board recommends policies and monitors their implementation, on the use of human beings as subjects for physical, mental, and social experimentation, in and out of class. . . . Protocols for the use of human subjects in research and in class experiments, whether funded internally or externally, must be approved by the (IRB) or in accordance with IRB policies and procedures prior to the implementation of the human subject protocol. . . . Violation of procedures and approved protocols can result in the loss of funding from the sponsoring agency or the University of Arkansas and may be interpreted as scientific misconduct (*See Faculty Handbook*).

Supply the information requested in items 1-14 as appropriate. **Type** entries in the spaces provided using additional pages as needed. In accordance with college/departamental policy, submit the original **and** one copy of this completed protocol form and all attached materials to the appropriate Human Subjects Committee. In the absence of an IRB-authorized Human Subjects Committee, submit the original **and** one copy of this completed protocol form and all attached materials to the IRB, Attn: Compliance Officer, OZAR 118, 575-3845.

1. Title of Project: Math, Science, and Social Studies Teachers' Attitudes towards Diversity and Accommodation of Diversity with Reference to Culturally and Linguistically Diverse Seventh, Eighth, and Ninth Grade Students in a Mid-South State
2. (Students **must** have a faculty member supervise the research. The faculty member must sign this form and all researchers and the faculty advisor should provide a campus phone number).

	Name	Department	Campus Address	Campus Phone
Principal Researcher	<b>Nadia Khrais</b>	<b>CIED</b>	<b>F2, Stone House South</b>	<b>575-4283</b>
Co-Researcher				
Co-Researcher				
Co-Researcher				
Faculty Advisor	<b>Michael J. Wavering</b>	<b>CIED</b>	<b>F2, Stone House South</b>	<b>575-4283</b>

3. Researcher(s) status. Check all that apply.

Faculty     Staff     **Graduate Student(s)**     Undergraduate Student(s)

4. Project type

Faculty Research     **Thesis/Dissertation**     Class Project     Independent Study/  
 Honors Project     M.A.T. Research     Honors Project     Educ. Spec. Project

5. Is the project receiving extramural funding?

**No**     Yes. Specify the source of funds

6. Brief description of the purpose of proposed research and all procedures involving people. Use additional pages if needed. (Do not send thesis or dissertation proposals. Proposals for extramural funding must be submitted in full).

Purpose of research: **Please see attached document: The Purpose of the Proposed Research**

Procedures involving people: **Please see attached document: The Purpose of the Proposed Research**

7. Estimated number of participants (complete all that apply):

\_\_\_\_ Children under 14    \_\_\_\_ Children 14-17    \_\_\_\_ U of A students (18yrs and older)      X\*   **Adult non-students**

<b>Estimated number of participants*</b>	
<b>150 – 200</b>	<b>participants in the survey part</b>
<b>10 – 15</b>	<b>participants in the interview part</b>
<b>9</b>	<b>participants in the observation part</b>

8. Anticipated dates for contact with participants:

First Contact   May 2011                        Last Contact \_\_\_\_\_

9. Informed Consent procedures: The following information must be included in any procedure: purpose of the research; identification of researchers and their institutional affiliation; expected duration of the subject's/respondent's participation; how confidentiality will be ensured; that participation is voluntary and that refusal to participate will involve no penalty or loss of benefits.

**F Signed informed consent will be obtained. Attach copy of form.**

**F Modified informed consent will be obtained. Attach copy of form.**

F Other method (e.g., implied consent). Please explain on attached sheet.

F Not applicable to this project. Please explain on attached sheet.

10. Confidentiality of Data: All data collected that can be associated with a subject/respondent must remain confidential. Describe the methods to be used to ensure the confidentiality of data obtained.

**Each participant will be assigned a code number that will be used to match the knowledge and attitudes of survey, interview, and observation. Only the researcher (Nadia Khrais) will know the codes and they will be kept in a secure place.**

**All information will be treated with confidentiality. Results from this research will be reported as aggregate data. All codes will be destroyed at the end of the study.**

11. Will participants in the research be exposed to more than minimal risk? F Yes **F No.** Minimal risk is defined as risks of harm not greater, considering probability and magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests. Describe any such risks or discomforts associated with the study and precautions that will be taken to minimize them.

Benefits: Other than the contribution of new knowledge, describe the benefits of this research.

**Risks: there are no anticipated risks to participating in the study. All information obtained in connection with this observation will remain confidential.**

**Benefits: this research will increase the overall knowledge to understand the challenges of teachers' attitudes and classroom practice towards having a culturally and linguistically diverse students enrolled in their mainstream subject area classrooms. At the same time, this study has the potential to benefit middle school and junior high teachers in a way that helps them to enhance their classroom practicing attitudes to meet the needs of all of their students equally.**

12. Check all of the following that apply to the proposed research and supply the information requested on attached sheets:

F A. Deception of or withholding information from participants. Justify the use of deception or the withholding of information. Describe the debriefing procedure: how and when will the subject be informed of the deception and/or the information withheld?

- F B. Medical clearance necessary prior to participation. Describe the procedures and note the safety precautions to be taken.
- F C. Samples (blood, tissue, etc.) from participants. Describe the procedures and note the safety precautions to be taken.
- F D. Administration of substances (foods, drugs, etc.) to participants. Describe the procedures and note the safety precautions to be taken.
- F E. Physical exercise or conditioning for subjects. Describe the procedures and note the safety precautions to be taken.
- F F. Research involving children. How will informed consent from parents or legally authorized representatives as well as from subjects be obtained?
- F G. Research involving pregnant women or fetuses. How will informed consent be obtained from both parents?
- F H. Research involving participants in institutions (prisoners, mentally disabled, etc.). Specify agencies or institutions involved. Attach letters of approval.
- F I. Research approved by an IRB at another institution. Specify agencies or institutions involved. Attach letters of approval.
- F J. Research that must be approved by another institution or agency. Specify agencies or institutions involved. Attach letters of approval.

13. Checklist for Attachments.

The following are attached:

**F Consent form (if applicable) or**

**F Letter to participants, written instructions, and/or script of oral protocols indicating clearly the information in item #9.**

F Letter(s) of approval from cooperating institution(s) and/or other IRB approvals (if applicable)

**F Data collection instruments**

14. Signatures.

I/we agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects/respondents are protected. I/we will report any adverse reactions to the committee. Additions to or changes in research procedures after the project has been approved will be submitted to the committee for review. I/we agree to request renewal of approval for any project when subject/respondent contact continues more than one year.

Principal Researcher _____	Date _____
Co-Researcher _____	Date _____
Co-Researcher _____	Date _____
Co-Researcher _____	Date _____
Faculty Advisor _____	Date _____

**PROTOCOL APPROVAL FORM**

(To be returned to IRB Program Manager with copy of completed protocol form and attachments)

**Human Subjects Committee Use Only** (In absence of IRB-authorized Human Subjects Committee, send protocol to IRB).

**Recommended Review Status**

Human Subjects Committee can approve as exempt because this research fits in the following category of research as described in section 9.02 of the IRB policies and procedures (**Cite reasons for exempt status**):

Printed Name and  
Signature of the HSC Chair \_\_\_\_\_ Date \_\_\_\_\_

\*\*\*\*\*

Expedited Review by a designated member of the IRB because this research fits in the following category of research as described in section 9.03 of the IRB policies and procedures (**Cite reasons for expedited status**):

Printed Name and  
Signature of the HSC Chair \_\_\_\_\_ Date \_\_\_\_\_

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Requires Full Review by the IRB because this research fits in the following category of research as described in section 9.04 of the IRB policies and procedures (**Cite reasons for full status**):

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Project Number \_\_\_\_\_ Received RSSP \_\_\_\_\_

Sent to: \_\_\_\_\_ Date \_\_\_\_\_

**Final Status**

Approved as **Exempt** under section 9.02 of the IRB Policies and Procedures (**Cite reasons for exemption**):

Approved as **Expedited** under Section 9.03 of the IRB Policies and Procedures because (**Cite reasons for expedited status**).

Printed Name and  
Signature: \_\_\_\_\_ Date \_\_\_\_\_

IRB (for the Committee)

Approved by **Full** review under Section 9.04 of the IRB as meeting requirements of the IRB Policies and Procedures.

Printed Name and  
Signature: \_\_\_\_\_ Date \_\_\_\_\_

IRB Chairperson

## Appendix B

### Survey Instrument

#### MODIFIED INFORMED CONSENT (Survey)

**Title:** Math, Science, and Social Studies Teachers' Attitudes towards Diversity and Accommodation of Diversity with Reference to Culturally and Linguistically Diverse Seventh, Eighth, and Ninth Grade Students in a Mid-South State

**Researcher:**

**Nadia Khrais**  
**College of Education and Health Professions**  
**Department of Curriculum and Instruction (CIED)**  
**University of Arkansas**  
**Fayetteville, AR 72701. USA**

**Dear teachers,**

I am a doctoral student at the University of Arkansas in the Department of Curriculum and Instruction. I am conducting a survey as part of my dissertation. I would like to invite you to participate in research study looking at the attitudes of math, science, and social studies middle/junior high school teachers towards diversity and accommodation of diversity in the classroom regarding culturally and linguistically diverse students (CLD). Your input will provide a valuable insight. Attached to this letter a survey designed to help me to collect data about attitudes of teachers towards diversity in content area classrooms. I would like your participation. The survey will only take approximately 25-30 minutes to be completed. Returning this survey implies consent to take the survey. If you agree to participate in this survey you may be asked to participate in an interview and/or class observation voluntarily. Participating in the survey does not obligate participants to continue with the interview and observation portions of the study, and participants are free to withdraw from the study at any time.

This survey is completely **voluntary** and completely **confidential**. All information will be held confidential to the extent allowed by law and University of Arkansas policy. Results from the research will be reported as aggregate data. Participants' names will not appear on any reports and all the participants identifying links will be destroyed as soon as the survey, interviews, and observation records are matched up. You have the complete right to withdraw from this study at any time. Your decision to withdraw will bring no negative consequences - no prejudice to you.

**Please complete the survey no later than a week of receiving this email, website, or HTML link.** If you have any questions or comments regarding this survey please feel free to contact me, my advisor or the IRB office via emails at [nkhrais@uark.edu](mailto:nkhrais@uark.edu), [wavering@uark.edu](mailto:wavering@uark.edu), and [irb@uark.edu](mailto:irb@uark.edu).

Thanks in advance for your time and efforts to complete this survey

## Survey

### Section A

Which, if any, of the following describes your opinion? Please respond to each of the following statements by choosing one of the provided responses that indicates your level of agreement.

**SA = Strongly Agree, A = Agree, N = Neither Agree nor Disagree,  
D = Disagree, SD = Strongly Disagree**

1. Knowing the background and the experiences of culturally and linguistically diverse (CLD) students have a strong impact on their learning performance.	SA	A	N	D	SD
2. Every student in my class is a unique combination of his/her cultural background, language, home and experiences.	SA	A	N	D	SD
3. My students' identities bring the richness to my classroom with language and culture.	SA	A	N	D	SD
4. CLD students should be encouraged to modify their behavior to adapt to the mainstream culture.	SA	A	N	D	SD
5. Understanding of students is influenced by my own culture.	SA	A	N	D	SD
6. Teachers should respect and value CLD students' primary language and dialects.	SA	A	N	D	SD
7. It is the teachers' responsibility to utilize students' first languages and dialects as vehicles for helping CLD students to learn standard English.	SA	A	N	D	SD
8. I have adequate training to work with culturally and linguistically diverse (CLD) students.	SA	A	N	D	SD
9. I am interested in receiving more training in working with CLD students.	SA	A	N	D	SD
10. I am prepared to integrate multicultural contents into the curriculum.	SA	A	N	D	SD
11. I am prepared to teach using a different multicultural perspective.	SA	A	N	D	SD
12. I am prepared to teach with different learning styles to meet the individual needs of my students.	SA	A	N	D	SD
13. I expect students to come to my class with a particular set of essential skills.	SA	A	N	D	SD
14. The more I expect from students academically the more they are likely to achieve.	SA	A	N	D	SD

15. I expect that all students in my subject area classes can and will learn regardless of their diverse cultures or languages.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
16. Students who don't put enough efforts usually fail in my subject area class; likewise, students who work hard and put forth the effort usually succeed.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
17. Some students, no matter what I do, will not make it in my class.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
18. Teachers' high expectations of CLD students enable them to develop positive attitudes, perceptions, and a high self-efficacy of academic ability.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
19. Having CLD students in my subject area classes benefits all students.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
20. Having CLD students in my subject area classes increases my workload.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
21. Having CLD students in my subject area classes requires more of my time than other students require.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
22. Having CLD students in my subject area classes slows the progress of the entire class.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
23. Having CLD students in my subject area classes creates a positive educational environment.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
24. Regardless of cultural differences, all students should be taught in the same way.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
25. Knowing the background and the experiences of CLD students is a major element to increase their learning achievement.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
26. It is part of my responsibility as a teacher to use different instruments of teaching (formal, symbolic, media), to help convey important information, values, and actions about cultural and linguistic diversity.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
27. Meeting the individual needs of all my students is an important part of my lesson plans.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
28. Subject area teachers do not have enough time to deal with the needs of CLD students.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
29. CLD students should be able to acquire standard English within two years of enrolling in school.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
30. CLD students should not be allowed to use their home language while in subject area classes.	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>

31. CLD students should not enroll in general education classes until they attain a minimum level of standard English proficiency.	SA	A	N	D	SD
32. The CLD students in my subject area class seem to participate less than other students.	SA	A	N	D	SD

**Please respond to each of the following statements by choosing one of the provided responses that indicates the extent to which each apply in your classes.**

**NR = Never or Rarely, S = Some of the time, M = Most of the time**

33. I use cooperative learning techniques rather than competitive.	NR	S	M
34. I include content related to my students' diverse background in my lesson plans.	NR	S	M
35. I use classroom activities requiring different learning styles to meet the needs of all my students.	NR	S	M
36. I encourage my students to work as a team more often than independently.	NR	S	M
37. I simplify coursework for CLD students.	NR	S	M
38. I allow CLD students more time to complete coursework.	NR	S	M
39. I modify assignments for the CLD students enrolled in my subject area classes.	NR	S	M
40. I provide materials for CLD students in their first languages as well as in English.	NR	S	M
41. I match my instructional techniques to the students' learning styles to meet their needs.	NR	S	M
42. My classroom decisions are made based on the needs of all my students.	NR	S	M
43. Effort is more important to me than achievement when I grade CLD students.	NR	S	M
44. In my subject area classes some of the students present a big challenge to me to meet their needs.	NR	S	M
45. Some students I just cannot seem to connect with.	NR	S	M
46. I use different cross-cultural communications patterns to communicate with my students to promote their learning.	NR	S	M

**If you are teaching math or science please answer Section B questions 57 and 58.**

**If you are teaching social studies please answer Section B question 59.**



**Section B**

**Please read each statement below and select the proper answer that indicates your level of agreement.**

**SA = Strongly Agree, A = Agree, N = Neither Agree nor Disagree,  
D = Disagree, SD = Strongly Disagree**

47. Math and science materials should help students to understand the ways in which people from a variety of cultures and groups have contributed to the development of scientific and mathematical knowledge.	SA	A	N	D	SD
48. Math and science materials should help students to understand the ways in which assumptions, perspectives and problems within these fields are often culturally-based and influenced.	SA	A	N	D	SD
49. Social studies materials should help students to understand the American society, history, and culture from diverse ethnic and cultural perspectives.	SA	A	N	D	SD

**Section C**

**Please state how you identify yourself in the following categories by choosing one of the provided answers. Your answers will assist in the categorization of the responses.**

50. Gender:	Male		Female			
51. Race or ethnic group:	White	African American		Asian	Hispanic	Other
52. Age:	20-29	30-39	40-49	50-59	60-over	
53. Subject area:	Math	Science	Social studies		Other	
54. Level of education:	Bachelor's degree		BA	BS		BSE
	Master's degree		MA	M.Ed.		MAT
	Specialist degree		Ed.S.			
	Doctoral degree		Ph.D.		Ed.D.	
55. Including this year, Number of years taught:	1-4	5-9	10-14	15-19	20-24	25-over
56. Teaching grade level:	7 <sup>th</sup> grade		8 <sup>th</sup> grade		9 <sup>th</sup> grade	
57. Is English your first language?	Yes			No		
58. Do you speak a second language?	Yes	No	If yes, what language(s):			
59. The highest ability level attained for language proficiency	Beginner		Intermediate		Advanced	

## Appendix C

### Interview and Observation Tool

#### INFORMED CONSENT (Interviews)

**Title:** Math, Science, and Social Studies Teachers' Attitudes towards Diversity and Accommodation of Diversity with Reference to Culturally and Linguistically Diverse Seventh, Eighth, and Ninth Grade Students in a Mid-South State

**Researcher:**

**Nadia Khrais**  
**College of Education and Health Professions**  
**Department of Curriculum and Instruction (CIED)**  
**University of Arkansas**  
**Fayetteville, AR 72701. USA**

**Dear teachers:**

I am a doctoral student at the University of Arkansas in the Department of Curriculum and Instruction. I am conducting an interview as part of my dissertation. You are invited to participate in this study.

If you decide to participate, you will be interviewed about your experiences and class practices towards diversity in one meeting upon prior arrangement. The interview will be digitally recorded. The interview will require approximately one hour.

**Description:** The present study will investigate the attitudes of 7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> grade math, science and social studies teachers who have culturally and linguistically diverse students in their mainstream classrooms, measure teacher attitudes towards inclusion of this population of students, and gauge their attitudes toward accommodation of that diversity on culturally and linguistically students' learning in their content area classrooms. I am particularly interested in the research implication answering this question that would have an impact on reducing the achievement gap between culturally/linguistically diverse students and mainstream students in math, science, and social studies subject area classrooms.

**Risks and Benefits:** There are no anticipated risks to participating in the study. All information obtained in connection with this interview will remain confidential and your individual comments will be disclosed only with your permission. Identifiers on audio tapes will be recorded in a manner that will not reveal your identity. Additionally, recorded interviews will be kept confidential to the extent allowed by law and University of Arkansas policy. Participants' names will not appear on any reports and all the participants identifying links will be destroyed as soon as the survey, interviews, and observation records are matched up. The benefits of this research: by taking part in this study, you will increase the overall knowledge to understand the challenges of teachers' attitudes and classroom practice towards having a culturally and

linguistically diverse students enrolled in their mainstream subject area classrooms. At the same time, this study has the potential to benefit middle school and junior high teachers in a way that helps them to enhance their classroom practicing attitudes to meet the needs of all of their students equally.

**Voluntary Participation:** Your participation in the research is completely voluntary. If you decide to participate, you are free to discontinue participation at any time during the study without prejudice. Simply notify me of your decision.

**Confidentiality:** You will be assigned a code number that will be used to match the knowledge and attitudes interview. All information will be kept confidential to the extent allowed by law and University of Arkansas policy. Interviews results will be reported as aggregate data. Participants' names will not appear on any reports and all the participants identifying links will be destroyed as soon as the survey, interviews, and observation records are matched up.

If you have any questions about this study or this consent form, please ask me or my advisor Dr. Michael Wavering. If you have any additional questions during or after the study, my advisor and I will be happy to answer them. My advisor, the IRB office, and I can be contacted through electronic mail at [wavering@uark.edu](mailto:wavering@uark.edu), [irb@uark.edu](mailto:irb@uark.edu), and [nkhrais@uark.edu](mailto:nkhrais@uark.edu).

**Right to Withdraw:** You are making a decision whether or not to participate. You are free to participate or not in the research and to withdraw from this study at any time. Your decision to withdraw will bring no negative consequences - no prejudice to you.

**Informed Consent:** I, \_\_\_\_\_, have read the  
(Please print)  
description, including the purpose of the study, the procedures to be used, the potential risks and side effects, the confidentiality, as well as the option to withdraw from the study at any time. Each of these items has been explained to me by the researcher. The investigator has answered all of my questions regarding the study, and I believe I understand what is involved. My signature below indicates that I freely agree to participate in this experimental study and that I have received a copy of this agreement from the researcher.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Interview Question Guide

1. Tell me about your background as a teacher?
  - Years of experience
  - Subject areas
  - Schools
  - Number of CLD students
  - Nature of training for working with CLD students
2. What are some of the biggest challenges teachers face when understanding and addressing the needs of CLD students?
  - How do you meet their challenges?
  - Could you please tell me about the resources that are available to you?
  - How do you think students' native culture and language may impact their performance as a student in your class?
3. What techniques or strategies have been successful in your experience with CLD students?
4. Could you please identify three propositions you think it is relevant to culturally responsive teachers?
5. How you build effective cross-cultural communications with your students?
6. Can you think of any characteristics that CLD students bring to the classroom?
7. Could you identify specific examples of what you have been personally engaged in that demonstrates commitment to principles of equity and diversity?
8. How did those experiences increase your understanding regarding the implications of teacher attitude and beliefs about diversity for student achievement?
9. Some teachers talk about “having high expectations” with “high levels of understanding” for CLD students. How do you interpret that statement?
10. What kinds of things have you done in the classroom that has facilitated the academic success of CLD students?

## **INFORMED CONSENT (Observation)**

**Title:** Math, Science, and Social Studies Teachers' Attitudes towards Diversity and Accommodation of Diversity with Reference to Culturally and Linguistically Diverse Seventh, Eighth, and Ninth Grade Students in a Mid-South State

**Researcher:**

**Nadia Khrais**  
**College of Education and Health Professions**  
**Department of Curriculum and Instruction (CIED)**  
**University of Arkansas**  
**Fayetteville, AR 72701. USA**

**Dear teachers:**

I am a doctoral student at the University of Arkansas in the Department of Curriculum and Instruction. I am conducting observations as part of my dissertation. You are invited to participate in this study.

If you decide to participate, I will visit your class one time upon prior arrangement. Your active participation is highly appreciated and it is extremely valuable and will provide several potential benefits.

**Description:** The present study will investigate the attitudes of 7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> grade math, science and social studies teachers who have culturally and linguistically diverse students in their mainstream classrooms, measure teacher attitudes towards inclusion of this population of students, and gauge their attitudes toward accommodation of that diversity on culturally and linguistically students' learning in their content area classrooms. I am particularly interested in the research implication answering this question that would have an impact on reducing the achievement gap between culturally/linguistically diverse students and mainstream students in math, science, and social studies subject area classrooms.

**Risks and Benefits:** There are no anticipated risks to participating in the study. All information obtained in connection with this observation will remain confidential to the extent allowed by law and the University of Arkansas policy. Results from the research will be reported as aggregate data. Participants' names will not appear on any reports and all the participants identifying links will be destroyed as soon as the survey, interviews, and observation records are matched up. The benefits of this research: by taking part in this study, you will increase the overall knowledge to understand the challenges of teachers' attitudes and classroom practice towards having a culturally and linguistically diverse students enrolled in their mainstream subject area classrooms. At the same time, this study has the potential to benefit middle school and junior high teachers in a way that helps them to enhance their classroom practicing attitudes to meet the needs of all of their students equally.

**Voluntary Participation:** Your participation in the research is completely voluntary. If you decide to participate, you are free to discontinue participation at any time during the study without prejudice. Simply notify me of your decision.

**Confidentiality:** You will be assigned a code number that will be used to match the knowledge and attitudes of observation. All gathered information will be kept confidential to the extent allowed by law and the University of Arkansas policy. Observation results will be reported as aggregate data. Participants' names will not appear on any reports and all the participants identifying links will be destroyed as soon as the survey, interviews, and observation records are matched up.

If you have any questions about this study or this consent form, please ask me or my advisor Dr. Michael Wavering. If you have any additional questions during or after the study, my advisor and I will be happy to answer them. You can contact me, my advisor, and the IRB office through electronic mail at [nkhrais@uark.edu](mailto:nkhrais@uark.edu), [wavering@uark.edu](mailto:wavering@uark.edu), and [irb@uark.edu](mailto:irb@uark.edu).

**Right to Withdraw:** You are making a decision whether or not to participate. You are free to participate or not in the research and to withdraw from this study at any time. Your decision to withdraw will bring no negative consequences - no prejudice to you.

**Informed Consent:** I, \_\_\_\_\_, have read the  
(Please print)

description, including the purpose of the study, the procedures to be used, the potential risks and side effects, the confidentiality, as well as the option to withdraw from the study at any time. Each of these items has been explained to me by the researcher. The investigator has answered all of my questions regarding the study, and I believe I understand what is involved. My signature below indicates that I freely agree to participate in this experimental study and that I have received a copy of this agreement from the researcher.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**Diversity in the Classroom**  
**Observation Documentation**

**Teacher:** \_\_\_\_\_ **School:** \_\_\_\_\_

**Subject Area:** \_\_\_\_\_ **Grade:** \_\_\_\_\_

**Observer:** \_\_\_\_\_ **Date(s) of Observation:** \_\_\_\_\_

**Section #1: Direct Classroom Observation**

**A. Demonstrates skill and competency in the design and application of inclusive instructional approaches, assessments, techniques, and curriculum.**

**Evidence:**

1. Describe the environmental print displayed about the room that demonstrates a valuing of diversity (e.g., visual supports, posters, banners, etc.).
- 2a. Describe grouping strategies that enhance student achievement and promote non-like group interaction (e.g., ability level, gender, etc.)
- 2b. Sketch the room with attention to the instructional arrangements.
  - Back of the room
  - Front of the room
  - What conclusions could be drawn from this arrangement?
3. Describe specific instructional materials that illustrate valuing and promoting the understanding of diversity factors (e.g., multicultural literature, manipulatives).
4. How is the teacher adapting the lesson for individual students (e.g., differentiating instruction regarding diversity factors across content, delivery, or evaluation)?

Student (Identified by name or clothing, e.g., color of shirt)	Explicit illustration that reflects a valuing of diversity factors

**Please rate each item with the scale: 1=little to no competency observed; 2=fair to adequate competency observed; 3=strong competency observed.**

5. Demonstrates appropriately needed “distribution of attention” to all students. Teacher attends to students in a manner that demonstrates respect for students’ diverse abilities and experiences	1	2	3	Comments:
6. The teacher ensures that all students understand and can carry out the procedures for instructional activities	1	2	3	Comments:
7. The teacher makes instructional content relevant, linked to students’ practical experiences, attends to learning styles, multiple modes of delivery, and checks for understanding	1	2	3	Comments:

**B. Reinforces attitudes valuing and promoting understanding of diversity.**

**Evidence:**

1. Works well with and treats with dignity and respect all individuals regardless of race, ethnicity, ability, language, gender, sexual orientation, age, or religion.

**Tally the specific teacher comments and interactions directed towards each student.**

Student	Praise	Question	Feedback	Direction Giving	Redirection	Other

2. Describe the types of student-to-student and student-to-teacher interactions.



## Appendix D

### Sources of Themes and Survey Construction

Rational/Source of themes and survey statements construction	Previous studies findings
<b>Theme 1: Valuing CLD students' culture and language</b>	
Questions 1, 2, 3, 4, & 5. Banks (2008, 2009), Banks & Cochran-Smith (2005), Cummins (2000), Diller & Moule (2005), Dooly (2005), Garcia (2002), Gay (2000), Gollnick & Chin (2009), Valenzuela (1999).	-Employing culturally responsive teaching methods utilizing students' cultures and experiences as resources for teaching and learning. Integration of diverse cultural content into the curriculum at different levels is considered a crucial element to increase CLD students' learning achievement.
Questions 6, 7, 29, & 30. Haig & Oliver (2003), Karabenick & Clemens Noda (2004), Reeves (2006), Schmidt (2000).	-Looking at CLD students' first language or dialect as a deficit. CLD students should enroll in special classes until they master the minimum proficiency of the standard English language before they are allowed to enroll in subject area mainstream classes.
<b>Theme 2: Attitudes towards inclusion</b>	
Questions 19, 20, 21, 22, & 23. Diaz-Rico & Weed (2006), NCES (2001), Reeves (2006), Terrill & Mark (2000).	-The inclusion of CLD students in subject area classes. -Having CLD students in subject area classrooms. Lacking of the skills to deal with CLD students behind negative attitude towards inclusion and teaching this population of students.
<b>Theme 3: Teachers' beliefs towards CLD students</b>	
Questions 24, 28, 29, 30, 31, & 32. Darling-Hammond & Berry (1999) Diaz-Rico & Weed (2006), Gay (2000), Nieto (1999), Reeves (2006), Schultz et al. (1996), Valenzuela (1999), Wolfram et al. (2006)	-Teachers' beliefs towards CLD students enrolled in their subject area classroom. -The critical role of teachers' beliefs regarding teaching CLD students and their abilities of learning.
<b>Theme 4: Teachers' training</b>	
Questions 8, 9, 10, 11, & 12. Bartolomé (2002), Byrnes et al. (1997), Everhart & Vaugh (2005), Garcia (2002), Karabenick & Clemens Noda (2004), Lee & Oxelson (2006), McCloskey (2002), NCES (2000), Phuntsog (2001), Youngs & Youngs (2001).	-Teachers' training and preparedness to work with CLD students. -Lacking of training and skills to integrate a multicultural education that reflects CLD students' cultures and experiences may generate a negative attitude to facilitate learning and development.

<b>Theme 5: Teachers' expectations</b>	
Questions 13, 14, 15, 16, 17, 18, & 32. Billings (1990, 1994), Diaz-Rico & Weed (2006), Gay (2000), Guyton & Wesche (2005), Good (1974), Ford (1984), Diaz-Rico et al. (1994), Lachat (1999), Ladson-McDonough (1997), Mullis & Jenkins (1990), Nieto (1999), Oakes (1985), Rom & Falbo (1996), Tucker et al. (2005), Valenzuela (1999), Winfield (1986)	-High and low expectations affect students' self-confidence and consequently their academic performance.
<b>Theme 6: Teachers attitudes towards CLD students' learning needs</b>	
Questions 25, 26, 27, 44, 47, 48, & 49. Banks (2008); Carreira (2007), Colarusso & O'Rourke (2010), Diaz-Rico & Weed (2006), Ladson-Billings (2000; 2009) Moll (1992), Maxwell-Jolly (2008)	-Teacher attitudes towards CLD students' learning needs. -CLD students' learning needs and the role teachers play to meet the individual educational needs for each student.
<b>Theme 7: Teaching methods and teacher-student communications</b>	
Questions 33, 35, & 36. Delpit (2006), Ladson-Billings (2006)	-Teaching methods and communication patterns. -Delivering different teaching strategies that match CLD students' learning styles.
Question 34. Banks (2009), Cummins 2000, Diller & Moule (2005), Gollnick & Chin (2009), Valenzuela (1999)	-Integrating multicultural content in the curriculum and in the lesson plans.
Questions 37, 38, 39, 41, & 42. Banks & Cochran-Smith's (2005), Barker & O'Neil (1995), Byrnes et al. (1997), Crawford (1997), Garcia (2002), Garcia & Pearson (1994), Sobel & Taylor (2001), Winfield (1995), Youngs & Youngs (2001)	-Modification of instruction. -Integrating CLD students' real life experiences and home culture in instruction as an important issue in the learning process. -Using different instrumental materials reflects all students' background and experiences is urgent to promoting student self efficacy and learning achievement.
Question 40. Haig & Oliver (2003), Reeves (2006), Schmid (2001)	-Providing materials in CLD students 1st language as well as in English increase CLD students learning English and increase their learning in general.
Question 43. Darling-Hammond (1994), Garcia & Pearson	-Utilizing different assessment patterns that involve CLD students' cultural preferences.

<p>(1994), Garcia (1996), Merino (2007)</p>	<p>-The awareness to differentiate between CLD students' ability to write and read using standard English and their competence in subject matter being taught.</p>
<p>Questions 45&amp; 46. Beegle (2007), Cummins (1996), Darling-Hammond &amp; Berry (1999), Gay (2000), Gilbert (1995), Larke (1990), Reed (1996), Sleeter (2008), Schultz et al. (1996)</p>	<p>-Communication patterns and the student/teacher relationship and the role they play in increasing CLD students' learning.</p>

## Appendix E

### Example of Categories Coding Process

#### Participant 4's interview

Identified themes	Initial codes
<b>Culture</b>	The things they are interested in, different foods to different activities outside of school, make a huge difference in the classroom interaction and in the community.
	CLD students have to interact with each other and not separating themselves out.
	Their input needs to be respected just as any other students would be
	We have done different activities were they have to write about their family traditions like a favorite holiday. We see a lot of cultural diversity in these papers because they are all on a personal level.
	With math, it is harder to see because what we do at this level is just the basic skills of math. At times, it is hard to relate culture to it.
	Tomorrow we are going to do a survey they are going to pick something to survey about. In an assignment like that I will see more diversity in the results I get.
	Tomorrow we are going to do a survey they are going to pick something to survey about. In an assignment like that I will see more diversity in the results I get.
<b>Communication</b>	Working with groups becomes a struggle in communicating with each other.
	Especially with those students that don't know how to speak English, I try to teach them a word and then I allow them to teach me a word. Using a student translator or another translator to ask them about their family or where they are from helps develop a social relationship. I think building a personal relationship helps with CLD students.
	Activities that involve communication with one another have become a priority in my lesson planning.
	Have communication with the student to understand their mental processing.
	Communication and feedback is the biggest impact on how I assess their knowledge.
	One of the most important think I've done is to establish a relationship, even with non-speaking English students, is to develop a personal relationship with them, one where they feel comfortable.
	I feel it doesn't matter where they are from and what connection they can make, the first connection has to be between the two of you.
	Most students are not going to respond regardless of their culture and their background (Negative attitudes).
	It is hard to make connections with non-English speaking students.

<b>Language</b>	They come to us not being able to speak the language or understand the language fluently.
	I think having a partner peer is probably the best language tool that can help them during most of the class.
	A new arrival center which allows them to be submerged in learning basic English for about nine weeks. Then they are placed in a regular classroom situation which helps them apply and begin using the new language.
	Until they have some very basic vocabulary, they are continuing to struggle. The need for the basic vocabulary is why I think that the new arrival is crucial for new language learners to succeed.
	We also have for math a computer program that translates it into Spanish. However, that's the only language it translates into in the program right now. So that helps the Spanish native speakers because they can hear it in English and can translate it into Spanish. This will increase their vocabulary with the repetition.
<b>Learning styles</b>	In my classroom I do a lot of hands-on activities.
	I'll do partner pairing. They are usually paired with someone who can speak English that can often explain with a different strategy, one-on-one.
	We do picture vocabulary
	By visually seeing terms, words, and academic vocabulary, the content means so much more. That's the most successful things that I've seen in working with these kids
	Applying the technique and strategies has helped the students feel more successful.
	Hands-on activities, vocabulary charts.
<b>Grading</b>	I think it helped to see you know you can't always grade everything, especially when it comes to projects and group activities.
<b>Training</b>	Taking ownership in the district training that we've gone through would be one example.
<b>Learning needs</b>	You have to differentiate the lesson to meet the needs of the CLD student.
	Assess what you want the child to learn and look at the results.
	Partner pairing with an English speaking student has also been successful.
<b>Expectations</b>	All of my students give me the best work. I expect that of all my students. Even with CLD students who are struggling in learning the language, I always expect them to attempt the work.
	The longer the student has been in the US, my expectations become little higher.
	By knowing their level of understanding and their ability to communicate, I can set my learning expectations to meet their needs.

## Appendix F

### Tables

Table (1): *Demographic Survey Participants' Data*

<b>Independent Variables</b>	<b>Coding</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Gender</b>	Male	32	23.4
	Female	105	76.6
<b>Race</b>	White	123	90
	African American	2	1.5
	Asian	2	1.5
	Hispanic	4	3
	Other	6	4.0
<b>Age</b>	20-29	22	16.1
	30-39	34	24.8
	40-49	36	26.3
	50-59	36	26.3
	60-over	9	6.6
<b>Subject Area</b>	Math	40	29.2
	Science	50	36.5
	Social Studies	47	34.3
<b>Level of Education</b>	BA	28	20.4
	MA	63	46
	Ed.S	46	33.6
	PhD	0	0
<b>Years of Experience</b>	1-4	21	15.3
	5-9	29	21.2
	10-14	22	16.1
	15-19	23	16.8
	20-24	16	11.7
	25-over	26	18.9
<b>Grade Level</b>	7th	35	25.5
	8th	21	15.3
	9th	81	59.1
<b>English as a 1<sup>st</sup> Language</b>	Yes	133	97.1
	No	4	2.9
<b>Speaking a 2<sup>nd</sup> Language</b>	Yes	31	22.6
	No	106	77.4
<b>Level of 2<sup>nd</sup> language proficiency</b>	Beginner	9	29
	Intermediate	10	32.2
	Advanced	11	35.4

Table (2): *Frequency for Valuing Students' Cultures and Languages*

<b>Dependent Variables</b>		<b>Strongly Agree</b>	<b>Agree</b>	<b>Neither</b>	<b>Strongly Disagree</b>	<b>Disagree</b>
<b>Knowing the background and the experiences of culturally and linguistically diverse (CLD) students have a strong impact on their learning performance</b>	N	66	62	4	0	5
	%	48.2	45.3	2.9	0	3.6
<b>Every student in my class is a unique combination of his/her cultural background, language, home and experiences</b>	N	102	33	2	0	0
	%	74.5	24.1	1.5	0	0
<b>My students' identities bring the richness to my classroom with language and culture</b>	N	79	49	6	0	3
	%	57.7	35.8	4.4	0	2.2
<b>Understanding of students is influenced by my own culture</b>	N	0	0	16	23	91
	%	0	0	11.8	16.9	66.9
<b>CLD students should be encouraged to modify their behavior to adapt to the mainstream culture.</b>	N	3	49	49	3	32
	%	2.2	36	36	2.2	23.5
<b>Teachers should respect and value CLD students' primary language and dialects</b>	N	62	64	9	0	1
	%	45.6	47.1	6.6	0	0.7
<b>It is the teachers' responsibility to utilize students' first languages and dialects as vehicles for helping CLD students to learn standard English</b>	N	16	58	27	2	34
	%	11.7	42.36	19.7	1.5	24.8

Table (3): Mean Score of the 7 items of Teachers' Attitudes towards Valuing Students' Culture

<b>Dependent Variables</b>	<b>N</b>	<b>M</b>	<b>SD</b>
Knowing the background and the experiences of culturally and linguistically diverse (CLD) students have a strong impact on their learning performance.	134	1.63	0.72
Every student in my class is a unique combination of his/her cultural background, language, home and experiences.	134	1.28	0.48
My students' identities bring the richness to my classroom with language and culture.	134	1.52	0.69
Understanding of students is influenced by my own culture.	134	2.02	0.67
Teachers should respect and value CLD students' primary language and dialects.	134	1.63	0.64
It is the teachers' responsibility to utilize students' first languages and dialects as vehicles for helping CLD students to learn standard English.	134	2.63	1.03
CLD students should be encouraged to modify their behavior to adapt to the mainstream culture.	134	3.11	0.86

Table (4): ANOVA for Valuing CLD Students' Cultures and Languages

<b>Independent Variables</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>	<b>Sig.</b>
<b>Gender</b>	1.11	1	1.11	9.16	0.00**
<b>Race</b>	1.33	4	0.33	2.73	0.03*
<b>Age</b>	1.18	4	0.29	2.39	0.05
<b>Subject Area</b>	0.03	2	0.02	0.24	0.89
<b>Level of Education</b>	0.24	2	0.012	0.92	0.40
<b>Years of Experience</b>	2.13	5	0.43	3.64	0.00**
<b>Teacher Grade Level</b>	0.03	2	0.01	0.10	0.90
<b>English as 1<sup>st</sup> Language</b>	0.92	1	0.92	7.50	0.00**
<b>Speaking 2<sup>nd</sup> Language</b>	0.00	1	0.00	0.02	0.89
<b>Level of 2<sup>nd</sup> Language Proficiency</b>	1.13	3	0.38	3.07	0.03*

\*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001.

Dependent variables, response to 7 questions measuring valuing CLD students' culture and language. Independent variables, the 10 demographic variables, n = 136.



Table (5): *Tukey Follow-Up Test for Race*

<b>I</b>	<b>J</b>	<b>Mean Difference</b>	<b>SE</b>	<b>Sig</b>	<b>95% Confidence Level</b>	
					<b>Lower bound</b>	<b>Upper bound</b>
<b>(Race)</b>	<b>(Race)</b>	<b>(I - J)</b>				
<b>White</b>	<b>Black</b>	-0.60	0.24	0.11	-1.30	0.08
	<b>Asian</b>	-0.03	0.25	1.00	-0.72	0.65
	<b>Hispanic</b>	0.40	0.20	0.17	-0.09	0.90
	<b>Other</b>	-0.15	0.15	0.83	-0.55	0.25
<b>Black</b>	<b>White</b>	0.60	0.25	0.11	-0.08	1.30
	<b>Asian</b>	0.57	0.35	0.50	-0.40	1.53
	<b>Hispanic</b>	1.00(*)	0.30	0.01	0.17	1.83
	<b>Other</b>	0.50	0.30	0.50	-0.33	1.23
<b>Asian</b>	<b>White</b>	0.03	0.25	1.00	-0.65	0.72
	<b>Black</b>	-0.57	0.35	0.47	-1.50	0.40
	<b>Hispanic</b>	0.43	0.30	0.61	0.40	1.30
	<b>Other</b>	-0.12	0.28	1.00	1.00	0.67
<b>Hispanic</b>	<b>White</b>	0.40	0.25	1.00	-0.70	0.72
	<b>Black</b>	-1.00(*)	0.35	0.01	-1.53	0.40
	<b>Asian</b>	-0.43	0.30	0.61	-1.30	0.40
	<b>Other</b>	-0.55	0.30	1.00	-1.00	0.70
<b>Other</b>	<b>White</b>	0.20	0.15	0.83	-0.25	0.60
	<b>Black</b>	-0.50	0.30	0.50	-1.23	0.33
	<b>Asian</b>	0.12	0.30	1.00	-0.70	1.00
	<b>Hispanic</b>	0.55	0.22	0.11	-0.07	1.17

Based on observed means.

The Error term is Mean Square (Error) = 0.12.

The mean difference is significant at the 0.05 level.

Table (6): Tukey Follow-Up Test for Years of Teaching Experience

I (Y-experience)	J (Y-experience)	Mean Difference (I - J)	SE	Sig	95% Confidence Level	
					Lower bound	Upper bound
1-4 n = 21	5-9	-0.21	0.10	0.35	-0.48	0.09
	10-14	-0.05	0.10	1.00	-0.40	0.25
	15-19	0.03	0.10	1.00	-0.26	0.33
	20-24	-0.27	0.11	0.16	-0.60	0.05
	25-over	-0.28	0.10	0.07	-0.57	0.01
5-9 n = 29	1-4	0.21	0.10	0.40	-0.09	0.48
	10-14	0.14	0.10	0.71	-0.14	0.42
	15-19	0.23	0.10	0.20	-0.04	0.51
	20-24	-0.08	0.11	1.00	-0.39	0.23
	25-over	-0.08	0.10	1.00	-0.35	0.19
10-14 n = 22	1-4	0.05	0.10	1.00	-0.25	0.36
	5-9	-0.14	0.10	0.71	-0.42	0.14
	15-19	0.008	0.10	1.00	-0.21	0.40
	20-24	-0.22	0.11	0.37	-0.54	0.10
	25-over	-0.22	0.10	0.22	-0.51	0.06
15-19 n = 23	1-4	-0.03	0.10	1.00	-0.33	0.30
	5-9	-0.23	0.10	0.17	-0.5071	0.04
	10-14	-0.09	0.10	1.00	-0.3834	0.21
	20-24	-0.31	0.11	0.07	-0.6304	0.01
	25-over	-0.31(*)	0.10	0.02	-0.60	-0.03
20-24 n = 16	1-4	0.27	0.11	0.20	0.05	0.60
	5-9	0.08	0.11	1.00	0.23	0.40
	10-14	0.22	0.11	0.40	-0.10	0.54
	15-19	0.31	0.11	0.07	-0.01	0.63
	25-over	-0.00	0.11	1.00 0	-0.32	0.31
25-over n = 26	1-4	0.28	0.10	0.07	-0.01	0.60
	5-9	0.08	0.10	0.95	-0.19	0.61
	10-14	0.22	0.10	0.22	-0.06	0.35
	15-19	0.31(*)	0.10	0.02	0.03	0.51
	20-24	0.00	0.11	1.00	-0.31	0.32

Based on observed means.

The Error term is Mean Square (Error) = 0.12.

The mean difference is significant at the 0.05 level.

Table (7): Tukey Follow-Up Test for 2<sup>nd</sup> Language Proficiency

I (2 <sup>nd</sup> L- proficiency)	J (2 <sup>nd</sup> L- proficiency)	Mean Differenc e (I - J)	SE	Sig	95% Confidence Level	
					Lower bound	Upper bound
Non	Beginner	-0.12	0.12	0.78	-0.43	0.20
	Intermediate	-0.24	0.12	0.17	-0.54	0.06
	Advanced	0.20	0.11	0.26	-0.09	0.50
Beginner	Non	0.12	0.12	0.80	-0.20	0.43
	Intermediate	-0.12	0.16	0.90	-0.54	0.30
	Advanced	0.32	0.016	0.18	-0.09	0.73
Intermediate	Non	0.23	0.12	0.17	-0.06	0.60
	Beginner	0.12	0.16	0.90	-0.30	0.54
	Advanced	0.44(*)	0.15	0.02	0.04	0.84
Advanced	Non	-0.20	0.11	0.30	-0.50	0.09
	Beginner	-0.32	0.16	0.18	-0.73	0.09
	Intermediate	-0.44(*)	0.15	0.02	-0.84	-0.04

Based on observed means.

The Error term is Mean Square (Error) = 0.13.

The mean difference is significant at the 0.05 level.

Table (8): Frequency for Negative Attitudes towards Inclusion of CLD Students in Subject Area Classes

Dependent Variables		Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Having CLD students in my subject area classes increases my workload	N %	2 1.5	22 16.2	29 21.3	68 50	15 11
Having CLD students in my subject area classes requires more of my time than other students require	N %	1 0.7	31 22.8	35 25.7	58 42.5	11 8.1
Having CLD students in my subject area classes slows the progress of the entire class	N %	13 9.5	59 43.4	43 31.4	18 13.1	4 2.9

Table (9): Mean Score of the 3 Items of Negative Attitudes towards Inclusion of CLD Students

<b>Dependent Variables</b>	<b>N</b>	<b>M</b>	<b>SD</b>
Having CLD students in my subject area classes increases my workload	135	2.47	0.72
Having CLD students in my subject area classes requires more of my time than other students require	135	2.65	0.95
Having CLD students in my subject area classes slows the progress of the entire class	135	3.44	0.94

Table (10): ANOVA for Negative Attitudes towards Inclusion of CLD Students in their Subject Area Classroom

<b>Independent Variables</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>	<b>Sig.</b>
Gender	1.37	1	1.37	2.41	0.12
Race	0.78	4	0.20	0.33	0.86
Age	2.87	4	0.72	1.26	0.29
Subject Area	0.20	2	0.10	1.72	0.84
Level of Education	1.09	2	0.54	0.95	0.39
Years Taught	1.85	5	0.37	0.64	0.67
Teacher Grade Level	3.74	2	1.78	3.38	0.04*
English as First Language	0.22	1	0.22	0.38	0.54
Speaking Second Language	0.15	1	0.15	0.26	0.61
Level of Second Language Professioncy	1.67	3	0.56	0.98	0.41

\*P< 0.05, \*\* P<0.01, \*\*\*P<0.001.

Dependent variables, Response to 3 questions measuring teachers' negative attitudes towards inclusion of CLD students.

Table (11): *Tukey Follow-Up Test for Grade Level*

I (Grade level)	J (Grade level)	Mean Difference (I - J)	SE	Sig	95% Confidence Level	
					Lower bound	Upper bound
7 <sup>th</sup> grade	8th grade	-0.35	0.21	0.21	-0.84	0.14
	9th grade	-0.39(*)	0.15	0.03	-0.74	-0.03
8 <sup>th</sup> grade	7th grade	0.35	0.21	0.21	-0.14	0.84
	9th grade	-0.4	0.18	0.98	-0.47	0.40
9 <sup>th</sup> grade	7th grade	0.39(*)	0.15	0.03	-0.03	0.74
	8th grade	0.04	0.18	0.98	-0.40	0.47

Based on observed means.

The Error term is Mean Square (Error) = 0.12.

The mean difference is significant at the 0.05 level.

Table (12): *Frequency for Teachers' Positive Attitude towards Inclusion of CLD Students in Subject Area Classes*

Dependent Variables		Strongly Agree	Agree	Neither	Strongly Disagree	Disagree
Having CLD students in my subject area classes benefits all students	N %	45 32.8	67 48.9	22 16.1	1 0.7	2 1.5
Having CLD students in my subject area classes creates a positive educational environment	N %	26 19	80 58.4	29 21.2	1 0.7	1 0.7

Table (13): *Mean Score of the 3 Items of Positive Attitudes towards Inclusion of CLD Students*

Dependent Variables	N	M	SD
Having CLD students in my subject area classes benefits all students	137	1.88	0.77
Having CLD students in my subject area classes creates a positive educational environment	137	2.06	0.70

Table (14): ANOVA for Teachers' Positive Attitudes toward Inclusion of CLD Students in their Subject Area Classroom

<b>Independent Variables</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>	<b>Sig.</b>
Gender	0.80	1	0.80	1.80	0.18
Race	2.60	4	0.65	1.50	0.22
Age	0.96	4	0.24	0.53	0.71
Subject Area	0.85	2	0.43	0.95	0.39
Level of Education	0.18	2	0.09	0.20	0.82
Years Taught	1.70	5	1.70	3.83	0.05
Teacher Grade Level	0.09	2	0.04	0.09	0.91
English as First Language	0.91	1	0.91	2.06	0.15
Speaking Second Language	0.01	1	0.01	0.02	0.90
Degree Level	0.72	3	0.24	0.53	0.66

\*P< 0.05, \*\* P<0.01, \*\*\*P<0.001.

Dependent variables, Response to two questions measuring teachers' positive attitudes towards inclusion of CLD students. Independent variables, the 10 demographic variables, N= 135.

Table (15): *Frequency for Teachers' Beliefs about CLD Students Enrolled in their Subject Area Classes*

<b>Dependent Variables</b>		<b>Strongly Agree</b>	<b>Agree</b>	<b>Neither</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
Regardless of cultural differences, all students should be taught in the same way	N %	33 24.1	87 63.5	9 6.6	5 3.6	3 2.2
Subject area teachers do not have enough time to deal with the needs of CLD students	N %	29 21.8	49 36.8	25 18.8	25 18.8	5 3.8
The CLD students in my subject area class seem to participate less than other students	N %	3 2.2	58 42.6	29 21.3	41 30.1	5 3.7
CLD students should be able to acquire Standard English within two years of enrolling in school	N %	33 24.4	40 29.6	39 28.9	21 15.6	2 1.5
CLD students should not be allowed to use their home language while in subject area classes	N %	28 20.6	57 41.9	39 28.7	11 8.1	1 0.7
CLD students should not enroll in general education classes until they attain a minimum level of Standard English proficiency	N %	19 13.9	54 39.4	34 24.8	26 19	4 2.9

Table (16): ANOVA for Teachers' Beliefs about CLD Students Enrolled in their Subject Area Classes

Independent Variables	SS	df	MS	F	Sig.
Gender	2.13	1	2.13	6.38	0.01**
Race	0.68	4	0.17	0.48	0.75
Age	0.80	4	0.20	0.57	0.68
Subject Area	0.01	2	0.005	0.02	0.98
Level of Education	0.90	2	0.45	1.31	0.28
Years Taught	1.50	5	0.30	0.68	0.51
Teacher Grade Level	0.87	2	0.44	1.26	0.29
English as First Language	0.06	1	0.06	0.16	0.69
Speaking Second Language	0.09	1	0.09	0.26	0.60
Level of Second Language Proficiency	0.91	3	0.30	0.88	0.46

\*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001.

Dependent variables, Response to 6 questions measuring teacher believes about having CLD students in their subject area classrooms.

Independent variables, the 10 demographic variables, N =130.

Table (17): Frequency for Teacher Training

Dependent Variables		Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
I have adequate training to work with culturally and linguistically diverse (CLD) students	N	23	56	22	29	6
	%	16.9	41.2	16.2	21.3	4.4
I am interested in receiving more training in working with CLD students	N	10	68	37	21	1
	%	7.3	49.6	27	15.3	0.7
I am prepared to integrate multicultural contents into the curriculum	N	23	76	25	10	3
	%	16.8	55.5	18.2	7.3	2.2
I am prepared to teach using a different multicultural perspective	N	21	66	33	15	2
	%	15.3	48.2	24.1	10.9	1.5
I am prepared to teach with different learning styles to meet the individual needs of my students	N	68	69	0	0	0
	%	49.6	50.4	0	0	0



Table (18): Mean Score of the 5 Items of Teachers' Training and Preparation

<b>Dependent Variables</b>	<b>N</b>	<b>M</b>	<b>SD</b>
I have adequate training to work with culturally and linguistically diverse (CLD) students.	136	2.55	1.13
I am interested in receiving more training in working with CLD students	136	2.53	0.87
I am prepared to integrate multicultural contents into the curriculum	136	2.23	0.89
I am prepared to teach using a different multicultural perspective	136	2.35	0.92
I am prepared to teach with different learning styles to meet the individual needs of my students.	136	1.51	0.50

Table (19): ANOVA for Teacher Training

<b>Independent Variables</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>	<b>Sig.</b>
Gender	1.26	1	1.26	3.82	0.05
Race	0.81	4	0.38	1.13	0.35
Age	2.19	4	0.55	1.65	0.17
Subject Area	1.25	2	0.62	1.87	0.16
Level of Education	0.61	2	0.31	0.91	0.40
Years Taught	3.52	5	0.70	2.16	0.06
Teacher Grade Level	1.66	2	1.66	5.03	0.08
English as First Language	0.59	1	0.59	1.75	0.19
Speaking Second Language	0.11	1	0.11	0.33	0.56
Level of Education	0.28	3	0.09	0.27	0.58

\*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001.

Dependent variables, Response to five questions measuring teacher training.

Independent variables, the 10 demographic variables, N = 136.

Table (20): *Frequency for Teachers' Expectation*

<b>Dependent Variables</b>		<b>Strongly Agree</b>	<b>Agree</b>	<b>Neither</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
The more I expect from students academically the more they are likely to achieve	N %	71 52.2	58 42.6	6 4.4	1 0.7	0 0
I expect that all students in my subject area classes can and will learn regardless of their diverse cultures or languages	N %	61 44.5	67 48.9	7 5.1	2 1.5	0 0
Teachers' high expectations of CLD students enable them to develop positive attitudes, perceptions, and a high self-efficacy of academic ability	N %	42 30.9	85 62.5	9 6.6	0 0	0 0
I expect students to come to my class with a particular set of essential skills	N %	0 0	24 17.8	27 20	74 54.8	10 7.4
Students who don't put enough efforts usually fail in my subject area class; likewise, students who work hard and put forth the effort usually succeed	N %	3 2.2	11 8	37 27	60 43.8	26 19
Some students, no matter what I do, will not make it in my class	N %	20 14.6	49 35.8	27 19.7	37 27	4 2.9

Table (21): Mean Score of the six items of Teachers' Expectation

<b>Dependant Variables</b>	<b>N</b>	<b>M</b>	<b>SD</b>
I expect students to come to my class with a particular set of essential skills	134	2.48	0.87
The more I expect from students academically the more they are likely to achieve	134	1.54	0.62
I expect that all students in my subject area classes can and will learn regardless of their diverse cultures or languages	134	1.64	0.65
Students who don't put enough efforts usually fail in my subject area class; likewise, students who work hard and put forth the effort usually succeed	134	2.31	0.95
Teachers' high expectations of CLD students enable them to develop positive attitudes, perceptions, and a high self-efficacy of academic ability	134	1.76	0.57
Some students, no matter what I do, will not make it in my class	134	3.31	1.11

Table (22): ANOVA for Teachers' Expectation

<b>Independent Variables</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>	<b>Sig.</b>
Gender	0.66	1	0.66	4.30	0.04*
Race	0.46	4	0.12	0.72	0.57
Age	1.13	4	0.28	1.83	0.13
Subject Area	0.51	2	0.26	1.63	0.20
Level of Education	0.33	2	0.16	1.03	0.36
Years Taught	0.44	5	0.09	0.55	0.74
Teacher Grade Level	0.22	2	0.11	0.69	0.51
English as First Language	0.08	1	0.08	0.51	0.48
Speaking Second Language	0.04	1	0.04	0.28	0.60
Level of Second Language Professioncy	0.11	3	0.04	0.22	0.88

\*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001.

Dependent variables, response to 6 questions measuring teacher expectation.

Independent variables, the 10 demographic variables, N = 133.

Table (23): *Frequency for Teacher Attitudes towards CLD Students Needs*

<b>Dependent Variables</b>		<b>Strongly Agree</b>	<b>Agree</b>	<b>Neither</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
Knowing the background and the experiences of CLD students is a major element to increase their learning achievement	N	47	81	7	2	0
	%	34.3	59.1	5.1	1.5	0
It is part of my responsibility as a teacher to use different instruments of teaching (formal, symbolic, media), to help convey important information, values, and actions about cultural and linguistic diversity	N	60	65	9	2	0
	%	43.8	47.4	6.6	2.2	0
Meeting the individual needs of all my students is an important part of my lesson plans	N	75	52	9	1	0
	%	54.7	38	6.6	0.7	0
Math and science materials should help students to understand the ways in which people from a variety of cultures and groups have contributed to the development of scientific and mathematical knowledge	N	26	60	26	0	0
	%	23.2	53.6	23.2	0	0
Math and science materials should help students to understand the ways in which assumptions, perspectives and problems within these fields are often culturally-based and influenced	N	16	58	35	4	0
	%	14.3	51.8	31.2	3.6	0
Social studies materials should help students to understand the American society, history, and culture from diverse ethnic and cultural perspectives	N	19	21	5	2	0
	%	40.4	44.7	10.6	4.3	0

Table (24): Mean Scores of Teacher Attitudes towards CLD Students' Needs

<b>Dependent Variables</b>	<b>N</b>	<b>M</b>	<b>SD</b>
Knowing the background and the experiences of CLD students is a major element to increase their learning achievement	137	1.73	0.62
It is part of my responsibility as a teacher to use different instruments of teaching (formal, symbolic, media), to help convey important information, values, and actions about cultural and linguistic diversity	137	1.67	0.69
Meeting the individual needs of all my students is an important part of my lesson plans	137	1.53	0.65
Math and science materials should help students to understand the ways in which people from a variety of cultures and groups have contributed to the development of scientific and mathematical knowledge	112	2.00	0.68
Math and science materials should help students to understand the ways in which assumptions, perspectives and problems within these fields are often culturally-based and influenced	113	2.23	0.73
Social studies materials should help students to understand the American society, history, and culture from diverse ethnic and cultural perspectives	103	1.85	0.73

$\alpha = 0.72$ .

SD = standard deviation. The mean represents the average score on a five-point Likert scale in which 1 = strongly agree, 2 = agree, 3 = neither, 4 = strongly disagree, and 5 = disagree.

Table (25): ANOVA for Teachers' Attitudes towards CLD Students' Needs.

<b>Independent Variables</b>	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>	<b>Sig.</b>
Gender	0.01	1	0.01	0.15	0.70
Race	0.32	4	0.08	1.00	0.43
Age	0.21	4	0.05	0.61	0.67
Subject Area	0.55	2	0.28	3.52	0.03*
Level of Education	0.13	2	0.06	0.79	0.51
Years of Experience	1.32	5	0.26	3.60	0.00***
Grade Level	0.13	2	0.06	0.79	0.45
English as First Language	0.02	1	0.02	0.30	0.60
Speaking Second Language	0.01	1	0.01	0.13	0.72
Level of Second Language Proficiency	0.11	3	0.04	0.44	0.73

\*P < 0.05, \*\* P < 0.01, \*\*\*P < 0.001.

Dependent variables, Response to 6 questions measuring teachers' attitudes towards CLD students' needs in their subject area classrooms. Independent variables, the 10 demographic variables, N = 137.

Table (26): *Tukey Follow-Up Test for Subject Area*

		Mean Difference	95% Confidence Level			
I	J		Lower bound	Upper bound		
(Subject area)	(Subject area)	(I-J)	SE	Sig		
Math	Science	0.07	0.06	0.42	-0.07	0.21
	Social Studies	-0.08	0.06	0.41	-0.22	0.07
Science	Math	-0.07	0.06	0.43	-0.21	0.07
	Social Studies	-0.15*	0.06	0.03	-0.29	-0.02
Social Studies	Math	0.08	0.06	0.41	-0.07	0.22
	Science	0.15*	0.06	0.02	0.02	0.29

Based on observed means.

The Error term is Mean Square (Error) = 0.08.

The mean difference is significant at the 0.05 level.

Table (27): Tukey Follow-Up Test Years of Teaching Experience

I	J	Mean Difference					95% Confidence Level	
			SE	Sig	Lower bound	Upper bound		
(Y-experience)	(Y-experience)	(I-J)	SE	Sig				
1-4	5-9	-0.20	0.08	0.10	-0.43	0.02		
	10-14	-0.008	0.08	1.00	-0.25	0.23		
	15-19	-0.077	0.08	0.94	-0.31	0.16		
	20-24	0.12	0.09	0.78	-0.14	0.38		
	25-over	-0.12	0.08	0.70	-0.35	0.12		
5-9	1-4	0.20	0.08	0.10	-0.02	0.43		
	10-14	0.19	0.08	0.12	-0.03	0.41		
	15-19	0.13	0.08	0.60	-0.09	0.35		
	20-24	0.32*	0.08	0.00	0.08	0.57		
	25-over	0.09	0.07	0.84	-0.12	0.30		
10-14	1-4	0.01	0.08	1.00	-0.23	0.25		
	5-9	-0.19	0.08	0.12	-0.42	0.03		
	15-19	-0.07	0.08	1.01	-0.30	0.17		
	20-24	0.13	0.09	0.71	-0.13	0.39		
	25-over	-0.11	0.08	0.80	-0.33	0.12		
15-19	1-4	.077	0.08	0.93	-0.16	0.31		
	5-9	-0.13	0.08	0.60	-0.34	0.09		
	10-14	0.07	0.08	1.05	-0.17	0.30		
	20-24	0.21	0.09	0.24	-0.06	0.45		
	25-over	-0.04	0.08	1.09	-0.26	0.19		
20-24	1-4	-0.12	0.09	0.80	-0.38	0.14		
	5-9	-0.32*	0.08	0.00	-0.57	-0.08		
	10-14	-0.13	0.09	0.71	-0.39	0.13		
	15-19	-0.21	0.09	0.24	-0.45	0.06		
	25-over	-0.23	0.09	0.08	-0.48	0.02		
25-over	1-4	0.12	0.08	0.70	-0.12	0.35		
	5-9	-0.09	0.07	0.84	-0.30	0.12		
	10-14	0.11	0.08	0.75	-0.12	0.33		
	15-19	0.04	0.08	1.00	-0.19	0.26		
	20-24	0.23	0.09	0.08	-0.02	0.48		

Based on observed means.

The Error term is Mean Square (Error) = 0.07.

The mean difference is significant at the 0.05 level.

Table (28): *Frequency for Teaching Methods and Teacher-Student Communication*

<b>Dependent Variables</b>		<b>Most of the time</b>	<b>Some times</b>	<b>Never</b>
I use cooperative learning techniques rather than competitive	N %	01 0.7	45 32.8	91 66.4
I include content related to my students' diverse background in my lesson plans	N %	08 5.9	101 74.8	26 19.3
I use classroom activities requiring different learning styles to meet the needs of all my students	N %	01 0.7	29 21.3	106 77.9
I encourage my students to work as a team more often than independently	N %	03 2.2	59 43.1	75 54.7
I simplify coursework for CLD students	N %	44 32.1	70 51.1	23 16.8
I allow CLD students more time to complete coursework	N %	18 13.2	76 55.9	42 30.9
I modify assignments for the CLD students enrolled in my subject area classes	N %	25 18.4	72 52.9	39 28.7
I provide materials for CLD students in their first languages as well as in English	N %	85 62.5	71 30.1	10 7.4
I match my instructional techniques to the students' learning styles to meet their needs	N %	02 1.5	48 35.3	86 63.2
My classroom decisions are made based on the needs of all my students	N %	01 0.7	16 11.7	120 87.6
Effort is more important to me than achievement when I grade CLD students	N %	19 14.1	70 51.9	46 34.1
In my subject area classes some of the students present a big challenge to me to meet their needs	N %	25 18.2	98 71.5	14 10.2
I use different cross-cultural communications patterns to communicate with my students to promote their learning	N %	19 14	91 66.9	26 19.1
Some students I just cannot seem to connect with	N %	01 0.7	52 38	84 61.3



Table (29): Mean Score of the 14 Items of Teaching Methods and Teacher-Student Communication

<b>Dependent Variables</b>	<b>N</b>	<b>M</b>	<b>SD</b>
Effort is more important to me than achievement when I grade CLD students	130	2.22	0.67
In my subject area classes some of the students present a big challenge to me to meet their needs	130	2.08	0.52
Some students I just cannot seem to connect with	130	1.40	0.51
I use cooperative learning techniques rather than competitive	130	2.66	0.49
I include content related to my students' diverse background in my lesson plans	130	2.13	0.49
I use classroom activities requiring different learning styles to meet the needs of all my students	130	2.80	0.40
I encourage my students to work as a team more often than independently	130	2.54	0.53
I simplify coursework for CLD students	130	1.83	0.68
I allow CLD students more time to complete coursework	130	2.17	0.64
I modify assignments for the CLD students enrolled in my subject area classes	130	2.08	0.68
I provide materials for CLD students in their first languages as well as in English	130	1.44	0.62
I match my instructional techniques to the students' learning styles to meet their needs	130	2.63	0.50
My classroom decisions are made based on the needs of all my students	130	2.88	0.30
In my subject area classes some of the students present a big challenge to me to meet their needs	130	1.94	0.57

$\alpha = 0.66$ .

SD = standard deviation. The mean represents the average score on a five-point Likert scale in which 1 = strongly agree, 2 = agree, 3 = neither, 4 = strongly agree, and 5 = agree.

Table (30): ANOVA for Teaching Methods and Teacher-Student Communication

Independent Variables	SS	df	MS	F	Sig.
Gender	0.60	1	0.60	11.46	0.001***
Race	0.15	4	0.04	0.66	0.62
Age	0.08	4	0.02	0.35	0.84
Subject Area	0.02	2	0.01	0.16	0.86
Level of Education	0.86	2	0.04	0.76	0.47
Years Taught	0.07	5	0.01	0.23	0.95
Teacher Grade Level	0.42	2	0.21	3.90	0.02*
English as First Language	0.02	1	0.02	0.34	0.56
Speaking Second Language	0.00	1	0.00	0.00	0.95
Degree Level	0.09	3	0.03	0.52	0.67

\*P < 0.05, \*\* P < 0.01, \*\*\*P < 0.001.

Dependent variables, Response to 13 questions measuring teacher teaching methods and communication patterns in their subject area classrooms. Independent variables, the 10 demographic variables, N =130.

Table (31): Tukey Follow-Up Test for Grade Level

I	J	Mean Difference	95% Confidence Level			
			Lower bound	Upper bound	SE	Sig
(Grade Level)	(Grade Level)	(I-J)	SE	Sig		
7 <sup>th</sup>	8 <sup>th</sup>	-0.03	0.06	0.85	-0.18	0.11
	9 <sup>th</sup>	0.13*	0.04	0.01	0.02	0.23
8 <sup>th</sup>	7 <sup>th</sup>	0.03	0.06	0.85	-0.11	0.18
	9 <sup>th</sup>	0.16*	0.05	0.00	0.03	0.29
9 <sup>th</sup>	7 <sup>th</sup>	-0.13*	0.04	0.01	-0.23	-0.02
	8 <sup>th</sup>	-0.16*	0.05	0.00	-0.29	-0.03

Based on observed means.

The Error term is Mean Square (Error) = 0.05.

The mean difference is significant at the 0.05 level.

## Appendix G

### Figures

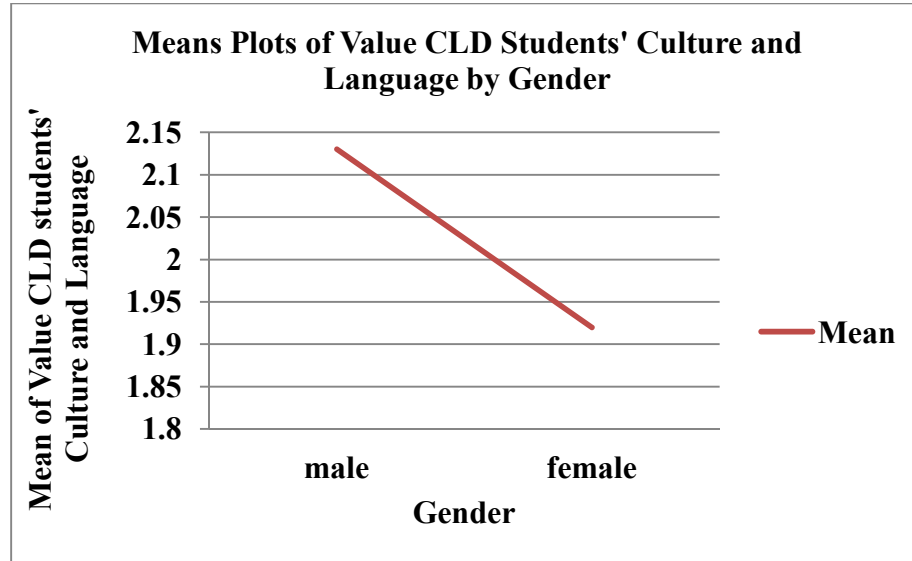


Figure (1): Mean Scores for Scale Measures by the Gender of the Respondents.

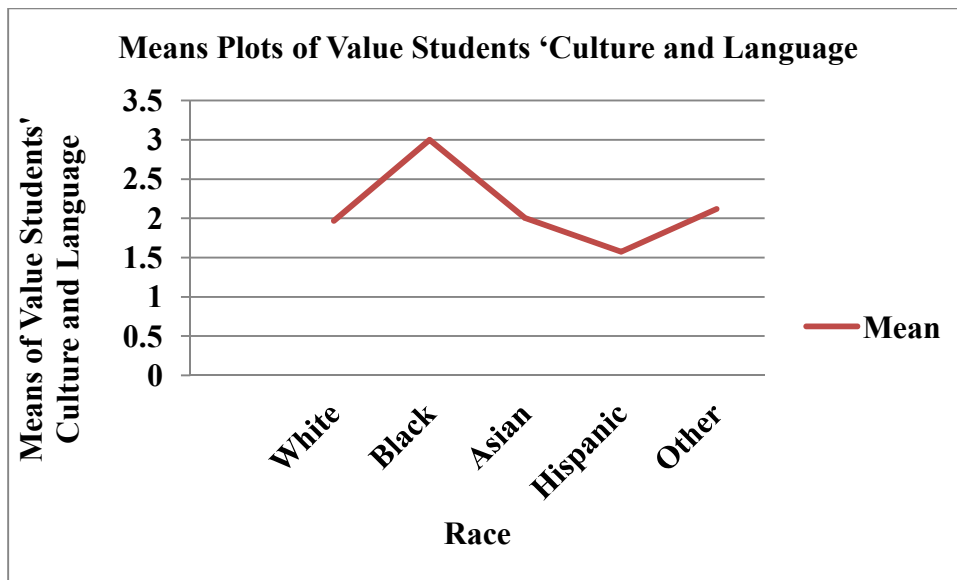


Figure (2): Mean Scores for Scale Measures by the Race of the Respondents.

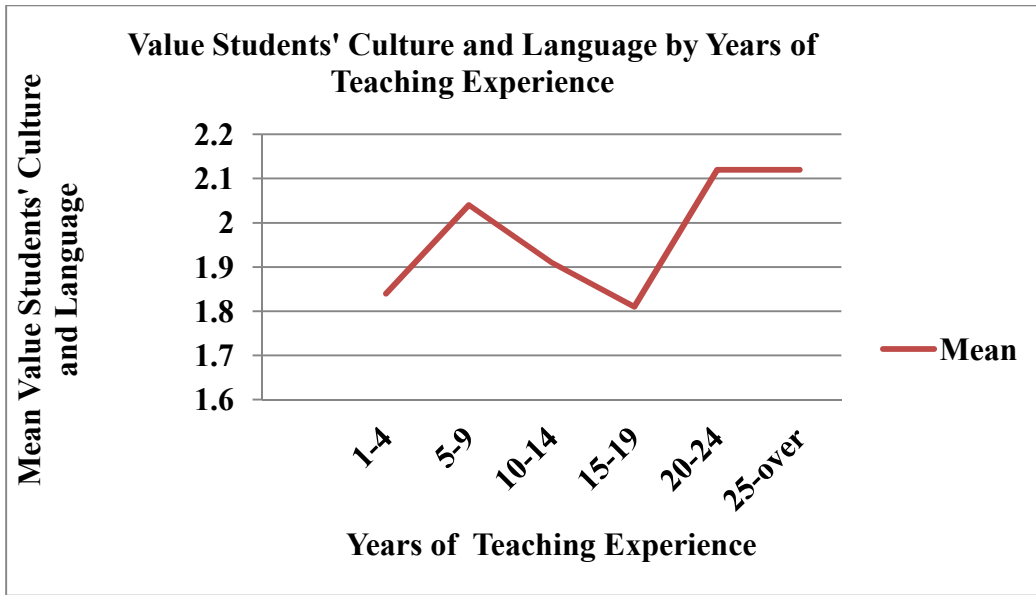


Figure (3): Mean Scores for Scale Measures by the Years of Teaching Experience of the Respondents.

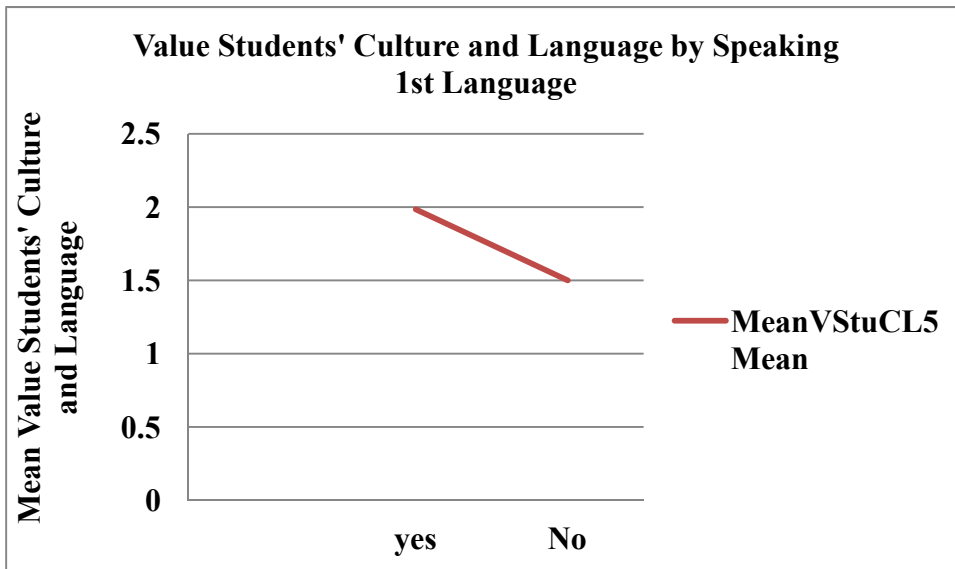


Figure (4): Mean Scores for Scale Measures by Speaking English as a 1<sup>st</sup> Language.

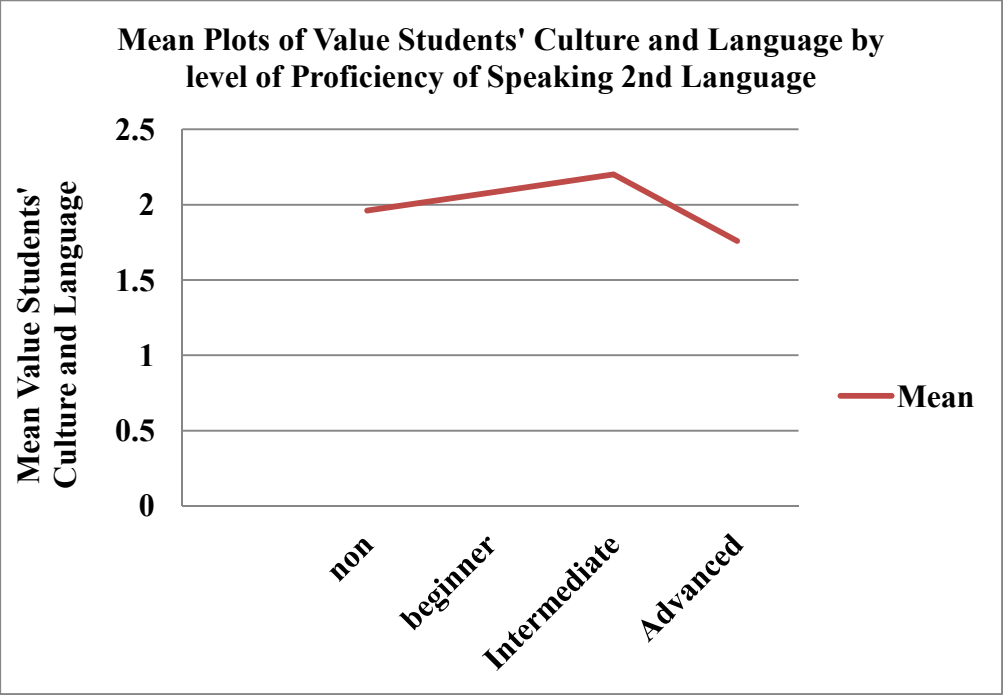


Figure (5): Mean Scores for Scale Measures by Level of Proficiency of Speaking Second Language.

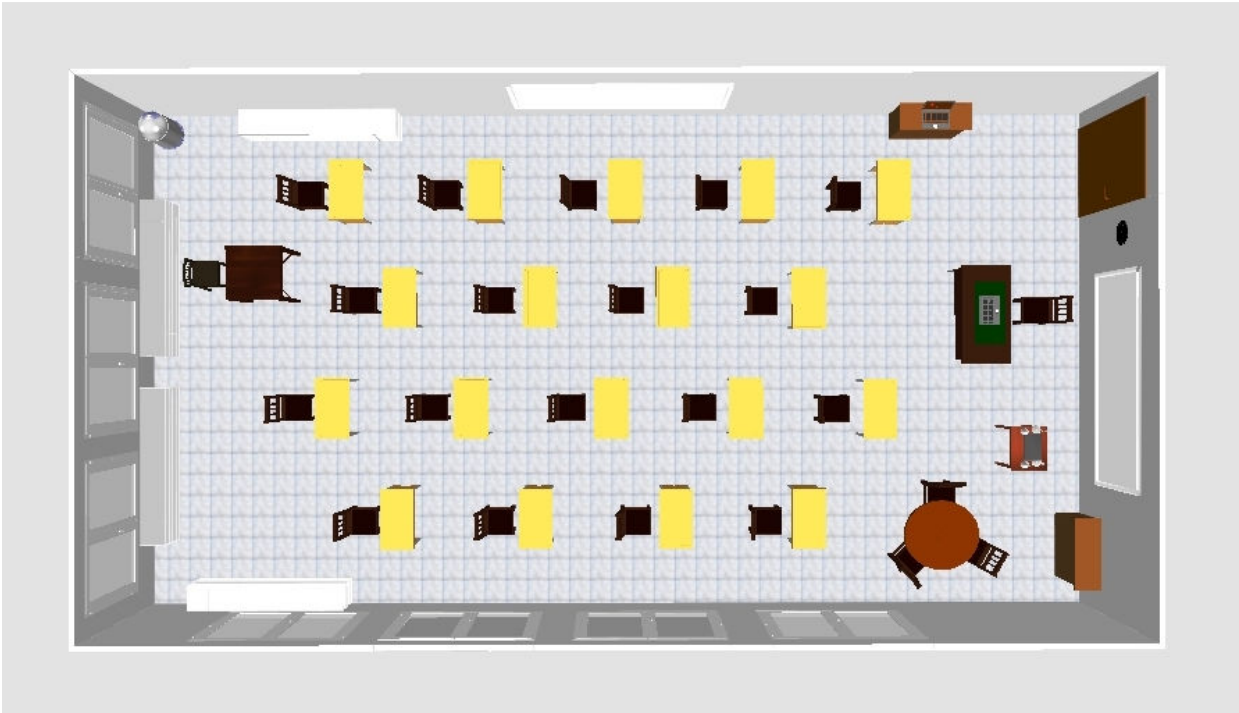


Figure (6): Participant 1 classroom physical arrangement (plan not to scale).



Figure (7): Participant 2 classroom physical arrangement (plan not to scale).

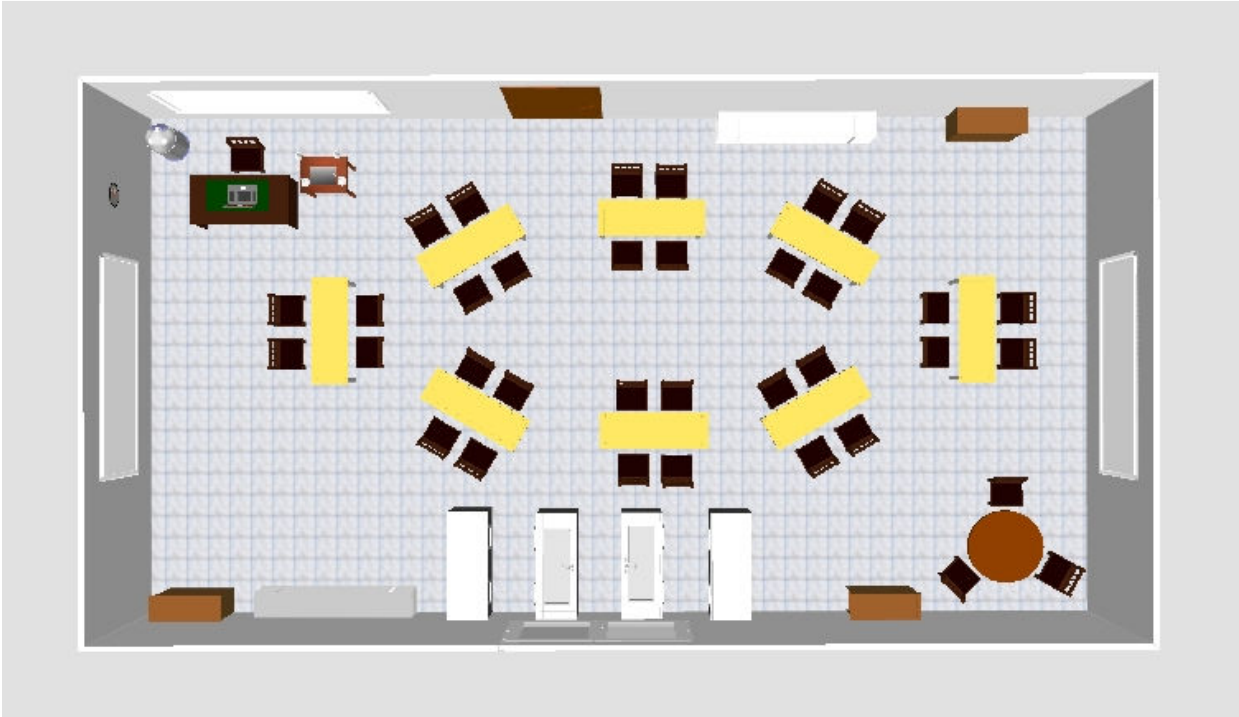


Figure (8): Participant 3 classroom physical arrangement (plan not to scale).

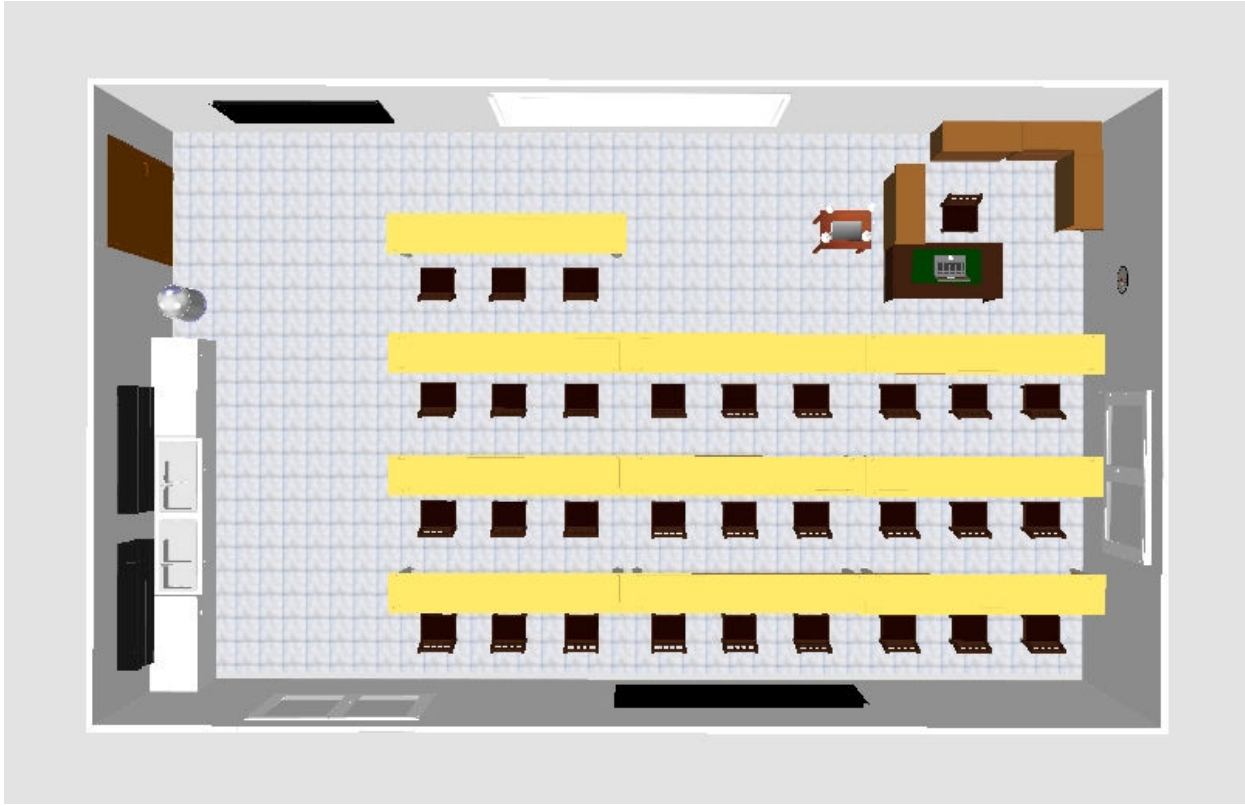


Figure (9): Participant (4) classroom physical arrangement (plan not to scale).

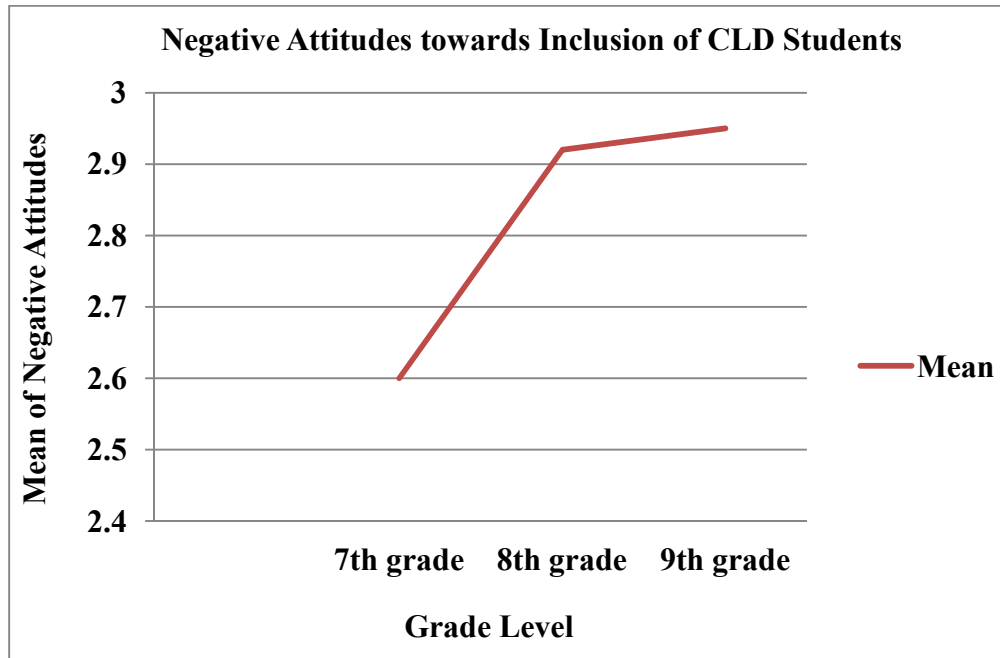


Figure (10): Mean Scores for Scale Measures by the Respondents Grade Level.

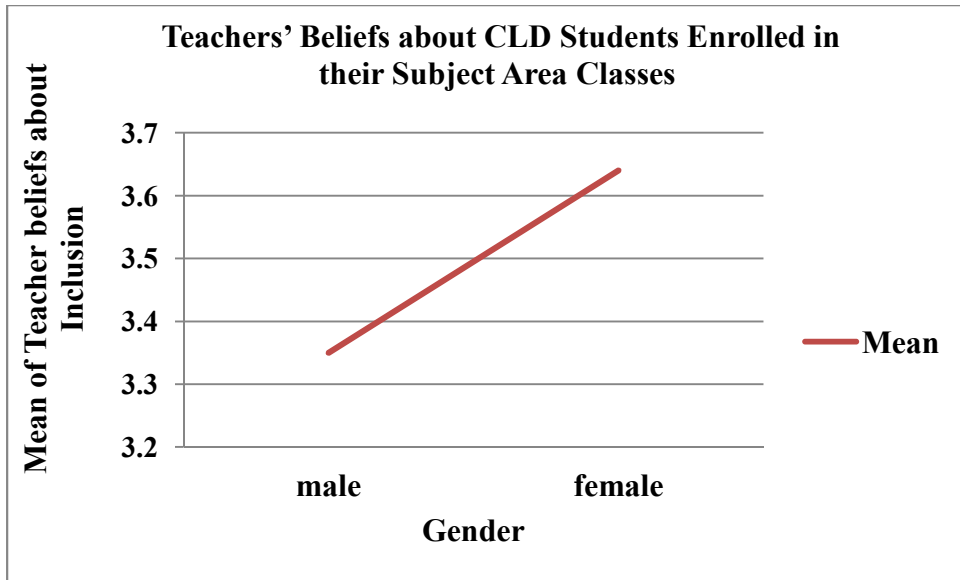


Figure (11): Mean Scores for Scale Measures by the Respondents Gender.

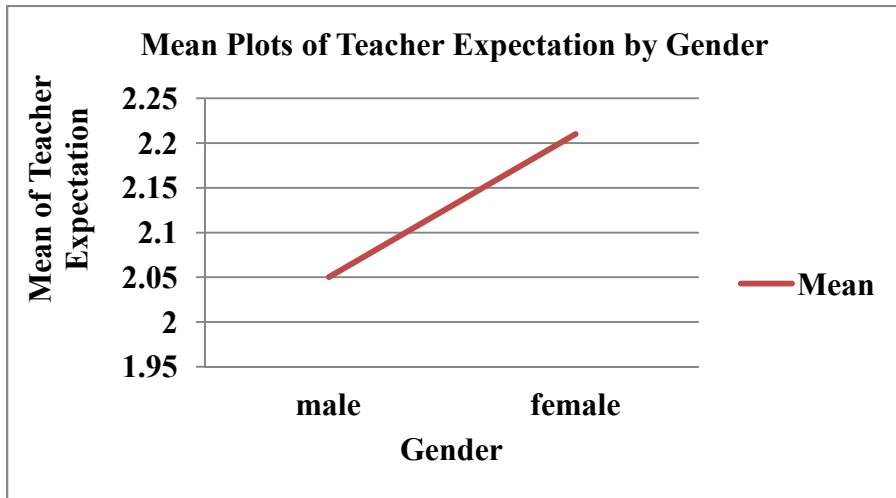


Figure (12): Mean Scores for Scale Measures by the Gender of the Respondents.



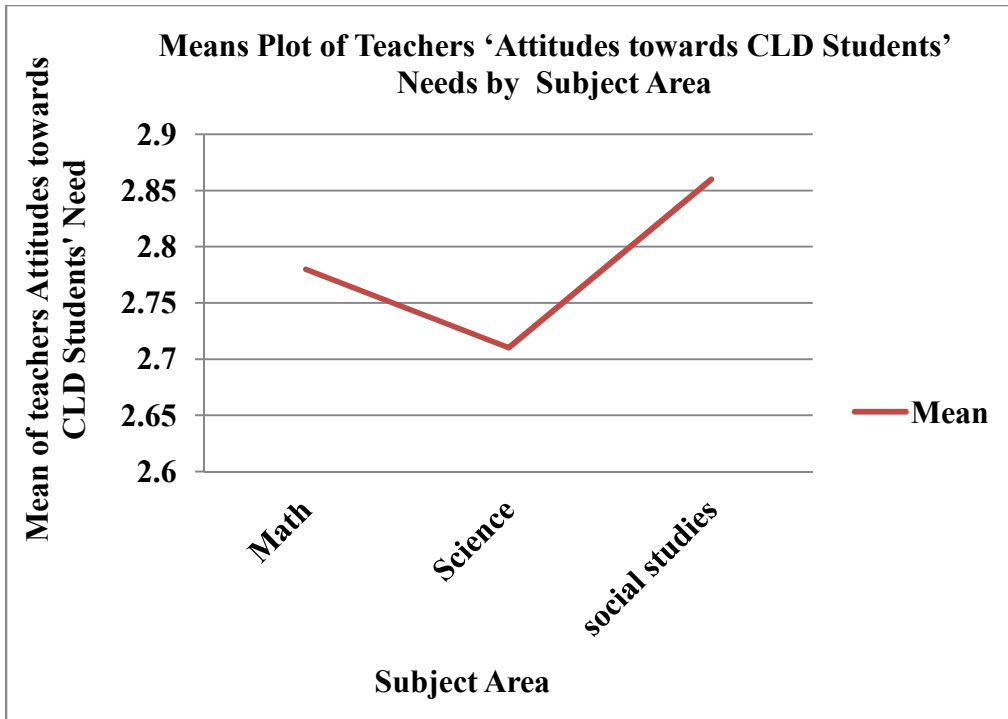


Figure (13): Mean Scores for Scale Measures by Teaching Subject Area of the Respondents.

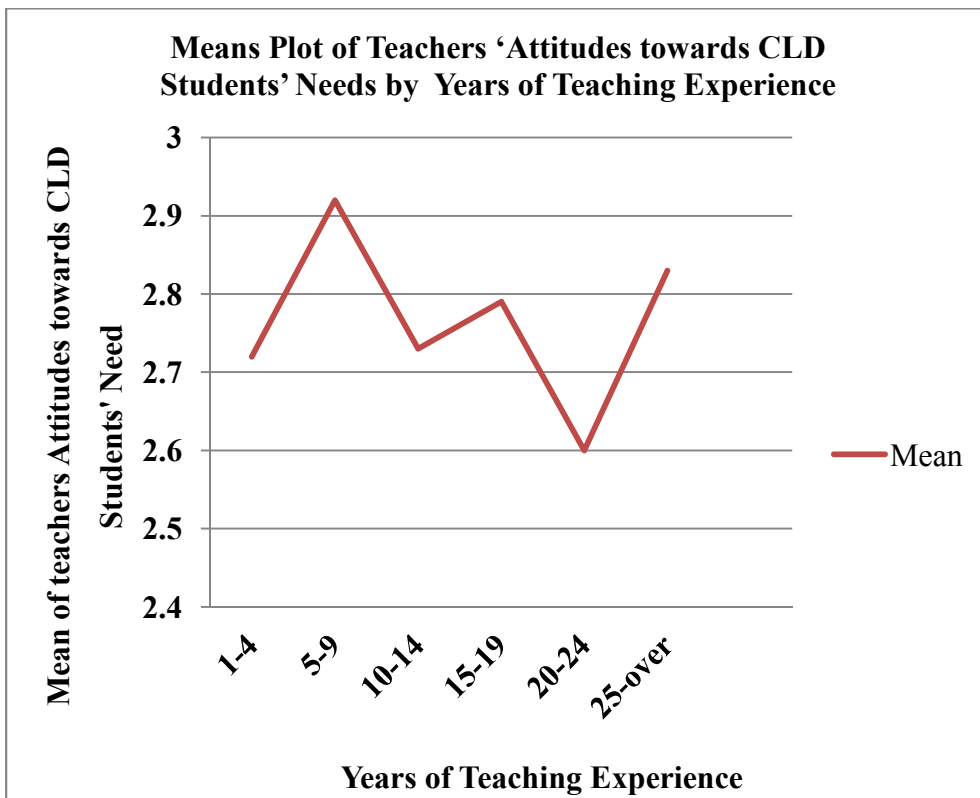


Figure (14): Mean Scores for Scale Measures by the Years of Experience of the Respondents.

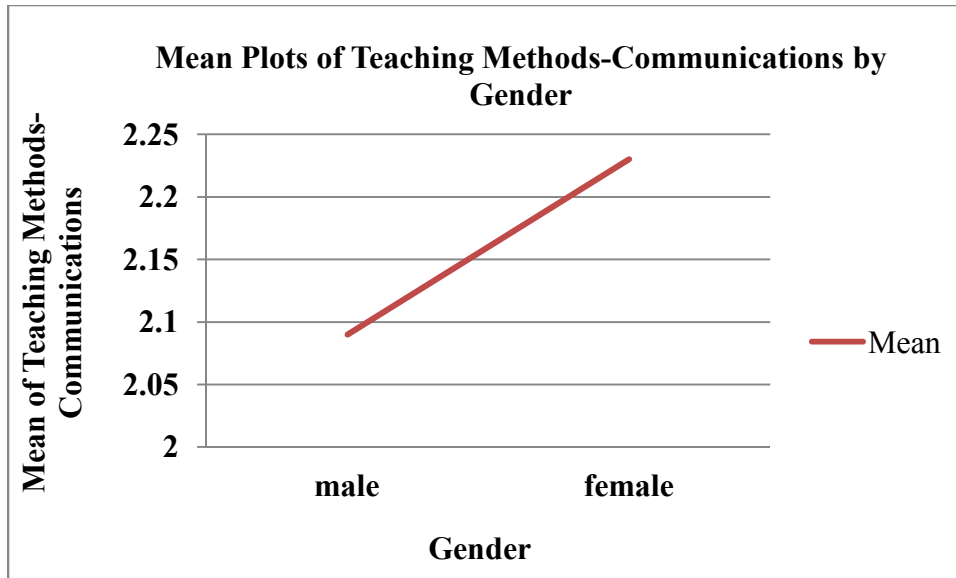


Figure (15): Mean Scores for Scale Measures by Gender of the Respondents.

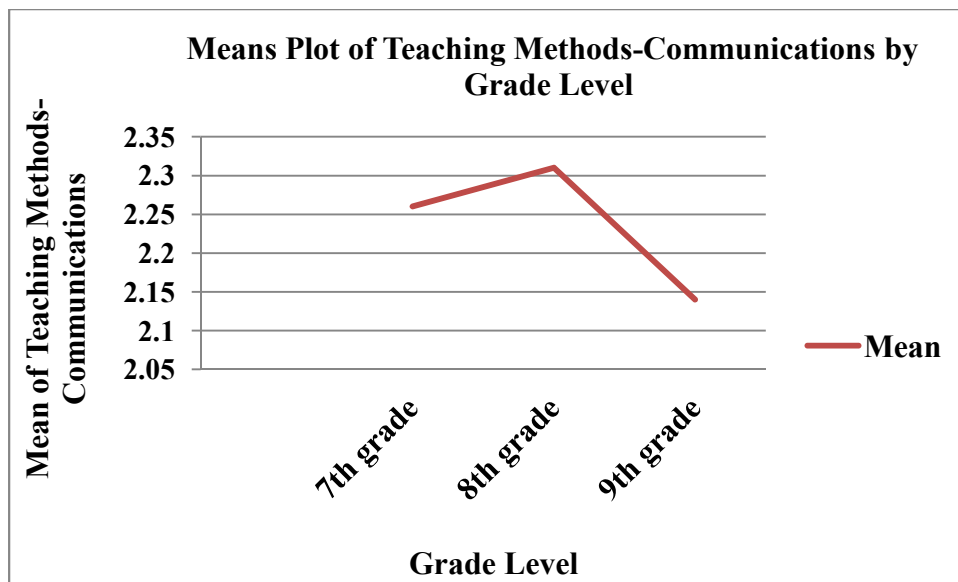


Figure (16): Mean Scores for Scale Measures by Teaching Grade Level of the Respondents.