

Culturally Responsive Teaching within the Common Core Math Modules

by

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Abstract

The Common Core State Standards aim to provide each child throughout the United States with the same educational opportunities regardless of economic status, gender, or state of residence. Within the goals of the common core standards the main priority is for all students to graduate and be college and career ready. This drastic shift in education has brought upon its own challenges and restrictions. Many teachers have been left wondering, how can they teach the new common core math modules while continuing to teach considering the students' culture and individual needs? Every child has their own unique needs whether educational or emotional. Each child also brings with them a home culture unique to that student. Each student has a specific way by which she/he learns best, whether they learn best through music, movement or visual or musical kinesthetic approaches. As educators we are well aware that each child brings with her/him a plethora of experiences, and specific educational and emotional needs which must be addressed in order to educate students successfully. As the common core standards become an integral part of education today, educators, administrators, and parents are feeling the pressure to adapt quickly to the new expectations. Teachers are feeling the added pressure of teaching using culturally responsive strategies to fit the specific needs of their students. Geneva Gay, professor of multicultural education at the University of Washington-Seattle states culturally responsive teaching "Uses culture and experiences of different ethnic groups as a launch pad to teach more effectively" (Chinn, Chinn & Gay, 2005). Within culturally responsive teaching teachers are able to teach cultural awareness while scaffolding to fit individual educational and emotional needs. Educators across the country would agree that teaching to meet the individual needs of students based on their background knowledge is an effective teaching strategy that takes time and skill.

Given the drastic changes in education today educators are left to wonder how this can be done.

Will the CCSS provide diverse students with the same quality education?

Culturally Responsive Teaching within the Common Core Math Modules

Introduction

The new Common Core Standards have swept the educational system in the United States in full fury. Its goal of providing every student with a high quality education, which will in turn provide them with the opportunities to succeed and be career ready, has quickly become the slogan repeated in every media source. The reality of education has changed, teaching has taken a big shift and our expectations increased drastically. Students are now being held to higher standards regardless of economic status, gender, state of residence, or culture. This leads us to ponder, are these new Common Core Standards helping or hurting our students? How can teaching to meet the cultural needs of our students still be considered a best practice? According to the new Common Core Standards the essential philosophy of the common core emerged from several factors including the desire of having one set of standards across the country and to provide a set of English Language Arts (ELA) and Mathematics Standards that would prepare students for career and college readiness (McLaughlin & Overturf, 2012, p.153).

As a result, teachers, parents and administrators have felt the effect of the new expectations and the shift of education. Connecting students' culture to their education has been a teaching practice for endless years. Given the liberty of the previous standards, teachers felt the freedom to meet the standards while also meeting students' specific needs. According to Doll & Garrison meeting the new common core expectations of having students understand the perspective of others is a challenge not only for the students, but for teachers and administrators (Doll & Garrison, 2013). Providing students with the high quality education stated in the new Common Core Standards while also connecting their culture to their education is a daunting task. Many teachers are feeling overwhelmed, restricted and unsuccessful. Many teachers are feeling

as if they have been asked to read a script and rely on hope that the students have been able to achieve to the high expectations set in the new common core math modules.

Unfortunately, the expectations for mathematics have changed drastically. Schools have adopted the new Common Core Math Standards and have vowed to use the new common core math modules found on www.engageny.org. As Alberti (2013) states “reports about the declining U.S. performance in mathematics on international assessments have called for a greater focus in mathematics education” (p.26). The standards have pushed for a deeper focus on few topics which build upon each other from one grade level to the next. As Alberti emphasizes “rigorous mathematics refers to a deeper, authentic command of mathematical concepts. To help students meet the standards, educators will need to pursue, with equal intensity, three aspects of rigor in the major work of each grade: conceptual understanding, procedural skill and fluency, and application (p.27). These key components of concept development, fluency and application are components of the new math module lessons. Every lesson is composed of many different activities which provide students with the opportunity to build mathematical knowledge within each activity. However, these lessons have been created in a one size fits all mentality leaving little time to reach students’ individual needs as well as making cultural connections. Despite their high expectations many parents and students are feeling the pressure of helping students achieve these new standards without knowing exactly how to help them reach these standards.

It is obvious teachers, administrators and parents are the key components to help students achieve within the new rigorous standards. When students are able to create a solid connection with their teachers it is obvious the student is able to achieve. Teachers who spend the time to get to know their students individually are able to make connections that help students accomplish their goals. Unfortunately, many teachers have felt the pressure to achieve the standards. The

time to get to know one another and connect to students' experiences has taken a back seat to the CCSS. According to a national survey of teacher perspectives on the common core 78% of teachers responded to having at least some basic familiarity with the CCSS in mathematics, with 18 percent stating they were "very familiar; with the CCSS in math", 22% stating they were "not familiar at all" (EPE research center, 11). When asked if they felt prepared to teach the CCSS to a diverse group of students including students with disabilities, English language learners, low-income students and students at risk academically only a fifth of teachers stated to feel very prepared (EPE research center, 26). Without a doubt teachers feel less confident in their readiness with the new expectations to reach all students and their diverse needs. This leads us to ask, how can teachers use culturally responsive teaching strategies within the new common core standards? How can we reach all students but continue to provide students with a rigorous education?

Problem Statement

The high expectations of the new Common Core Mathematic Standards have created a mold in which all students must fit regardless of cultural background or economic status. The population of students from culturally and ethnically diverse backgrounds continues to increase. Such change in our population must be taken into account when educating our students. Teachers and students have felt the impact of the CCSS, taking the time to reach students individually has become more and more difficult. The new mathematics modules have been implemented as the new mathematics curriculum in many schools. The pace, difficulty, and structure of such units have made it difficult for teachers to teach in a manner where they are able to reach each child individually. Educators continue to face the challenges finding the balance of reaching high expectations and creating an environment where students are "welcome, supported, and provided

with the best opportunities to learn regardless of their cultural and linguistic backgrounds” (Barnes, 2006). However, many educators have felt the pressure to choose between teaching to fit students’ cultural needs or teaching to fit the mold. The reality is our public schools are culturally diverse and our students will achieve when culturally responsive teaching is used effectively to facilitate academic achievement, cultural competence, and sociopolitical consciousness (Barnes, 2006).

The impact a teacher can have on a student’s academic achievement goes without question. We have the key to unlock potential, the key to help all students reach their educational goals. Joseph Ciaccio (2004) stated, “Students’ must see themselves as active participants in the learning process. If they have some control over their educational lives, the terribly destructive attitude of ‘us against them’ - kids against adults, and students against teachers- will end” (p.53). Every teacher aspires to provide their students with the tools they will need to achieve, explore, and establish a love of learning while providing an environment that encourages success and encouragement. It is not a battle of educator and students. As educators our priority should be to push for success and not failure. An effective teacher can be the key to the achievement of students regardless of where they come from or who they are.

Unfortunately, the new Common Core Mathematic Standards and Common Core Math Modules have created many challenges for instructing students based on their cultural and individual needs. Many teachers face the challenges of creating opportunities for students to connect to own experiences while creating an inviting environment conducive for achievement. Educators are feeling the immense pressure to teach the modules word by word in hopes to prepare students for the New York State Assessments or for the next grade where such previously learned skills will be necessary for success. Many teachers worry if they do not spend the

amount of time allocated for a particular task in the module that it may hinder the students' achievement. As a result, finding the balance of teaching the modules with fidelity and teaching to meet each student's individual needs has become a problem. Seeing the benefits of culturally responsive teaching within the math modules is a new topic. Educators know the benefit of scaffolding one's teaching but ask how culturally responsive teaching and the modules can be implemented effectively in their own classrooms.

Significance of the Problem

This thesis project will focus on Eugenio Maria de Hostos Charter School (EMHCS) a dual-language charter school which provides Kindergarten through Grade 8 in the City of Rochester, New York. During the 2012-2013 school year 393 students attended EMHCS. The 2012-2013 annual report stated that 89% of the EMHCS students come from low-income homes. The population of the students consists of 61% Hispanic, 38% Black, .7% white, and .2% American Indian, Asian or Pacific Islander. EMHCS began to transition to the new common core math modules in the 2012-2013 school year making it the curriculum during the 2013-2014 school year. Jeffrey Halsdorfer, Principal of EMHCS, states "teachers in grades kindergarten through eighth grade will be using the New York State Common Core Math Module Curriculum...which includes fluency, concept development, student application, and debrief" (Halsdorfer, 2012). Although the achievement in mathematics at EMHCS has consistently been higher than the Rochester City School District with similar populations, the changes have become overwhelming for many of the EMHCS teachers.

In the beginning of the 2012-2013 school year the researcher conducted a survey based on Culturally Responsive Teaching in hopes of providing teachers with support on how to use CRT effectively in the classroom. This particular survey was given to all staff including office

personnel, kitchen staff, paraprofessional, administrators, and teaching staff. The survey asked to identify their knowledge on a scale of 1-10, 10 being the highest, on a variety of questions including:

1. How well do you know what Culturally Responsive Teaching is?
2. How important do you see the integration of students culture into the curriculum?
3. How realistic is it to integrate student's culture with the new core curriculum requirements?
4. Rate the following characteristics of Culturally Responsive Teaching in order from the most important to least important: engaging the entire school community, building trust with students, transforming instructional practices, engaging personal culture, confronting issues of social dominance and social justice, and transforming the culture of the classroom.
5. Would you like to learn more about Culturally Responsive Teaching and how to implement it into your classroom?

After receiving completed surveys it was obvious that the majority of EMHCS staff was unsure of what Culturally Responsive Teaching was as a program or how to use it effectively in the classroom while balancing the academic rigor of the new Common Core Standards. However, 39 of 42 of the EMHCS staff wanted to learn more about Culturally Responsive Teaching and how they could implement the various characteristics effectively in their own classroom. Of the 42 staff members surveyed, 41 were unsure of what Culturally Responsive Teaching entailed. Given the results of this survey the researcher has set to focus on providing an understanding of CRT as a program. The researcher has chosen to look specifically at the K-3 content teachers,

whose surveys clearly showed a lack of solid understanding of culturally responsive teaching as a program that could effectively be implemented their own classroom.

The 2013-2014 school year brought upon the challenge of implementing the Common Core Math Modules with fidelity within the classrooms. Seeing the frustrations and overwhelming feelings such changes had created in all the teachers, the researcher created a survey for the K-3 content teachers based on the math modules and how they felt they were able to connect culturally responsive strategies to the delivery of the modules in their classroom. The results include a Kindergarten, First and Third Grade teacher. The researcher is currently the Second Grade teacher at EMHCS. Given the fact that the previous survey concluded that teachers did not know the basics of CRT placing the new CCSS on top would prove to be a challenge. The teachers not only felt overwhelmed with the changes, but with the opportunities to add to the modules without feeling as if they were venturing into uncharted territory. Given the changes it was apparent that there was a need to not only provide teachers with the resources to implement CRT in their classroom, but also to provide the added resource of teaching using CRT within the new mathematics expectations of the Common Core State Standards. The survey included the following questions:

1. Do you feel as if the new Common Core Math Modules provide opportunities for students to have cultural expression where their voices and experiences are incorporated into their daily learning? Why or why not?
2. Within the new math modules, how has 'caring' become an integral part of instruction? Explain.
3. Has it been difficult creating a culture where students are able to interact and develop communicational skills? Why or why not?

4. Do you believe the new math modules have enough cultural content? Why or why not?
5. How would you adapt the new modules and its implementation to be more culturally responsive?

The survey results show that of the four K-3 content teachers 100% felt that the new common core math modules didn't provide opportunities for students to have cultural expression where their voices and experiences are incorporated into their daily learning. When asked if the math modules had enough cultural content all four K-3 teachers stated that they did not provide enough for the population in which they teach. Adapting the modules to fit our students' individual needs was desired by all of the teachers but they were not sure how to do this effectively and with fidelity. When asked "Do you feel as if the new Common Core Math Modules provide opportunities for students to have cultural expression where their voices and experiences are incorporated into their daily learning?" results show that 3 of 3 teachers concluded that the common core modules did not allow for ample opportunities for cultural expression. It is apparent that the modules have brought upon its own hardships. Each of the teachers expressed their concern of the expectations of the modules not fitting the population of students being serviced at EMHCS. The third grade teacher stated, "The modules are geared toward a one size fits all experience. This does not refer to cultural differences it refers to learning abilities". The modules have set to provide a path teachers can take to reach the new CCSS as the Kindergarten teacher expressed, "The Common Core Modules expect certain answers and certain ways of expressing yourself. I don't feel there are enough opportunities for cultural expression" a concern shared by the first grade teacher who stated, "With teaching the modules verbatim, I don't think students have a chance to express their own voices". Given the

emphasis CRT brings upon on having a freedom of cultural expression in the classroom, it has become a daunting task for these teachers to find the balance between reaching the CCSS while reaching students on their own cultural common ground.

Caring is a key component within a Culturally Responsive Program. This characteristic to many may feel that ‘caring’ is an aspect in the classroom environment that comes naturally for educators. However, with the changes school have faced the aspect of ‘caring’ has become more and more difficult for teachers to balance. When asked “Within the new math modules, how has ‘caring’ become an integral part of instruction?” of three teachers two admitted that caring has fell off the list of priorities because of the new expectations set for this school year. One of the three teachers surveyed saw the importance of such characteristic within the new expectations and has found a way to balance both to find success within her classroom. She stated, “Considering how much the lessons build off each other, the teacher has to care to get students engaged, and motivated”. The other two teachers saw the aspect of caring as important in a successful classroom but could not find the way to balance with the higher level expectations. The first grade teacher stated, “I think the rigor of the modules has lessened the opportunity for caring. It is much more difficult to stop and take the time to spend with a student emotionally” it is obvious that her feelings are shared with the third grade teacher who stated, “I honestly feel like caring has become a foreign concept. We are so focused on the content, pacing and rigor it has become difficult to show caring to our students. The importance has fallen on completing a lesson per day”. It is apparent that the new changes have caused a big change in the way these teachers have adapted their sense of caring in their own classroom. Creating an environment where students’ voices are heard, where students’ cultures are part of everyday learning is an integral component of teaching in a culturally responsive manner. When asked “Has it been

difficult creating a culture where students are able to interact and develop communicational skills?” all three teachers agreed that the modules provide some opportunities to create a culture in the classroom where students are able to use their own background knowledge with the new material. Students have opportunities to learn the particular math skill with different fast pace fluency activities and games. As the third grade teacher emphasized this change was not seamless, “I feel that this is an area that has definitely gotten better. Once I became more confident with the modules, I was able to give my students time to interact and communicate their learning with their peers. Each day students are given valuable time to work with their peers”. It is apparent that the modules have created the time for conversations between students, now the goal is to connect these activities to be more culturally aware for the specific population of student services at EMHCS. It is apparent to all three teachers that the Mathematics Modules lack enough cultural content. When asked, each teacher emphasized the lack of cultural content in the lessons thus far but did emphasize the importance of having these connections for their students. The first grade teacher stated, “Just using ‘cultural’ names like Kyra or Imran is not enough”. The kindergarten and third grade teacher both agreed that the content in the new modules is extremely rigorous and fast paced, making it difficult to integrate both content and cultural teaching. The third grade teacher stated, “I don’t believe the modules have enough cultural content because I feel like the content is geared toward the Caucasian, suburban, middle-high class cultures” and as the kindergarten teacher stated the modules “don’t leave much room for personalization”.

Each of the content teachers at EMHCS understand the importance of adapting the new curriculum in ways that are culturally responsive. All three of the teachers stated they would change the different story problems, independent practice, and delivery of instruction to include

examples that their particular classroom culture would be able to relate to. When asked “How would you adapt the new modules and its implementation to be more culturally responsive?” the Kindergarten teacher stated she would prefer to “have more flexibility especially in assessment by using different application examples that students could relate to culturally” this idea was shared by the third grade teacher who stated she would like to have the ability to “adapt the new modules and its implementation to become more culturally responsive by changing names, locations and activities”. One thing is certain, although they felt there was a need to make adaptations to best fit the cultural and emotional needs of their particular students; they had a difficult time coming up with ways to change the implementation of the module delivery.

Purpose

As we can see each of the EMHCS content teachers felt as if the Modules had positive and negative characteristics. All were in agreement that each of the characteristic of CRT was important in creating a classroom environment that was conducive to the educational and emotional needs of their particular students. As the year progressed the teachers began to feel much more confident with the modules. However, they have yet to find specific ways to not only meet the rigorous expectations of the Common Core Modules, but to effectively teach in a culturally effective manner to fit the particular students in their classroom.

The purpose of this thesis project is to (1) understand the effect of the common core math standards on teaching (2) understand how to implement culturally responsive teaching practices within the new math standards in hopes of reaching all students educationally and culturally. Based on the survey it was apparent that the content teachers at EMHCS had no background knowledge of CRT and now have been expected to begin a new curriculum for mathematics instruction. Although they see the importance of the CRT characteristics, they lack

the tools needed to begin the transition of teaching the rigorous curriculum while implementing CRT strategies. Based on the research, the researcher will create an instructional manual on culturally responsive strategies that can be effectively implemented while maintaining the integrity of the math modules. The study will serve as a resource for teachers providing effective instructional strategies based on cultural awareness. In addition, this research will help increase the awareness of using cultural responsive strategies to reach the needs of our students in this period of educational change. The achievement of our students relies on our ability to reach them for who they are individually, not for the mold they are expected to fit.

Rationale

The Common Core State Standards have been adopted across the United States of America. These new standards are becoming the norm in classrooms across the country. Teachers have seen their instruction and expectations change drastically in order to fit the new standards. The new Common Core Standards have brought upon a daunting task in the content area of Mathematics. Teachers and administrators are seeing the effects the high demands have had on students and parents. The way of teaching mathematics has changed dramatically. The new math modules have provided teachers with set units based on the CCSS which include lessons, problem sets, application problems, homework, and exit tickets. The new strategies and vocabulary require students to have a basis on previous grades making it extremely difficult for students who began modules without any previous exposure to the CCSS or math modules. Teachers and administrators have sought to find ways to maintain the integrity of the new modules while providing students with the individualized instruction they would need to succeed academically. Teachers and administrators have found it extremely difficult to find ways to incorporate culturally responsive strategies with the new state expectations.

Research Questions

After each state independently made the decision to adopt the Common Core State Standards, beginning in 2010, teachers, administrators, principals, and superintendents became the leaders of the implementation of the CCSS (corestandards.org). As of December 2, 2013 forty-five states, the district of Colombia, and four territories have adopted the Common Core State Standards (corestandards.org). The new math modules created by the New York State Educational Department (NYSED) have provided math units, which could be adopted or adapted (www.engageny.org). Although these mathematics modules have been created as a guide for teachers to follow, many teachers have felt the pressure to follow the lessons instructions as a script leaving little to no room for cultural teaching within the new expectations. Although NYSED states that teachers have the liberty and flexibility to adapt the math lessons many teachers are unsure how to adapt their lessons to reach their students while continuing to teach with fidelity. In order to provide teachers with the support they will need, this study will investigate the following questions:

1. What is culturally responsive teaching?
2. What are some barriers to the new common core state standards?
3. What are effective culturally responsive teaching practices?
4. How can culturally responsive teaching strategies be implemented within the new common core mathematics modules?

Definition of Terms

Common Core Math Modules- These mathematic modules (units) have an emphasis on fewer topics based on the CCSS. Each lesson includes problem sets, fluency activities, exit tickets, homework, and application problem and concept development lessons.

Common Core State Standards (CCSS) - The Common Core State Standards is an K-12 initiative in the United States which states what students should know in English Language Arts and Mathematics at the end of each grade. The initiative has a focus of preparing students for college and career readiness.

Culturally Responsive Teaching- Culturally responsive teaching is founded on the constructivist view of learning where learners use their background knowledge and beliefs in order to make connections to new ideas and perspectives.

NYSED- New York State Educational Department is the department in the State of New York responsible for the public school system of the state.

Scaffolding- A teaching approach which provides individualistic support for each student while progressively moving them to a solid understanding, such approach focuses on bridging any learning gaps while creating realistic attainable goals for each student.

Summary

To teach effectively using cultural awareness while maintaining the integrity of the new math modules may seem like a daunting and overwhelming task. The goal of the researcher is to provide a detailed understanding of the new common core Kindergarten, First, Second and Third Grade math modules and how teachers can use culturally effective teaching as an integral part of daily instruction. The researcher (a second grade content teacher) aims to provide an

understanding on effective culturally responsive teaching strategies that can be implemented within the new common core math modules using a center-based approach.

These culturally responsive strategies will help teachers continue to teach the modules with fidelity while making cultural connections with their students. The researcher hopes to provide teachers with a valuable resource that can be used in order to help instruction become meaningful for students and teachers. The center-based approach will allow the teachers to meet the needs of their students in smaller group settings. Such approach will provide ample time to make daily connections with each student individually. Therefore, the researcher aims to provide teachers with an instructional manual which will help teachers and administrators understand what culturally responsive strategies can be implemented in the mathematics classroom. The instructional manual will look specifically at the different components of each module lesson including fluency, application problem, concept development, problem set, debrief, and exit ticket. Within each component the researcher aims to provide teachers with cultural strategies that can be implemented seamlessly and effectively in the classroom. The instructional manual will provide various examples of culturally responsive strategies within each of the above mentioned lesson components.

Chapter Two: Literature Review

The objective of this literature review is to closely examine how culturally responsive teaching can be an effective tool for teaching Common Core mathematics. I will closely evaluate effective culturally responsive strategies and how such strategies can help teachers who feel the challenges of meeting the cultural needs of their students while reaching the high expectations set within the Common Core Math Modules and State Standards.

Culturally Responsive Teaching Practices

The population of our schools has become more and more culturally and ethnically diverse. This drastic change is becoming more apparent in the public schools across the country. According to the population reference bureau between 1990 and 2000 there was a 63% increase of immigrant families (Chinn, Chinn & Gay, 2005). The unfamiliarity of these new cultural groups can cause anxiety, hostility, prejudices, and racist behaviors for those who do not have a solid cultural awareness. The increase of students from diverse racial, cultural, and linguistic backgrounds is not the issue; the real issue lays on the preparation of educators servicing such students. Given the surplus of educators one would imagine a good teacher is simply a good teacher and such skills have no correlation to class, race, gender, ethnicity, or culture of students and/or teachers. However, behavior norms, expectations, values, and attitudes differ greatly from one culture to the next. Creating a disconnect between education and cultural awareness is entirely detrimental to the achievement potential of our students. What educators teach and instill to their students is rooted in the educators own personal cultural upbringing. Whether a positive or negative outlook is taken, the effect is significant on each and every student. This world view may hinder our students from making a connection to what they are learning while affecting their self-esteem and academic success.

Educators are faced with a need to teach in a culturally responsive manner using students' experiences and culture in order to better fit the needs of each child individually. These practices have shown to be best practice in many classrooms. Geneva Gay, professor of multicultural education at the University of Washington-Seattle states culturally responsive teaching "Uses culture and experiences of different ethnic groups as a launch pad to teach more effectively" (Chinn, Chinn & Gay, 2005). Teaching in a culturally responsive manner demands a shift in what we know of culture and language learning. The following six qualities are the beginning of such a shift: (1) Understanding how learners construct knowledge, (2) Learning about students' lives, (3) Being socioculturally conscious, (4) Holding affirming views about diversity, (5) Using appropriate instructional strategies, and (6) Advocating for all students (Villegas & Lucas, 2007). Culturally responsive teaching uses not only cultural knowledge and prior experiences but pushes educators to use diverse teaching styles to make learning relevant to their diverse learners. Within CRT each student is validated for her/his own personal strengths, her/his personal beliefs and values, while learning in an environment created to appreciate and incorporate multicultural learning.

Understanding how learners construct knowledge

Culturally responsive teaching is founded on the constructivist view of learning where learners use their background knowledge and beliefs in order to make connections to new ideas and perspectives. The educator's responsibility is to help students use what they know to reach what they need to learn. Villegas & Lucas (2007) reiterate that "learning involves questioning, interpreting, and analyzing ideas in the context of meaningful issues" but does not mean schools should not make time for "direct instruction, memorization, and basic skills instruction" (29). Educators must make a conscious effort to balance instruction in a manner where home cultures

are an integral part of daily learning. Culturally responsive educators are firm believers that the students' culture has a deep influence in the way the student learns (Brown, 2007). When students are able to have valuable opportunities to engage in their learning while integrating what they know with what they are learning students are able to think critically and develop valuable skills for the future.

Culturally responsive teachers make a solid effort to make the culture of the classroom inclusive to all students. As an educator, one is consistently self-reflective on one's teaching making adjustments to instruction to best fit the students' needs. One is also understanding of cultural differences students bring from home. Many immigrant families continue to maintain strong ties with their cultures once they have reached the United States. It goes without saying that these culture and linguistic ties are an instrumental part of who our students are. Getting to know their culture is necessary in order to get to know the students strengths. A culturally responsive teacher is able to access students' linguistic ability, interest, prior knowledge, and in turn, use such knowledge to connect students' personal strength to the instruction.

Learning about students' lives

To better educate students in meaningful ways educators must know who they are teaching. When the teacher comes from a culture distinct from that of their student it may be difficult for that teacher to understand the culture in which their student brings into the classroom. Given the responsibility of teaching a diverse population begins with a self-reflection of who are, what are attitudes towards that culture may be, and what pre-determined prejudices we may already have. This self-reflection can be very difficult for many educators. Many educators may find they are not adequately suited to teach this group of students. Brown (2007) provides valuable suggestions for pre-service teachers who are beginning their preparation to teach using

cultural responsive pedagogy and getting to know each student as an individual; (1) build effective cross-cultural communication by deciphering students' cultural codes, (2) understand the cultural characteristics and contributions of different ethnic groups, and (3) create reciprocity in the classroom, in which students and teachers become partners to improve student learning (58).

Getting to know students and families individually will help teachers make the valuable home to school connection. Villegas and Lucas (2007) stress the importance of getting to know students individually not in a generic stereotypical manner which can lead to misconceptions. To better service our students we must have an understanding of the students' families, favorite activities, likes, dislikes, and perspectives of school. Teachers can make the effort to get to know students' lives outside of the school setting, which can, in turn, create great parent-teacher collaborations. Although our lives may differ greatly from those of our students making the effort to understand who they are individually and getting to know them at that level shows a divine respect for the culture which they bring to the classroom. A teacher who is able to see all students through the same light regardless of color, gender or orientation will see that each child has some kind of strength. Culturally responsive teachers are to integrate what the student brings to the classroom with what the curriculum states they must learn. As Gay (2004) emphasizes "students need to understand how multicultural issues shape...their personal lives" (30).

Being socioculturally conscious

To effectively teach using culturally responsive teaching one must first shift one's ideology by getting rid of pathological orientations such as the notion that we must "correct what children of color don't have or can't do; or the notion that children of color are at risk" (Chinn, Chinn & Gay, 2005). As Villegas & Lucas (2007) emphasize, "successfully teaching students

from culturally and linguistically diverse backgrounds-especially students from historically marginalized groups-involve more than just applying specialized teaching techniques” (29). Culturally responsive teaching practices emphasize that teachers must shift such orientation in order to get a new direction. Educators must not rely on one’s own experiences to begin to understand the lives of their students as misinterpretations can lead to unjust judgments detrimental to their educational success. Within culturally responsive teaching educators are able to meet the needs of the particular group while scaffolding to fit individual needs. When teachers have such orientations, students are set for failure and success cannot come from failure. Geneva Gay emphasizes the inappropriateness of faulting the intellectual potential of the students’ or the competency of teachers (Chinn, Chinn & Gay, 2005). Educators and administrators must look closely at the school culture and if such school culture is incompatible with that of the child. Such negativity can impact students’ achievement. As educators we must see the benefits of identifying such cultural conflicts before it becomes detrimental to the success of our students.

Educators must also guide students within the reality, representation, and relevance (Gay, 2004). Students have an understanding of the reality of their own cultural background, given the reality each student is able to see what contributions were made by diverse groups that may not be included in the general curriculum. Giving students the reality can aid in promoting harmony within the classroom and school community while avoiding controversy or conflict that may be distorted or misrepresented (Gay, 2004). Schools need to find ways to make schooling relevant, exciting, and significant for students. If students see no value to what they are learning, no real significance, no reflection of who they are in what they are learning, their education becomes a chore not a passion. It is obvious that when learning has a particular connection to who we are as individuals, learning becomes realistic and significant. Educators must make the effort to make

learning relevant to their particular groups of students. Brown (2007) provides valuable suggestions for educators: (1) look at your own attitudes and practices, (2) get to know ethnic groups' cultural values, traditions, communication and learning styles, (3), become socioculturally conscious by recognizing that there are multiples ways of perceiving reality and these are influenced by one's location and social order, and (4) hold affirming views of your students while seeing students in a positive light not as a problem that must be overcome (58-59).

Holding affirming views about diversity

As mentioned above many educators must become socioculturally conscious. Unfortunately many educators feel as if they must "correct what children of color don't have or can't do; or the notion that children of color are 'at risk'" (Chinn, Chinn & Gay, 2005). Many educators have assumptions that underprivileged students will never be able to achieve as their privileged counterparts. Such mentality is not only detrimental for the student, but for the teacher. Unfortunately, this mentality is very common and is educationally negligent for students who have the ability to succeed academically but are given low academic expectations.

Villegas and Lucas (2007) compare the characteristics of educators who challenge students academically to those who have low academic expectations. A teacher who has "low academic expectations for the students and ultimately treats them in way that stifle their learning are more apt to use drill, practice, and rote-learning activities at the expense of more challenging work that demands the use of higher-order thinking skills" in comparison to teachers "who see students from an affirming perspective and truly respect cultural differences are more apt to believe that students from non-dominant groups are capable learners, even when these students enter school with ways of thinking, talking, and behaving that differ from the dominant cultural norms" (5). A culturally responsive educator who does have affirming views about diversity will,

in fact, provide students with a challenging curriculum while supporting, monitoring, and holding students accountable for their learning.

Using appropriate instructional strategies

Understanding the importance of activating students' background knowledge in the classroom is an instructional strategy with great benefits. As previously stated students are able to engage in curriculum content when their own experiences are activated. Teachers can also make an effort to draw on students' native language within the curriculum giving all students the opportunities they will need to succeed academically. Providing students with visual cues, graphic organizers, hand-on activities and bilingual dictionaries can help support students academically. The culturally responsive teacher will see the importance of connecting students' lives to help in reaching the high expectation set for them. As educators we must engage all students in learning regardless of socioeconomic status or race.

Teachers must have a solid understanding of the characteristics of diverse learning styles. Given the diverse learning styles of all students, educators must make an effort to provide all students with a variety of teaching techniques for students. When developing the curriculum educators need to be conscious not only of the curriculum content but the process in which such is developed. As previously stated the educator must make an effort to get to know each student individually and within the process the educator is able to create learning goals and objectives that not only incorporate multicultural education within the curriculum. The educator should be conscious of using a variety of ethnic groups in the daily activities, while integrating various ethnic groups within all subjects. A teacher may provide students with different options to reach the particular goal or task but in turn the options provide the student with various strengths to choose what best suits them. Opening the educational process to students, allowing them to make

their own choices in how they will learn best, will in turn create an environment open for reflection, insight, and relevance. Gay (2003) emphasizes “students perform more successfully on all levels when there is greater congruence between their cultural backgrounds and such school experiences as task interest, effort, academic achievement, and feeling of personal efficacy or social accountability” (34). If this has been proven to be a benefit to students across the country, with more reason should educators teaching to these diverse groups of students continue to make the changes needed to implement culturally responsive teaching techniques within their classroom.

Advocating for all students

Unfortunately, students who come from underprivileged backgrounds are expected to achieve substantially below their privileged counterparts. Such mentality is detrimental to students who need educators who can show that success is attainable with hard work and determination. As Villegas and Lucas (2007) emphasize, in order for schools to be culturally responsive, administrators, educators, and community leaders must all work together. Educators must realize their role as advocates for their students and families. An educator can make a world of difference in her/his own classroom, imagine if the same cultural connections could be replicated in other classrooms or in the school itself. A shared vision between teachers, school leaders, administrators, families, and the community must be developed for our culturally diverse students. When this vision comes to fruition, the benefits will be endless. Students from underprivileged backgrounds will not be seen as inferior but as full of potential who, with the correct guidance, will be able to achieve at the same levels as their privileged counterparts.

Advantages of Culturally Responsive Teaching

Culturally responsive teaching has a primary goal of empowering culturally diverse learners to achieve academic success, cultural connections, and a sense of personal cultural appreciation. Culturally Responsive Teaching requires educators to go beyond having an understanding of various cultures; educators must develop various CRT characteristics such as caring and communication, while creating a classroom community conducive to learning. The mentality that diverse students do not want to learn is replaced with the mentality that these students want to learn, and when engaged in appropriate rigorous and engaging activities, they will achieve academically. This culturally responsive teacher is also able to make connections with students by making them feel as a valuable asset in their own education. Geneva Gay (2010) emphasizes the impact a culturally responsive classroom can have on a student of color. She emphasizes the importance of helping our diverse students develop an understanding of who they are based on their culture, values, and beliefs. Educators are able to guide learners in seeing their personal potential while guiding their path to academic success.

Culturally responsive teaching provides students with an opportunity to connect their own culture to their education. The disparity and mismatch between the student's home culture and the culture of schools can be severely detrimental to student achievement (Rosebery, McIntyre & Gonzalez, 2001). Culturally responsive teaching emphasizes the importance of using students' knowledge and experiences in order to give students the same opportunities to succeed. Sociocultural research dating back to the beginning of the 1960s looked to find a solid answer as to why schools were failing students of the working-class and poor. Although no one answer was found, it was obvious to the researchers that children from different homes, communities, and economic backgrounds learn a "fund of knowledge" (p.2). Within this study dating back 53 years to studies conducted to this day, the same conclusion is made, "students learn more and

performed better when they were allowed to use house-hold-based fund of knowledge” (p.2). If educators, teachers, and communities worked together to create schools where culturally responsive teaching was the norm the success of our students would increase drastically.

Curriculum as a component of Culturally Responsive Teaching

Curriculum is considered an important component of culturally responsive teaching but cannot stand alone. Gay (2010) emphasizes the importance of educators looking closely at the curriculum to see how such can be redesigned to fit the needs of our particular group of students. Within culturally responsive teaching there is an emphasis of using curriculum content as a tool to help students assert their own capabilities, experiences, and attitudes towards their learning. Educators and administrators must cautiously choose culturally relevant content and continue to emphasize the importance of the curriculum delivery in the classroom. The curriculum content and delivery should be meaningful to the students and connect to who they are as individuals. Choosing curriculum content can take a variety of characteristics whether it entails using students’ personal experiences and culture or teaching new content to students where they can make connections to their own experiences. When the curriculum content is meaningful, student achievement will improve. In addition to understanding the content educators must make an effort to give students direct instruction on the ‘hidden curriculum’ found in their everyday interactions with the curriculum. This hidden curriculum can entail who is considered a leader, or skills that are not directly taught such as, How do I study for a test? What is the importance of this test? (Brown, 2007)

The curriculum needs to be culturally relevant including as Geneva Gay (2010) stated, “information about the histories, cultures, contributions, experiences, perspectives, and issues of their respective ethnic groups” (Chapter 5, Section 1, para. 4). Educators must see the importance

implementing multicultural education will have in the education of the students. Educators must work to design culturally relevant curriculum, which is not a simple task. Educators must be involved in identifying the multicultural strengths and weaknesses in the curriculum and instruction, be willing and able to make any adjustments necessary, and be conscious of the effect of symbolic, formal, and social curriculum on what is seen as valuable to society (Brown, 2007). Educators with a negative 'I can't, I won't, I don't know how' attitude see the integration of multicultural teaching as a separate curriculum, given the changes in education today many educators feel as if there is not more room in the day to include such teaching. As educators we must make the effort and fight for change, in the end the ones who suffer the consequences are the students. The changes in education today have made many educators see the necessity of culturally relevant teaching fall to the bottom of its list of priorities.

As we look closely at the new Common Core State Standards and the new Common Core Mathematic Modules, it is important to truly understand the difference between the formal curriculum and the hidden curriculum. Educators are expected to teach using a formal curriculum, which are materials regulated by the government of the United States of America. Although the new math modules are not mandated, they have been adopted by many school districts since it connects directly to the new Common Core State Standards. The hidden curriculum is unspoken and takes various forms including human interactions, role modeling, symbolic representations, and mass media perspectives. When decorating a classroom, we must be conscious of the message sent to the students. The symbolic curriculum emphasizes the importance of looking carefully at the rules and decorations we choose to put on the walls of our classroom and school. The choices we make can send a message to our students whether negative or positive. Gay (2010) consistently emphasizes how symbolic curriculum including: (1) images, (2) symbols, (3)

icons, (4) mottoes, (5) awards, and (6) celebrations are used in the classroom can inadvertently teach students who and what is important. The media is a powerful curriculum source for cultural content. Students encounter distorted information of cultural groups. Gay (2010) emphasizes the impact such content can have on our students “the images are too easily accessible and their influence too powerful for teachers to ignore how ethnic groups and issues are presented in television programming, films, newspapers, magazines, and music videos” (Chapter 2, Section 6, para. 49). As culturally responsive educators, it is our responsibility to intervene and provide our students with accurate presentations of ethnic groups.

Common Core Barriers

The Common Core State Standards, which have been adopted by 90% of the states, aim to provide each child throughout the United States with the same educational opportunities regardless of economic status, gender, or state of residence. Within the goals of the common core standards the main priority is for all students to graduate and be college and career ready. With years of research, the nation has decided that the expectations of high school students in most states were not as rigorous. Given the ‘non-rigorous curriculum’ it was concluded that students were leaving high school unequipped to succeed at the college level. To better understand the implications the common core has on education we must understand clearly what the nation constitutes as “college-and career ready”. Achieve (2011) offers college and career readiness to the content knowledge and skills high school graduates must acquire in English and mathematics in order to be successful in any and all future decisions. These skills include critical thinking, problem solving, reading, written communication, and habits and skills that come from a curriculum that is well rounded and rigorous (p.2). The goal is to provide students with a well-rounded education making the transition from high school to college successful. Achieve (2004)

offers a statistic, which provides insight for such a drastic change in education stating that 53 percent of students entering college must take a remedial English or mathematics course with the percentage of minority or underprivileged students being much greater (p.3). The goal of the Common Core Standards is to provide a rigorous content with a strong focus in English Language Arts and Mathematics for all students with the expectation being for all students to reach the same standards regardless of race, cultural background, or economic status.

This drastic shift in education has brought upon its own challenges and restrictions. The journey the new Common Core Standards have set for educators, administrators, students, and parents has been demanding, and overwhelming. Many schools have been forced to find more opportunities in the day to provide students with added interventions and support classes in order for all students to have the same level of opportunity to achieve the standards (Christinson, Wiggs, Lassiter & Cook, 2012). The Common Core has changed how mathematics is taught in the primary grades. The CCSS expect students to have a solid understanding of mathematics, not just have the ability to solve math problems step by step. In a second grade classroom students working on subtraction with regrouping will need to explain the process. Why did they unbundle? How many tens are in one hundred? When do you need to unbundle? Showing the process is not acceptable any longer: students must link mathematics to real-world situations, model their work, and demonstrate mastery of each standard with proficiency. The Common Core Standards focus highly on the importance of educators seeing modeling as an essential teaching tool for student engagement and learning. Many teachers have worked to find the balance between teaching the Common Core Modules while integrating Culturally Responsive strategies.

Undoubtedly, teachers are feeling the added pressure of teaching using culturally responsive strategies to fit the specific needs of their students. Teachers who understand the power of culturally responsive teaching not only respect cultural differences, but also provide students with rigorous curriculum. Culturally responsive educators see the importance of teaching students the importance of reflection and self-monitoring of their own education. Such educators set a high level of expectations for all their students and hold them accountable for their progress and performance. Given the changes the common core has created within education, it is apparent that the educators at EMHCS have had a difficult time finding the balance of reaching the standards.

The Common Core State Standards may seem overwhelming and daunting for many educators. Many teachers have felt the implementation of new curriculum, instruction, and assessments have become a battle. Teaching has shifted from fitting the needs of each student individually to fitting the expectations of the new standards. As we look specifically at the Mathematics Standards, we see a deeper understanding on fewer topics, linking across grade levels, and rigorous understanding of concepts, skills, and application. The standards now expect each grade level to focus much deeper into major topics. In Grades K-2 students focus on concepts, skills, and problem solving related to addition and subtraction. In Grades 3-5 students focus on concepts, skills, and problem solving related to multiplication and division of whole number and fractions (Alberti, 2012). The Common Core Standards also provide a “learning progression” from K-8 assuming that students master the skill at the given grade level. In the following school year they will be using the previously taught skill to embark on a higher level understanding. The following table depicts the progressive understanding within the

mathematical concept of geometry within Grades K-3 of the Common Core Mathematics Geometry Standards.

Table 1

Grade Level	Standards Addressed for Geometry - Shapes
Kindergarten	K.G.1 I can identify and describe shapes. K.G.4 I can analyze, compare, create, and compose shapes.
Grade 1	1. G.1, 2, 3 – I can reason with shapes, and their attributes. 1. G.1 – I can build and draw shapes with defining attributes. 1. G.2 – I can compose two-or three-dimensional shapes to create a composite shape. 1. G.3 – I can partition circle and rectangles into two and four equal shares.
Grade 2	2. G.1, 2, 3 – I can reason with shapes and their attributes. 2. G.1 – I can draw shapes with specified attributes (angles, faces) 2. G.2 – I can partition rectangles to find the number of square units within the rectangle by counting. 2. G.3 – I can partition circles and rectangles to find halves and thirds.
Grade 3	3. G. 1, 2 – I can reason with shapes and their attributes 3. G. 1 – I can recognize that shapes in different categories may share attributes. 3. G. 2 – I can relate fraction work to shapes.

The Common Core Standards have created a plan of action for teachers and administrators for every grade level. Within this plan of action students are expected to have mastered each standard in order to be successful the following school year. This approach of teaching mathematics has set schools on a whirlwind. Administrators and teachers have felt the need to look carefully at their mathematics instruction and curriculum, while looking to see if it provides (1) teaching for understanding, (2) a balance in teaching number sense, computational

fluency, conceptual understanding, and problem solving opportunities where students are able to apply their conceptual understanding, (3) ample opportunities for practice of math facts, and assessments, (4) an alignment to the ideology of the Common Core Standards, (5) ample opportunities for students to receive feedback and reflection, (6) ample opportunity to develop number sense, and (7) active engagement in problem solving opportunities (Christinson, Wiggs, Lassiter & Cook, 2012).

Given the added pressure schools have felt to use a program that fits the Common Core Standards rigor and expectations, many schools have opted to adopt the new Common Core Mathematics Modules. The modules have been designed to have a balance in the teaching of number sense, computational fluency, conceptual understanding, and problem solving opportunities where students are able to apply their conceptual understanding. Although the math modules have been publicized as a “resource” not a mandated curriculum, many schools have adopted using them as the mandated curriculum. The Common Core Mathematics Modules are not only aligned to the new Common Core Standards but also available online. The New York State Mathematics Curriculum Modules claim to “integrate the CCLS, rigorous classroom reasoning, extended classroom time devoted to practice and reflection through extensive problem sets, and high expectations for mastery” (www.engageny.org). Each component is rigorous and fast paced expecting students to be able to express themselves at a higher deeper conceptual understanding. Students are assessed in three different ways “concretely, representationally, and abstractly” (Strom, 2012). Mathematics is now focused on deepening students’ conceptual understanding, but there is little to no mention of using culturally responsive strategies to connect students’ home culture to their learning. Critics of the common core emphasize the implementation of such standards as quick, approximately one year, which has brought upon

great concern not only of its implementation but also development of the standards, content, and supporting documents (Mathis, p.3). Critics also point that the standards will not be the determining factor on the improvement of each state or how such standards will change the public education system. The reality is many teachers and administrators were unprepared for such a drastic change in education. These changes have brought an undeniable need to balance higher expectations with the need of multicultural education.

Culturally Responsive Mathematics Teaching

Although the new Common Core Mathematics Standards have become a challenge for many teachers, it is important to note that getting to know each student as an individual is imperative in order to provide them with the quality education they deserve. To become a culturally responsive mathematics teacher we not only need to understand how learners construct knowledge and what instructional strategies would fit our students best. However, a culturally responsive mathematics teacher must also get to know the lives of each student, become socioculturally conscious, hold affirming views about diversity, and advocate for all students (Villegas & Lucas, 2007). Educators become dynamic and use what the students bring with them to reach what the standards have asked them to learn. In the article entitled 'Culturally Responsive Mathematics Teaching and English Language Learners' Gilberto Lobo, a dual language fifth grade teacher emphasizes four key strategies all teacher can use to increase the success of all students: (1) relate mathematics to real-life experiences, (2) use mathematics as a tool for developing the learning community, (3) use questions to help students develop the language and concepts of mathematics, and (4) explicitly teach the vocabulary of mathematics using questions to help students develop the language and concepts of mathematics (Torres-Velasquez & Lobo, 2005).

Although the Common Core Standards and Math Modules have changed education, it is imperative that we find ways to adapt our teaching to better fit the needs of our students while still reaching the high expectations of the new standards. As previously stated every student brings a plethora of experiences to the classroom and using such experiences to make connections to the mathematics curriculum is necessary for student success. Torres-Velasquez & Lobo (2005) reiterate the importance of teachers' personal opinions and how these opinions can have a negative impact on students' academic success. In the classroom "what teachers deem as important or unimportant, wondrous or boring, worthy of pride or shameful, is communicated to their students one way or another, through their language and through their curriculum" (p.250) The teachers' attitudes, positive or negative, toward the new standards and modules can also be communicated to the students. Educators have to become conscious of the choices made in the classroom. The math modules should be seen as a resource and not as a script; every curriculum should and can be modified in order to engage students in their education while connecting to the culture each student brings to the classroom. The Common Core Standards are here to stay; now our job as educators is to find ways to fit them to our individual students using the many strategies of culturally responsive teaching. As Aguirre, Zavala & Katanyoutanant (2012) stated, "as mathematical teacher educators, we can build on the importance of children's mathematical thinking. Strengthen their understanding of the role language plays in mathematics learning and teaching for second language learners , and increase ways educators can integrated children's cultural find of knowledge into their mathematics lessons" (p.116-117)

Understanding the power of caring

The changes in education have not just affected educators. Students across America have felt the pressure to meet the higher expectations set by the new Common Core Standards. The

media has been overflowing with reports of overwhelmed educators and parents who feel as if schools were not ready for its implementation. The expectations have increased immensely and with such drastic changes, many classrooms have adapted to find the balance between meeting the standards and connecting to each student. The Common Core Standards continue to emphasize the teaching and learning of mathematics as a skill learned through interactions between the teacher, student, and the mathematics content. The necessity of having an educator who values each student for who they are by showing a deep sense of caring has become a non-negotiable quality in every culturally responsive educator tackling the rigor of the Common Core Mathematics Modules.

The power of caring is an irreplaceable factor in education, learners must feel welcomed and cherished in their classroom environment as well as for who they are as individuals. Gay (2010) emphasizes the importance of teachers not steering away from showing compassion to each student. When the teacher is able to create a bond with each student, the opportunity for educators to teach based on the needs of each learner will happen naturally. Given the changes in society, the importance of educators making an effort to be involved in the lives of their students is becoming a necessity. When learners feel as if who they are as individuals is being validated in the classroom, the educator is able to provide an education that is meaningful for the student. The change the new Common Core has brought to the classroom has forced teachers to have an open line of communication with parents. Geneva Gay (2010) states the four attributes of caring as “attending to person and performance, action provoking, prompts effort and achievement, and is multidimensional responsiveness” (Chapter 3, Section 3, pp.29). A culturally responsive educator is able to foster warmth, cultivate a sense of responsibility, respond to students’ emotional and social needs, build confidence, and help all students see what they are capable of

becoming. Given the changes in education we must never forget that a culturally responsive educator can be academically demanding, but personally supportive and encouraging. Educators must find the balance of providing students with the written curriculum while still preparing students with the learning experiences that are intellectually challenging and personally relevant.

Creating climates for learning in the classroom

Creating a climate for learning has been a necessity in every classroom even before the implementation of the Common Core Mathematics Standards. Given the fast implementation of the standards creating an environment where learners would succeed has become a struggle for many educators. Although creating such environment brings upon its own challenges be many would agree that creating a positive environment where every student can learn and successful has become a necessity.

In order to be successful each student must be empowered and guided to believe that they each have the potential to learn and succeed. Each student must feel, (1) as a valuable asset to the classroom, (2) responsible for their learning and behavior, (3) what they are learning has meaning and value, and (4) confident in their ability to be successful. Teachers must, (1) create an environment where all students can learn and be successful, (2) see the potential in every learner and guide each learner to reach their potential, (3) create a climate where all learners are respected and accepted, (4) create a safe environment where the stress and expectation are realistic and attainable, (5) consider the learning tasks ‘Can this task be modified to not be overwhelming for my students’?, and (6) increase the feedback given to each student, reward each student’s academic achievements, big or small.

The aspects of creating a positive climate in the classroom has unparalleled benefits. The culture each learner brings to the classroom can be the key an educator can use to unlock the

potential deep within. Gay (2010) emphasizes the importance of educators unlocking that potential with effective communication (teacher to student, student to teacher). If the educator has a difficult time accepting the communication of each student the academic performance can be severely affected. When the student feels accepted for what they bring to the classroom the learner will feel accepted and respected in the classroom. Communication does not refer only to spoken language but nonverbal communication, symbolic communication, formal and informal communication. Educators must be well aware of the lasting effects communication can have in the classroom environment.

In order to teach the Common Core Mathematics Modules with fidelity and integrity creating a positive classroom environment is a necessity. Teaching the Mathematics Common Core Standards requires educators to motivate students to value what they are learning by focusing on tasks that are of interest while focusing on active participation with peers (Christinson, Wiggs, Lassiter & Cook, 2012). The focus on creating a classroom that has an objective of creating a positive community will have great benefits in achieving the goals of the Common Core Standards when, (1) students ideas and methods are seen as valuable, (2) students have opportunities to choose strategies that work best for them, (3) students are able to share their problem solving strategies in a respectful environment, (4) mistakes are valued as learning experiences, (5) educators and learners opinions are respected as guides to achieve mathematical reasoning (Christinson, Wiggs, Lassiter & Cook, 2012). Although every learner in the classroom is different each learner has a desire to achieve and succeed. Creating a positive climate in the classroom is a non-negotiable; educators must do what is necessary to create this environment for their students. The benefits have no comparison, not only will students feel valued but will

learn how to respect one another, value each other's differences, while feeling they can achieve and will stop at nothing to reach their goals.

Delivery of instruction

The expectation of the Common Core Mathematics Modules not only focus on reaching the standards per grade level but create opportunities for learners to have a deeper understanding of the mathematic content. To better understand how to effectively teach learners the new standards it is imperative to understand that every learner has their own unique learning style. Every learner is engrained with a particular learning style, as educators we must first be aware of each learner's style by analyzing what they choose to do, how they interact with their peers or teachers, and how they interact with the information. Once aware of the learners preferred style the instruction of the mathematics can become more individualistic. As Christinson, Wiggs, Lassiter & Cook (2012) the Common Core Standards have important implications for instruction including, (1) making sense of problems and persevere in solving them, (2) reason abstractly and quantitatively, (3) construct viable arguments and critique the reasoning of others, (4) model with mathematics, (5) use appropriate tools strategically, (6) attend to precision, (7) look and make use of structure, and look for repeated mathematical problems (p. 50-64). To better understand how to effectively integrate culturally responsive teaching to the teaching of the Common Core Mathematics Modules we will carefully look at each of these implications for instruction.

I can make sense of problems and persevere when solving them. In order to effectively reach the Common Core Standards educators must provide ample opportunities for students to explain their reasoning when solving problems. Culturally responsive educators will not only create an environment where all students feel comfortable in sharing their problem solving techniques but feel that their cultural expression is appreciated and respected. In order for

students' to feel as if they are able to make sense of the problem and solve them educators must be aware of the time allocated to engagement in problems solving situations. The more learners are involved in solving problems, analyzing its content, finding solutions the more they will be able to connect to various complex problems. The culturally responsive educator must, (1) take into account the thought and reasoning process of each learner based on learning style and culture, (2) facilitate students sharing of their problem solving process, (3) provide learners ample opportunities to interact with peers through collaborative work, (4) structure the classroom mathematical tasks in a way were students have opportunities to choose a strategy that fits them best, (5) give students opportunities to struggle within the mathematical process while fostering independence and responsibility, (6) integrate each student's culture within each lesson, understanding that mathematics is a procedural learning process that requires learners to make consistent connections to the real-world.

I can reason abstractly and quantitatively. Educators must understand that mathematics is learned abstractly and quantitatively. Learners are able to decontextualize by taking a situation and representing it symbolically and quantitatively reasoning the information by creating a coherent representation of the problem. The educator must be well aware that mathematics instruction (1) makes sense, (2) facilitates the development of number sense, (3) provides regular problem solving experiences, (4) concepts are taught within context, (5) constant practice of application problems and new concepts, and (6) lesson and activities have an emphasis reasoning (Christinson, Wiggs, Lassiter & Cook, 2012).

I can construct viable arguments and critique the reasoning of others. Within the Common Core Mathematics Modules learners are immersed in ample opportunities to analyze mathematical problems while using logic and reasoning to solve the given problem. Educators

must be aware that their instruction and classroom environment must provide learners with (1) ample opportunities to interact with peers and teachers, (2) ample opportunities to struggle with the mathematic content, (3) time and support with new content language, (4) guidance and respect for every individuals problem solving strategies, (5) ample experience in creating mathematical arguments, (6) structured lessons and activities, (7) opportunities for all learners to present their mathematical solutions, and (8) a classroom community which appreciates each learners culture, reasoning, and contributions (Christinson, Wiggs, Lassiter & Cook, 2012).

I can model with mathematics and provide students appropriate tools. Understanding that mathematics is a real-world skill is very important for learners. Culturally responsive teachers are able to get to know each student as an individual using their strengths and interest to bring mathematics to life. A primary educator must understand that modeling with mathematics includes providing students with ample opportunities to (1) use objects and/or mathematical drawing/ representations, (2) providing different ways to represent various situations, (3) see similarities in mathematical representations, (4) time to share their solutions, and (5) provide all students mathematics tools to problem-solve (Christinson, Wiggs, Lassiter & Cook, 2012).

I can attend to precision. The Common Core Mathematics Modules focus greatly on providing students with ample opportunities to explain to peers and educators. To provide all students the same opportunities to thrive within the new expectations educators must (1) teach new vocabulary and guide students to use the new vocabulary in discussions, (2) create a climate conducive to positive learning interactions, (3) integrate mathematical concepts in daily learning, (4) reinforce all students number sense daily, and (5) provide all students with constant positive feedback (Christinson, Wiggs, Lassiter & Cook, 2012).

I can look for and make use of structure. Culturally responsive educators look for opportunities to connect student's real-life to what they are learning in the classroom. An effective way to do so is allowing students to look for and make use of patterns, and connections within the mathematics curriculum. Educators focus on, (1) creating a positive climate in the classroom where learners are able to see mathematical patterns, (2) use lessons/activities where patterns are exclusively taught e.g. $5 + 7$ is the same as $7 + 5$, and (3) mental math activities are frequent and become an asset to daily math instruction. Educators who make an effort to connect to student's real world experiences also look for and express regularity in repeated mathematical problems. Such skill provides students with opportunities to see patterns within mathematical problems. Educators are able to provide learners with skills needed to look for patterns within math, use patterns structures to foster conceptual understanding, and practice such patterns for mastery.

Chapter Three: Application

This thesis project was guided by the K-3 content teachers of a dual-language charter school in the City of Rochester. The goal was to determine, (1) how knowledgeable were the content teachers on the topic of culturally responsive teaching, (2) how has the implementation of the new Common Core Mathematics Standards and Common Core Modules affected their daily mathematics instruction, and (3) how have they been able to not only implement the new modules, but also how these educators have been able to continue teaching using culturally responsive strategies.

The product entitled 'Culturally responsive teaching within the Common Core Math Modules' had various intended outcomes. The primary goal was to provide the Content teachers at Eugenio Maria de Hostos Charter School with a basic reference manual that could help the teachers become more knowledgeable about culturally responsive teaching and how they could use these techniques to better service their student population. Given the changes this school year had brought to the content teachers with the implementation Common Core Mathematics Standards and the Common Core Mathematics Modules, the manual's secondary goal was to provide a guide to help teachers implement culturally responsive teaching within each of the components of the modules including fluency, application problems, concept development, and reflection time.

As a result, the teachers at EMHCS would have a reference to help them not only manage the new modules but also effectively manage teaching in a culturally responsive manner. In turn not only would the teachers feel more comfortable using the techniques but also the benefits for their students would be endless. The hope is with the implementation of culturally responsive teaching techniques the K-3 teachers would not only be able to help their students achieve

academically but also will create a culturally responsive climate to help their students achieve and succeed. The grand desire is to provide these highly marginalized diverse groups of students with all of the opportunities they deserve in order to reach the goals set through the Common Core Standards.

This thesis project was created with the help of the three content teachers at EMHCS, their input to the researcher allowed for the identification of the problem. All three of these teachers work with culturally diverse students, each hold master's degrees one in Childhood Education, one in Bilingual Education, and one in Teaching English to Speakers of Other Languages (TESOL). When identifying the problem, the researcher used two surveys. In August 2012 the researcher used a survey during a professional development day to begin the 2012-2013 school year (see Appendix A). The survey included five questions based on the basic culturally responsive components. The teachers answered the questions in order to the best of their ability on a scale of 1-10 (10 being the highest). They were asked to rate the importance of the culturally responsive components. The survey was given with no added support. The researcher accepted 'not sure' as a valid answer. After this survey it was very apparent that the teachers did not have a solid understanding of the culturally responsive components or how to implement these into their own classroom. However, each of the teachers did answer "yes" when asked if they would like to learn more about culturally responsive teaching and how they would implement it into their own classroom. Based on this survey, the researcher concluded there was a need at EMHCS to provide teacher's with a resource to help them understand the fundamentals of culturally responsive teaching.

During the 2013-2014 school year the implementation of the new Common Core Standards brought upon its own challenges to EMHCS. The content teachers were now expected

to help each student reach the high expectations of the Common Core Standards by using the State issued Common Core Mathematics Modules. These modules changed the teaching pace and rigor from years prior. The K-3 teachers felt added pressure to reach the new standards and teach a new rigorous curriculum. These changes motivated the researcher to provide the K-3 content educators with a second survey with five simple questions based on culturally responsive teaching within the common core math modules (see Appendix B). The researcher explained to each teacher the purpose of the survey. Given the impact such changes have had on these educators the surveys were completed and returned within a week. Based on the survey, all of the K-3 content teachers felt that the new common core math modules didn't provide opportunities for students to have cultural expression where their voices and experiences were incorporated into their daily learning. All educators agreed that the module lessons did not provide enough cultural content for their population. Each educator felt restricted in their liberty to adapt the modules to fit their learners. Based on the results and findings from the survey the researcher was able to create a manual designed specifically to guide any of the educators wanting to integrate the Common Core Math Modules with Culturally Responsive Teaching Techniques.

Given the hardship caused by the modules, it was apparent to the researcher that the product for this thesis product not only had to provide practical changes but also examples for each section of the module lesson. The manual section entitled "Teaching the Common Core Mathematics Modules while using Culturally Responsive Teaching Strategies" gives a closer look at what educators can do to integrate CRT strategies within fluency, application problems, concept development, and student debrief. Each section begins with a question such as "How can you use CRT strategies during fluency activities?". After each question the researcher has provided different changes educators can make to integrate CRT with the CCSS, such as "show

your students that you care about them individually. Get to know each student's individual needs". Given the results of the survey conducted to the EMHCS Content teachers it was apparent that having practical suggestions of what they can do was very important. The researcher took this into account when providing educators with suggestions. Each part of the lesson is broken into sections, each with examples or simplistic suggestions of what they can do to effectively integrate both CRT and CCSS. The examples provided come directly from the Mathematics Modules and have been adapted to integrate CRT strategies, hence giving educators a visual understanding of what such integration would look like in their own classroom.

Description of the Project

The project for this thesis was the creation of a manual intended to help guide any teacher having to balance teaching the Common Core Mathematics Modules while integrating culturally responsive teaching techniques. This manual will be part of a workshop designed for K-3 content teachers. In such workshop educators will benefit from learning how small changes within their teaching, classroom climate, and delivery of instruction can have a great impact on their students' academic success. The manual will provide educators with a lifelong reference in the future. Its quick and simplistic information will provide teachers with a reader friendly reference on things they can do differently in each aspect of the Mathematics Module lesson including: fluency, application problems, concept development, problem set, and reflection time. The workshop will reference each of these module components while inviting teachers to be reflective on what they already do in the classroom and how they have adapted their teaching to fit the needs of their students'.

The first section of the workshop will focus solely on the following questions, (1) what is culturally responsive teaching? and, (2) what qualities do culturally responsive teacher have?

Within this section the goal is to become more knowledgeable on culturally responsive teaching as a program as well as the characteristics of a culturally responsive educator. Each section of the manual begins with a question. In this section teacher will become more knowledgeable on the benefits of using culturally responsive teaching practices, and the steps needed to become culturally responsive. After each question the teachers will see “I” statements, which invite personal reflection for teachers such as “I must investigate my own attitudes and beliefs of other cultures” these statements were created to not only invite personal reflection, but also impulse change within the educator.

The second section of the manual provides educators a closer look at the Common Core Mathematics Modules and how as educators implementing Culturally Responsive Teaching Strategies are attainable and manageable. Within this section of the manual the researcher breaks apart the key components of the mathematics modules including fluency activities, application problem, concept development, and student debrief. Each section of the mathematics modules is closely examined to show how educators can implement CRT within the modules. Each section provides teachers with realistic changes that can be made to intertwine culturally responsive teaching without compromising the fidelity of the modules. Each section begins with a question and an “I” statement, which invites personal reflection for teachers. In this section teachers will not only become more knowledgeable on the benefits of using culturally responsive teaching practices but also how they can effectively integrate such strategies within the Common Core Mathematics lessons.

The product appendix of the manual also provides teachers with tools they can use to attend to each student’s cultural characteristics and individual needs while reaching the rigorous expectations of the Common Core Mathematics Modules. The task card templates provide

teachers with challenging problems while giving students additional practice based on their individual needs. The story problem organization page, included in Spanish and English, provides students with a way to organize their information. This organization tool is beneficial for learners struggling with the application problems within the Common Core Mathematics Modules. Learners are able to break apart the important information within the application problem such as, who is involved? what is involved? The lesson planning and reflection page is a helpful tool for teachers planning their daily mathematics lesson. Before the lesson they will write the focus of the lesson, a simple lesson overview, and the standards addressed. After the lesson the teacher will checkmark if they were flexible, caring and empathetic listeners, understanding of culture, and reflective. Constant reflection will provide teacher time to find opportunities to improve the delivery of each of the culturally responsive components. After filling in the simple checklist the teacher will reflect on the lesson's success and if any changes should be made to connect to students' cultural differences.

Summary

Culturally Responsive Teaching has been a popular topic in education for many years. Many educators, administrators, and community leaders have seen the benefits of connecting student's home culture to their education. Although the abrupt change in education caused by the new Common Core Standards has created changes in the educational system in the United States, educators continue to feel unequipped to balance new standards and teaching with a sense of cultural awareness. This reluctance may come from lack of knowledge on such a new issue, not lack of desire. Given an understanding of how to effectively balance both CRT and CCSS, educators will strive for the benefit of their students. Seeing the lack of information the researcher of this study created a workshop and manual dedicated to these hardworking,

dedicated educators who have spent endless hours balancing the changes without jeopardizing the education of their students. As Villegas & Lucas (2007) emphasize “successfully teaching students from culturally and linguistically diverse backgrounds-especially students from historically marginalized groups-involves more than just applying specialized teaching techniques” (29). Achieving the goal of teaching the Common Core Mathematics Modules while integrating Culturally Responsive Components requires dedication from educators, administrators, and communities. What is the benefit of such changes? The benefits are endless. All students will have the opportunity to achieve academically, not because of the color of their skin, or because they come from a diverse cultural background, but because they have potential that has been unlocked by great educators. Educators who can tap into this potential can not only inspire but also motivate. What can be more beneficial than to see learners tap into their potential and succeed?

Chapter Four: Conclusions and Recommendations

Discussions

The purpose of this thesis project was to provide educators with a simplistic, user friendly guide to effectively use Culturally Responsive Teaching strategies while teaching the Common Core Mathematics Modules. In order to provide educators with a helpful resource, three main research questions were used for the purpose of this thesis project:

1. What is Culturally Responsive Teaching?
2. What are the qualities of Culturally Responsive educators?
3. How can Culturally Responsive Strategies be effectively integrated within the Common Core Mathematics Modules?

The research based on Culturally Responsive Teaching continues to prove that teaching while attending to the culture each student brings to the classroom has immense benefits in each child's education. Not only are students engaged in the community created in the classroom, but also will have a personal connection with the information they are learning. Educators will have a deeper understanding of their students as individuals. Although research has proven that teaching in a culturally responsive manner is beneficial, many educators feel as if it is a difficult and overwhelming process. Educators must see that the positives outweigh the negatives. The changes in education with the implementation of the Common Core Mathematics Modules have proven the necessity to find a balance between academic rigor and making personal connections with each learner. Hence, balancing the expectations of the Common Core Modules while integrating Culturally Responsive Teaching techniques, will take time, effort, planning, and commitment.

Throughout the literature review, many conclusions could be made, (1) Culturally Responsive Teaching has proven itself as an effective program with great benefits for students, educators, and communities, (2) educators and administrators are able to transcend any pre-determined cultural biases, (3) educators will innately integrate social and academic curriculum while providing different approaches to reach the standards or goals, and (4) CRT educators create a classroom community where academic and cultural excellence is expected, facilitated, and appreciated. Through the literature review, the researcher was able to become more knowledgeable within the topic of Culturally Responsive Teaching, as well as the Common Core Standards, and Common Core Mathematics Modules. Given the drastic change in education with the implementation of the Common Core Standards, it was necessary for the researcher to have a clear understanding on the standards including the objectives, learning targets, and suggested instructional practices. The researcher felt the need to not only have detailed research on CRT, but also of CCSS. Such research would help facilitate the goal of integrating the Common Core Mathematics Modules and Standards with the goals of Culturally Responsive Teaching. Within the research, the researcher was able to clarify misconceptions based on the modules, such as that making adjustments to application problems were not recommended or allowed.

During the research on Culturally Responsive Teaching techniques, the researcher was able to become more informed on what strategies could be used seamlessly within the mathematics modules. For instance, when researching CRT techniques, it was important to give educators simple suggestions on what could be implemented within each section of the Common Core Mathematics Modules. For instance, during the fluency section of the modules educators can show, (1) caring for each student as an individual, (2) patience, and (3) caring for the success of each child. Such simple strategies can be seamlessly integrated in every classroom.

During the process of this thesis it was apparent that there was a need for professional development not only on Culturally Responsive Teaching, but also how to effectively integrate these strategies within the Common Core Mathematics Modules. Many of the studies emphasized the need for educators to see what they can do, what they have already been doing, and how they can continue making effective changes to better serve their learners.

Finally, during the process of gathering information for the manual and professional development, the researcher was able to become more knowledgeable on Culturally Responsive Teaching Techniques. Given the researcher's experience as a Grade 2 content educator with experience teaching the Common Core Mathematics Modules, finding effective ways to implement these strategies to the different components of the modules was not only personally rewarding but a reflection experience. Most importantly, the benefits for students and educators will be apparent in the classroom community that will be created, the academic success each learner will see, and the sense of belonging and acceptance that will be apparent every day in the classroom.

Summary

As it was apparent in the literature, Culturally Responsive Teaching is not only beneficial to students but also to educators, administrators, parents, and communities. Educating the future leaders of our country with standards that provide the same academic rigor to all students regardless of economic status, gender, or state of residence is a commendable change in education today. However, our students need to be taught in a manner where their cultural characteristics including their values, traditions, language, communication, learning styles, and relationship are appreciated and accepted. Educators must see that teaching the Common Core

Mathematics Standards while implementing Culturally Responsive Teaching Techniques will take time, patience, and planning but its benefits will be endless.

Limitations

Although Culturally Responsive Teaching has been shown in different literature as an effective teaching practice, there are several limitations that must be addressed. First, in the search of literature it was difficult to find enough research studies that gave specific strategies educators could use during the teaching of mathematics. Many of the studies provided general teaching strategies, but did not specifically focus on the mathematics instruction. Second, many of the research referenced Geneva Gay, professor of multicultural education at the University of Washington-Seattle, as the main resource of their own study. Although she is by far the most well-known researcher on the topic of Culturally Responsive Teaching, the researcher believes that having a variety of authors with the same notoriety as Gay would prove the conclusion of CRT being a necessity in every classroom. Finally, in regards to the literature available it was difficult to find literature. Finding articles which focused on teaching the Common Core Standards using Culturally Responsive Teaching was a true challenge. Finding literature based on the Common Core Mathematics Modules was even more challenging. Given the fact that these changes are relatively new, research has yet to be published, making it a true limitation to this thesis project.

In addition to the limitation in literature is the limitation in the population, which was selected by the researcher to identify the problem for the thesis project. The problem statement was created based on a small sample of content teachers in comparison to the grades serviced at EMHCS. The researcher only focused on teachers of Grade K-3, given the drastic changes they were facing day to day in their classrooms. Finally, looking at the survey used to identify the

problem, it is safe to say it also had its limitations. Given the fact that the survey was given in the beginning of the school year when teachers were very unfamiliar with the new modules and tension were high, some of them may have answered based of the stress these modules had created and some of them may have not been as truthful in their responses.

Recommendations

The creation of this thesis has provided educators an answer to the lingering question: How can I teach the Common Core Mathematics Modules while integrating Culturally Responsive Teaching Strategies? During the intensive research required for this thesis the researcher has learned that the integration of Culturally Responsive Teaching within the Common Core Mathematics Modules will require commitment from not only the educator, but also from administrators, parents, and community. Although understanding the cultural characteristics including values, traditions, language, communication, learning styles, and relationship norms of each student may seem as an overwhelming task, educators must continue to be reassured of the benefits using CRT within CCSS will have on each learner's academic success. To better facilitate the transition, educators must receive training with useful and realistic changes that can be done seamlessly in the classroom. Teachers must be able to concentrate on one of the Culturally Responsive qualities at a time, which are referenced in the first section of the thesis product.

Educators must understand that Culturally Responsive Teaching is a school-wide effort that will require constant collaboration, reflection, and planning. All educators must understand the need for Culturally Responsive Teaching, not just in the mathematics classroom. Each classroom should be able to offer children a classroom environment that not only is safe, but also appreciative of who they are and what they bring to their own education.

Given the importance of giving all learners the best opportunities to succeed, the researcher will present this thesis project to the Principal of EMHCS, Jeffrey Halsdorfer, as well as the Mathematics Teaching Coach, Kristen Barry, in order to set a professional development session to better help the K-3 content educators implement the Culturally Responsive strategies within their daily teaching of the Common Core Mathematics Modules. The researcher plans on providing some helpful strategies for educators that will in turn provide the students at EMHCS with not only an academically rigorous curriculum, but also a curriculum that is tailored to see them as individuals.

Future research

In order to understand the importance Culturally Responsive Teaching will have in the implementation of the Common Core Standards and Modules future research is a necessity. The lack of literature on the subject of the Common Core Mathematics Modules made the investigation of this topic difficult to manage. Given the fact that the modules were implemented this school year, future research on modification, changes, and adaptations would be beneficial to research. Furthermore, more investigation on such a relatively new topic must be conducted in order to provide learners with the most beneficial education available.

Conclusion

Overall, the amount of gathered information was not only beneficial for the creation of the thesis project, but also for the researcher who has been affected by the changes in mathematics instruction and the integration of CRT strategies. After such extensive research it is apparent that there is a great need for professional development in order to show educators what they can do to best fit their diverse learners. The Common Core Standards have created a great

shift in education, but as educators are we willing to navigate the shift with our students' needs as our first priority or will we let a curriculum be the navigator of our students' education?

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Appendix A

Survey (1)

Position: _____

Directions: Answer the following questions in order to the best of your ability.

1. On a scale of 1-10 (10 being the highest) how well do you know what Culturally Responsive Teaching is? Explain your answer.

2. On a scale of 1-10 (10 being the highest) how important do you see the integration of students culture into the curriculum? Explain your answer.

3. On a scale of 1-10 (10 being the highest) how realistic is it to integrate student's culture with the new Common Core curriculum requirements? Explain your answer.

CULTURALLY RESPONSIVE MATHEMATICS TEACHING

4. Rate the following characteristics of Culturally Responsive Teaching in order from most important to least important. If you are not sure of one of the characteristics you may write a question mark next to it.

_____ engaging the entire school community

_____ building trust with students

_____ engaging the entire school community

_____ transforming instructional practices

_____ engaging personal culture

_____ confronting issues of social dominance and social justice

_____ transforming the culture of the classroom

5. Would you like to learn more about Culturally Responsive Teaching and how to implement it into your classroom? Yes or No

CULTURALLY RESPONSIVE MATHEMATICS TEACHING

Appendix B

Survey (2)

Grade Level: _____

1. Do you feel as if the new Common Core Math Modules provide opportunities for students to have cultural expression where their voices and experiences are incorporated into their daily learning? Why or why not?

2. Within the new math modules, how has ‘caring’ become an integral part of instruction? Explain.

CULTURALLY RESPONSIVE MATHEMATICS TEACHING

3. Has it been difficult creating a culture where students are able to interact and develop communicational skills? Why or why not?

4. Do you believe the new math modules have enough cultural content? Why or why not?

5. How would you adapt the new modules and their implementation to be more culturally responsive?

CULTURALLY RESPONSIVE MATHEMATICS TEACHING

Appendix C

Agenda

Title: How can I implement Culturally Responsive Teaching Strategies
within the Common Core Mathematic Modules?

Objectives:

- Educators will become more knowledgeable of the qualities of Culturally Responsive educators.
- Educators will become more knowledgeable of different changes they can make to integrate such strategies to the teaching of the Common Core Mathematics Modules.

EMHCS Day 5 Meeting: Session 1- 3:45-4:45 p.m.

3:45- 3:50 Welcome

3:50- 4:00 Brief summary of thesis will be given. We will review the objectives and rate their knowledge on a scale of 0-2 on each of the above mentioned objectives.

4:00- 4:30 Qualities of Culturally Responsive Educators

4:30- 4:45 Closing Discussion

Rate your comfort level on a scale of 0-2, before and after this first session.

0 – I don't know anything about this topic.

1- I can explain some aspects of the topic.

2- I can provide clear examples and can teach a friend!

	Before	After
Culturally Responsive Teaching		
Benefits of CRT		
Empathy and Caring		
Self-reflection on own belief and culture		
Reflection on own cultural frames of reference		
Knowledge of cultures		
Importance of flexibility		

CULTURALLY RESPONSIVE MATHEMATICS TEACHING

Appendix D

Agenda

Title: How can I implement Culturally Responsive Teaching Strategies
within the Common Core Mathematic Modules?

Objectives:

- Educators will become more knowledgeable of the qualities of Culturally Responsive educators.
- Educators will become more knowledgeable of different changes they can make to integrate such strategies to the teaching of the Common Core Mathematics Modules.

EMHCS Day 5 Meeting: Session 2- 3:45-4:45 p.m.

3:45- 3:50 Welcome

3:50- 4:00 Brief summary of prior session. Sharing- What qualities have you been working on in your classroom? Have you noticed any changes? Educators will rate their comfort level on integrating CRT within the modules.

4:00- 4:30 How can I integrate CRT within the Common Core Modules?

4:30- 4:45 Closing Discussion

I can use CRT strategies during...	Before	After
Fluency		
Application Problems		
Concept Development		
Student Debrief		
Lesson Planning		