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A Time to Create Change: A Case Study of Culturally Relevant Education

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Pedagogy that rests on three criteria or propositions: (a) Students must experience academic success; (b) students must develop and/or maintain cultural competence; and (c) students must develop a critical consciousness through which they challenge the status quo of the current social order (p. 160).

In short, CRE is the use of culture, rigor, and critical consciousness for students of color to achieve success in the classroom. This dissertation in practice examined the use of CRE in classrooms at a Colorado high school. A case study was developed through interviews, observations, and collecting lesson plans from teachers in each of the core subjects to identify and analyze how CRE is perceived and used in these classrooms.

Relationships, diversity, intention, and administrative support were themes that emerged from the data that correlate to CRE framework created from the work of Ladson-Billings and Gay. Additionally, the themes of communication, disposition, student engagement, assessment and teacher accountability were present in this study but not prominent in the literature.

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Chapter One: Introduction

Students of color are not provided the same opportunities as their White peers in schools all over the country, which then creates gaps in their learning. Students of color routinely do not have access to the best teachers, programs, and technology available (Griner, 2012). To understand these gaps in opportunities, a brief history of modern-day race in education is needed. Stembridge (2019) states that "Equity gaps are neither surprising nor unexpected given the United States' history with race tracing back to the earliest incarnations of the 'American Experiment.'" Stembridge (2019) connects U.S. history to the present gaps in education; therefore, it is important to understand the history of segregation and desegregation in schools across the United States.

Since the founding of the United States with the writing of the Constitution in 1787 there has been unequal treatment of people of color. Schools for students of color often did not have enough funds, qualified teachers, and opportunities in higher education compared to their White counterparts. Students of color had to fight and protest to receive a high-quality education and create schools to get post-secondary degrees (i.e., Historically Black Colleges and Universities).

It was not until 1954 that the United States Supreme Court outlawed segregation in schools through the Brown v. Board of Education court case decision. This ruling meant that students could not be separated in schools based on their race and ethnicity. However, with Brown v. Board of Education II, the court stated that states and districts

are the entities that enforce the desegregation of schools. Parents were allowed to choose a "school of choice" for their child and move them to that school. This meant that some schools, because of decreased enrollment, would close and White parents would send their children to all White private schools. As a result, students such as the Little Rock Nine and James Meredith required police or national guards escort them to school so they could receive an equitable education.

Not only did students of color have to worry about the physical dangers of desegregation, but they also had to deal with the financial impact as well. "School of choice" and "White flight" resulted in consequences, which Ladson-Billings (1994) explains: "As the Whites and middle-income people of color fled the cities, they not only abandoned the schools to poor children of color, but also took with them the resources, by the way of the diminishing tax base" (p. 3). With a "White flight" of White families away from a desegregated school to the suburbs, this left city schools without the property taxes they needed to fund schools.

It was not until 1968 with *Green v. County School Board of New Kent County* that the Supreme Court declared the "school of choice" idea was not desegregating schools and required school districts to develop a plan to desegregate schools (Green v. County School Board of New Kent County). School busing was an example of this type of desegregation plan. Districts bused students to other schools to desegregate them (Pierre-Louis). The Supreme Court allowed districts and states to end this policy in the 1990s, which ended forced busing. (Pierre-Louis).

Statement of the Problem

This segregation and desegregation have led to an extended history of racially unequal education in the United States, which has created performance gaps in our schools today. Although the Supreme Court attempted to end segregation in schools, gaps remain, through no fault of students of color. These gaps are often referred to by educators and politicians as "achievement gaps." Gay (2018) states that "too many students of color have not been achieving in school as well as they should (and can) for far too long" (p. 1). The concept of an achievement gap explains why students of color achieve lower scores on standardized tests and have lower graduation rates.

Research shows this achievement gap in our educational system (Boykin & Noguera, 2011). Ladson-Billings (2006) argues that the achievement gap is a theory or term that describes the difference in standardized test scores between students of color and White students. Students of color perform lower than their White counterparts on standardized assessments, in grades, and in graduation rates. In 2018, on the Colorado SAT, White students achieved a mean average score of 1072 (out of 1600), while African American students achieved a mean score of 909, and Latino students a mean score of 915 (Colorado Department of Education, 2019).

The achievement gap is multidimensional since it occurs in a full range of academic disciplines including, but not limited to, math, science, reading, writing proficiency (Boykin & Noguera, 2011). These gaps start in early childhood and increase throughout the K-12 system. The achievement gap illustrates that students of color underperform compared to White and Asian students on standardized tests and college acceptance rates (Mendoza-Denton, 2014). For example, 17% of the Latino population

who took the Colorado Assessment Program (TCAP) scored unsatisfactory on the reading exam, whereas only 5% of White students scored unsatisfactory (Colorado Department of Education, 2015).

Critics believe that the achievement gap is created by lack of school funding in high-risk areas that are primarily people of color. However, gaps are present in highly resourced schools as well. For example, the Hills School District in Colorado, a pseudonym, is ranked #400 in school districts in the country, 13th in Colorado, 8th in the Denver Metro Area, and 1st in the city of Aurora (*U.S. News*, 2020). According to *U.S. News*, each of the Hills School District's high schools appears in their *Best High Schools in the Country* listing. However, according to the state SAT data, a significant gap exists between White students and Latinx and African American students. In 2019, the district had an overall SAT score of 1068; however, African American students scored an average of 943, and Hispanic students scored 978, compared to the 1112 average for White students (Colorado Department of Education, 2019). This data demonstrates gaps are evident even in the high achieving Hills School District.

There are problems with the term achievement gap. Many theorists believe that the use of "achievement gap" puts the blame on the student by suggesting they do not want to or try to achieve success in education. According to Picower (2021), "the ideology on achievement that remains dominant reinforces deficit thinking that blames children of color. Any solutions that come from this framing will target students of color of their families as in need of being 'fixed'" (p. 101). In other words, focusing on "achievement" puts blame on the student when it is not entirely the student's fault that

they do not achieve as well as their fellow White students. The use of achievement can also create a deficit mindset for both the teachers and students (Shukla et al., 2022).

In comparison, the term "opportunity gap" attempts to change the way teachers think about the gap. The term "opportunity gap" suggests this gap exists because a student of color is not provided the same opportunity or resources to learn or show their learning. According to Stembridge (2019) a gap is

> anything that might undermine the perception of a learning opportunity as meaningful, attainable, and worthy of investment by the student—either as a function of how a student may (or may not) be positioned to take advantage of an opportunity, the design of the opportunity itself, or even the awareness that the opportunity exists. (p. 11)

Shukia et al. (2022), reminds educators that the opportunity gap is not the same as an achievement gap. Teachers and administrators need to move away from "deficit" thinking and think about what opportunities the student has or has not had. It shifts the conversation away from limitations to possibilities.

Although teachers and administrators are a part of the puzzle, government officials have also tried to close the gap through laws and funding. In 2001, the United States Congress and President Bush tried to close gaps and bring them to public attention by passing the No Child Left Behind (NCLB) Act. The NLCB requires yearly assessments in grades 3-8. These testing results are made public and can be further analyzed based on gender, race, and socio-economic status. If a school performs low on these assessments for four or more years, the school administration will be replaced, and funding will be cut (Reardon et al., 2013).

In response, schools focus on individual student groups to address the NCLB standards so that they will not lose funding. Students of color are one of the student

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groups that many schools focus on. According to Reardon et al. (2013), "NCLB has helped bring into focus that there are still stereotypes of education [for] students of color" (p. 6). Yet, the opportunity gap has not narrowed because the focus NLCB places on schools (Reardon et al., 2013). Researchers found no significant change in the gap after studying different districts across the country.

The problem continues to be how to close the opportunity gaps and it remains a focus in the educational community. Since NCLB has not resulted in significant improvement, what other ways can the opportunity gap be closed?

One solution lies in the use of Culturally Relevant Education (CRE). CRE is a way to create a classroom using students' culture and experiences to promote learning. CRE and Culturally Relevant Teaching (CRT) are often used interchangeably in the literature. Today Critical Race Theory (CRT) is also being debated in many schools across the country. This research will use the term and idea of CRE for the rest of this dissertation instead of Critically Relevant Teaching and Critical Race Theory.

Culturally Relevant Education

Culturally Relevant Education (CRE) is a theory and practice that is used to understand and close the opportunity gaps in our schools. Ladson-Billings (1995) defines culturally relevant teaching as the notion that:

> Culturally relevant pedagogy rests on three criteria or propositions: (a) Students must experience academic success; (b) students must develop and/or maintain cultural competence; and (c) students must develop a critical consciousness through which they challenge the status quo of the current social order. (p. 160)

Kesler (2011) agrees with Ladson-Billings stating that, "academic success, cultural competence, and sociopolitical consciousness are all characteristics of culturally relevant teaching" (p. 2). CRE acknowledges the legitimacy of cultural heritages, builds meaning,

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uses a wide variety of instructional strategies, teaches students to praise and understand their own heritage, and integrates multicultural information in all subject areas (Griner & Stewart, 2012). Gay (2018) adds to CRE by defining it as "using the cultural knowledge, prior experiences, frames of reference and performance styles of ethnically diverse students to make learning encounters more relevant and effective for them" (p. 36). With CRE, teachers focus on the student, their background, culture, and learning styles to help them become successful in school.

Some teachers have also started to focus on closing the opportunity gap. However, these teachers often meet resistance from other teachers and the school community. Working to close the opportunity gap is often met with resistance because of the idea of "not seeing race" in the classroom. The idea of a colorblind classroom assumes that teachers treat every student equally. However, this ideology sustains and justifies the culture of power for White teachers in the classroom (Choi, 2008). Ladson-Billings (1994) claims the White teachers she interviewed "don't see color: they see children." Choi (2008) believes that talking about race makes White teachers uncomfortable and defensive. However, the idea of not seeing color hinders the learning for students because it minimizes the students' culture and experiences (Boykin & Noguera, 2011). Using this colorblind approach further marginalizes students of color who have limited access to education resources (Ladson-Billings, 1994).

Another way closing the opportunity gap has been hindered is because of the teacher's own culture and background. VanDeWeghe (2005) concludes that since most teachers come from White, middle-class backgrounds they feel unprepared or racist if they look at cultural differences. For example, in White mainstream culture, if you do not

look an adult in the eye, it is considered rude. However, in some cultures, it is rude to look an adult in the eye. A White teacher could think a student is being rude because they are not looking at the teacher in the eye, whereas if the teacher understood the differences in culture, there would not be a behavior issue.

Another form of resistance to closing the gap is a teacher's philosophy on teaching. Ladson-Billings (1995) discusses how some teachers believe that good teaching is being able to teach content to students so that they can master it. According to Gay (2010) another detrimental philosophy is making the class teacher centered. In this type of classroom, students are required to pay attention to the teacher for most, if not all, of the class period. This might be difficult for students of color because these cultures are more community based and sometimes learn better in a community-based environment. Teachers might find it difficult to focus on the opportunity gap because it means they might have to change their philosophy on what and how to teach.

Singleton (2015) shows how CRE closed the opportunity gap at Del Roble school in California. This school had a high number of students of color, and a prevalent opportunity gap. In 2001, proficiency scores for students of color in reading and writing were lower than White students. The faculty and administration addressed institutionalized racial challenges in school climate, culture, programs, and structures. They also looked at the curriculum to see if the curriculum related to the culture of all students. The administration tried to hire more teachers of color and stop the biases that were created in special education. Teachers shared methods that were increasing student performance. Administration and staff created relationships between students and the

community overall. According to Singleton (2015), with these efforts, the gap was closed in a year.

A teacher might ask how this can be done. Ladson-Billings (2014) believes that teachers using CRE in their classroom should focus on African American students as subjects rather than objects. As a subject a student has a depth of knowledge and history that a teacher can learn about; an object lacks these qualities in the eyes of the teacher. In education, object focused teachers think of a student as a "number" or a name in the gradebook, not focusing on their individual qualities. CRE teachers focus on student achievement and cultural competence instead of classroom management and assimilation (Ladson-Billings, 2014).

Furthermore, CRE is an approach that needs to be woven into the fiber of the classroom and school. Ladson-Billings (2014) and Stembridge (2019) believe that CRE requires the teacher to change all their classroom, content, and beliefs of education. This means that both the school and teacher need to change. It needs to be a systemic and permanent change in school culture, not just a poster, holiday, or month of awareness during the school year.

Stembridge (2019) argues that the first step in creating a culturally relevant classroom is thinking about equity and the equity gap that occurs in classrooms. The opportunity gap is widened by anything that undermines the perception of a learning opportunity as meaningful, attainable, and worthy of effort. Teachers need to realize that equity and closing the opportunity gap starts by realizing that students are not carbon-copies of each other. They all are individuals and bring their own experiences to the classroom. Teachers need to not only revise the content but also be intentional when it

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comes to best practices as an agent of change, which will look different in every classroom and content area.

Purpose of the Study

As a teacher and proponent of CRE at Mountain View High School (pseudonym), I wanted to see how CRE was enacted in classrooms other than my own. The purpose of this study is to examine teachers' perceptions of CRE and to also see how, if at all, CRE is implemented in the classrooms at Mountain View High School.

Mountain View High School is a school in the Hills School District in Colorado (both pseudonyms) and is known for its high performance on standardized tests. According to the Colorado Department of Education (2016), Mountain View performs high on standardized tests, however, a racial performance gap exists in the school. For example, on the 2019 SAT, Black and Hispanic students scored an average of 949 and a 1017 out of 1600 respectively, while White students scored an average of 1130 out of 1600. According to the College Board (2023) a 1350 test score on the SAT will help students get into the top 10% of colleges. This means that students of color may have a tougher time getting into their preferred colleges based on their SAT score alone. Since these scores show a performance gap in the school, I wanted to see if CRE as an instructional intervention can help close these gaps in Mountain View.

Utilizing the research of Gay (2002) and Ladson-Billings' (1995), a consistent definition was created for CRE for this research. CRE is teaching that uses intention, diversity, and connectivity in a classroom to help students of color increase levels of achievement. As a current teacher at Mountain View High School, identifying ways in which changes in instruction can benefit students of color is important. Social Studies fits

well with CRE because of the use of culture and history in its content. Personally, CRE is used as much as possible in my Social Studies classes at Mountain View. When I lesson plan, I first think of the histories and cultures of my minority students and how I can put these into the topic for the. For example, in my Civil War unit for my U.S. History class I have students read and research how Native Americans were impacted by the Civil War, who did they fight for (if they did) and why. I use this example because Native American history during the Civil War is usually not discussed in a high school classroom. This way, I hope it shows my students of Native American descent that their history is just as important as other groups currently.

However, there are other core subjects where CRE can be incorporated and the data from this study can demonstrate how to successfully implement CRE in different subjects at the high school level.

The goals for this research are two-fold, including examining teachers' perceptions of CRE and observing CRE in classrooms at Mountain View High School. The research questions are as follows:

1.   How do high school teachers perceive CRE?

2.   How is CRE operationalized in the classroom?

3.   What are the implications for the teachers' professional development?

Methods

To examine teacher perceptions of CRE and observe CRE in the classrooms, a qualitative approach was used to collect and analyze the data. Creswell (2013) states that qualitative research allows researchers to have a compound and comprehensive understanding of the research that cannot be found in quantitative research. It also allows

researchers to tell the stories of individuals and encourages study participants to be active in the research study. This type of research is especially important in education where the stories of the participants are helpful to show a real-world perspective (Stake, 1995). Qualitative data allows for the use of interviews and observations in data collection, which can show details in the lives of participants that quantitative data cannot.

There are many types of qualitative research that could have been used in this study; however, a single case study approach is most suitable for the purpose of this study. A case study explores a phenomenon using a variety of data sources to examine the site through multiple ways (Baxter & Jack, 2008). In case study research, the investigator explores a real-life problem using multiple forms of data collection, and the final report includes a case description or themes (Creswell, 2013). Case studies allow researchers to focus on a single case and get an all-inclusive perspective (Yin, 2014). A singular case study also allows the researcher to see and capture the complexity of a phenomenon (Stake, 1995). It also investigates a real-world problem in depth and explores the complexity.

According to Yin (2014) and Baxter and Jack (2008), a case study is relevant when the focus of the research is to answer how and why something occurs; this allows the researcher to delve deeper into a subject. In creating these how and why questions, the unit of analysis for the case, needed to be identified (Yin, 2014). The next decision was to decide who and how many teachers would be needed in this case study to help create the case description.

The case description needs to define the boundaries (who, how many, where) as to limit what is studied in the research phase (Yin, 2014). A single case study is the best approach for this study; therefore, the research focus is on CRE at Mountain View.

The overall goal of qualitative research is to help solve or identify an issue for a population. The goal for this study is to understand teacher perceptions of CRE and teacher enactments of CRE in high school classes since there is a gap in the literature about CRE in different subject areas in one school. Different forms of data were collected to get a bigger picture of CRE inside the classroom and how lessons are planned to use CRE theory. To have multiple forms of data, the principal identified four teachers they felt used CRE in each of the core subject areas: math, science, English, and world languages.

Limitations

Although there are always limitations in research that can impact data collection, the biggest limitation during this research was the fact that I am also a teacher at Mountain View High School. Potentially, bias is possible, since I am a colleague of the teachers I observed. These colleagues may have seen me more as a fellow teacher than a researcher, which could have skewed data by purposefully teaching what they knew would benefit the case study. The teachers also may have felt that since I am currently a teacher at the school, I had pre-conceived notions of CRE inside the school and biases regarding how the different departments use CRE.

Another limitation encountered involved the use of student perceptions. Student voices are an important way to develop a full picture of how CRE is used at Mountain View. I felt that student voices would provide a real sense of what CRE and how it is

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perceived and shown in the classroom. Unfortunately, insufficient parental consent forms were obtained to collect student voices for the study. While the study received both IRB and district approval process to interview students, lack of written parental consent excluded student voices from this study, which would have provided more insight into the effect of CRE at Mountain View.

Summary

There is an achievement or opportunity gap in education and achievement between students of color and their White counterparts. Students of color continuously perform lower on state standardized tests. Culturally Relevant Education (CRE) is a way that teachers can help close the opportunity gap in schools. A case study of Mountain View High School was conducted to identify and demonstrate how CRE is currently being utilized. Multiple forms of data were collected from participating teachers including interviews, observations, and artifacts. Chapter 2 will discuss the relevant literature on CRE theory and practice. Chapter 3 describes the design of the case study and will also go into detail on how the data was collected and analyzed. Chapter 4 will discuss the results of the study including a summary of how the data was collected and description of the themes that emerged through data analysis. Finally, in Chapter 5, the themes and data collected will be reviewed to provide implications of the study for other high schools interested in using CRE.

Chapter Two: Literature Review

As stated in Chapter 1, an opportunity gap exists in American classrooms today. Students of color do not receive the same opportunities that their White counterparts do. This can impact tests scores, graduation rates, and college acceptances. Culturally Relevant Education (CRE) is a theory and practice that can help close these gaps in the classroom. This study focuses on Mountain View High School to determine how CRE is used and perceived by teachers from English, science, math, and world languages departments. The case study used data from observations, interviews, and lesson plans. A singular case study was created to answer the following questions from the data:

1. How do high school teachers perceive CRE?

2. How is CRE operationalized in the classroom?

3. What are the implications for teachers' professional development?

A review of the literature provides a clear and unified definition of CRE and identifies ways it is used in the classroom. This literature review also identifies disparate beliefs about what CRE is and how it manifests in a classroom setting.

Search Procedures

The literature review begins by looking at required doctoral texts focused on CRE. The writings of Gloria Ladson-Billings were cited in many articles required in doctoral education courses. A deeper review of the works of Ladson-Billings revealed her book *The Dreamkeepers* (1994). The search then expanded to include other works by

Ladson-Billings, including *Culturally Relevant Pedagogy: Asking a Different Question* (2021).

These books define key search terms that lead to finding additional relevant literature. Searching the DU library online database for phrases such as "culturally relevant education" and "culturally relevant teaching" identified additional articles and books on the topic. A search of Google Scholar provided over 3,800,000 articles and books. From there, a theoretical framework of CRE developed themes of "relationships" and "administration," which narrowed the scope of literature found in earlier research. This study was additionally narrowed with a focus on CRE in the high school setting.

Theoretical Framework

In qualitative and quantitative studies, theoretical frameworks narrow the ideas and themes for the researcher. A theoretical framework couples different to inform the research (University of Southern California Library, 2016). It is guided by existing knowledge to provide a "lens" for new research (University of Southern California Library, 2016). A theoretical framework accomplishes one primary purpose: to explain the meaning, nature, and challenges associated with a phenomenon so that we may use that knowledge and understanding to act in more informed and effective ways (University of Southern California Library, 2016). This study is grounded in the work of Ladson-Billings (1995) and Gay (2002), and together their theories on culturally relevant teaching provide the framework for this study on CRE.

As stated in Chapter 1, Ladson-Billings (1995) explains that in CRE as, "(a) Students must experience academic success; (b) students must develop and/or maintain cultural competence; and (c) students must develop a critical consciousness through

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which they challenge the status quo of the current social order" (p. 160). Gay (2018)

defines Culturally Relevant Teaching as "using the culturally knowledge, prior

experiences, frames of reference and performance styles of ethnically diverse students to

make learning encounters more relevant and effective for them" (p. 36). She explains

further that CRE:

> Acknowledges the legitimacy of the cultural heritages of different ethnic groups, both as legacies that affect students' dispositions attitudes, and approaches to learning as worthy content to be taught in the formal curriculum. It builds bridges of meaningfulness between home and school experiences as well as between academic abstractions and lived sociocultural realities. It uses a wide variety of instructional strategies that are connected to different learning styles. It teaches students to know and praise their own and one another's cultural heritages. It incorporates multicultural information, resources, and materials in all the subjects and skills routinely taught in schools. (p. 37)

These definitions create a theoretical framework in which to study CRE (Figure 2.1).

CRE can be broken down into three themes or ideas: a) relationships, (b) intentions, and

(c) diversity.

Figure 2.1: Theoretical Framework
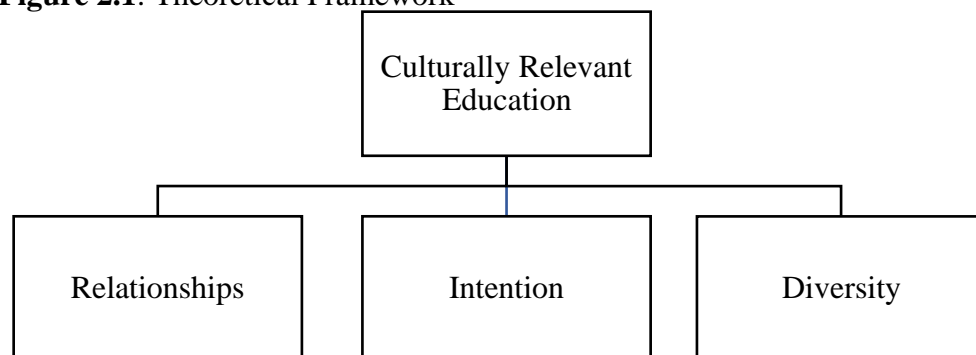
In this framework, educators develop relationships to provide students with an

adult figure who cares about them and their experiences. Additionally, teachers are

intentional in considering the culture and history of students of color when planning

lessons. And considering diversity, teachers ensure minority students' cultures are

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represented in lessons and the classroom. This framework guided the examination of Mountain View High School teachers' perceptions of CRE as manifested in the classroom.

Ladson-Billings

Ladson-Billings (1995), as stated above, is a major theorist of culturally relevant teaching and defines culturally relevant teaching as having students of color achieve academic success, cultural competence, and critical consciousness. Ladson-Billings (2021) defines academic success in more detail as student learning, which is more than what can be tested in the classroom or on a standardized test. This does not mean that the "extra" learning is not important because it is not reflected on a test score; rather it contributes to the overall learning a student achieves during a school year. Ladson-Billings uses an example of a 5th grader who is at a 2nd grade level. At the end of the year, this student is at a 4th grade level. According to a standardized test or a grade at the end of the year, this student is not successful in advancing to the next grade; however, this student clearly succeeded in learning. According to Ladson-Billings (2021), the growth of this 5th grader is academic success in advancing two grade levels, not meeting grade level expectations.

Cultural competence also helps students achieve academic success. Ladson-Billings (2021) defines cultural competence as making accommodations to serve students of color and being aware of not only community culture and norms, but also their own culture. This means that the history of people of color is interwoven in the entire curriculum, not addressed only in a day or month dedicated to an ethnic group.

Additionally, schools that are competent in culture awareness have interpreters at every school function for parents.

Developing a critical consciousness allows students to critique the world around them. Ladson-Billings (2021) believes that creating critical thinkers prepares students to enter society. However, the pushback teachers can receive from parents and school administration make this challenging. Ladson-Billings emphasizes that critical consciousness is not aligned with any political ideology but enables students to "explore their own problems" and problem solve independently.

In her works, Ladson-Billings details how to develop students' critical consciousness in the classroom. To create a culturally relevant classroom, Teachers need to utilize a student's culture as a vehicle for learning, such as using music lyrics from a rap song to help teach poetry or allowing students who are emerging bilingual to use their native language to understand the content of a course then translate it (Ladson-Billings, 1995).

Another way to do this is to make learning more meaningful by using real-world examples so that students will be more engaged in class. If students are more engaged, they are more likely to learn the material. This allows the students to relate their culture to the topic or skill they are learning in the classroom. The goal is for students to connect to their communities and histories to classroom learning.

To create cultural consciousness, Ladson-Billings (1995) suggests students be given the tools necessary to critique society. Cultural consciousness makes students aware of what is going on in the world, enabling them to critically comment and change it. It is important to create a cultural consciousness for students so they can become

productive members of society. To do this, teachers need to help students engage with the world and others in a critical format such as writing letters to the district administration about why their textbooks are out of date (Ladson-Billings, 1995), or to actively involve students in the social issues of their community by volunteering or participating in local activities (Ladson-Billings, 1995). This connects the curriculum to students' lives and shows students how they can participate in society concerning current issues. Perhaps most importantly, it teaches students that critical thinking requires actively examining power and how it operates.

Ladson-Billings (1995) also notes that demonstrating caring and personal accountability increases achievement in a culturally relevant classroom. Teachers must show they care not only for students' well-being but also the cultural relevance of content and skills taught in the classroom (Ladson-Billings, 1995). Personal accountability is demonstrated by teachers who realize they are personally responsible for the education occurring in the classroom. This might look like teachers standing up for what is right even though it might go against district norms (Ladson-Billings, 1995). For example, a math teacher might decide not to use the district math program because it is not culturally relevant to the students.

Gay

In *Preparing for Culturally Responsive Teaching*, Geneva Gay (2018) defines CRE as "using the culturally knowledge, prior experiences, frames of reference and performance styles of ethnically diverse students to make learning encounters more relevant and effective for them" (p. 36). She explains in more detail that CRE:

> Acknowledges the legitimacy of the cultural heritages of different ethnic groups, both as legacies that affect students' dispositions attitudes, and approaches to learning as worthy content to be taught in the formal curriculum. It builds bridges of meaningfulness between home and school experiences as well as between academic abstractions and lived sociocultural realities. It uses a wide variety of instructional strategies that are connected to different learning styles. It teaches students to know and praise their own and one another's cultural heritages. It incorporates multicultural information, resources, and materials in all the subjects and skills routinely taught in schools. (p. 37)

Gay agrees with Ladson-Billings (1995) that to create a culturally relevant classroom, a teacher must know the cultural identities of his or her students. However, she further suggests that teachers need to learn details of their students' cultural groups. This, according to Gay, increases students' attention since the teacher is demonstrating care for the students and showing that their culture is important.

This differs from Ladson-Billings because Gay asserts teachers should know their students more personally than Ladson-Billings does. For example, Ladson-Billings describes a CRE classroom that includes many different cultures in the curriculum. Gay, however, suggests that a teacher learn the individual cultures of each student and include it in the curriculum. While both writers believe that culture is important, Gay believes it is the most important aspect of CRE teaching and curriculum.

Gay (2002) believes a way to increase the use CRE is to make a school culture a culture where teachers, administrators, and students have informed discussions on multi-cultural education. This allows the population of the school to have honest, respectful discussions on race and culture. Because perceptions of cultures other than one's own can be distorted due to the influence of upbringing, mass media, and other factors, and it can sometimes be hard to create a safe conversation. By providing teachers with multicultural knowledge, it will become less difficult to include culturally relevant strategies in the

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classroom. For example, with these resources, a history teacher can look beyond a textbook for content to teach, to other sources, especially from people of color, who might have different perspectives on that historical topic.

Additionally, Gay's (2002) work shows that to create a culturally relevant classroom, teachers need to not only see and acknowledge standards and common curricula but also recognize where they might be failing to represent their students' culture through culturally conscious symbolic curriculum (i.e., what teachers put on their walls) and addressing social curriculum (e.g., current issues in society). By identifying issues of race and culture not only in the classroom but also in society, student learning becomes relevant to them and their lives. Using representative curriculum, the teacher demonstrates that their students' culture is important, thus allowing them to make a personal connection with the student: Developing these kinds of relationships is critical to the CRE theoretical framework.

Both Ladson-Billings (1995) and Gay's (2002) theories create the foundation for this study by providing context and a working definition of culturally responsive teaching. Ladson-Billings and Gay's works demonstrate that CRE includes students' culture *and* how a teacher should teach to tap into those cultures to bridge communities and learning. It is much more than curriculum; it also links the students' culture and communities to their learning.

Literature Themes

Using this theoretical framework below that focusses on relationships, intention, and diversity, further research illuminates how they are used in a high school setting.

Figure 2.2: *Theoretical Framework*

```
              ┌─────────────────────┐
              │ Culturally Relevant │
              │      Education      │
              └─────────────────────┘
        ┌───────────────┼───────────────┐
┌───────────────┐ ┌───────────────┐ ┌───────────────┐
│               │ │               │ │               │
│ Relationships │ │   Intention   │ │   Diversity   │
│               │ │               │ │               │
└───────────────┘ └───────────────┘ └───────────────┘
```
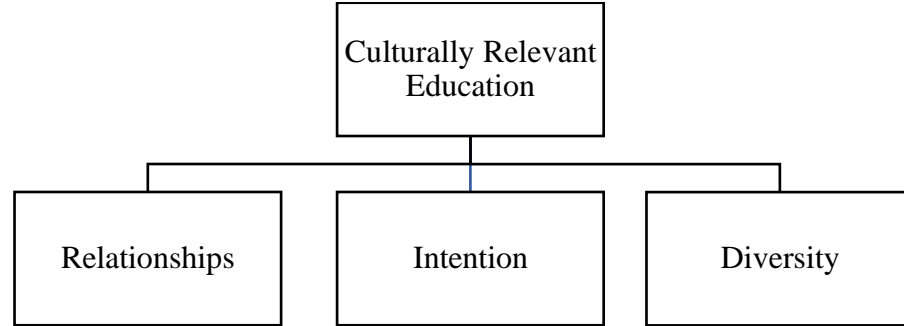
Gay's (2010) definition of Culturally Relevant Education "simultaneously develops, along with academic achievement, social consciousness and critique, cultural affirmation, competence, and exchange" (p. 45). This case study specifically asks how CRE is used and how teachers perceive it.

Relationships

Teacher relationships with their students is a fundamental aspect of culturally relevant teaching. Griner and Stewart (2012) explain that disconnection between teachers and students of color is a major cause of the achievement gap. Stembridge (2019) believes that equity is not possible without a connection between the student and the teacher. A teacher-student relationship creates a connection that may be based on curriculum, outside activities, or current events. This connection shows students that the teacher cares about them and wants them to be successful.

Stembridge (2019) also believes that the perception of openness in relationships in school spaces enable students to most likely be more successful. Stembridge (2019) explains that "human beings are more willing to invest ourselves in areas where there is support and connection" (p. 40). Gay (2018) agrees, stating "students, in kind, feel obligated to we worthy of being so honored (of a relationship with the teacher). They rise

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to the occasion by producing high levels of performance of many different kinds—academic, social, moral, and cultural" (p. 59). In other words, relationships help students feel more engaged with the curriculum, leading to increased student participation in the classroom. When students feel that they have a connection with the teacher, they want to please that teacher. Relationships are a way to get students invested in school (Stembridge, 2019). Relationships can be created through a teacher demonstrating competence, fairness, and integrity (Stembridge, 2019).

Hammond (2015) also agrees that relationships or "learning partnerships" help build trust with students across different cultures so that relationships created can create deeper learning. Relationships can create trust and respect between the teacher and students that will also allow the teacher to increase rigor in the classroom. Handcock (2011) concurs, citing different studies of African American students who felt that when they had the support of the teacher, it raised their achievement and made school more meaningful for them. Kessler (2011) describes a scenario in his own classroom when he assigned students to create a family tree. He failed to realize that not all students could make a "tree" because one of his students was adopted. Since he did not look at every student individually, this student (and her adoptive mother) felt excluded from the assignment and the class.

In conclusion, relationships are an important theme in CRE work because it creates a connection between the student of color and the teacher. Students tend to do better in the classroom when they have a sense that their teachers care and want them to be successful in the classroom.

Diversity

The second literature theme focuses on diversity, which is often lacking in school curricula. Diversity in curriculum means presenting different cultures' histories and perspectives in the course content. Kesler (2011) argues that teachers and administrators do not see the inherent political, social, and cultural undercurrents in the curriculum. Texts and curriculums are written from the majority perspective, which often marginalizes minority groups. For example, there are very few textbooks that discuss the impact of the American Civil War on Native Americans. However, Native Americans participated in the war by contributing to both sides (depending on the tribe) because they were hopeful that either side would help them gain more sovereignty on their land.

Gay (2010) agrees that any culturally based curriculum other than the majority tends to be a special project or a single assignment and is not interwoven into the entire class. For example, a teacher might assign a special project on Martin Luther King Jr., and what he accomplished, however; after completion of that project, there is little talk of diversity or contributions to the modern-day Civil Rights movement. Students of color find it difficult to learn when they are not represented in the curriculum that is taught.

Another example of diversity is from Goldenberg (2013) who believes that students of color resist schooling for fear of acting "White." As stated in Chapter 1, White culture has dominated American society, including education. Students do not want to act "White" because that culture has marginalized them for many generations. That "White" culture has also been used to measure success (e.g., standardized tests). In this example Keefe (2009) shows that "speaking White" can cause negative peer pressure; therefore, students will not use it in the classroom. However, Goldenberg

(2013) feels that students of color "fear of acting white" is not resisting academic

achievement but resisting the lack of diversity in the curriculum. For example, Keefe

(2009) talks about an example he used in a meeting with Black students:

> When I give a speech, as an attention-grabber, I often tell my audience that I will
> be speaking to them in two languages: my primary language of Ebonics and my
> secondary language of English. I let them know that I have mastered the former
> but still struggle with aspects of the latter. This typically results in reserved
> laughter from the audience, but the reality is that this is precisely the case with
> many Black people. Black male students expect one another to be fluent in
> Ebonics; if they are not, they are often accused of 'speaking White'. Speaking
> standard English can cause ridicule, thereby limiting the students' desire to
> practice it in the classroom. (p. 17)

Students may feel that if they follow the dominant culture, they are rejecting their own

culture (Goldenberg, 2013).

Curriculum from textbooks is not immune to this problem. Textbooks are

controlled by the majority group and, therefore, include content that relates primarily to

the majority culture (Gay, 2010). Similarly, Kessler (2011) argues this omission

marginalizes implies to students of color that their history and culture is not important to

society. In many history textbooks, for example, minority history is limited to a special

section in a chapter or a single page of a chapter. Hammond (2015) believes that diversity

in curriculum recognizes students' culture and use it to enhance learning. Students

understand the importance of their history and culture because it is discussed in the

classroom consistently. Therefore, if cultures are equally represented and valued, students

of color tend to feel the connection to school.

Additionally, there is often a lack of diversity in the school setting. Griner and

Stewart (2012) conducted a study of students and parents of color in a school setting

concluding that they sometimes feel unwelcome at school meetings and functions

because they might be the only minority present, and, therefore, they could be singled out. Also, schools often hold back-to-school nights, teacher conferences, review sessions, and award ceremonies during the evening. The schools do not realize that some parents work during this time, and sometimes students watch their younger siblings for their parents to work, which results in parents feeling out of touch with the school community (Griner & Stewart, 2012). According to Weller (2019), people of color tend to work low end jobs that have evening hours. Therefore, it can be difficult to attend after school functions.

Teachers need to connect not only with students and the community, but with the content they teach as well. Students of color find it difficult to connect with teachers who follow mainstream White culture (Griner & Stewart, 2012). This leads to students feeling disconnected with school rules and expectations, which then hinders their learning (Griner & Stewart, 2012). When a student is disconnected from the class or the content, they do not feel the need to learn the material.

Teachers need to ensure that the curriculum content is diverse, accurate, and comprehensive, and consistently taught. Kessler (2011) argues that alternative family structures and other cultural attributes can be an essential part of the curriculum. Including these leads students to feel validated (Gay, 2010). Similarly, Brown (2007) believes that inclusion of different cultures and perspectives into a classroom creates a learning community where both the teachers and students feel respected and connected. Inclusion, according to Brown (2007),

> "emphasiz[es]that all people, especially teachers, should learn about and respect
> themselves, one another, and all other people in honor of their many diverse
> cultural characteristics" (p. 60).

In other words, students of color feel more connected to learning and school when their culture and history is being taught regularly in school. This proves to the student that they and their culture are important to the teacher and the school.

Kafele (2009) describes a situation when he was principal. He asked his staff to listen to more hip-hop music. He wanted his staff to see both the positive and negative aspects of hip-hop so they could better relate to their students. He believes that students of color, particularly African American males, listen to and internalize the lyrics, making it harder for teachers who are unfamiliar with the genre to connect with them. Kaflele (2009), as an older White male did not listen to that type of music, and most of the teachers in his school did not listen to it either. However, by taking the time to listen to the music and analyzing the lyrics of the songs, Kafele (2009) found that teachers had a better understanding of hip-hop and the impact of the lyrics on their students. Therefore, teachers could understand why their students might be disengaged and they can create lessons incorporating hip hop lyrics to better engage students in the material.

Diversity in curriculum also helps create relationships between a student and the teacher. Keefe (2009) states, "Just as one cannot teach what one does not know, one cannot effectively teach whom one does not know. When you know your students' history, you know your students" (p. 24). Including more diversity in the curriculum and learning about students' histories and culture, in turn, helps to foster learning because the students feel comfortable being themselves. They feel they don't have to act a certain way or fear punishment for acting a certain way. When teachers become more inclusive, students feel recognized, respected, valued, seen, and heard (Gay, 2010). If a student feels that the teacher cares about them, they will work harder and be more connected to

the content in the class. Connecting and including the ideas and beliefs of students'

cultures assists students in becoming more comfortable in the classroom. As a result,

students tend to participate and learn.

In conclusion, diversity is a CRE that not only includes diverse content but also

diverse way of thinking. Teachers need to be diverse in thinking as well as creating

lesson plans. Teachers need to be more diverse to help foster the relationships with

students and to help students feel respected and valued.

Intention

The final theme in the literature is intention. For students of color to feel safe and

learn in a classroom, teachers must intentionally create daily lessons with individual

students in mind. According to Hammond (2015), intention is the starting point in CRE

because it activates the teacher's will to change and to have courage when things in and

out of the classroom become difficult. A teacher instituting CRE needs to have the will to

change because it is easy for a teacher to become "stuck" in the way that they teach. The

old way is comfortable and more likely not to anger parents or administration. CRE can

be difficult because it creates a new way of thinking about not only curriculum but also

how a classroom is run. The teacher must change their whole mindset about education

and think about CRE every time a lesson is planned, or a class begins.

Hammond (2015) believes that a teacher's awareness (i.e., intention) of culture is

essential in CRE work. To begin, Hammond believes that teachers need to be aware of

the different levels of culture. This includes surface culture, shallow culture, and deep

culture.

Surface culture can be observing holidays, food, and dress. According to Hammond (2015), this does not create much anxiety in a majority group. Therefore, surface culture is what one typically sees in schools. For example, a cafeteria might provide non-pork options for Jewish and Muslim students.

Shallow culture is made up of unspoken rules around social interactions and norms. This can be harder for teachers to understand because cultures have different unspoken rules. For example, Hammond (2015) uses eye contact as an example of shallow culture. In American White culture, it is respectful to look someone in the eye when you speak to them. However, in some Asian cultures, it is disrespectful to look someone in the eye while having a conversation. Deep culture, according to Hammond (2015), is made up of tacit knowledge and unconscious assumptions that create someone's world view. They are mental models of culture in the form of associations and assumptions. For example, in Western culture red means danger, while in Eastern cultures, red means good luck. For Westerners, red has been linked with danger for so long the association is automatic.

These levels of culture are important to understanding intentionality because, according to Hammond (2015), to create change in a classroom, deep culture is what needs to be addressed. This is the most difficult and challenging part of culture to address; therefore, it needs to be intentional, so it is not skipped over. Awareness of surface and shallow culture is important but will not create the change needed to make a classroom or school more culturally diverse.

To achieve that, a teacher needs to look through a broader socio-political lens when they are planning a lesson. Hammond (2015) believes teachers who do this focus

the cultural lens to successfully teach students of color. Class projects and assignments need to be intentionally constructed to include the culture and history of all students. For example, in a U.S. History class, the 4th of July should include the impact the Declaration of Independence had on women and people of color. A teacher who sees only shallow or surface culture would not address negative aspects of the Declaration. With an understanding of deep culture, a teacher could support students to understand why the 4th of July might not be a celebration for every American. The lesson becomes more personal because it changes how students think about the holiday and how people of color today might feel about it. By deepening cultural understanding, the curriculum becomes stronger and more rigorous (Kessler, 2011). Knowing the students' perspectives and culture, teachers see students as unique individuals, and schools can create a greater energy for learning.

Another way to be intentional in CRE is by approaching teaching as not *what* to teach students, but as *how* to work with the students. This requires teachers to intentionally learn not only about students' culture but also on how students learn. Differentiation is a common strategy in today's classrooms whereby teachers modify lessons and exams based on how individual students learn. According to Hammond (2015) culture can be a part of how students learn. For example, some cultures are more collective, meaning people work together to solve a problem, whereas others are individualistic with expectations that a person works by themselves. Hammond (2015) states that White culture is more individualistic, while students of color tend to have a more collective learning style. Teachers need to incorporate different learning strategies

to deepen existing knowledge and enthusiasm for learning (Wlodkowski & Ginsberg, 1995).

Importantly, Evans et al. (2020) asserts that intention is needed for an entire lesson to be effective. They use an example of a teacher who wanted to use hip-hop in her English classroom. Instead of using it to dive deeper into the content, the teacher used only a snippet of the song and then had students work in their textbooks. The authors believe the teacher used CRE only as a "hook" to get students' attention and then went returned to a non-inclusive lesson. This token use of cultural music amounts to cultural appropriation because it does not use the interest and experiences with songs and lyrics of the students (Evans et al., 2020).

Intention can also include developing students' critical consciousness. Ladson-Billings (2021) states that critical consciousness is where students can apply and synthesize and critique their environment to be productive members of society. Teachers need to intentionally teach students not only cultural competence but also critical thinking skills and how to apply them to real-life situations. Ladson-Billings (2021) believes that teachers avoid teaching critical thinking skills because it can be perceived as political. However, the skill to think critically about the world is essential to becoming effective members of society.

It is important to note that teachers might intentionally avoid CRE because it may not be accepted by an administrator or the community. For example, according to the *Tampa Bay Times*, Florida has started to ban curriculum that could be considered diverse because "it will indoctrinate students." Philosophers, teachers, and educators have said

that these critics are incorrect in this belief. However, these unsubstantiated claims about

CRE may lead teachers to fear repercussions and, therefore, avoid CRE in the classroom.

In conclusion, intention was the last theme that materialized from the literature.

CRE requires that teachers be purposeful on using students' culture every day in class,

not just on one activity that deals with a minority culture or person.

But Isn't That Good Teaching?

In some of the literature a problem arose with the idea that teachers,

administrators, and the community might think that CRE is "just good teaching."

Figure 2.3: *Stembridge's Ideas on "Just Good Teaching"*

Cultural
Competence

Culturally
Responsive
Habits of
thinking (a
toolbox)

Just Good
Practices
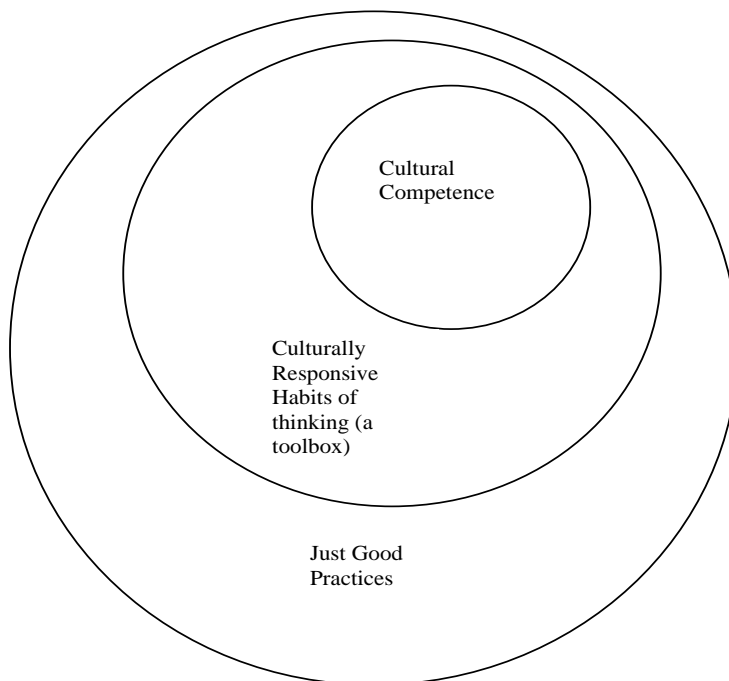
However, Ladson-Billings (1995) and Stembridge (2019) disagree. Ladson-Billings

(1995) questions that fact that if it is just good teaching, why are there still gaps in

education? She also states that the biggest difference between "good teaching" and CRE

is the specific focus on students of color (1995). Stembridge (2019) believes that "good

teaching" does not include equity work. Katz and Van Allen (2022) also agree, they

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believe that CRE is not only about culture but responding to injustices experienced by students.

> Stembridge (2019) states,
>
> > rather than limiting our students to one dimension of their identity for our pedagogical convivence (and loaded with the stereotypes and biases), the goal is to compassionately see each student as fully human… context always matters, and a significant part of equity work is the task of interpreting context. (p. 66)

He believes the difference is the mindset of teachers when planning lessons and teaching the content. Figure 2.3, from his book *Culturally Responsive Education in the Classroom: An Equity Framework for Pedagogy* (2020), shows how being culturally responsive goes deeper than "just good teaching."

Culturally Relevant Education and Professional Development

Today in schools, teachers learn new teaching strategies through regular professional development. This case study also examined CRE in professional development at Mountain View. Therefore, articles concerning professional development and culturally relevant education also needed to be identified. In addition to the themes of relationships, diversity, and intention developed from a systematic review, other themes emerged concerning CRE in professional development. Using the same process as stated earlier in the chapter, articles were found on how CRE can be taught in professional development. The themes that were created specifically for CRE and professional development were reflection, collaboration, and creating a toolbox of strategies to use in the classroom. Figure 2.4 below visualizes how reflection, collaboration, and a toolbox for teachers emerged from the professional development literature. These themes are like the themes stated earlier because they discuss CRE, but the themes discussed below are specific themes on how to include CRE in professional development.

Figure 2.4: *CRE and Professional Development*

```
        ┌──────────────────────┐
        │  CRE and Professional │
        │      Development      │
        └──────────────────────┘
          │          │          │
 ┌────────────┐ ┌────────────┐ ┌────────────────────┐
 │ Reflection │ │Collaboration│ │Toolbox for Teachers│
 └────────────┘ └────────────┘ └────────────────────┘
```
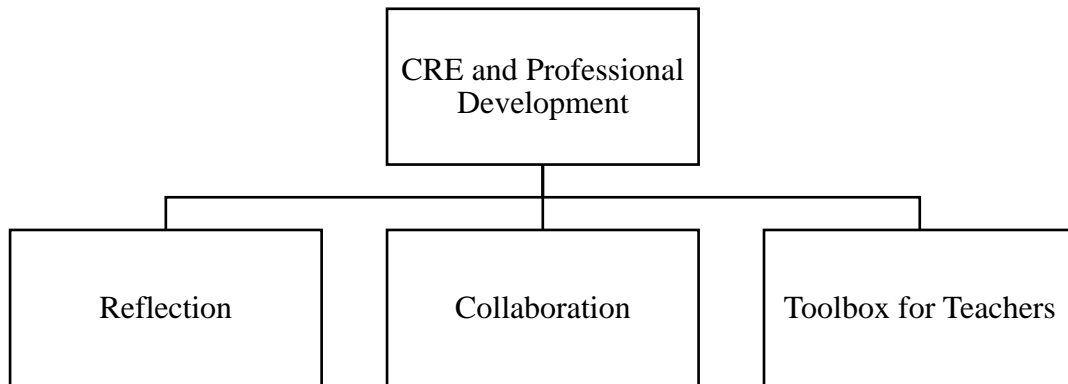
Reflection

Reflection is a common practice used to improve teaching. Reflection is taking

the time to look at what and how you did something to improve yourself for the future.

Teachers reflect on themselves as educators and what they do in and out of the classroom

to improve their pedagogy. Reflection, as professional development strategy in CRE,

begins by having teachers reflect on the impact of race and culture on not only how they

teach but also how themselves (Landsman & Lewis, 2006). According to Landsman and

Lewis (2006),

> no amount of external focus on diverse learners can ameliorate the challenges that
> occur if one does not also understand the impact that one's own life experiences
> have had on expressions of behavior, thought and belief. The lens through which
> all of us interpret the expressions of others is quite powerful and often
> unconscious. (p. 254)

This suggests that through reflective practice teachers need to be mindful of their own

experiences, understandings, and awareness of race and culture so that they may realize

the importance of using CRE in their classrooms. Also, teachers need to realize that there

is an opportunity gap occurring in schools. As Howard (2006) states,

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self-knowledge is perhaps the one of the most critical factors in determining our effectiveness as White teachers in multiracial schools. The more I have examined my own 'stuff, related to race, culture, and difference, the less likely it is that I will consciously or unconsciously expose students to my own assumption of rightness, my luxury of ignorance, or my blind perpetuation of the legacy of White privilege. (p. 127)

This self-knowledge can be achieved through meaningful reflection, leading teachers to understand the need for CRE and, in turn, assist them to close the opportunity gap and ensure that students of color are not left behind.

As teachers reflect on the issue of race in schools, according to Brown and Crippen (2016), it allows them to continuously hone their practice of CRE and improve their lesson planning. Reflecting on their use of CRE allows teachers to acknowledge what worked, what did not work, and what strategies they should use in upcoming lessons (Brown & Crippen, 2016). Also, Brown and Crippen (2016) argue that reflection provides a space for teachers to create professional goals and to create an action plan to accomplish the things they feel they fell short on.

As teachers reflect on the good and bad of the lesson, they also need to take time to reflect on how race has impacted them both personally and professionally. Then teachers need to reflect on how race impacts both the classroom and the curriculum to make their classroom more culturally relevant.

Collaboration

Collaboration is the idea of teachers working together toward a common goal, in this case, to make their classrooms more culturally relevant. According to Brown and Crippen (2016), collaboration is essential for teachers to achieve growth in CRE. In collaboration sessions, teachers brainstorm ideas and align their teaching philosophies to current research on student learning and CRE strategies (Brown & Crippen, 2016). For

example, Brown and Crippen (2016) state, "as teachers move from awareness to practice, they require specific support in constructing curriculum that are both reform-based and integrate students' backgrounds" (p. 482). Teachers can bounce ideas off each other to achieve a more culturally relevant lesson and classroom.

For CRE instruction to improve, teachers need support in the form of other teachers. According to Landsman and Lewis (2006) the "building of an inclusive community in education is grounded in both co-learning and the sharing of resources and expertise that will enable all members of the community to rise together" (p. 252). Collaboration encourages teachers to share their thinking, their understandings, and their awareness of students' culture and race to brainstorm new and innovative ways to use CRE strategies in their classroom. Together, teachers can help close the achievement and opportunity gaps, and because they are working together on their professional development, they can increase their knowledge of CRE. Collaboration provides productive ways to learn more about CRE and how to successfully implement it into the classroom.

In conclusion, collaboration is helpful for teachers to brainstorm ideas on how to use CRE in a classroom. Teamwork helps teachers work together to increase their knowledge of CRE because they can bounce ideas of each other and talk things out and get instant feedback.

Teacher Toolbox

According to Boykin and Noguera (2011) there is no quick fix to closing the opportunity gap. That is why teachers need different, effective strategies to use in their "toolbox." This is especially true for teachers trying to make their classrooms more CRE

inclusive. The toolbox includes the following: lesson exemplars, readings, evaluating

lesson plans, and more (Brown & Crippen, 2016). When a toolbox is fully stocked,

teachers envision culturally responsive lesson plans especially for their certain subject

area (Brown & Crippen, 2016).

Gay (2018) goes into detail about what this toolbox can look like. In her book

Culturally Responsive Teaching: Theory, Research, and Practice (2010), she includes a

section at the end of every chapter on "practice possibilities" to supply an educator's

toolbox. For example, in the chapter "The Power of Culturally Responsive Caring," she

lists examples and strategies on how to create relationships and show students that their

teacher cares. For example, she provides this "tool" for teachers:

> be critically cognizant of your attitudes, beliefs, and expectations about different
> ethnic, racial, and cultural groups, cultures, experiences and issues, and track how
> they are manifested in instructional practices and relational behaviors (e.g., in
> professional and personal habits of being). (p. 97)

Gay describes a way for teachers to show that they care and want to create relationships

by instructing the teacher to be aware their own underlying believes and assumptions

about different racial groups.

Teachers feel that a toolbox is useful because they have ideas to access if they feel

stuck. By having a wide selection of CRE strategies available, teachers feel more

comfortable trying CRE strategies in the classroom (Brown & Crippen, 2016). According

to Landsman and Lewis (2006) the more strategies and knowledge a teacher has, the

more likely a teacher can blend different content and knowledge together. It is also

important to ensure that these tools are proven successful in the classroom by the data.

According to Boykin and Noguera (2011) teachers should look for evidence that the tools

are successful, systematic, and replicable to have successful implementation (Boykin & Noguera, 2011).

Connection of Literature Review to the Case Study

Relationships, diversity, and intention are major components of CRE. They inform how an instructor incorporates diversity into his or her teaching and aid institutions in closing the achievement the achievement gap. This literature review narrows and defines what CRE is through the themes of relationships, equity, intention. This has focused the case study on Mountain View High School by giving examples of what to look for when conducting research. It also provides a solid foundational knowledge of CRE to observe and interview teachers and analyze lesson plans.

However, the available literature lacks articles addressing how to incorporate CRE into a high school setting. For example, a database search of "culturally relevant education" and "high school" generated zero results. Searches of "elementary school" or "middle school" combined with "culturally relevant education" did result in more articles, as did "culturally relevant education" combined with specific subject areas (e.g., math and science). However, a more global view of the impact of CRE on an entire school was difficult to find. Therefore, the case study as described in Chapter 3 will attempt to shed light on CRE and its use in a high school setting.

This theoretical framework was essential when conducting research of the lesson plans, interviews, and observations. It provided a way to narrow and focus the questions asked and identify what to look for in observations and lesson plans when collecting data. This study explores teachers' perceptions of CRE and their implementation of CRE in the classroom. During the teacher observations, the key focus centered around the diversity

of content, the intention of including students' background and culture in creating a class, and how the teacher created relationships in the classroom. Teachers, who were chosen by the administration of the school, have verbally indicated an interest in creating positive change for students of color to the school administrators or other teachers.

Conclusion

The literature on CRE provides the foundation of CRE as a tool to create an equitable classroom in the high school context. The literature review utilized the works of Ladson-Billings and Gay to create a theoretical framework because they are considered the founders of CRE. The major themes of relationships, diversity, and intention were identified as essential parts of the theoretical framework. The literature review also included sources about CRE in professional development, which is an important factor in one of the research questions. Collaboration, reflection, and a teacher toolbox were themes that emerged from sources on professional development and CRE. The next chapter explains the methods regarding how the case study was created and how the research was conducted.

Chapter Three: Methodology

An opportunity gap exists in American schools today, and CRE is a theory often

used to help close that gap. As stated in chapter one, the goal of this study is to identify

the following: (a) how teachers perceive Culturally Relevant Education (CRE), (b) how it

is operationalized in the classroom, and (c) implications for future professional

development. Using case study methodology, the researcher examined CRE at Mountain

View High School. This chapter details the qualitative research methodology used in this

study, including participant selection, data collection, data analysis, and dissemination.

Qualitative Approach

Creswell (2013) states that qualitative research provides a complex and detailed

understanding of the research. It also allows researchers to explore a problem or issue

where variables cannot be easily measured or where voices are silenced (Creswell,

2013). Qualitative research consists of interpretive, material practices that allow the

world to be visible (Creswell, 2013). It also allows researchers to tell the stories of

individuals and encourages the participants to be active in the study. This type of

research is especially important in education and social service where the stories of the

participants are necessary to show a real-world perspective (Stake, 1995).

Although there are many types of qualitative research, a single case study

approach was determined to be most appropriate for the purpose of this research. A case

study explores a phenomenon using a variety of data sources to explore an issue in

multiple ways (Baxter & Jack, 2008). In case study research, the investigator explores a real-life problem using multiple forms of data collection, and the final report includes a case description or concluding themes (Creswell, 2013). Case studies allow researchers to focus on a single case for an all-inclusive perspective (Yin, 2014). A singular case study also allows the researcher to capture the complexity of a phenomenon (Stake, 1995). It investigates a real-world problem in depth and explores the complexity.

According to Yin (2014) and Baxter and Jack (2008), a case study is relevant when the focus of the study is to answer how and why something occurs; this allows the researcher to delve deeper into a subject. Therefore, developing these how and why questions is a crucial unit of analysis (Yin, 2014). Once the case is identified, then the boundaries are set (i.e., who, how many, where) to limit what is studied in the research phase (Yin, 2014).

Sampling is important to identify subjects for a case study. This case study used stratified purposeful sampling and criterion sampling. In stratified purposeful sampling, the researcher selects certain sites and/or individuals to include in the study so they can purposefully focus the research problem and phenomenon in the study (Creswell, 2013). This case study design empowered the researcher to decide who and what was to be sampled, how the research would be done, and how many people and sites need to be sampled (Creswell, 2013). Stratified purposeful sampling examines subgroups (i.e., different groups inside a large group) and facilitates comparisons (Creswell, 2013). Criterion sampling requires that cases meet certain conditions. In criterion sampling, the subjects are selected based on criteria for the study (Creswell, 2013). In other words,

stratified purposeful sampling helps decide who participates due to the research questions and criterion sampling identifies the participants that meet certain criteria.

In a single case study approach, there are multiple ways to collect data including interviews, observations, and documents. In an interview, a series of questions are prepared for either an individual or a group that is being studied. According to Yin (2014), questions are developed before and during the interview process. Also, during the interview, the researcher needs to be a good listener by observing the interviewee's reactions and body language along with listening to the words the interviewee is saying (Yin, 2014). Interviews include questions directly related to the case; these are insightful because they provide explanations and personal views (Yin, 2014). However, interviews can have a negative effect on the study as well, particularly if the questions are worded to create bias, if the responses from the interviewee are not documented accurately, or the interviewee attempts to give answers the researcher wants to hear (Yin, 2014).

When conducting observations, the researcher notes a phenomenon in the field setting through using their five senses and recording what stimulates those five senses (Creswell, 2013). In other words, a researcher documents what he/she hears, smells, sees, and touches. Observations are a good tool in a case study because they reveal reactions to research questions in real time (Yin, 2014). However, observations can be time consuming, and it is often difficult for one observer to see, hear, and record multiple actions all at once (Yin, 2014).

Physical artifacts are papers, pictures, videos, etc. that can be used to help develop a broader understanding of the case (Yin, 2014). They can give insight into

cultural and technical features that observations and interviews miss (Yin, 2014).

However, they can be challenging to obtain (Yin, 2014).

After collecting data, the researcher must analyze it. In qualitative research, the researcher organizes data, reads and memos the data, codes and themes the data, and then interprets the data (Creswell, 2013). Yin (2014) suggests relying on the theoretical propositions that led the case study in the first place. For example, the literature review in Chapter 2 narrowed down what exactly CRE is. This important strategy uses the theoretical ideas to develop the research questions. Additionally, the theoretical ideas guide organizing and analyzing that data (Yin, 2014). Yin (2014) also suggests using pattern-based logic when analyzing data to generate codes and themes. In this type of study, the researcher compares the findings from the case studied with predicted information before the data was collected.

Creswell (2013) suggests for a researcher to first immerse themselves in the data and read the transcripts several times before breaking it into parts (Creswell, 2013). Using these memos, the data can be put into initial categories (Creswell, 2013). The next step in data analysis is to describe and classify data into themes (Creswell, 2013). At this stage the researcher describes what is seen and "provide(s) an interpretation in light of their own views or views in the literature" (Creswell, 2013, p. 184).

The first way to start analyzing the data is to create codes. Coding sorts of data into small categories of information to create evidence (Creswell, 2013). The researcher starts with five to six codes and expands after re-reviewing the data. According to Creswell (2013), it is important to have no more than 25-30 categories so that it is possible to translate those codes into a limited number of themes. Naming the codes will

come either from exact quotes of the participants or names the researcher composes (Creswell, 2013), requiring both inductive and deductive reasoning.

Inductive reasoning is the idea of using and organizing the data into increasingly more abstract forms of information (Creswell, 2013). Deductive reasoning is the idea that researchers create themes that are supported by data (Creswell, 2013). Through coding, themes emerge. Themes are broad units of information that include several codes (Creswell, 2013). The researcher finds similarities among the memos and codes to group them together into themes. In a case study, these themes will form the detailed description of the cases.

However, there are limitations to qualitative research. First, a power relationship could be created because the researcher knows the participants and that could create bias (Creswell, 2013). Bias can be created because the participants have created a relationship with the researcher and do not want the researcher to be disappointed if the data, they provide contradict their research. Therefore, participants might say or do things the researcher wants to see or hear, which will skew the data. Researchers need to allow the participants to be a part of the data collection (looking at research questions before hand; collaborating during data analysis) to limit that power relationship (Creswell, 2013). Also, qualitative research, specifically case studies, does not rely on quantitative data (Yin, 2004). However, certain cases require different needs and situations (Yin, 2004).

The overall goal of qualitative research is to solve or identify an issue for a population. The goal for this study was to understand teacher perception of CRE and teacher implementation of CRE in a high school setting. To fulfill this goal, the study

needed to collect data in multiple ways. To collect these varied forms of data, purposeful

sampling was used, and three observations of the classes for four teachers during their

99-minute class periods occurred. These teachers also submitted two lesson plans that

illustrate their use of CRE in instruction. The purpose of this case study was to identify

culturally relevant teaching strategies at Mountain View High School. The research

questions are as follows:

1. How do high school teachers perceive CRE?

2. How is CRE operationalized in the classroom?

3. What are the implications for the teachers' professional development?

Research Site

The school where this study was conducted is Mountain View High School,

which is in the Hills School District. During the 2015-16 school year, the year prior to

data collection, Mountain View had approximately 2,600 students (Colorado

Department of Education, 2016). Of these 2,600 students, 10% identify as African

American and 17% identify as Latino (Colorado Department of Education, 2016).

Mountain View also has 175 faculty and staff members and has a long-standing

reputation of high achievement, specifically on standardized tests. The school's test

scores are above the state average, which makes it a high performing school (Colorado

Department of Education, 2015). The school has consistently scored above the state

average in ACT and Advanced Placement test results as well (Colorado Department of

Education, 2015). On the ACT in 2014, Mountain View students e scored an average of

22.7 out of 36, while the state average was 20.3 (Hills School District, 2016). The most

common AP exam taken at Mountain View is English Language and Composition with

236 students taking the exam, and with a 78% pass rate with a score of three or above. In comparison, 55% of students who took this exam nationally scored a three or above (College Board, 2016).

However, there is a significant gap between the test scores of the students of color and White students. Approximately 38% of the students at the school are African American or Latino (Hills School District). On the 2014 TCAP math assessment at Mountain View, 24% of African American and 40% of Latino students scored proficient, while 55% of White students scored proficient (Colorado Board of Education, 2016). On the reading assessment, 76% of African American and 78% of Latino students scored proficient, while 84% of White students scored proficient (Colorado Board of Education, 2016).

Additionally, students of color are less likely to register for and complete AP classes. Those who take the AP tests face significant gaps in scores in comparison to White students (Colorado Department of Education, 2016). For example, in 2014 146 African American students and 155 Latino students took the AP English Language exam, while 906 White students took the exam (Colorado Department of Education, 2016). In the state of Colorado, African American students averaged a 2.21 and Latino students averaged 2.38 on AP exams, while White students averaged a 3.04 on the AP exams (College Board, 2016). Since the school is high achieving, the opportunity gap between students of color and White students is often hidden.

This school was chosen for two reasons: (a) The researcher is a social studies teacher at Mountain View and, therefore, (b) has a vested interest in the school and wants to see the school continue to improve. This study can identify teachers'

perceptions about CRE, describe their operationalization of CRE, and implications for professional development.

Recruitment and Selection

To identify participants for this study, the researcher met with the principal at Mountain View High School (see Appendices A and I). Administrators in the Hills District have received training in CRE, which allows them to identify qualified participants. Additionally, the principal is qualified to help select participants because she met the following criteria: (a) has general knowledge of CRE; and (b) has knowledge of the faculty. The principal's knowledge is based on her interactions with the entire staff, specifically the departments in this study, which were more extensive than the researcher's, enabling her to identify teachers who met the criteria.

The initial meeting identified the objectives of the study and potential participants for the study. The case study used stratified purposeful and criterion sampling to select the participants. These two types of sampling were required to select participants who worked in Mountain View and participants who understood CRE. The principal identified participants that met the following criteria: (a) trained in CRE, (b) expressed interest in integrating diversity/culture in instruction, (c) were observed by the principal or self-reported using CRE strategies in the classroom, and (d) represented one of the following content areas: English, math, world languages, and science.

To provide data on how CRE is used in different content areas, a teacher in each major subject area was selected. To qualify for the study, the participants must meet three of the four requirements. It was difficult to find teachers in each targeted subject

area who were officially trained in CRE since the district did not offer formal CRE training.

From this meeting, the participants were narrowed from 175 members of the faculty to four members. These four were chosen to represent four major academic departments (i.e., English, science, world languages, and math) because they had a prior general knowledge of CRE and were willing to participate in the case study; social studies was not included because the researcher's role in the department could create bias.

Participants

The researcher met with the principal and discussed the purpose research questions and asked her help to find one teacher was chosen by the principal from each of the core departments (math, science, English, world languages) who she thought understand CRE and uses it in their classrooms. Rebecca is an English teacher who has taught for 23 years. She has her B.A. in English and Journalism and her M.Ed. in Secondary Education. The classes that were observed were her teamed English 10 and 12th grade World Literature class. A teamed class at Mountain View is a class that is designated to have at least half (if not more) of the students in special education with an IEP and the rest are general education students. Elizabeth is a Spanish teacher who has been in the classroom for 24 years. She received her B.A. in Political Science and her M.A. in Spanish Literature. Her Spanish 4 and her AP Spanish Literature were the classes that were observed. Mark has taught science for 13 years and has a master's in education. His 12th grade honors anatomy and physiology class and 9th grade physical science classes were observed. Finally, Steve has taught for 12 and a half years. He has received

his B.A. in mathematics and 2 M.S. in education: one in curriculum design and instructional leadership and another in educational leadership and policy studies. Table 1 describes the teachers and the classes that participated in the study.

Table 1: *Study Participants*

Teacher	Content	Years Taught	Education	Classes Observed	Grade Level	Dates Interviewed, Post Interviewed & Observed
Rebecca	English	23	B.A. English & Journalism	Teamed CP English 10	10, 12	Inter: 9/21/2016 & 10/3/2016
			M.Ed. Secondary Education	World Literature		Obs: 9/22/2016 (3 classes in a row)
Elizabeth	Spanish	24	B.A. Political Science	Spanish 4	Varied	Inter: 9/21/2016, 9/23/2016, & 12/14/2016
			M.A. Spanish Literature	AP Spanish Literature		Obs: 9/22/2016, 9/26/2016, & 9/30/2016
Mark	Science	13	M.Ed.	Anatomy & Physiology	12	Inter: 9/28/2016 & 12/16/2018
						Obs: 9/26/2016, 9/28/2016, & 9/30/2016
Steve	Math	12.5	B.S. Mathematics	CP Algebra II	Varied	Inter: 9/23/2016, 9/28/2016, & 12/13/2016
			M.Ed. Curriculum Design and Instructional Leadership			Obs: 9/20/2016 & 9/27/2016
			M.Ed. Educational Leadership & Policy Studies			

Note. All names used are pseudonyms. Interview and Observation have been shortened to Inter and Obs respectively.

Data Collection

The selected teachers were sent an e-mail asking them to participate in the study (see Appendix E). The email explained that participation in the study was voluntary and solely for research purposes. Consent forms granting permission to interview and observe their classrooms were attached (see Appendix D). Over the next two weeks, the teachers returned their signed consent forms. The researcher met each of the participants to give an overview of the study and overview of CRE. The overview included definitions from Gay (2005) and Ladson-Billings (1995). These definitions were used to make sure that during the interviews and when teachers sent lessons plans, both the researcher and the participant were working from the same definition to limit confusion.

Teacher Observations

During the months of September and October 2016, the participants were observed for three 99-minute lessons using the CRE rubric to describe culturally responsive practices (Anchorage School District, 2016; see Appendix G). This rubric, created by Anchorage School District to evaluate CRE in classrooms, assesses the attitudes and teaching strategies needed for a culturally relevant classroom. According to the rubric, attitudes include high expectations, professional reflection, personalized instruction, and diverse knowledge systems. Additionally, the rubric states that teaching strategies include student engagement, adjusting lessons for different learning styles, having varied assessments, supporting students, using cooperative strategies, and place-based learning. This aligns with the themes stated in Chapter 2 since the rubric looks for intention, diversity, and relationships.

The teachers chose the lessons to be observed based on the following criteria: (a) a lesson without exams, (b) the teacher was comfortable with the researcher in the classroom (i.e., they felt comfortable with another adult in the room watching everything that goes on in the classroom), and (c) the teacher felt that it was a good example, a telling case, of CRE based on the definition given in the first meeting (Stake, 1995). Also, the researcher ensured the participants were comfortable in the classroom because she wanted to observe the class and not be a distraction for the participant or the students. Throughout the observation, field notes were taken that aligned to the rubric components.

A telling case (Stake, 1995) is a way for the researcher to observe and take a closer look of CRE used in the classroom with the researcher in the room. It was also a good way to study the perception of CRE from the different teachers and notes that were taken aligned to the rubric (Appendix H) components.

Teacher Interviews

During the month of September 2016, the participants were interviewed. Questions asked included those related to teaching, the use of CRE, and how CRE could be used more in the school. Prior to observations, the researcher conducted two 50-minute interviews with each participant using the teacher interview protocol (Appendix F). Additionally, the researcher conducted a 30-minute interview (Appendix F) after each observation during the months of September, October, and December 2016.

The purpose of these interviews was to explore teachers' perceptions of CRE and how they describe its implementation in their classroom. The interviews were audio

recorded and detailed notes were also taken. All the interviews took take place in an empty classroom, an office, or the library, based on each teacher's preference. After the interviews were completed, the recordings were sent to www.rev.com for transcription services.

Artifacts

Additionally, each teacher participant submitted two CRE lesson plans from a lesson that was not observed to be used as artifacts. The purpose of collecting these lesson plans was to provide evidence of the participants' enactment of CRE strategies in lesson planning in other lessons. As stated in Chapter 2, it is important that CRE is used thorough the curriculum and not just one lesson. To examine these artifacts, a rubric adapted from the Pacific Education Group (Appendix G) was used to evaluate the use of CRE in the lessons. For example, this rubric looks at the activities to see if multiple perspectives are being presented throughout the lesson. Also, it allowed for further examination of when teachers are taking time during the lesson to specifically think or plan for and help students of color. This rubric allowed the lessons to be examined to identify if CRE is operationalized in other lessons.

Table 2 shows how the data collected from teacher observations, teacher interviews, and lesson plan artifacts will then be analyzed for this study.

Table 2: *Data Collection and Analysis Plan*

Data collection	Objective	Timeline and Location	Protocol	Data Source & Data Analysis
Teacher interviews	Identify teacher perceptions of CRE	September, October, and December Teachers' offices, classrooms, or library according to the teacher preference	Teacher email protocol (Appendix H) Teacher consent form (Appendix D) Teacher interview protocol (Appendix F)	Interview transcripts Memo data Turn memos into codes and themes
Document collection	Teachers' integration of CRE in other lessons	September, January, February, May, and July	CRE rubric on lesson plan component (Appendix G) Two lesson plans from each teacher who is interviewed that uses CRE	Two lesson plans that use CRE Memo data Turn memos into codes and themes
Teacher Observation	Teacher use of CRE strategies in the classroom	September and October Teacher classroom Teacher will select date and class. Three 99-minute periods	Teacher email protocol (Appendix H) Teacher consent form (Appendix D) CRE rubric (Appendix G)	Observation notes CRT rubrics Memo data Turn memos into codes and themes

Note. Protocols and analysis examples are found in the Appendices.

Data Analysis

Analysis is key in any study to organize and interpret the data to determine whether it provide answers to the research questions (Creswell, 2013) in the form of themes: broad units of information that show a common idea. The procedures used in the analysis are further explained in Figure 3.1.

Figure 3.1: *Data Analysis Plan*

1st reading of data to create memos

Memos are put into Excel in order to create codes

Data and codes are exported into Dedoose

2nd reading of the data using Dedoose and data is highlighted using the codes

3rd reading of data and codes are grouped together to create themes
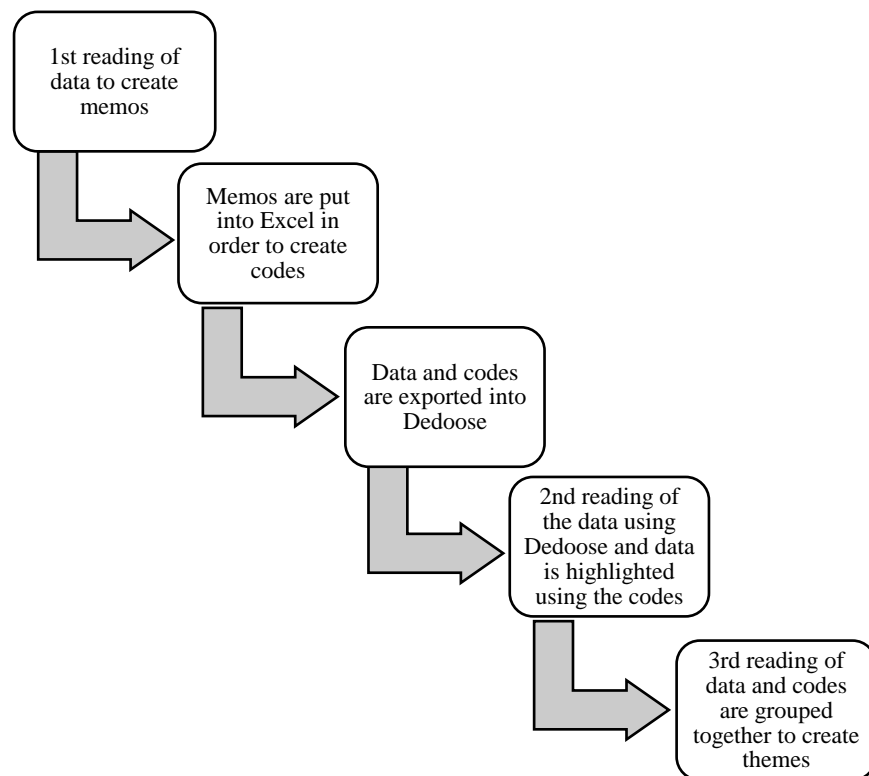
For the analysis of the observations, interviews, and artifacts, data was stored on a personal laptop and backed up to a flash. The researcher typed notes during the observations and wrote notes by hand during the interviews, later typing them into a word document for easy storage and use. All the collected data (lesson plans,

observation notes, and transcripts) were uploaded to Dedoose, a web tool that creates

memos, categories, and themes electronically. For example, the Dedoose program

allowed the researcher to create a color-coded memo specifically related to that quote.

The color-coding of these artifacts enables the researcher to identify themes more

readily.

The researcher analyzed the data through four readings. In the initial reading, the

researcher looked for key words and patterns and created memos with phrases or ideas

summarize that section of data (Creswell, 2013). The research questions were not

referenced in these memos. According to Creswell (2013) it is important to examine the

data without any preconceived notions.

To analyze the data, the researcher used a pattern matching technique. According

to Yin (2014) this technique compares the findings from a case study with a prediction.

The literature study provided information the researcher used to make a prediction.

Comparing the data collected to the prediction strengthens the internal validity of the

study (Yin, 2014).

A second reading of the data focused on coding: categorizing the information

collected (Creswell, 2013). The memos created in the first reading were assigned codes.

Finally, in the third reading, the researcher identified themes of the use of CRE at

Mountain View, how it is perceived, and how professional development would be

impacted. The researcher tracked themes and sub-themes using an excel spreadsheet to

organize the evidence that supported those themes as well as any outliers that

contradicted the major themes found in the data. The data analysis table included the following columns: themes, sub-themes, evidence, outliers.

Finally, the researcher drew generalizations from the data (Creswell, 2013) that identified the CRE protocols Mountain View excelled at, and which protocols the school needed to improve on.

Ethics

Ethics prevent researchers to use a study to verify a predetermined position (Yin, 2014). This researcher is a teacher at Mountain View High School and has a personal interest in the school, which could lead to bias. Therefore, the researcher was careful to remind themselves of these notions before, during, and after the study to avoid bias in the data collection and analysis.

To combat this bias the participant teachers were assured that the purpose of this case study was to research CRE and that anything they said would not be used against them in any way. This explanation was provided verbally and on the consent form (Appendix D). From the outset, the researcher communicated that the subject's participation is voluntary, they can decline to participate at any time, and their confidentiality will be maintained. Everything is kept confidential by using pseudonyms for teachers, the school, and school district.

Summary

In conclusion, the opportunity gap is when students of color do not have the same access to quality teachers, schools, materials, and opportunities as White students. A way to close this gap is to use culturally relevant instruction in classrooms. Data for

this single case study included lesson plans, classrooms observations, and teacher interviews. After collecting this data, the researcher memoed the transcripts and artifacts to establish codes. Combing those codes, themes emerged to demonstrate how CRE was implemented. The next chapter details the different themes that emerged.

Chapter Four: Results

An opportunity gap exists in schools today where students of color do not receive the same educational opportunities White students. This includes access to advanced placement and honors classes, technology, and new curriculum. Culturally Relevant Education (CRE) is a curriculum and teaching strategy that can help narrow that gap. This research is a case study at Mountain View High School. The research questions are as follows:

1. How do teachers perceive CRE?

2. How is it operationalized in the classroom?

3. What are the implications for professional development?

Four teachers from major core subjects participated in this study: English, science, math, and world languages. Teachers were observed for three periods, interviewed three times, and then submitted two lesson plans. The data collected was memoed, coded, and categorized into themes. This chapter is a discussion of the results.

Summary of Data Collection

A qualitative case study was used because it utilized a complex, detailed understanding of research where the variables cannot be easily measured it also allowed the stories of individuals to be told and allowed the participants to become involved in the study as well (Creswell, 2013). A case study investigates a current trend in depth and within its real-world context. Case studies also use multiple forms of data and benefits

from different theories to guide data collection and analysis (Yin, 2014). A single case study was created to investigate Mountain View in depth and with a real-world use of CRE.

This case study used stratified purposeful and criterion sampling to find subjects to interview, observe, and obtain lesson plans. Stratified purposeful sampling is when certain sites or individuals to student to help understand the research problem and phenomenon in the study (Creswell, 2013). For this study, teachers that were included were identified by the school's principal from each major core subjects at Mountain View. The teachers' use of CRE was examined in each subject area. Teachers were observed and interviewed three time and the researcher asked for at least two lesson plans that the teacher felt showed the effective use of CRE. Information about the participants included in the study is found in Table 1 in Chapter 3.

Summary of Data Analysis

Analysis is important to any study because it allows a thorough analysis of the data and how or how it did not answer the research questions (Creswell, 2013). The data was read four times to create memos, codes, and then themes. In a case study it is important to find key words or patterns that relate to the research topic (Yin, 2014). In this case study observations, interviews, and the collection of lesson plans of four teachers were collected. After data was collected, the data was read through it to create memos. Then the data was read again and coded.

Finally, the data was read through a fourth time and the codes were combined to create themes. The memos were then typed into Excel to create codes. Then the data was uploaded into NVivo qualitative data analysis software to expedite the analysis process. The codes were entered into NVivo separately. Figure 4.1 shows the themes that emerged through the data.

Figure 4.1: *Major Themes*
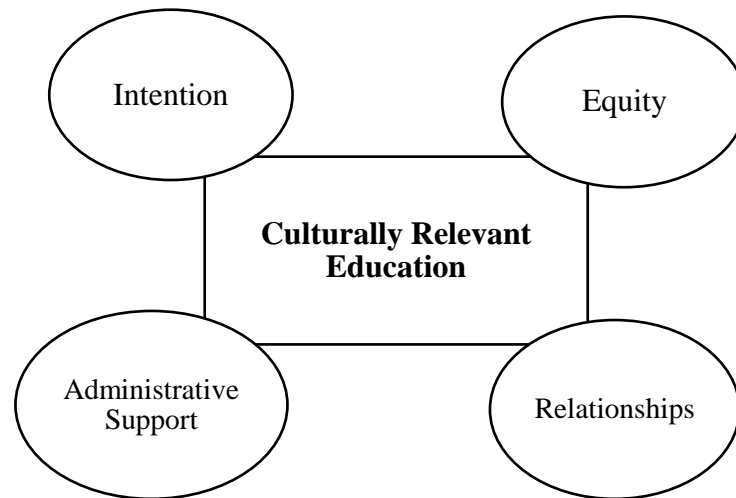
Creation of Themes

The themes that emerged from the data can be split into two different applications: 1) theory and teaching CRE and 2) professional development and CRE. The themes that emerged from the data for theory and teaching in CRE are analysis are relationships, equity, behavior, assessments, and intention. While the themes of relationships, intention, and equity were revealed in the literature review, behavior and assessments emerged as outliers and will be discussed later in this chapter. In terms of professional development, administrative support with the subthemes of support and training emerged as the main themes, and teacher accountability emerged as an outlier.

Ladson-Billings (1995) and Stembridge (2019) talk about these different theories in their literature. Ladson-Billings (1995) talks about relationships and communication being key in CRE, whereas Stembridge (2019) brings in behavior, assessments, and equity pieces to create a culturally relevant classroom. The themes this chapter focuses on are relationships, equity, and intention with outlier themes of communication and behavior with Table 3 showing how these themes were observed with the participants.

Table 3: *Observation of Themes*

	Relationships	Communication	Intention	Equity	Behavior	Assessments	Administrative Support
Rebecca	Interviews and observations	Interviews and observations	Interviews, observations, and lesson plans	Interviews, observations, and lesson plans	Interviews and observations	Interviews and observations	Interviews
Mark	Interviews	Interviews and observations	Interviews, observations, and lesson plans	Interviews, observations, and lesson plans	Interviews and observations	Interviews and observations	Interviews
Elizabeth	Interviews and observations	Interviews and observations	Interviews, observations, and lesson plans	Interviews, observations, and lesson plans	Interviews and observations	Interviews and observations	Interviews
Steve	Interviews and observations	Interviews and observations	Interviews, observations, and lesson plans	Interviews, observations, and lesson plans	Interviews and observations	Interviews and observations	Interviews

Teachers and Themes Observed

Equity

The first theme identified is equity, which is an important aspect of CRE. This requires teachers to understand the students' culture and be intentional on lesson plans. Stembridge (2019) believes that the equity gap is in schools today. He believes that the equity gap is anything that undermines the perception of a learning opportunity as attainable, and worthy of investment (Stembridge, 2019). Students are not a carbon copy of their counterparts and to be equitable in the classroom, teachers must treat their students as individuals, not as one group of students. A way to create an equitable classroom is to help treat students as equals and individuals is to find out about their backgrounds.

Background of Students. The research showed that teachers try to make equitable classrooms by learning student backgrounds and use that information to be intentional and relevant in creating lesson plans. Rebecca tries multiple techniques to know the background of her students as illustrated by this transcript from a Friday lesson:

> What are we doing this weekend? Someone tells me something fun they're going to do this weekend,' So, you know, checking for birthdays, you always find out when they have a birthday, things like that. When I find out who is in sports, I attend one of their contests, so I find out, 'here you are going … what do you play?' I will go to one game of each kid and then if they are in the musical, I go to the musical, so I'm trying to see them outside of the classroom. I did something almost every day for homecoming and if they see you there and they can see you outside of class that's another connection that you can make.

Rebecca believes a way to know the background of a student is to find out what

activities, jobs, volunteer work students do outside of school. She uses her knowledge of

what they like to do outside of class to make a connection with individual students. She

also goes to outside activities (e.g., plays, concerts, homecoming, etc.) to show not only

her support for students but also that she knows what each student does outside of school,

which helps her connect with students. Rebecca also believes a way to know students

better is to learn about their cultural or religious backgrounds. Rebecca stated the

following:

> Um, I find out their background, I find out culturally their background, um. If I
>
> have Jewish kid, I'm like, 'Oh, how was Rosh Hashanah?' Or whatever. I had
>
> some, um, kids that are Muslim and they had their Eid, they had one... Okay, so
>
> they, I'm like, 'Hey, how was your holiday?' And da-da-da-da, and I let them
>
> share it in front of everybody and talk about it. Um, which was funny because he's
>
> like, 'Oh, we slaughtered a lamb and ate some food,' (laughs) you know, and
>
> share it and stuff and we're like, 'Mm.'

Rebecca likes to find out what religious holidays and activities students participate in

through conversation with them. She feels that connects with students because it shows

she cares. I asked Rebecca to go into more detail about how she finds out about the

different cultures of her students:

> So students of color specifically, um, so I, uh, I, I know for some, and I think it is
>
> a cultural thing having a White person touch them is not, they don't like that, so I
>
> definitely make sure I've done my groundwork, I've tried to get a hold of them

and that if I do go in to touch them on the shoulder or something they see it

coming. I talk to them, I ask them. I do, it'll be before or after class, or it'll be in

the hallway.

Rebecca gives a survey to students at the start of the year to get information about her

students' backgrounds. She also has individual conversations with students before and

after class and sometimes she must pull a student into the hallway to conduct that one-on-

one conversation. She also does her research on different cultures to understand

appropriate interactions with specific students are.

Mark also agrees with Rebecca that individual conversations aids in

understanding a student's background:

And just try to make that, that connection and understand that everybody has kind

of their own issues that they're dealing with outside of this place and sometimes

that's related to your family, sometimes it might be related to your race, some-

you know, there's all kinds of things… every kid as an individual and trying to

help them be the best person that they can be in relationship to what I'm trying to

teach them. And sometimes they aren't successful with what I'm trying to teach

them, but if I can help them in other ways to be, you know, able to cope with

situations and, you know, that kind of stuff, so that at least they're taking

something away from my class. If, if it's not content, then something from our

relationship or something like that.

Mark believes that knowing an individual student allows him to help a student with not only math but also issues outside the classroom. Mark also talks about teachers believing in what students are going through:

> I guess, the, the piece is just understood that whatever they're going through is real to them, even if you don't necessarily think it's that, maybe that big of a deal. But we're all different, and we all handle things differently.

The teacher needs to recognize that what is going on in a student's personal life can impact them in the classroom. Elizabeth also believes her knowledge of a student's background supports the individual student in the classroom environment:

> I need to know those kids and know what makes them tick and where they are, what their background is... They've got drama, so, and you have this group of kids, but things don't work if you don't kind of take stock of them, so when I walk in the classroom, I try to look every single kid in the eye every day and make eye contact and make sure I know where they are and check visually with them to see how they're doing.

Elizabeth acknowledges that students are all different and come to class with different issues and problems, so it is important to know them as individuals to support them to be successful in her class:

> I'm not holding their hand. I'm not coddling them, but I'm saying, 'I get where you're coming from and what your struggles are. Let me help you get to where you need to be,' if that makes sense, and so I look at all my kids that way and what motivates them.

She may not be able to make the content easier for the students, but she can motivate them.

These ideas align with Hammond's (2015) belief that diversity in the curriculum allows teachers to show students of color that their culture is important and that they are represented in the school. Students will feel more respected, valued, seen, and heard (Gay, 2010). This was not only heard in interviews but seen in classroom observations as well.

The researcher observed teachers having individual or small group conversations to understand individual students. For example, Mark was preparing students for a lesson on cancer in his anatomy and physiology class. He realized the topic could be sensitive for students who they might know someone who has or had cancer, and discussions might be painful. He told students that if they do not feel comfortable asking a question or commenting in class, they can ask him individually or write him a note, and he would respond individually. He does not cold call individual students who may be reluctant to participate.

This observation shows that Mark understands that cancer can be a sensitive subject for students based on their personal experiences. He realizes that students might be uncomfortable talking about cancer, but he still wants to answer the students' questions. This shows that he understands the personal nature of his subject and wants to be respectful of his students and their experiences.

Understanding students' backgrounds can also apply to teaching content. I observed Elizabeth's Spanish IV class. During the lesson, she stopped speaking in

Spanish to explain something in English. She also took questions in English and responded in English. When the students were working on an activity, she stopped by my table and told me that when she really wants to get the point across, she does not speak Spanish. She feels that if she used Spanish in parts of the lesson, the significance would be lost. Elizabeth understands that individual students might have problems in translation, so she uses English and does not get angry when students use English. This allows students to feel comfortable asking questions about the lesson. Other teachers might believe that since it is a Spanish class, everything must be spoken in Spanish, but Elizabeth realizes that some individual students might be scared to ask questions in Spanish because of their speaking ability. She creates a community where it is ok to speak English to ask questions, so students do not have to be afraid.

Rebecca also had individual conversations that did not have to do with the content she was teaching. She asked an African American male why he was not on the spirit bus for homecoming. The student replied that he needed sleep. Then, a Latino male shared that he had work, and Rebecca engaged in a conversation with him about his work as a mechanic. As she walked around the classroom, she spoke to another student about signs she knows from her sign language class. She noticed one of her male students has an application, and she inquired what the application was for. These conversations were not confrontational; she had a positive tone when she asked questions, and students responded in a positive tone. Her tone and types of questioning shows that she cared about what students do outside of class. For example, she knew that the African

American male would have been on the spirit bus for homecoming because he plays a fall sport. She would not have been able to ask that question if she did not know that student.

Another example from Rebecca is how she taught the novel *The Glass Castle*. I observed her calls discussion of the word *endure*. Rebecca asked students what they had to endure. A White female wearing a pink nightgown shared about getting her appendix out. An African American male wear explained that when he was living in Nigeria, and he was hit by teachers. Rebecca followed up asking where, and he said he was hit everywhere… A White female about getting pneumonia. More students volunteered their stories… An African American female her spinal surgery then an African American male talked about getting hit by a car when he was on his bike.

Rebecca uses individual backgrounds to help students understand what *endure* means by connecting that word to something students had to go through in their lives. This facilitates understanding the concept or parts of the novel. Now, when a character *endures* in the novel, the students can connect to their own experience to better understand the novel.

Steve believes that understanding a student's culture can also help with classroom management:

> The first thing I got in there when I started teaching, is everybody says, 'Don't let them call you Mr.'… okay, I guess, and I didn't understand it at first, and then I heard students talking at one point and I asked I said, 'You know, why… why do you call … why do you call me Mr.?', and they said, 'Well, it's a… it's a sign of respect, because I don't… If I call you by your last name or your first name, that's

not showing you the respect you deserve, you know as the teacher of the room.'

Um, and you know from... In from their cultural background the best way they

can show me respect is calling me Mr. or if it was a female teacher, Ms., and the

White teachers within that building hated it, they didn't understand it, and I... and

I was like... Like first off, if somebody's doing that I mean, that's... they're not

being disrespectful. I mean you wouldn't see it as that, but then there are people

who teaching for 20 years and they just... You know what, what's my name?

What's my name? What's my name? Well, it's less respectful for them to call you

by their name.

Steve believes that knowing students' cultures and backgrounds reduces behavior

problems. He had individual conversations to understand why Latino students do not

often use a teacher's last name. They responded that in their culture, calling a teacher by

their last name and not just Mr. and Ms. are disrespectful. Steve believes that most White

teachers do not understand this because they are unaware of the cultural difference. Steve

is validating students' cultures by learning about how students respect their elders. Steve

also explains the importance of individuality in his classroom to help student

achievement:

I try to treat everybody like an individual, I guess, and I've got some kids that, you

know, they're just so painfully quiet, and you know, you don't wanna, I feel like,

go after them, in terms of like really trying to call them out… And I've got, um,

an Asian student that, she sits right up front, and she's so quiet, never comes in,

never asks questions. I mean, so, you know, I've really tried to go out of my way

to at least check with her, and even if she doesn't have her homework, which she usually doesn't, just say, 'How's your day going?'… And just try to make that, that connection and understand that everybody has kind of their own issues that they're dealing with outside of this place and sometimes that's related to your family, sometimes it might be related to your race, some- you know, there's all kinds of things.

Steve goes out of his way to know students individually. He understands that some students do not want to talk but that does not mean he should not check in with his quiet students.

The teachers in this case study felt that a way to be equitable is to know their students and their culture. Therefore, the student feels comfortable because the teacher knows them at a deeper level and respects them. Learning about students' histories and culture, helps to create a learning environment because the students feel comfortable being themselves. They feel they don't have to act a certain way or fear punishment for acting a certain way. When teachers become more inclusive, students feel recognized, respected, valued, seen, and heard (Gay, 2010). This can be seen in Steve's discussion of understanding how different cultures respect their elders. Steve's discussion is an example of Brown's (2007) belief that respect each other's culture and beliefs to show students that they are important to the teacher. Another way to show equity is through intention, which is the next theme.

Intention

   A second theme that emerged during analysis is intention. Teachers need to intentionally include diverse subjects with individual students in mind. The teachers in this study explained how they intend to include equity in the classroom. All the teachers sent lesson plans they there felt were examples of them intentionally including equity and culture.

   Student Culture in Lesson Planning. Student background is essential to create lesson plans that are culturally relevant and equitable for students. Pedagogy is science and the study of teaching and learning (Stembridge, 2019). Lesson planning is key to creating a successful classroom, especially one that is culturally relevant. Pedagogy without talking about equity people are more prone to rationalize the predictability of low scores (Stembridge, 2019). All the teachers in this study addressed using students' culture and identity in their lesson planning. Rebecca considers students' culture in lesson planning when she decides which books and articles to read in class:

    Lesson planning, see, it's kind of, I don't know… I've changed my books up

    because I'm like, 'Ugh, this book is stupid. Another White girl saves a Black girl,'

    you know, like, 'Oh, this is dumb. These kids don't want to read that.' Um, I think

    I've been able to change out some of the curriculum or some of the books that we

    do that just are not going to relate and be positive.

By learning about her students, Rebecca recognizes readings and books that will not engage her students of color. She has removed curriculum with a "White savior" motif, where the White person "saves" a person of color. This aligns with Gay (2010), Kessler

(2011), and Hammond (2015) because Rebecca considers those students with intentionality, recognizing how these students of color will respond to the content she teaches. Rebecca further explains how she develops grammar exercises:

> Grammar [scoffs] grammar's boring. Um, you can put it on a colorful worksheet, (laughs) you can jazz it, you can change up some names and things like that, but it's still not going to be the most exciting. What I will do is I'll take like People magazine articles, and I'll just make sure there's some cultural relevance to it... And I change the article for grammar mistakes, so the kids must, uh, fix it for grammar, but you've got a positive story, you've got a person of color in the story, and so, try to expose them that way with something that's basic as grammar.

Rebecca uses more relatable and current topics to teach things she feels would be duller otherwise. She shows in this example that teachers can use relevant and positive articles and readings to teach grammar, a skill she feels can be boring and disengage students. Rebecca continues to talk about different aspects of her curriculum that need to be more culturally relevant. According to Ladson-Billings (1995), students must build their academic skills, especially in literacy. She suggests the way to do this is to have the students learn what is most meaningful to them by using real-world examples, so that students will be more engaged in class.

The biggest example intention is Rebecca wanting to change the type of books in the English curriculum to be more relatable to students of color. When asked what aspects of the lesson she feels could use more CRE theory, she responded:

Uh, our novels are crappy. I don't get to [pick novels out] ... It's department. It's well, it, it was who... Our novels haven't changed in 17 years, 18 years, whatever. How-however long we've been... Occasionally, we can incorporate a new one, but it's few and far between. So that is already kind of dictated for us. Um, it would be nice to have more a multi-cultural perspective on some of them… female voice, but we are a very traditional college prep school. I mean that was the focus when we opened, and we've maintained that.

Rebecca feels the novels in the English curriculum need to be more culturally diverse. However, she has little control over this aspect of the curriculum because it is a department decision. The books were chosen for the purpose of preparing students for college, but she feels that focus has changed and the books that they read need to change as well. This concurs with Evan et al. (2020) who assert that CRE should be more than a "hook" to get students interested in the lesson. Intentionally selecting more diverse books would require an intentional and fundamental change for the English department. Rebecca's use of real-world examples and her desire to change the books in the English curriculum also connect to Ladson-Billings' (2021) idea of critical consciousness by focusing lessons reading on real world issues, thereby preparing students for their role as adults in society.

Because anatomy and physiology is an honors science elective for seniors who plan to study science in college, students in the class are already interested in the content. However, Mark still tries to include content that will interest and motivate his students:

I mean, we've got some things that we go through, disease wise, that I try to hit on. Like we're coming up in unit 6, after break, doing blood, and so I talk about sickle cell anemia and, and why that is, uh, a significant disorder in the African American population and, um... And why it's in place. Why that is a, a genetic trait that, in some ways, is, is desirable, um, for, for that population, um, in Africa. So, um, related to malaria. So, things like that, I try to tie in, um, if it, if it's appropriate. Um, but I feel like most of the kids that are in my class, they just kind of have a, an innate interest in the body and what's going on.

However, Mark feels that this can be difficult with the content he needs to teach:

While you know, I pretty much set my own curriculum in anatomy I also know that the stuff that I go through and do benefits them a great deal later and to remove some of that so that they can go out and do what just interests them, I think they would be missing some things. But, in an ideal world... (On lesson planning using CRE) [I want to be] on it and be more intentional with that. And, um, I think the hard thing for me with that is I'm so, and I think for a lot of teachers, we're so bogged down with the content that we must get through to go in and back fill with that, but that's also the piece that helps make it personal for the kids.

Mark believes that if he creates lessons only on what interested the students, they would be missing some of the content. He struggles with balancing content the students are interested in and what he feels he needs to teach for his students to be successful. Mark

believes that teachers may struggle to incorporate CRE because they feel so bogged down with the content.

This relates to the examples from Kaflele (2009) and Kessler (2011) in which teachers felt they were successful because the teachers in their examples were worried about content and used CRE only as a "hook." To address this dilemma, Mark creates a "practical application reading" to help connect students to the content:

It, it's an article that is real life, usually Scientific American, so it's more accessible than like a true. And those, um, like we did one with the ... with the nervous system, the, the reading that they did for their PAR, [the article was about a way] to figure out a way to take prosthetics- and make them more integrated into your central nervous system. So, the article that we read really talked about the urgency for this related to, uh, the war veterans and things like that. And so I think for a lot of our kids, they have brothers, sisters, family members, you know, parents, whatever, that are, that are in the military, and maybe effected directly, or at least know somebody, I mean, at this point, with all the, the wars and everything that have been going on, um, that's kind of impacted by that- so maybe that piece not so directly with ethnic background.

Mark has the students complete a practical application reading for every unit to help apply the content they are learning to current events. Steve and Elizabeth use the knowledge of their students' culture to guide them in lesson planning. This connects the curriculum taught in the classroom to students' lives. Ladson-Billings (1995) believes it also shows students how they can participate in society and current issues of today, and

perhaps more importantly and, it teaches them that critical thinking requires actively examining power and how it operates.

Steve discusses the intentionality with which he creates story problems in his math classes:

I guess the best way to explain what I do is I look for every opportunity to involve the students, their individual likes, dislikes, cultures at every opportunity. To plan for it and to have it be part of it means that on some days it's not and on others it is from my perspective. And so, when I go through and I look at tests and things, and if I see everybody's name as Bill, Billy, Joe Bob, Nancy, then I do go through and change some of the names to different names to represent different ethnicities. So, I do that when that comes up. I guess I'm conscious that when we're doing a story problem that could be um, that someone might look at and say that's a stereotypical Hispanic thing to do, then I make sure it's not a Hispanic name or group of people that is involved in the story and that kind of thing.

Steve is intentional about the people and situations he uses in word problems. Steve considers the individual students and cultures in his classroom when he plans and writes exams. Although he tries to be conscious of CRE every day, he finds it challenging to create culturally relevant lesson plans every day. This idea aligns with Hammond (2015) that teachers need to sharpen their cultural lenses to be able to be successful CRE teachers.

Finally, Elizabeth explains how she also looks at student's background when she creates lessons:

Some of the planning I do, I think, 'How, how will this go across to this group of kids?' But I also, because so much of what I do is, especially at these levels, is very, very cultural because we talk about all the regions of Spanish speaking world, um and then in the lit class, um it's all about culture and history and geography and the time. I just think it's something that I do naturally. I think that the course lends itself to it. Perhaps if I was teaching math, I wouldn't know how to do this, but I think teaching language, um, teaching a course that has to do with the cultures of the Spanish-speaking world, of which there's a great amount of diversity, I think that that just lends itself to it.

Elizabeth plans with two things in mind: how will it be received by the students in the classroom and how much Spanish culture she includes in her lessons. Elizabeth feels that CRE is inherent in her planning because her content lends itself to talking about diversity and culture. She acknowledges it would be harder to incorporate CRE in other subjects such as math and science.

Culture in Lesson Plans. As a part of case study, teachers were asked to provide two lesson plans that they feel incorporate CRE. This reveals information about their beliefs of CRE because they selected these lessons as strong examples of CRE and how to implement it. The lesson plans were read, coded, and memoed, to reveal themes.

Elizabeth sent me a lesson about Cuban culture (Appendix K). In this lesson she discusses the history and culture of Cuba in English instead of Spanish. Elizabeth stated that she asks questions and talks in English when she feels it is very important and does not want content to get lost with translating from Spanish to English. After Elizabeth

checks for understanding about culture and history of Cuba, students read a poem/article about Cuba in Spanish and complete a fill in the blank worksheet, which includes a vocabulary box for the words the students might not know. At the end of the worksheet the students write short answer responses to questions in Spanish. Elizabeth is using culture from different Spanish countries to help teach students the Spanish language.

Elizabeth also sent me a lesson plan for her Spanish IV class (Appendix J). The lesson includes a student project for which students must visit a store where Spanish is the primary language. She gives directions in English and explains that students must visit and purchase something at the store and converse with an employee in Spanish. Students will also observe other interactions in the store answer questions on a worksheet and present their findings to the class. Elizabeth is engaging the students by having them speak and listen to Spanish in a real-world setting. She also requires students to talk about how they felt about the experience. Ladson-Billings (1995) and Gay's (2002) works show that CRE includes students' culture *and* includes how a teacher should teach to tap into those cultures to bridge communities and learning. In addition to the content they teach, they connect with the students based on their own culture and communities.

One lesson plan from Steve (Appendix L) was submitted. It is a lesson plan for an Algebra I class where the students learn how to plot points on a graph based on data about Amtrak trains. In this lesson, students use math in a real-world example to show how math is used in daily life. This correlates with Kessler's (2011) idea of connecting the curriculum to personal experiences. Students might need to use a train as a form of transportation, so Steve teaches them to do that and math at the same time.

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Also, only one lesson plan from Rebecca (Appendix M) was submitted, which is a from a CP English 10 class. She first gives students time to study for a vocabulary test, then has the students work on grammar practice. As a class they are reading *Absolute True Diary of a Part-Time Indian* and discussing the mood of the novel. In this discussion, she asks students to identify the mood of current popular movies. Next, students watch "30 Days on a Reservation," with Morgan Spurlock. This short documentary explores what life is like on the Navaho Reservation today and is followed by a discussion of the cultural differences between where the students live and the reservation. Finally, they will read the first chapter of the novel out loud. Rebecca's lesson plan fits with CRE because she exposes students to Native American culture and affirms that culture. The project and assignment centers on Native American culture, not just as a sidenote in the lesson.

She also gives students time to study because she understands their need for time to prepare. Finally, she connects with students through their interest in current movies to help students understand what mood means in a novel, reading, or video. Goldenberg (2013) argues that learning about families and their backgrounds help make schools more inclusive, and families tend to feel more connected to schools and the learning that takes place. Teachers need to ensure that the curriculum content is diverse, accurate, and comprehensive, and regularly taught. By doing so, students can feel validated about and with their culture (Gay, 2010).

Mark's lesson plan (Appendix N) is for his freshman CP physical science class. In the lesson the students apply density to unknown solids, complete a density lab, and

graph the results of their lab. It is also a workday, allowing students to recover credit for various labs and assignments. For example, students who earned a zero on a Mentos and Coke lab had the opportunity to complete the lab for credit. Students read an article on Archimedes and his contributions to our understand of density and wrote a paragraph to explain how Archimedes used the scientific method to understand density. Mark uses CRE by giving students more time for labs and missing work. He also understands that students need to prepare and that they might need more time to complete the work.

To summarize, another theme is for a teacher to intentionally use CRE in lesson planning. The research revealed teachers' intentionality when creating lesson plans by using real-world examples, changing curriculum, and making sure students of color are represented in their lessons. The next theme of relationships ties equity and intention together by creating relationships to know what cultures are represented in the classroom and how students learn.

Relationships

The third theme that emerged is relationships, as relationships are an important aspect in a culturally relevant classroom (Stembridge, 2019). Connecting to and including the ideas talked about earlier about equity and intention, using beliefs of students' cultures in lessons leads students to become more active and have a positive experience in the classroom (Stembridge, 2019). As a result, students want to participate and learn. A teacher who knows students on a personal level creates trust and respect (Ladson-Billings, 1998). In this study, teachers tried to build relationships through classroom management.

Relationships in the Classroom. All four of the participants identified that

relationships are key to CRE in the classroom. Mark explained:

> At the beginning of my career, I didn't think that the relationship piece mattered. I
>
> kind of was just like, 'Okay, well they can like me, not like me, whatever. It
>
> doesn't impact what I do.' And as time has gone on, I have realized that that
>
> relationship piece is one of the most important things.

Through experience, Mark realized that relationships are one of the most important things

in the classroom. However, other teachers felt more passionate about relationships than

Mark. Elizabeth made the point that relationships are essential to close the opportunity

gap:

> I think it's building relationships. I think it builds relationships, that kids begin to
>
> find someone they can trust. My background may be different, but my belief is it's
>
> a human connection piece and the more I know about that kid, then I can continue
>
> to work with them, or I have a filter or a lens to work with them.

Elizabeth believes that to close the achievement gap, she needs to understand and know

the student at a personal level because her experiences and culture are different.

Elizabeth goes on to say, "But if you don't know how to approach the piece of

meeting people, who they are and where they are, then I don't think they will buy it. Kids

won't buy what you're selling." Elizabeth believes that teachers need to create

relationships for students to "buy in" to the content and skills teachers are trying to pass

on to their students. Rebecca also said something similar:

I think a teacher who is culturally responsive and cares about, that looks at all her kids and knows all her kids. Gets to know what's going on as best as she can, as much as the kids will tell her.

Rebecca a student will try harder in the classroom if a teacher knows them at a more personal level. A CRE teacher knows what goes on both inside of school and outside of school for students. Steve was able to pinpoint examples in his class:

Because of the relationship we've built and our ability to be academic and to be interactive and fun at the same time, they're [the students] are asking more questions… They've been seeking help outside of class. They've been coming to do their quizzes… but what I know is that their demeanor and in many cases the demeanor has changed completely from quiet and withdrawn to an active member and participant in the, the group.

Steve believes that students tried harder in class once he created relationships. Initially, they did not come in for help or to re-take quizzes. As he developed relationships, students looked to him for the support they needed to be more successful in his math classes.

Rebecca, Steve, and Elizabeth all felt relationships were important to be a successful teacher and to close the achievement gap. Students work harder when the student feels a connection with a teacher and believes the teacher is there to support them (Hammond, 2015; Handcock, 2011; Stembridge, 2019). This case study also had data on relationships during teacher observations.

Nurturing Relationships. Three teachers were observed using and developing nurturing relationships with students. Steve, Rebecca, and Elizabeth were observed greeting students at the door, walking around the classroom, talking with students one-on-one, and talking about current events. Griner and Stewart (2012) state that disconnection between teachers and students of color is a major cause of the achievement gap. Students of color find it difficult to connect with teachers who follow mainstream White culture (Griner & Stewart, 2012). A relationship is an important aspect in a culturally relevant classroom. Connecting and including the ideas and beliefs of students' cultures assists students in becoming more comfortable in the classroom. As a result of this, students tend to want to participate and want to learn.

For example, Rebecca spent the first 10 minutes talking about that week's homecoming and sports events. Rebecca and the students discussed who was going to which events. All the students were engaged, participating in, or paying attention to the conversation.

Administrative Support

The last major theme in this chapter ties to the theoretical framework for professional development in Chapter 2. In Chapter 2, reflection, collaboration, and a toolbox for teachers were the themes found to be tied to professional development. Gay (2010) and Khalifa et al. (2016) feel that even though transformation to CRE is important in the classroom, administration and other leaders in education need to transform to be culturally relevant as well. School administrators need to model attitudes and practices that promote cultural diversity to address students' needs (Hansuvadha & Slater, 2012).

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The data revealed that the teachers believed that CRE needs to be relevant to the administration and included in the professional development provided to all teachers in the school. They found value in the CARE work done previously in the school and believed that work should be continued. Teachers also felt that CRE training for specific content areas would help Mountain View become culturally relevant. They advocated for administrative support to show the importance of CRE and give teachers a "toolbox" to help increase cultural diversity in classrooms. The outlier theme of teacher accountability also emerged from the data on professional development; the teacher participants emphasized that educators not only need professional development to "stock" their toolbox but also need to be held accountable for using those tools.

Support. Elizabeth, Steve, and Rebecca all believed that the administration needs to show that CRE is important to the school. by developing a goal and vision around CRE and sharing examples of successful implementation:

> I think admin must see it as relevant. I think admin is just like everybody else. They got so much on their plate and so many things coming from above, but I think if they see it as... I think admin needs to have a vision, and I'm not sure they do right now because they're new… but I think admin needs to say, 'This is ... This is important, and this is what we're going to do. And we're leading you down this.' I think it must come from there. But they must be enthusiastic about it… If we're like, 'This is dumb. Just get it done,' it, it's totally different than, 'This is important. And here's the success. And here's what you're going to see, and here's how all this can make an impact. And we are here to make an impact.'

Elizabeth believes the administration must make a direct effort to show the staff and community that CRE is important. They must be enthusiastic and share best practices to make an impact and get staff support.

Rebecca also agrees with Elizabeth that the administration needs to make CRE a priority by having ongoing, permanent CRE training:

The professional development needs to be there, and it needs to be ongoing. It can't just be this year we're going to take up CRE and do a couple of things with it and be done with it, because we've done cause we've done that several times. We've seen the trends. One year, it's going to be the big push and then the next year, nothing happens, and you don't even hear about it.

Rebecca believes That a consistent focus in CRE in professional development is necessary for consistent implementation in the school's classrooms.

Steve agreed, providing an example of how the administration tried professional development on CRE and equity without sufficient follow through:

There was an opportunity to really learn something about culture. And then nobody followed up on it. It happened. People were talking about it for a week. Maybe two, and then it was gone. And so that conversation, that little flicker of fire for conversation, they let it go out because they didn't want to talk about it anymore. People got busy doing their jobs and we didn't want to come back. We didn't want to revisit that. So, if you're going to push people out of their comfort zones to start to have them look at things from something besides their personal perspective, then their personal reality can change. But if you're in your own zone

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with your own perspective, with your own sunglasses on, and you don't know

what other people are seeing, how can you expect to grow?

Steve's example concretely illustrates the challenge for White educators to remain

engaged in CRE. He acknowledges that addressing issues of race and inequity is

uncomfortable but necessary for growth and improvement. He continues by pointing out

that White educators need to be willing to prioritize this work to serve their student

populations:

When it comes to equity and excellence, nobody wants to talk about it. Nobody

wants to put any work in... (Why?). Because you're in a building that has about

90% White teachers and a community which is probably, you know... An

immediate community which is probably 90% White, and, you know, even

though even though the diversity of the students is growing… We're nationally

ranked. So, it can't be that bad. And yet, you know, you're completely alienating a

certain, you know, a couple of groups completely. They don't want to talk about

it. There's work that's involved with [CRE]. There's a process involved, there's a

responsibility involved, and nobody wants to put it in. It's muddled. It's muddy

water, but nobody wants to get in.

Steve believes that since the staff is mostly White, CRE work makes them feel

uncomfortable, so they avoid it. Steve acknowledges that this discomfort is part of the

process; it requires effort, time, and a willingness to be uncomfortable.

Steve felt that the staff had previously made progress with CRE work in its

professional development for teachers but then stopped addressing the topic., He feels

that teachers did grow or develop new skills because professional development was discontinued. An example of this support was the CARE work done in the district in 2007.

CARE Work: Rebecca, Elizabeth, and the researcher were all part of a CARE team in 2008. CARE stands for Collaborative Action Research for Equity (Pacific Education Group) and was a part of a district initiative to become more culturally relevant. Teachers from every school in the district would meet to talk about CRE, its importance, and how to make a classroom more culturally relevant. Then, teachers at individual schools would meet to plan, observe, and discuss lessons that were created using the information from CARE. Rebecca explained what CARE was and how it helped her become a more culturally relevant teacher:

> I thought they were going in a pretty good direction with CARE stuff, you know they started it with small number of people, there were like eight, eight of us, ten of us that did it, um, and then they needed to broaden that some more… And it really put the teacher, um, understand where our students of color are coming from and how they feel on a day-to-day basis walking into, um, the Hills School District, which is a predominately White district.

Rebecca explained that the CARE program helped her understand where her students of color are coming from and how they feel coming to a predominantly White school district. She discusses how the CARE program made her re-think culture and her whiteness in the classroom. Elizabeth agreed:

We talked about this when we were doing our CARE work, you know, before, in

the past, that good teaching works for everybody. Um, but it can certainly reach

other kids... You know… a lot of kids are visual. They like music. They like

things to relate to them.

CARE taught teachers CRE and how to use it in the classroom. For example, Rebecca

explained how the CARE program and curriculum helped her to reach other kids. The

CARE program is an example of CRE training, which is the next subtheme.

CRE Training. The teachers felt that specific training on CRE in a specific

content area (e.g., math, science, etc.) would help increase CRE use in the school because

it is tied directly to the content. Mark felt that CRE was difficult in science, and he would

like more help connecting science curriculum to CRE:

I think the go-to answer is probably doing some kind of professional

development, but I ... I don't know if they can do professional development for

how to do CRE and, and involve more culture, in terms of teaching science. Like,

that's what I need.

Mark feels that he would be more successful in CRE if he had training specifically for his

science classes. The connections between science and culture are not readily apparent.

Gay (2005) and Ladson-Billings (1995) believe that CRE can be used in any subject area.

Teachers might feel that CRE does not apply to them because they do not teach about

culture and people. Rebecca also believes specific training based on content would help

the school:

It needs to be broken down to all right, English teachers, this is what you can do

and how you can do it. Math teaches, even though it's numbers, it's very concrete.

This is what you can do and... We've got to be in a breakout with our departments

and someone who is going to help me when I have all right, how do I make

grammar culturally responsive? It's got to be more than just changing some of the

names in my example.

Rebecca believes that CRE looks different in certain subject areas. She believes that

having breakout groups based on content would assist teachers to implement CRE in their

specific content area. Aronson and Laughtner (2014) agree that CRE is needed for

different subject areas to show teachers how to be successful using CRE in a certain

subject.

Additional Themes

However, themes not connected to the theoretical framework of Ladson-Billings

and Gay emerged through the data. The following themes were the outliers of the study:

communication, dispositions, engagement, assessment, and teacher accountability.

Communication

Communication between people or groups of people is key for success in any job

or field of study. According to Duta et al. (2014):

> Communication style is defined as the set of speech feature characteristics of a
> person in the act of communication. Style means specific ways of receiving the
> message, personal ways of interpreting the messages; specific ways of expressing
> the response, feedback… without communication, the teaching and learning
> process will not take place. (p. 1008)

Communication is key to creating relationships necessary in a CRE classroom. Hammond

(2015) states that oral tradition places a "heavy emphasis on relationships because the

process connects the speaker and the listener in a communal experience" (p. 28). The data showed that communication in the classroom nurtures the relationships required in CRE. I observed the theme of communication in student-teacher conversations and teachers actively listening to students.

Student-Teacher Conversations. All the teachers that I observed and interviewed believed that conversations, especially one-on-one conversations, were key to helping students achieve. This differs from the background of students because this is not just talking about culture, but things they are interested in (sports, theatre, etc.) and school itself. For example, Elizabeth stated, "so, it is just checking in. A lot of it is just checking in with the kid." These check-ins facilitate her understanding of what the student is going through, what might trigger the student and what motivates the student, leading to a more positive classroom environment and better classroom management. Elizabeth believes continuous check- ins with students will help the student's overall achievement in the class. Rebecca agreed that a one-one-one interaction.

> let's them know, I think that I'm on their side, I'm an advocate for them. I will
> know kind of what their triggers are, so through those conversations, they can let
> me know certain triggers.

Rebecca notes that if she knows what is happening in a student's life, she can better support them emotionally. Mark uses daily checks on homework to have one-on-one conversations with his students. Mark believes,

> the checks that I do for homework every day, you know, I at least try to talk to
> them a little bit and see, you know, what's going on. I've got, an Asian student

that, she sits right up front, and she's so quiet, never comes in, never asks

questions. I've really tried to go out of my way to at least check with her, and even

if she doesn't have her homework, (or) just say, 'How's your day going?' Just try

to make that, that connection and understand that everybody has kind of their own

issues that they're dealing with outside of this place.

Mark feels that even his homework checks create relationships, by asking how the

student is feeling that day. He feels this is particularly important for students who do not

like to participate in class. These conversations have helped him understand his student's

individuality and create connections with each student.

However, this was not observed in Mark's classroom. Mark did walk around to

check student work and whisper to students, but for the rest of the class I did not see any

attempts to at conversation. The lessons were mostly lecture based, with Mark sitting at

the front of the room.

However, in the other teachers' classrooms, the teachers frequently conversed

both with students as an entire class and one on one. Each teacher walked around to talk

to students, to see if they needed help, or to just check in.

One of those teachers, Elizabeth, also believes one-on-one conversations support

students to grasp troublesome content and create positivity in the classroom.

I'll stop them individually and I'll say, 'Hey, (student name), when you're off, we

need to talk. Come and see me. We need to talk. I want to sit down. I want to

make sure you get this.' I always, I never, ever approach anything from, 'This is

going to be on an exam.' It's always, 'I need you to learn this because you're

becoming a Spanish speaker. You're learning Spanish. I want you to learn

Spanish. So, you're not there right now. It's part of the process. You're going to

get there.' And if there's a concept or something that any, that a kid is struggling

on, I will always say, 'Remember, this is a piece of a very, very, very big hole.

And so just because you're not getting this one thing, doesn't mean you're not a

strong language learner. It just means you're not getting this one thing, and you're

eventually going to get it. And I just, you know, reassure them that way.

Elizabeth believes having open, honest, positive conversations help students become

better Spanish speakers. She worries that if students stress out about the exams, they will

not become functioning Spanish speakers. She believes that the exam is not most

important; she wants students to learn the curriculum so they will become competent

Spanish speakers. Hammond (2015) agrees. She believes that teachers focus too much on

exams rather than the skills students need to be independent thinkers.

Positivity is also important in student-teacher conversations. Elizabeth believes

that teachers who are positive have a better effect on students than teachers that are

negative:

I think most kids, if not all, respond to people being direct with them and honest,

not mean.' I never, I don't even, that kind of talking to kids, 'Your kind of lazy.'

None of that ever occurs to me. I would never say any of that to kids. I just say,

'You can do better. So how can I help you do better? I know you can.'

Elizabeth believes that teachers can be honest with students, but without negativity. She feels that negative communications do not help in terms of encouragement and self-esteem.

Steve also focused on the positive in one-on-one conversations. Steve encouraged a Latina female as she worked, saying, "Good job! Excellent." Additionally, when a student fell asleep in class, Steve gently woke him and encouraged him by e telling him he can be successful instead of yelling or punishing the student for falling asleep. Steve remained positive and focused on the student's achievement. Caring for a student includes caring of their well-being and caring about specific type of content and skills taught in the classroom (Ladson-Billings, 1995).

During an interview, Steve further described how culture impacts student-teacher conversations:

> A lot of students of color, African American to be specific, have told me over the years that for things to mean something to them when they hear them, they must come in a certain way of expression. So, for instance for if I talk quietly to a person, to a White person, that might be enough to convey my concern and my understanding. Whereas, when I talk to a person of color, a lot, and this is kind of where I try to hear how they converse with other people. So, if they're a real boisterous and outgoing person then the conversation I have is in the same tone. Because that's how they're communicating and that's how they're expressing things that are important to them. So, whereas one person, if I'm boisterous and outward going with one person, and maybe it might be intimidating and scare

them or push them away. Whereas with another person they see it as this guy

cares about what I'm doing so now I'm going to pay attention.

Steve recognizes that different cultures communicate in different ways. He believes that

students of color tend to be more energetic in their speech while White students are timid.

He attempts to communicate with students in their preferred style to show that he cares

about them. Hammond (2015) also states this when she talks about individual cultures vs.

collective cultures. White culture tends to be more individualistic and individual while

cultures of color tend to be communalistic, and community based. Collective societies

speak and interact to make sure everyone is included (Hammond, 2015).

    Active Listening. Another form of communication is to listen to a student.

Listening to individual students is also a part of student-teacher communication.

According to Duta et al. (2014) "teachers must be skilled at listening to students as well

as explaining things clearly" (p. 1011). Duta et al. (2014) believes that teachers becoming

active listeners is an essential part of communication. Steve agrees that listening is key to

communication:

    I listen to what they're talking about, I listen to the way they talk. I listen to the

    things that they're doing. I try to get them to talk about themselves, things they're

    interested in, and then I guess I don't, and then after all of that happens you know,

    then when I start to get to know them then I can start talking to them as

    individuals. And so, as I go around the room, I'll know so-and-so is doing this, so-

    and-so is doing that, this person likes to draw, this person has interest in tech. And

so, I try to learn about them as individuals so that I can talk to them as

individuals.

Steve believes listening to students and their interests help increase communication

between student and teacher. Steve intentionally has these kinds of conversations

individually rather than in a larger group, recognizing that students might be more

forthcoming one-on-one than in front of their fellow students.

Dispositions

Another theme that emerged outside of the framework was the disposition, or

behavior, of the teacher toward the student. Stembridge (2019) believes that behavior, or

engagement, is the most valuable commodity in the interest of learning. Strategies for

engagement are neither universal or objectively or culturally neutral in how they are

defined (Stembridge, 2019). Truscott and Stenhouse (2018) argue that teachers'

dispositions are a key to student achievement regardless of race, especially when teachers

position themselves as learners, believing that students can be teachers of the adult

teacher and of their peers (Truscott & Stenhouse, 2018). Therefore, it is necessary to

examine the disposition of both teacher and student.

Understanding Biases. Successful CRE teachers must understand their own

biases. Teachers must show and confront their own limitations (Stembridge, 2019).

Teachers need to embrace insecurities and be risk takers to be more culturally relevant

(Stembridge, 2019). Steve suggests one of the ways to show vulnerability is to step out of

a routine:

Well teachers need to get out of their rigid routine. I think some are so routine and

they don't care about their backgrounds, they just know they're going to be here

and they're going to go through this, this, and this and if the kids keep up, great, if

they don't, they're not going to worry about it.

Steve feels that teachers need to take risks and try to be less rigid in the way the present

material. Rather than simply presenting the curriculum, teachers should ensure students

are grasping the curriculum and learning the content. The teacher must be willing to

admit their approach was unsuccessful and be willing to change. This willingness reveals

the teacher's vulnerability. Steve also feels the entire school needs to be more vulnerable

in the community:

Until we get people from the community, from the outside to come in and be a

part of what that is, and to be a part of telling their story and telling their truths,

and being a part of that conversation… Because its White people talking about

White people's experiences and how White people dealt with White people's

experiences, and how they've had White people's feelings about [those White

people experiences]. [Teachers] didn't know or didn't realize they had, that those

things were going on or that they had experienced it, or that it happened in this

area. Or even within this building. It started conversations. People were

uncomfortable. They were pushed out of their comfort zone and made to squirm.

To be culturally responsive, teachers must become culturally aware. This requires

listening to community members who are people of color and breaking through systems

of racism that has kept them in their comfort zones. Only when White teachers step out of

their comfort zone can they understand cultural awareness. Griner & Stewart (2012) agree, stating that students of color find it hard to connect with teachers who follow mainstream curriculum. To do this Brown (2007) suggests that teachers learn about themselves and others to foster respect in their classroom.

Steve goes on to discusses why he believes teachers are hesitant to become more culturally relevant:

When things are linear, things are easy. As crappy as our great stuff has been, it's linear. You do this, you do this, you get a result. Okay, well now I can look at this, and we can analyze. When we're talking about culture, it's not linear, you know. It's different, and every classroom with every individual, it's different.

Steve believes that using CRE is difficult because it is not straight forward with clear answers. Teachers are hesitant to try CRE because risk of failure seems high.

The teacher's participants also addressed that teachers need to be ok with feeling uncomfortable. In other words, a teacher to be vulnerable to feelings of discomfort. Instead of ignoring the feeling or asking someone else to handle the situation, they should examine the experiences, assumptions, and biases behind the feeling. else. For example, Steve talks about teachers who feel uncomfortable talking to students of color about behavior:

Everyone just goes to [the only African American dean],) let's get this Black kid over and talk to (him), like really? You can talk to this kid; you don't have to find the Black staff member to deal with a kid. You're going to have to figure it out or you're, you're in the wrong business.

You need to know that you're referring students of color two and a half to three times more frequently than White students, regardless of what the circumstances are. And this building, um, has blinders on. There is an issue… But there's no talk about the fact that teachers are who don't know how to communicate with, um, very expressive, um, students, students who talk in a different tone, you know. They don't know how to deal with that, and in return, those students get referred. You have, you know, you have a group of teachers that, that they don't understand, and they don't respect, and they don't know enough about their students to know when they're being disrespectful and when they're excited, and when they're just having a conversation.

Teachers' inability to be vulnerable and understand their own biases can lead to more student referrals, especially for students of color. Steve again addresses deep culture teachers' need to learn this deep culture of students, which might be different from their own.

Elizabeth explained that she also believes that teachers need to be vulnerable to discomfort to be culturally relevant:

It's uncomfortable. It's uncomfortable to have to, um, question your own practices, and I think that's part of a growth as a teacher and... You know, we're not just sages on the stage. We're here to get the kids thinking. Kids won't think if we don't make them... identify or... Not make them but show them that they can identify with something that's different from they, what they are. We're... WE should do it, but we're trying to ask them to the same thing.

Elizabeth argues that curriculum has historically been biased toward White culture, forcing students of color into uncomfortable spaces. Because teachers often ask students of color to "understand" or "identify with" White culture, Elizabeth feels teachers need to willing to be vulnerable and uncomfortable as they learn CRE. Elizabeth recognizes that White privilege has enabled teachers to avoid feelings of vulnerability and discomfort:

> Um... I certainly come from a perspective of White privilege, or a background of White privilege teaching in Wyoming, I didn't have, um, hardly any students of color, um, at that time. I think it's changed now, since I've been gone 14 years. Um, but going from Wyoming to Portland, Oregon, to an inner-city school in Portland, Oregon, that was eye-opening. That was extremely eye-opening to me, and suddenly, I said, 'Oh my goodness! I must approach things very differently here than I did somewhere else.'

White privilege stems from systems and institutions provide opportunities only, or primarily, to people who are White (McIntosh, 1988). As a result, White people have better access to power and opportunities than people of color do. Elizabeth realizes she had to approach teaching differently to narrow the opportunity gap.

Teacher vulnerability and confronting their own biases were factors in implementing CRE for the participants. According to the data, teachers need to "look in the mirror" when it comes to cultural biases and be willing to be uncomfortable when learning and talking about those biases. For example, Steve described student behavior and some teachers' tendency to "pass the buck" of student discipline to a teacher of color because they rely on the other teacher's personal experience as a person of color.

Student Engagement

In this study, all the teacher participants mentioned student behavior—specifically what student engagement looks like in their classroom. Student engagement is defined as student involvement in student activities, attitudes, interests, and values associated with others, self-regulated learning, and motivation to learn (Lester, 2013).

In one of the observations, Steve asked if any student had any questions on 1-7 on the worksheet from the previous lesson. A White student asked for help with question one. Steve asked her to be more specific about what she had a problem with. This led the student to understanding, and Steve asked her to explain how she solved the problem to the class, which she did. Next, Steve asked a student of color to describe how he answered question number five. Steve explained the most common mistake students make on that question. The students in this class are showing engagement by asking questions and answering the questions the teacher poses. The students are actively involved in the lesson.

In a different observation, Steve explained the students would be using statistics from different basketball players. He mentioned Michael Jordan but quickly realized that they might not know him because he played before their time. He referenced more current players like Steph Curry and LeBron James. Students then broke into small groups to graph and analyze the statistics for one of these players. Steve engages the students by allowing students to select the player whose data they would graph and analyze and allowing students to pick classmates to work with.

Mark also engaged students in his class. In one of the observations, Mark lectured about vitiligo and to the effect of this condition on the skin. As illustration, he points to people in entertainment the students might know who have vitiligo: a model and Michael Jackson. Mark next explained what happens to the skin when you tan. Mark engaged students with examples that students would be familiar with.

In an interview, Rebecca also discussed the use of relevant content to help students engage:

Seniors are bored, you know. Even today, we watched, in my senior class we watched the, like 10 great escapes, like prison escapes, and you know, some are on their phones, but a lot were totally engaged, and some were like, 'Oh yeah I know that' like Alcatraz one or talked about Pol Pot and Khmer Rouge and the great escape from the gulags. You get the engagement.

Rebecca uses examples from current events or from conversations with students to help her engage students with her lesson.

The teachers in the study felt that a way to use CRE in the classroom was to use relevant, current examples. Ladson-Billings (1995) believes that by using current or relevant examples, it would help students create a cultural consciousness that will help students be prepared to help change society.

Assessment and Student Achievement

Another theme that emerged from the data was how to assess students in ways that increase student achievement. Student achievement is defined as how students perform and show knowledge and skills on assessments. Teachers need to make sure that

assessments are rigorous. Rigor is a part of CRE because students need to have meaningful opportunities to show what they have learned (Stembridge, 2019). After completion of this research, the school adopted a new grading program that uses summative assessments to calculate a student's grade, rather than formative (or practice) assessments, such as homework, class activities, etc. Because formative assessment is not used in grade calculations, some students believed they did not have to complete it. This could have skewed the participants' beliefs and attitudes toward achievement and assessments. Teachers described various ways they assess what students know, track student progress, and determine what students need to do prepare for class.

Increasing Student Achievement. The researcher asked the teachers how the teacher increases student achievement. All responses addressed assessments and giving more opportunities for students to show what they know. Teachers described allowing students to re-take assessments and make test corrections to show what they know. Rebecca described an example with grammar:

> [The students] have a quiz of apostrophes, semicolons, and commas, so if they're not hitting a 70%, we, we're going back on—, on the quizzes if they're not getting a 70% which is a C, we're going back, reworking it, they have to do, we have to go back through it, and then they'll go back and retake the quiz. So, we're, we're going to keep reworking and reworking until we get at least a 70%.

Rebecca gives students multiple opportunities to achieve a C on grammar assessments. Steve also allows re-takes focuses on practice instead of achievement:

Because I'm never going to be the one that's going to be the focus when we talk about you. And that's not always the case with other students because teachers put themselves in a position where you know, the focus is on their practices instead of the student's achievement. So, I just make it very simple. You can take it as many times as you want. Whatever you need. You need extra help, you need more practice, all right. Let's do it.

Steve believes in giving students multiple opportunities to demonstrate learning because his focus is on student achievement, not the practice of teaching. Mark, on the other hand, allows test corrections instead of re-takes so the students can see what they did wrong:

Most of the time, I mean, I feel like they are grateful [for corrections on exams] to have the opportunity, that it's not just a one and, one and done situation. Um, the corrections that I do are a total pain. They hate them, but it gets them back a significant number of points, if you want to look at it that way, because they must go through, for everyone they got wrong, and for every multiple-choice answer option, they must tell me why it's either the right answer or the wrong answer. They don't like that very much, but it, it's effective. That's the other big thing I try to tell them is, this is not about just getting it done. You must spend the time to try to understand it, and it's not just having something filled out on a piece of paper.

Mark explains that when students correct their exams, they have another opportunity to learn the material. He asks students to write a sentence or two identifying the right answer and what they now understand. Mark also describes how he allows re-takes but does not lower expectations for students:

'You didn't pass the final. Like so, what do you want me to do?' He's [the

student] like, 'Well, can you just give it to me.' I'm like, 'No. But you didn't take

the unit 2 exam. It's not in there as a zero, so it's not hurting you, but it's certainly

not helping you. So, if you want to come in tomorrow and then you can do it. it.

You demonstrate to me you know unit 2 well enough to move you up the, the

grade scale, then you're good to go.' But I think just setting the bar, in terms of

what I want them to know and how I want them to know it and how I want them

to show it, and then not be willing to lower the bar.

Mark does not lower his expectations for mastery of the content but provides multiple

ways and opportunities to demonstrate knowledge. Steve also describes retakes to get

higher student achievement:

I have the carrot. And the carrot is the A is in your hands. And every year we have

conversations that comes around and whatever. I'm like look, I'm going to tell you

right now. You come down, when it comes to parent conferences, you need to be

ready. Because when they come in and they're going to ask what we need to do

I'm going to turn to you. And I'm going to say okay, what do you need to do? I'm

not going to answer it. You know what you need to do. What do you need to do?

Oh, I need to get in and retake my quizzes.

Steve believes showing students the way to a high grade and holding them accountable

motivates students to work harder. He requires the student to take responsibility for

success in his class. Mark also agrees students' ownership of their learning is important

for student achievement:

Getting (students) to recognize that, and then, um, sitting down with them, taking

the time to try to figure out, is it a test taking issue, is it a knowledge issue, is it a

studying issue, is it a retention issue, you know, what, what is the problem? And

then trying to get them to modify their preparation and they're behavior in that

regard. Every year I have probably, I don't. know, two or three kids that kind of

fall into that category.

Mark supports students to prepare for assessments by identifying barriers to their success. He works with his students to overcome these barriers, increasing their achievement.

Re-taking an exam or assessment focuses on the individual, not the teacher, by creating a learning experience tailored to the students' strengths and weaknesses, allowing them another opportunity to learn the material or a different way to demonstrate mastery. Pearson & Flory (2014) assert that allowing students to re-take assessments can close the achievement gap because it gives students multiple attempts to show mastery.

Tracking. Tracking refers to the practice of separating students based on their achievement levels into different classes. Steve was adamantly opposed to this practice, explaining,

The biggest thing for them is we have got to stop tracking students. We are

putting the same kinds of students in the same classrooms, in the same groups. I

get classes all the time full of kids that are below average achievement level,

mental, mental concerns, social concerns, behavior concerns, and they get

funneled into my class all the time, because I'm 'good with those kids.'

Steve believes that tracking hurts students because students will feed off each other's negativity and not try. He feels if students are de-tracked and there are differently abled students in a class students would achieve more:

> we must start de-tracking our students. We got to get them into classes where they're evenly distributed, where they have a chance to learn from other students, and it's going to require that we do some re-... we do some coaching and some support skills for our teachers, so that they can deal with... deal with the different groups of kids that are within that room.

Steve recognizes the value of providing opportunities for students to learn from each other. Lower achieving students can learn strategies from observing how their higher achieving peers learn material. Therefore, he believes that de-tracking would reduce behavior issues. Ladson-Billings (1994) agrees that tracking results in less individual attention for a student of color, creating a cycle of poor performance and fewer opportunity for students to advance their education.

Teacher Accountability

The final outlier revealed by the data concerning professional development and CRE was teacher accountability. Teacher accountability refers to requiring teachers to use CRE and consequences if CRE is not present in the curriculum or classroom management. How to hold teachers accountable for creating culturally relevant classes was hard for the teachers to figure out, as illustrated by Mark's interview:

> They can't dock our pay. They can't... I mean, they can put a letter in our file, I guess, or that kind of thing, or give us a talking to, but what I think, the most

powerful thing is you stop giving people what they want. And you wanna have specific offs (off hours or planning periods)? Well, you're gonna be working those offs now. You wanna teach specific classes? You're not gonna be teaching those classes. And to me, that just seems like the logical piece... And either way gets us to the result, or they stay and they're miserable and it's no different.

Mark suggests one possible consequence for a teacher who does not show growth in being culturally relevant is to assign them less preferred teaching schedules.

Elizabeth also struggled to identify ways to hold teachers accountable. She suggested that CRE should be tied to teacher evaluations. Colorado teachers are evaluated every year by an administrator as mandated by state bill SB191. Teachers are required to write goals and show progress on those goals to their evaluator. Elizabeth imagines that CRI could be:

somehow tied to our... SLO goals, you know? SLO goals are, um, are the goals that we're working on that are, um, this year and the district that are measurable goals, um... where all kids achieve at a certain level, not a certain percentage.

Rebecca agreed that teachers could be held accountable through their evaluations: "You know, so it's got to, we've got to have better instruction to the teachers, and it's got to be... we've got to be held accountable for it. So. Maybe, maybe it must go into part of our evaluation." Because teachers at Mountainview are evaluated on SLO goals every year, Elizabeth and Rebecca feel that having a SLO goal tied to CRE, or diversity could help increase the use of CRE.

Critical Consciousness

Explicitly missing from the data was evidence of Ladson-Billings (2021) idea of critical consciousness. While one could argue that this concept fits into the intention theme because teachers intentionally create a critically conscious classroom, this was not clearly seen in the data. None of the observations, interviews, or lesson plans explicitly showed the teachers requiring students to think critically on current social issues.

Summary

CRE is used at Mountainview High School through the themes of relationships, communication, equity and individuality, behavior of students and teachers, assessing students, and administrative support. All the participants felt that knowing the student is a key component, which is interwoven through all the themes that emerged. In the next chapter, the themes will be used to further answer the research questions, with discussion of limitations, implications, and suggestions for next steps in CRE.

Chapter Five: Discussion

Culturally Relevant Education has been discussed and analyzed throughout the previous four chapters. Below is a brief review of those chapters to discuss how the themes answer the research questions, how this research impacts educational practice, and ideas for future research.

Review of Study

Culturally Relevant Education is a theory developed by Ladson-Billings that can help narrow the opportunity gap between students of color and White students. The opportunity gap results when students of color do not receive the same chances in school as White students. A qualitative case study was conducted at Mountain View High School to see how CRE is viewed and used in the classroom.

This study's aim was to answer the following research questions:

1. How do teachers at Mountain View High School perceive CRE?

2. How is it operationalized in the classroom?

3. What are the implications for professional development at Mountain View?

A qualitative approach allowed me to have a more complex understanding of Mountain View's use of CRE. A single case study was used to observe the use of CRE in a real-world context at Mountain View.

The data collected was reviewed four times to create memos, codes, and then themes. The next section connects the themes discussed in chapter 4 to the research questions above.

Summary of Findings

Question #1 How do teachers at Mountain View High School perceive CRE?

Relationships

A relationship is an important aspect in a culturally relevant classroom (Stembridge, 2019). Teachers who connect with students support them to become more active and have a positive experience in the classroom (Stembridge, 2019).

Relationships in the Classroom. As stated in Chapter 4, all the participants believed that relationships are key in a culturally relevant classroom. For example, Elizabeth believes:

> a teacher who is culturally responsive and cares about that, looks at of her (or his) kids and knows all of her (his) kids. Gets to know what's going on as best as she can, as much as the kids will tell her (him).

When a teacher has a relationship with students and gets to know all their kids, students "buy in" to the content. Elizabeth also believes the reverse is true: if teachers do not have a relationship with a student, the student "won't buy what they are selling." Steve agrees that students try harder when he creates relationships in his classroom:

> Because of the relationship we've built and our ability to be academic and to be interactive and fun at the same time, [the students] are asking more questions.

The relationships Steve has built with his students motivate them be more active in the class. They try harder, come in for more help, and experience more success in his class. Another key theme of how teachers perceive CRE is equity in the classroom.

Equity

All the teachers in this study expressed agreement with Stembridge's (2019) beliefs that teachers must be agents of equity to close the opportunity gap and that learning about a student's identity leads to equitable opportunities.

Student's Background. The teachers felt they were better able to achieve equity when they learned about students' background and cultures. To learn about students' backgrounds, Rebecca asks questions about them and their life: jobs and other activities they do outside of school. She also asks about holidays and celebrations to learn about everyone's culture. For example, she asked Jewish students about Rosh Hashanah and Muslim students about Eid. She does this to show that she cares about the students and their cultures. Additionally, she conducts a formal survey asking about this information, supporting her to follow up with one-on one conversations. Rebecca also researches cultures that are new to her so she can better demonstrate respect in the classroom.

Steve identifies the impact on classroom management specifically. For example, he initially felt that students calling him "Mr." without his surname was disrespectful; however, after some Latino students explained why it is respectful in their culture just to say "Mr." or "Ms.," he no longer sees the behavior as troublesome.

Elizabeth recognizes that students come to school with individual problems and issues and knowing their struggles enables her to support their success. Another way CRE was perceived was how CRE was used in lesson planning.

Lesson Planning. Understanding students' backgrounds and culture is essential to create culturally relevant lessons. Stembridge (2019) believes that if teachers are not equitable in lesson planning, it will lead to low scores. All the teacher participants agreed that equitable lesson planning is a key component to culturally responsive teaching.

The teachers used different examples to show how they do this. Rebecca offers contemporary and multi-cultural reading selections. She incorporates real-world examples and current events in grammar exercises to get students to buy-in to the practice work. Mark also provides real world examples such as discussing different biological traits in his anatomy and physiology class whenever he can and seeks to include content the students will find interesting. He provides students with a practical application reading to help connect the content to the "real-world."

Communication

All four participant teachers expressed that student-teacher conversations and active listening are essential for the kind of communication require to implement CRE effectively.

Student-Teacher Conversations. Elizabeth, Rebecca, Mark, and Steve believe that one-on-one conversations lead to improved student performance. Rebecca stated, "It lets them know I think that I am on their side, I'm an advocate for them. I will know what kind of what their triggers are, so though those certain conversations, they can let me

know certain triggers." Through effective communication, Elizabeth can avoid classroom management issues and set students up for success. Mark agrees and uses homework checks as an opportunity to gain this insight:

> Just try to make that connection and understand that everybody has kind of their own issues that they're dealing with outside of this place.

As a result, Mark understands what students are going through individually. Elizabeth further explains, "It's just checking in with a kid. A lot of it is checking in with the kid."

These one-on-one check ins with students give Steve insight into his students' culture. Steve is now more aware of the ways in which he expresses himself to students because of the individual conversations he has with students. Steve also believes that active listening is another way to practice CRE.

Active Listening. Active listening is when the listener not only hears what the speaker says but also notices how they are talking and their level of emotion. Steve pointed out that teachers need to listen to students with an effort to understand:

> I listen to what they're talking about, I listen to the way they talk… I try to get them to talk about themselves, things that they're interested in... I try to learn about them as individuals so that I can talk to them as individuals.

Steve points out that listening is more than hearing a student's words; he listens for their inflection and watches body language to understand the feelings behind the words. He sees where they are coming from, leading to better understanding.

Dispositions

A teacher's frame of mind is also essential to successfully practice CRE. A teacher's behavior is key to running an effective classroom regardless of race (Truscott & Stenhouse, 2018). The teachers in this study highlighted the behavior of both teachers and students in achieving equitable learning opportunities.

Understanding Your Own Biases. One of the subthemes that emerged regarding dispositions was understanding your own biases. Teachers need to understand their own biases and insecurities and be willing to take risks (Stembridge, 2019). Steve and Elizabeth expressed how this creates a CRE classroom. Steve states:

Teachers need to get out of their routine. I think some are so routine and they

don't care about [students'] backgrounds.

Teachers who are more creative and vulnerable are better able to create CRE lessons classrooms. Teachers who are uncomfortable with change and avoid risking failure struggle to grow their CRE practices. Elizabeth states that teachers need to be uncomfortable if they are asking the kids to be uncomfortable.

Elizabeth and Steve also brought up the philosophy of White privilege. White privilege refers to increased opportunities in society and education open for people who are White (McIntosh, 1998). When Elizabeth recognized her White privilege, she began to teach differently:

I did not have any students of color in Wyoming… That was extremely eye

opening to me, and suddenly I said, 'oh my goodness!'

Steve brought up the need for vulnerability when teachers discipline students. He felt the teachers at the school ask the "one Black dean" to help with behavior issues of African American students. He continued, "You have a group of teachers that, they don't understand, and they don't respect, and they don't know enough about their students to know when they're being disrespectful and when they're excited, when they are just having a conversation." As Steve states, teachers' resistance to CRE work and being vulnerable can cause more referrals and discipline problems because of the culture difference.

Assessment and Student Achievement

Another theme that emerged from the data is how the teachers in the case study assessed students to help increase student achievement (i.e., how students show their knowledge and skills on an assessment). All four teachers provide students multiple chances to show their knowledge or skill, including re-taking assessments or completing test corrections. These opportunities allow students to address gaps in their knowledge or skills, increasing their achievement and closing the gap. Teachers who practice CRE are concerned with supporting all students' achievement and provide opportunities tailored to the student's needs.

Tracking. Mark, particularly, advocated against tracking students of similar achievement levels in the same class, arguing that this kind of separation harms student achievement. Having students of varying achievement levels in the same class allows for peer teaching and modeling behaviors that lead to successful achievement. The next section reviews the themes that answer research question # 2.

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Question # 2 How is CRE operationalized in the classroom?

This question focuses on how CRE is used in the classroom and identifies

discrepancies between theory and operation. Data from class observations and lesson

plans answer how CRE is used (or not used) in the classroom. The themes of

relationships, communication, equity, and behavior were CRE themes operationalized in

the classroom.

Relationships

Three teachers were observed nurturing relationships in their classroom, greeting

students at the door, talking with students one on one, and discussing current issues. As a

result, students were visibly engaged by participating or paying attention in class.

Equity

All the lesson plans provided by the participant teachers incorporated CRE in

some way. For example, the world languages teacher addressed history and culture of

Spanish-speaking countries in English for better comprehension. She also assigned

homework requiring using Spanish in a real-world situation, at a Spanish-speaking store.

Instead of using a random data set, the math teacher utilized data from Amtrack

trains, which students may need to use for transportation. The English teacher assigned

The Absolute True Diary of a Part Time Indian and referenced pop culture in a discussion

about mood. Additionally, students viewed the documentary "30 Days on a Reservation"

to establish connections between the novel and current conditions for Indigenous peoples.

Students connect to the content and skills through these real-life examples. She also took

into consideration situations outside the classroom by allowing class time for studying

prior to an assessment; the science teacher also made similar accommodations, allowing students time to re-do labs and assignments to achieve success.

Communication

The researcher observed three of the participant teachers using effective communication with students. Communication to encourage struggling students was positive and private. Discussion to foster relationships was also positive, focusing on exciting events in students' personal lives. Additionally, the world languages teacher gave instructions in English so students would better understand the directions and would not feel scared to ask a question in English.

Engagement

Student Engagement. The researcher observed student engagement using Lester's (2013) definition: student involvement in student activities, attitudes, interests, and values associated with others, self-regulated learning, and motivation to learn. All four teachers were observed using current events or issues to help students understand material and get them excited about learning. Students were asking questions, sitting up, and answering. Connections to famous athletes and entertainers captured student interest and led to engagement with the content, as did the use of current popular media and the opportunity to apply skills (i.e., speaking Spanish) in an everyday scenario.

Question #3 Implications for Mountain View

Data from the interviews provided an answer to how teachers could get more support for using CRE in the classroom. Administrative support was the overwhelming theme that answered this research question.

Administrative Support

Three of the four participant teachers expressed the need for administration to show that CRE is important to the school by creating a goal and vision around CRE. This goal and vision should guide professional development with an ongoing emphasis on CRE and a changing focus reflecting changes in student demographics.

Participants acknowledged that CRE work can be uncomfortable, but it needs to be done. The teachers again identified that white privilege could make people uncomfortable. However, they believed that CRE can be successful if teachers recognize this and understand when creating lessons.

CARE Work

CARE stands for Collaborative Action Research for Equity (Pacific Education Group). In 2008, the district adopted this initiative to become more culturally relevant. The teachers who were involved in this initiative felt strongly that the work was valuable and should resume.

The CARE program supported these teachers to become more culturally relevant in their teaching practices and mindset.

Accountability

The participant teachers struggled to identify ways to hold themselves and their peers accountable for implementing CRE. Suggestions included giving teachers who use CRE preferred teaching schedules or connecting CRE to evaluations that affect teachers' compensation.

CRE Training

The participant teachers felt CRE training in specific content areas would encourage their peers to implement CRE by providing examples and ideas relevant to their specific content area. The participants agreed that their peers may struggle to see how CRE can be applied to content. Opportunities to share failures, successes, and best practices would support all teachers to improve their implementation of CRE.

In conclusion, training, accountability, and administrative support were ways professional development could support CRE training at Mountain View. However, there were some limitations to this study, which need to be addressed.

Limitations

The results of this study may be limited because the researcher is a social studies teacher at Mountain View High School; her working relationship with all the teachers in the case study may have skewed the data despite efforts to remain neutral. Additionally, the study focused on core subject areas and, therefore, did not include teachers from all departments (i.e., physical education, music and fine arts, consumer and family studies, and business departments were not included).

The biggest limitation was the absence of students in the case study due to lack of parental response to the request for permission to interview their children. Additionally, one parent expressed concern about the appropriateness of student participation in the study, suggesting they may be used as a "pawn." Only two parents granted permission, providing an insufficient sample size. The researcher believes the students' perspective

would have been effective in revealing whether CRE is truly operational in Mountain View and identifying how the school can improve.

The next section moves from answering the research question and describes how this research can impact teaching.

Implications for Practice

The results of this study can lead to increased implementation of CRE work in Mountain View, specifically in the classroom. This can happen with the use of CARE work and professional development based on individual subjects.

CARE Work

The professional development provided through the CARE program by the Pacific Education Group in 2008 proved valuable to participants (including this researcher). At that time, the principal selected two teachers from each core subject (i.e., math, science, social studies, English, and world languages) who attended trainings outside of school with other teachers from the district. The participants within the school also observed each other and met to discuss their observations. However, the district was unable to afford to continue this program because of the Great Recession in 2008.

CARE work was a turning point for my teaching career. This program helped me to see that the idea of "colorblindness" is not an effective way to teach students of color. It also helped to see my own whiteness and how it impacted how I thought, interacted with students, and viewed the curriculum. This made me realize that I had to change my teaching practices if I wanted to be a more culturally relevant teacher; I must be intentional every time I step into the classroom, write a lesson plan, deal with student

behavior, and manage my classroom. This or similar professional development opportunities could have a profound impact on not only individual educators but also the whole school in reducing the opportunity gap. As noted in chapter 4, the teachers who went through this CARE work (Elizabeth and Rebecca) connected to more CRE themes than those who did not (Mark and Steve). This suggests that CARE work does have an impact on a teacher and the classroom.

Professional Development Based on Subject

In addition to a whole-school professional development initiative like CARE, teachers would benefit from breakout groups based on content area to identify strategies they could implement immediately. This is not a current practice at Mountain View. For example, Smith et al., (2022) challenge science teachers to dismantle and challenge the old science practices and create lessons that are more culturally responsive. Because students will not be successful in science if they cannot see themselves reflected in the content (Mensah, 2021), teachers need support to provide such representation. According to Mensah (2021), collaboration can support this transition in creating a science classroom more culturally relevant. Nolan and Keaser (2019) agree. They believe that learning from others is important in fostering growth and to talk out dilemmas and problems when trying to make a math classroom more culturally relevant.

Cultural Consciousness

Another topic for professional development is how to imbed cultural and critical consciousness in the curriculum for every subject. This was difficult to see in my observations of the teachers in my study. With professional development regarding

cultural consciousness, teachers could guide students to better understand and research current issues. Professional development would also support teachers who might otherwise decide not to present these lessons for fear of retribution from the community or administration. Such teachers might be less fearful and more willing to include these lessons if they received instruction on how to implement culturally conscious lessons.

Recommendations for Research

The biggest implications of this study are around preparing students for standardized testing, which is not aligned with CRE theory. Preparing students for a multiple-choice SAT, ACT, or CMAS exam, in my opinion, is against CRE theory. It is hard to connect the test to anything relevant to today, teachers cannot connect and make relationships with students proctoring the exam, and teachers cannot help students during the test or give students positive reinforcement. As a teacher, I need support to see how I can implement CRE in preparation for a rigid standardized test. I have received a suggestion to make the reading about a person of color or written by a person of color. However, this feels inadequate; as I have stated previously, CRE is much more than just changing a reading or an example of a different culture.

Another recommendation for further research is how to hold resistant teachers accountable for implementing CRE work. Throughout my research, I have encountered teachers who do not see the need for CRE because they "are not racist" and "do not see color." It would be interesting to explore how to engage those teachers in reducing the opportunity gap. Research into the effectiveness of evaluating teacher performance based on CRE would be informative. It would be interesting to see how teachers who are not

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strong in this work are evaluated on it and how evaluators help those teachers implement CRE in the classroom.

My recommendation is for further research on the themes found in chapter 4 that were not found in the literature from chapter 2: Communication, dispositions (behavior), and student engagement. Thorough research on how students and teachers communicate with each other would identify classroom management techniques and practices for teachers to implement, and how the teacher is perceived by the students could provide insights for using CRE in the classroom. Additional research on how both students and teachers behave could also prove useful. Teachers tend to focus on student behavior (specifically defiant behavior) and do not necessarily reflect on how they behave and how they are perceived by students. It would be interesting to see if CRE could change a teacher's mindset or behavior.

Finally, student engagement was a theme from chapter 4 not found in the literature. This could be a harder theme to research because the idea of student engagement is broad. As a teacher, I have seen engagement look different, and what I can perceive as disengagement could be engagement.

Engagement and culture could be another topic of research. Engagement can be culture based. For example, Hammond (2015) described different children of different cultures not looking an adult in the eye as respect. However, before this work I would have considered that non engagement if a student did not look me in the eye. It would be interesting to see how a possible "clash of cultures" influence what engagement looks like and how CRE could help remedy that clash.

Conclusion

There is an opportunity gap in this country today. Students of color perform less than their White counterparts on standardized exams, have lower graduation rates, and are given fewer opportunities for academic achievement. Ladson-Billings and Gay state that one of the ways to close this gap is through Culturally Relevant Education. Ladson-Billings argues "students must experience academic success, develop and/or maintain cultural competence, and develop a critical consciousness through which they challenge the status quo of the social order" (p. 160). Gay (2010) agrees, arguing that it is the job of the teacher to teach the whole child to help students of color maintain their identity.

The purpose of this case study was to see how CRE was perceived and operationalized in the classroom by a science, math, English, and Spanish teacher. This study also identified implications for professional development in terms of CRE. To answer these questions, I interviewed each participant at least three times, observed their classrooms, and requested at least two lesson plans from each teacher. I read through the data multiple times to identify themes from my data, which included relationships, administrative support, equity, dispositions, and assessment and student achievement. This researcher hopes these themes can be used to create a more culturally relevant Mountain View High School in the future.

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Appendices

Appendix A: District Approval

Cherry Creek Schools
Office of Assessment & Evaluation
5416 South Riviera Way
Centennial, CO 80015
720-554-5005

August 30, 2016

SUBJECT: Contingent Approval of Research: *Time to Create Change: A Case Study of Culturally Relevant Teaching in High School Classrooms*

Dear Ms. Kopay,

Your request to conduct research in Cherry Creek Schools is approved, contingent on the approval of the IRB of the University of Denver. Please note that you may not begin research until you receive IRB approval from your institution and send us confirmation of this approval. When you have sent us a copy of your IRB approval, we will send you an official approval letter.

While your research is approved at the district level, the final decision for study participation at any Cherry Creek school lies with that school's principal. The principal at the school you have identified will be contacted so they are aware that your research has been contingently approved by our office. However, please also reach out to them directly to explain your study. Principals have the final decision for whether or not you can conduct research in their building.

If you have any questions or concerns regarding this approval, the conditions, or our review process, or if there is anything I can do to help, please don't hesitative to contact me (jmcvey@cherrycreekschools.org, 720-554-5005).

Sincerely,

Jill McVey

Appendix B: IRB Approval

DATE: September 6, 2016

TO: Colleen Kopay
FROM: University of Denver (DU) IRB

PROJECT TITLE: [816882-1] Time to Create Change: A Case Study of Culturally Relevant
                     Teaching in a High School Classroom
SUBMISSION TYPE: New Project

APPROVAL DATE: September 6, 2016

EXPIRATION DATE: **August 15, 2017**
RISK LEVEL: Minimal Risk
CHILD RISK   45 CFR 46.404
ASSESSMENT:

CONTINUING REVIEW: Expedited
REVIEW PERIOD: 12 months
REVIEW TYPE: Expedited Review

ACTION: **APPROVED**

REVIEW CATEGORY: Expedited category # 7

> **Category 7:** *Research on group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.*

Thank you for your submission of the **New Project** materials for this project. The University of Denver IRB has granted **FULL APPROVAL** for your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission. The IRB determined that the criteria for IRB approval of research, per 45 CFR 46.111, has been met.

This submission has received an **Expedited Review** based on applicable federal regulations. Please note that the following documents were included in the review and approval of this study:

   Advertisement - Student Flyer (UPDATED: 09/1/2016)
   Application Form - IRB Narrative (UPDATED: 09/1/2016)
   Child Assent - Student Assent Form (UPDATED: 09/1/2016)
   Consent Form - Teacher Consent Form (UPDATED: 09/1/2016)
   Cover Sheet - IRB Change/Modification Letter (UPDATED: 09/1/2016)
   Letter - Principal Letter (UPDATED: 09/1/2016)

Appendix C: Research in Schools

University of Denver Institutional Review Board (IRB)
Office of Research Compliance
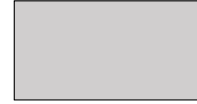
APPENDIX M – RESEARCH IN SCHOOLS

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University of Denver
Consent Form for Participation in Research

Teacher Consent Form

Project Title: Time to Create Change: A Case Study of Culturally Relevant Teaching in
High School Classroom
Principal Investigator: Colleen Kopay
Faculty Sponsor: Dr. Maria Salazar
DU IRB Protocol #: 816882-1
Study Site: Grandview High School

Purpose

You are being asked to participate in a research study. The purpose of this research is to
study about Culturally Relevant Teaching (CRT) in a high school. Culturally Relevant
Teaching is a curriculum theory that uses students' backgrounds, cultures, and
experiences when conducting and planning lessons and assessments to help close the
opportunity gap. An opportunity gap is created when a student's race and socioeconomic
status determines the availability of learning opportunities (i.e., access to higher level
courses, technology, and proficient teachers). Therefore, my research question centers on
CRT and its uses within this high school. My research study explores how effectively it's
being used and seeks to find ways to make it a productive and successful curriculum for
the students here.

You are being asked to be in this research study because you have met 3 of the 4 criteria:
(a) you are a teacher trained in CRT; (b) you have expressed interest in integrating
diversity/culture in instruction; (c) you were observed by principal and/or you have self-
reported enacting CRT; and (d) you teach in one of the following content areas: English,
Math, World Languages, and/or Science.

Procedures

If you participate in this research study, you will be asked to complete an interview and
be observed in the classroom twice.

This process will take approximately 5 hours and include providing some additional
information:

Three interviews: Two 50-minute interviews and a 30-minute post-observation interview.
These interviews will be conducted at a time of your choosing.
Three classrooms observations (of your choosing): each observation will last
approximately 99 minutes.

During the interview and observation process, I will be taking notes. The topics that will be part of the interviews include a discussion of CRT, your implementation of it, its use at this school, and so on. Since the goal of my research is to examine CRT and how it's used at Grandview, the conversations will revolve around it. The interviews will take place at a location of your choosing (e.g., your classroom or your office). The classes that will be observed will be of your choosing using CRT and should (a) not have any exams, (b) be ones that you are comfortable with me being in the class, and (c) be ones that you feel are good classes to observe CRT.

Two lesson plans where I was not observing. And you will give me two lesson plans that contain CRT curriculum.

Voluntary Participation
Participating in this research study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose not to be interviewed, observed, or give lesson plans for any reason without penalty or other benefits to which you are entitled.

Risks or Discomforts
Potential risks and/or discomforts of participation may include feeling uncomfortable about the topic and research questions. However, you may decide to end the interview or observation and the data collected will not be used in the final study.

Benefits
If you agree to take part in this study, you might be affected by the outcome of the study. Information gathered in this study may help the school increase the use of culturally relevant teaching strategies in the classroom, which might impact your teaching.

Incentives to participate
You will receive a $10 gift card for participating in this research project.

Confidentiality
The researcher will keep your information safe throughout this study. Your individual identity will be kept private when information is presented or published about this study. To help ensure this, the researcher will use pseudonyms to keep your information safe throughout this study. Your information that you provide will not affect your employment or status in the school in any way.

To keep your information safe, the researcher will keep the information given on a personal computer with a passcode.

The answers to the interview questions that you provide will be stored on a recording device and a secure computer. The information will be sent to a transcription website

www.rev.com. All of the audio and written notes will use pseudonyms only. The researchers will retain the interviews and observations until August 2019 at which time the data will be destroyed.

The interviews will not be made available to other researchers for other studies following the completion of this research study.

The results from the research will be shared at a doctoral defense meeting. The results from the research may be in published articles. Your individual identity will not be revealed when information is presented or published. Pseudonyms will be used for any presentation or publication.

The research records are held by researchers at an academic institution; therefore, the records may be subject to disclosure if required by law. The research information may be shared with federal agencies or local committees who are responsible for protecting research participants, including individuals on behalf of Maria Salazar may be reached at 303-871-3772 or msalazar@du.edu.

Questions
If you have any questions about this project or your participation, please feel free to ask questions now or contact Colleen Kopay at 720-308-8709 or cmdkopay@gmail.com at any time.

If you have any questions or concerns about your research participation or rights as a participant, you may contact the DU Human Research Protections Program by emailing IRBAdmin@du.edu or calling (303) 871-2121 to speak to someone other than the researchers.

Options for Participation
Please initial your choice for the options below:

___The researchers may audio/video record or photograph me during this study.
___The researchers may NOT audio/video record or photograph me during this study.

Please take all the time you need to read through this document and decide whether you would like to participate in this research study.

If you agree to participate in this research study, please sign below. You will be given a copy of this form for your records.
_____   _____

Participant Signature   **Date**

Appendix E: Email to Teachers

Teacher e-mail

To whom it may concern:

Hello-

My name is Colleen Kopay and I am currently a doctoral student at the University of Denver. Your child has been selected to participate in a study on culturally relevant teaching at Grandview High School. You were selected because you use culturally relevant teaching in the classroom. What will occur is 2 interviews, 3 classroom observations, and send me 2 lesson plans (all of your choosing). Participation is voluntary, and names will not be used. You will receive a 10 dollar gift card for your help in this study. Please e-mail me at cmdkopay@gmail.com if you have any questions.

Thank you for your time,
Colleen Kopay

Appendix F: Interview Questions

Interview Questions for Teachers

Day 1
1. Why did you join the teaching profession?
2. In your opinion, what is the most important mission of education?
3. Why did you choose this school to work at?
4. What are some suggestions you have on ways to close the opportunity and achievement gap?
5. In your opinion, what does culturally relevant teaching look like? What does it look in your classroom? Be specific.

Day 2
1. How do you try to connect with all of your students? What about students of color specifically? How does that affect your instruction?
2. How do you hold high standards for all students?
3. How do you specifically include different aspects of different cultures in the classroom?
4. How do you think CRT impacts student achievement?

Post Interview:

1. How do you feel the classes I observed went?
2. How did you assess the learning in the lessons in the classes I observed? How did your students of color?
3. In your opinion, how did you use CRT correctly?
4. What aspects of the lesson could do you feel you could use more CRT theory?
5. In your opinion, how can CRT be used by all of the teachers in this school?
6. How do you feel the school can help teachers use CRT more effectively in their classrooms?

Appendix G: CRE Observation Rubric

CULTURALLY RESPONSIVE EDUCATION		

ATTITUDES   ENVIRONMENT   CURRICULUM   TEACHING STRATEGIES   FAMILY/COMMUNITY INVOLVEMENT

DESIRED OUTCOME: Culturally responsive schools and educators recognize the full educational potential of each student and provide the support and challenges necessary for them to achieve that potential.

THE EDUCATOR SHALL:

	Level 1	Level 2	Level 3	Level 4
High Expectations	Understand the importance of communicating high expectations, and monitor their classroom interactions with students ensuring they communicate expectations for high achievement. Examine data to detect inequitable representation in special programs such as gifted, remedial, special education,	Incorporate teachers, guidance counselors, administrators, and other school personnel in delivering the message that ALL students can learn. Participate in professional development and reciprocal classroom observations with colleagues focusing on language and practices that promote high expectations.	Display a responsibility for all students and work from the premise that all children can attain high standards.	Reflect in their classroom practices that the school actively holds all students to high standards, recognizing the full educational potential of each student and providing the support and challenges necessary for them to achieve to that potential. Continually review data to detect inequitable representation in special programs and actively use those findings to inform the practices of the school and teacher.
Professional Reflection	Participate in professional learning that heightens the awareness of the impact of teacher attitude, background, culture, and socio-economic status on teaching.	Participate in professional development that develops skills to make adjustments in instruction as a result of the impact of teacher attitude, background, culture, and social class on teaching.	Continue to develop their own social and emotional skills in order to model those skills to students (self-awareness, the ability to move comfortably through cultures, social awareness, etc.) Provide professional development for teachers and administrators to change a possible pervasive negative attitude and propensity to blame culturally and linguistically diverse families for their children's struggles.	Regularly engage in self-assessment to determine their own socio-cultural consciousness and make the necessary adjustments when their biases may be affecting their behavior or attitude towards a certain group.
Personalized Education	Develop personal connections among and between students and teachers.	Gain first hand knowledge in alternative ways of knowing and learning.	Encourage the use of multiple perspectives and strengthen students' capacities to take on another's perspective.	Consider the unique and individualized learning histories (social, community, historical, familial, racial, gender, etc.) of all students, using that data to problem solve and individualize planning for students..
Diverse Knowledge Systems	Recognize the validity of traditional knowledge systems. Understand the significance of the role of cultural identity in providing a strong foundation for all social, emotional, intellectual and spiritual development	Participate in cross-cultural activities. Help students to appreciate current and historical events from multiple perspectives.	Develop a philosophy of education that is able to accommodate multiple world-views, values and belief systems. Enable educators to learn from and about their students' culture, language, and learning styles.	Embed an understanding of the role of cultural identity in providing a strong foundation for all social, emotional, intellectual and spiritual development into their teaching.

NOTES:

CULTURALLY RESPONSIVE EDUCATION

ATTITUDES   ENVIRONMENT   CURRICULUM   **TEACHING STRATEGIES**   FAMILY/COMMUNITY INVOLVEMENT

DESIRED OUTCOME: Culturally responsive schools and educators learn from and about their students' cultures; languages; and learning styles, and make instruction and assessment meaningful and relevant to their student's lives..

THE EDUCATOR SHALL:

	Level 1	Level 2	Level 3	Level 4
Student Engagement	Learn to pronounce all students' names accurately and use them often. Make routine contact with all students, even those who don't ask for help.	Learn about their students, including how differences of race, culture, class, character, gender, and genes influence their experience of schooling and academics.	Promote student engagement, share the responsibility of instruction, and encourage a community of learners.	Offer student-centered instruction, where students are encouraged to direct their own learning and to work with other students on assignments that are both culturally and socially relevant to them.
Learning Styles	Invite a variety of student responses to show respect for divergent thinking. Develop specific opportunities for students to cross groups and cultures.	Vary teaching approaches to accommodate diverse learning styles and language proficiency.	Consider all forms of intelligence and problem-solving skills in the assessment of the learning potential of students in their care and provide appropriate opportunities for the advancement of all students.	Utilize multiple instructional strategies and apply those strategies appropriately and flexibly in response to the cultural and instructional environment in which they are situated.
Varied Assessment	Attend trainings in the administration of assessment tools and methods that consider the students' cultural background.	Ensure classroom assessment is conducted with fairness and sensitivity towards students from culturally and linguistically diverse backgrounds.	Utilize information from several sources in assessing students' achievement.	Use a range of assessment strategies that provide students from diverse backgrounds opportunities to demonstrate their mastery and skills, including the opportunity to share what they know in their native language.
Student Support	Know when and how to provide accommodations to students with special needs and English language learners.	Become knowledgeable about the second language acquisition process and how to support students who are English language learners.	Apply knowledge and skills in using strategies for teaching English language learners; including sheltered English techniques.	Use a systematic process including data gathering, conducting assessments, and implementing instruction in 1.) native-language knowledge, 2.) English-language knowledge, 3.) academic background and school experience, 4.) learning and behavior patterns, including team-based intervention plans as necessary.
Cooperative Strategies	Use cooperative learning and other strategies that promote collaboration, especially for material new to the students.	Instruct through teacher/student dialogue and small group work that is academic and goal directed.	Use effective classroom practices that are challenging, cooperative, and hands-on.	Engage in critical self-assessment and participatory research to ascertain the extent to which their teaching practices are effectively grounded in best practices for all students.
Place-Based Learning	Use the local environment and community resources on a regular basis to link what is being taught to the everyday lives of their students.	Provide opportunities to learn through observation and hands-on demonstration of cultural knowledge and skills.	Incorporate local ways of knowing and teaching by utilizing Elders' expertise or providing opportunities for students to learn in settings where skills are naturally relevant.	Become knowledgeable in all areas of local history and cultural tradition that may have bearing on their work as a teacher, including the appropriate times and places for certain knowledge to be taught.

NOTES:

Appendix H: Lesson Plan Rubric

Lesson Plan CRE Rubric (adapted from Kea & Campbell-Whatley and Pacific
      Educational Group)
Title of Lesson:
Unit:
Objectives:

Checklist

Content

_____Diverse students' experiences, concerns, and interests are used to develop lesson content.

_____Is the content reviewed or learned relevant to Latino and African American students?

Activities

_____Do examples contain multiple perspectives for different groups of students?

_____Are students given time to work with others?

_____ Are groups based on race, gender, or mixed?

_____ In groups, are roles defined?

_____Are the lectures in the class student or teacher-based? Are visuals being used?

_____The lesson activities are made explicit for all students (Diverse students know what to do, especially when making choices)

_____ Are the activities in the lesson use multiple ways of learning?

Time in Class

_____ Questions asked during the lesson or in an activity that uses diverse students' experiences, concerns, and interests.

_____ Is there any time in class where students and the teacher can learn from each other?

_____ Does the lesson include time for the teacher to talk and create relationships for all students?

_____ Does the lesson contain opportunities for the students to offer their perspective?

Assessment

_____ Are there multiple ways to assess learning

Appendix I: Principal Approval

CherryCreekSchools

Dedicated to college and post-secondary readiness and success for every student.

September 1, 2016

To Whom it May Concern:

The purpose of this letter is to confirm I am aware of the research being conducted by Colleen Kopay, Doctoral student at the University of Denver. I support the study and will help with recruitment for potential subjects should Ms. Kopay need my assistance.

Please let me know how else I can be helpful with her research.

Sincerely,

Lisa Sprague, Ed.D.
Principal
Grandview High School

Dedicated to Excellence

Appendix J: Elizabeth's Lesson Plan

Español IV   Proyecto Cultural   México en Los Estados Unidos

OBJECTIVES:
1) Students will visit various Latino run and oriented businesses in the Aurora/Denver metro area.
2) Students will make cultural observations about the products, foods, environment, use of Spanish and clientele in the businesses.
3) Students will purchase small product in target language and interact with employees of business and other clients.
4) Students will present information to class about their visit, experiences and observations.
5) Students will discuss how they felt and reacted by being in an unfamiliar cultural and linguistic environment.

Antes de ir:
1 ¿Cuáles son unos productos que crees que vas a encontrar en un supermercado latino?
_____
_____
2. ¿Cuáles son unos productos que vas a encontrar que no están en un supermercado típico en los EE.UU.?
_____
_____
3. ¿Por qué existen tiendas especiales para la gente de otros países?
_____
_____

EL VIAJE:

1. <u>Elije</u> un supermercado de la lista y haz una visita (con un compañero de clase o con tus padres).
2. <u>Observa</u> todo...y esté preparado de hacer una presentación breve en clase. Será una presentación de 1-2 minutos. GOOGLE PRESENTATION
3. <u>Mira</u> las palabras siguientes para ayudarte planear tu viaje y tu presentación:

Las verduras	las frutas	las especias	la panadería
La carnicería	la lechería	la pescadería	la tortillería
El restaurante	los empleados	los letreros	los clientes

4. **COMPRA** un producto (barato) en la tienda. TIENE que ser algo pequeño y barato. Llévalo contigo a clase para enseñar la clase en tu presentación.

5. **SACA** una foto en la tienda, o afuera de la tienda como prueba o evidencia de tu viaje.

6. **PREPARA** una presentación breve para clase

CARNICERIA LATINA
2272 S Chambers Rd
(On the north east side of the street)

MI PUEBLO LATIN MARKET
15585 E Colfax Ave
Aurora, CO 80014
(Super small parking lot...very authentic experience)

PANADERIA TLAQUEPAQUE
2300 S Chambers Rd,
Aurora, CO 80014
(On the south east side of the street)
Backs up to the bike park

RESTAURANTES PARA CONOCER:

TACOS- LA MORENITA
Hampden & Chambers
15493 E Hampden Ave
Aurora, CO 80013
720-379-3058

TACOS SELENE
6th Avenue & Chambers
15343 E 6th Ave, Aurora, CO 80011

(303) 343-7879

TACOS SELENE
6th Avenue & Chambers
15343 E 6th Ave, Aurora,

Appendix K: Elizabeth's Lesson Plan

PUENTE   "Un homenaje a los cubanos"
por Ricardo Arjona

OBJECTIVE:
1) Identify the influence of the Cuban population in the United States.
2) Identify the way many Cubans in recent decades have had to arrive.
3) Discuss the concept of "pies secos" as part of immigration policy for Cubans.
4) Identify the relationship between Cuba and the United States.
5) Identify the relationship beween Cuban Americans and Cubans in Cuba.
6) Identify where the Cubans have had influence around the world.
7) Discuss Cuban spirituality, religion and beliefs systems.
8) Understand Afro Cubano influence in Cuba and in music, song and Dance.

1. ¿Cuál es el grupo más grande de latinos en la Florida?
2. ¿Cuándo llegaron a Miami y la Florida?
3. ¿Cómo llegaron muchos cubanos a la Florida?
4. ¿Cuáles fueron las olas de inmigración fuera de Cuba?
5. Describe la vida de los cubanos en las últimas décadas.
6. ¿Se puede viajar a Cuba fácilmente de los Estados Unidos?
7. Describe la relación de primos.
8. ¿Cómo son similares los primos? ¿Cómo son diferentes?
9. ¿Dónde está South Beach?
10. Describe el papel de un puente. ¿Qué hace? ¿Por qué son necesarios los puentes?

Habana,
siempre a las mitades, tan mitad _____, tan mitad _____
saben bien las _____ que en cada ventana siempre hay **un testigo**
Habana, **juran** los que _____ que no saben nada pa' entender lo tuyo.

Habana, tan cerca y tan _____ como esos espejos que reflejan nada
unos al _____ otros a un trineo que jamás vio _____
Habana, no ha podido Dios ni los 600 santos entender lo tuyo.

Mientras la Florida que es como esa _____ que se fue a otro lado
se sienta a extrañarte en la Hialeah de las _____
y yo que no toco _____ en este entierro muero por la pena,
de no hacerle al mago y construir un puente de _____ millas
para que los primos corran a abrazarse como se merecen
y la ideología no **se meta** más en lo que no le importa,
que la historia es larga, y la vida es corta.

Hay un cubano en La Habana, vendiendo habanos _____
se le han quedado en la cama tantos sueños dormidos
un cubano en La Habana, que es _____ de futuros
bloqueado a la americana, al enemigo cianuro,
un cubano en La Habana, un cubano en La Habana,
que no es culpable de na'.

> ### VOCABULARIO:
> **La mitad**-half
> **Un trineo**-a sled
> **Al otro lado**-to the other side
> **Extrañar**-to miss (someone or something)
> **Un entierro-**a funeral
> **Unos habanos**-Cuban cigars
> **Cianuno**-cyanide
> **Na´**-Nada
> **Un malecon**-boardwalk
> **Tumbao**-palabra cubana para "swing" or "swagger"

Hay un _____ en Miami, rencores por tradición
South Beach es su varadero, la Ocean su malecón
un cubano en Miami, tercera _____,
te habla de asere y consorte con la misma canción
un cubano en Miami, un cubano en Miami,
que no es culpable de na'.

Que se sequen los pies los que persiguen la Florida,
que otros se lavan las manos con _____ de diplomacia
ni el bloqueo es remedio ni **aferrarse** es la medida,
cuando manda el _____ siempre reina la desgracia.
Puente, habría que hacer un puente,
pa' unir a tanta gente,
en medio del conflicto ha vivido y vive
_____.

Puente habría que hacer un puente
pa' unir a tanta gente,
quizás la diplomacia no ha sabido hacer un
puente.

El tiempo va gastando el reloj de arena en tanto
esperar...

Vamos a hacer un puente, un puente hermano
vamos a unirnos todos con este tumbao,
Allá en Pinar del Río se siembra bajo el sol,
_____ contra el frío, salsita con béisbol.

Vamos hacer un puente, un puente hermano
vamos a unirnos todos con este tumbao,
Que fácil ve el _____, un yupi en la oficina,
domingos al buceo, merienda en la piscina.

Vamos hacer un puente, un puente hermano
vamos a _____ todos con este tumbao,
Cayeron las cortinas murió la _____ fría
el Kremlin ya está en ruinas, ¿quién quiere más
espías?.

Vamos hacer un puente, un puente hermano
vamos a unirnos todos con este tumbao,
Guaracha a la cubana con Celia y los Van Van
hay rastros de La Habana en Londres o en
Milán.

Hay ruidos de la Habana
por toda la ciudad
Coral Gables, Hialea,
Calle 8, Lincoln Road.
Cubanos que a escondidas
extrañan la otra orilla.
Baracoa, Santiago, Pinar del Río,
Camaguey, Matanzas, Varadero.

Y allá en la vieja Habana
Vedado Miramar.
Hay rastros de nostalgia
por alguien que se fue.

Cubanos del mundo con acento sincopado
En Roma o Budapest.
Tocando sones del pasado
en D.F. o Key West.
La clave, el swing,
las curvas de mujer.

Nadie gana la batalla
todos pierden, es así.
La política esta lejos de Juan,
María, Luis, Alberto, Lupe.
No importa donde vivan
si es aquí o allá a la otra orilla.
Ellos viven, ellos sienten.
Las medidas son pa' gente
no pa´ muros de concreto.
La historia es un suicida
que revive años después.

Aquí no hay bandos, solo hermanos.
Si me quieren de testigo
yo diré que no entendí.
Ya me dijo aquel amigo
caminando el malecón.
Yo no sirvo de enemigo
si hace tiempo me rendí.

Vamos a hacer un puente,
vamos a hacer un puente,
Vamos a hacer un puente,
Que se unan todas las manos
y el tiempo sana heridas
que no puede el rencor

Vamos a hacer un puente
Vamos a hacer un puente
pa' unir a tanta gente
Vamos a hacer un puente...

<u>DESPUES de ESCUCHAR la canción y ver el video:</u>

1. ¿Quiénes son los dos primos?
2. Describe la vida de cada "primo".
3. ¿Cuál primo sufre más?
4.¿Cómo pueden estar unidos otra vez los dos primos?
5. ¿Qué es la batalla en la canción?

<u>Lesson Plan – Algebra 1</u>

Topic: Real-world Applications of Slope in Public Transportation

Assignment Due:
Worksheet on calculating slope from a graph

HW review method:
Teacher will place solutions on the board for
students to check. Teacher will then answer
questions and work problems as need.

<div style="border:1px solid black;">

Learning Goals:

Students will model real-world data on a graph using linear modeling

Students will interpret slopes created from the real-world modeling and suggest what might cause the changes in the graphical representation.

Students will draw links between their project and their own community

</div>

Warm-Up Problems:
Students will work 3 problems involving slope in real-world situations. Students will discuss other places where slope plays a part in their everyday lives.

Lesson Notes:
As a class students will go through a quick review of finding slope from a graph, finding slope from two points, and finding slope from a story problem.

Exploration: *All Aboard Project*
Have students get into groups of three. Each person in the group needs their own copy of the project. Each student will create their own copy of results during the project.

   Part 1: Follow the steps outlined in the project and answer the questions as they are presented within the project.

   Part 2: When the project is completed, discus the differences between the two graphs within your group. What causes the differences? Why aren't they just mirror images of each other? Can students make a generalized statement about slope angle vs. rate of change?

Part 3: Finally, as a class, come back together and discuss the groups' results. Have students present their ideas about why the two graphs are different even thought the trains are just going back along the same path in reverse. What did students notice about the speed of the train relative to the angle of the slope? Have students share their own personal experiences with public transportation and its schedules.

<u>HW:</u>

Go the RTD web page and pick one public train transportation route that originates at Nine-Mile station and ends at Park Meadows Mall. Graph the route data going to the mall and returning on the same graph. Are the graphs mirror images of each other? If not, what might cause the differences in the data based on the direction of the train?

All Aboard!

Cape Codder

Hyannis…Buzzards Bay…Providence… New Haven…Stamford…New York

235		◄ Train Number ►					234
76 Su		◄ Days of Operation ►					91 Fr
Ⓡ ◐ ☕ ☎ ⊗		◄ Train Service ►					Ⓡ ◐ ☕ ☎ ⊗
Read Down	▼		Mile	Symbol	▲		**Read Up**
3 15P	Dp	(Bay Colony/Conrail) (ET) Hyannis, MA ●	0	● ♿	Ar		10 45P
3 28P		West Barnstable, MA	9	● ♿			10 17P
3 43P		Sandwich, MA	16	● ♿			10 05P
4 00P		Buzzards Bay, MA	24	●			9 51P
✳ 4 10P		Wareham, MA	29	●			✳ 9 37P
✳ 4 55P		Taunton, MA	56	●			✳ 8 54P
5 55P		(Amtrak) Providence, RI	76	♿			8 03P
D 7 42P		New Haven, CT	189	♿			R 6 01P
D 8 35P	▼	Stamford, CT	228		▲		R 5 03P
9 27P	Ar	New York, NY–Penn Sta. ●	264	Ⓢ		Dp	4 17P

You are given a timetable for an Amtrak train route connecting New York City and Cape Cod, Massachusetts.
The times going down the left side describe the trip of Train 235 from Hyannis to New York, while the times running up the right side are for Train 234, traveling on a different day from New York to Hyannis. **3 15P** means the time 3:15 p.m.
The distance to each station from Hyannis is given in the mileage column. Note that the total length of the trip is 264 miles.

1. Graph the position of Train 235 along its track as a function of time, for the entire duration of its trip. Use the timetable information, and your best guess of what happens in between the scheduled times.

2. Use your graph to answer the following questions.

   a. Between which two stations does the train travel at the fastest speed? How fast?

   b. Between which two stations does it travel at the slowest speed? How slow?

3. In what way should a graph of the position of Train 234 resemble the Train 235 graph? Write a mathematical description of what the graphs ought to have in common, and give a realistic explanation of why this might be expected.

4. Now make a separate graph of the position of Train 234 as a function of time.

5. Comparing the two graphs, point out the biggest discrepancies between quantities or features which you expected to be identical.
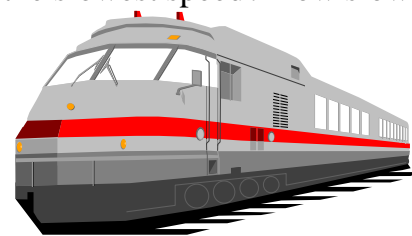
Math Domain

☐ Number/Quantity ☐ Shape/Space ☑ Function/Pattern

☐ Chance/Data ☐ Arrangement

Math Actions (possible weights: 0 through 4)

| 2 | Modeling/Formulating | 2 | Manipulating/Transform ing |
| 3 | Inferring/Drawing Conclusions | 2 | Communicating |

Math Big Ideas

☐ Scale ☐ Reference Frame ☑ Representation

☐ Continuity ☐ Boundedness ☐ Invariance/Symmetry

☐ Equivalence ☐ General/Particular ☐ Contradiction

☐ Use of Limits ☐ Approximation ☐ Other

One can expect students to plot distance along a vertical axis and time along the horizontal axis. (It is possible, but uncommon, to do it the other way around.) In plotting distance vs. time students will have to make some assumption about how the speed of the trains varies between stations. The most reasonable assumption, given the data, is that the trains travel at a uniform speed between stations. Further the students will have to make some assumption about the length of time that the trains are stopped at each station. Thus students may be expected to plot a graph that consists of linear segments connected by horizontal segments.

The steepness of each linear segment is a measure of the average speed during the corresponding time interval. Train 235 is seen to travel most rapidly between Providence and New Haven (about 63 miles per hour) and most slowly between Taunton and Providence (20 miles per hour).

Here is a possible graph of distance vs. time for Train 235:

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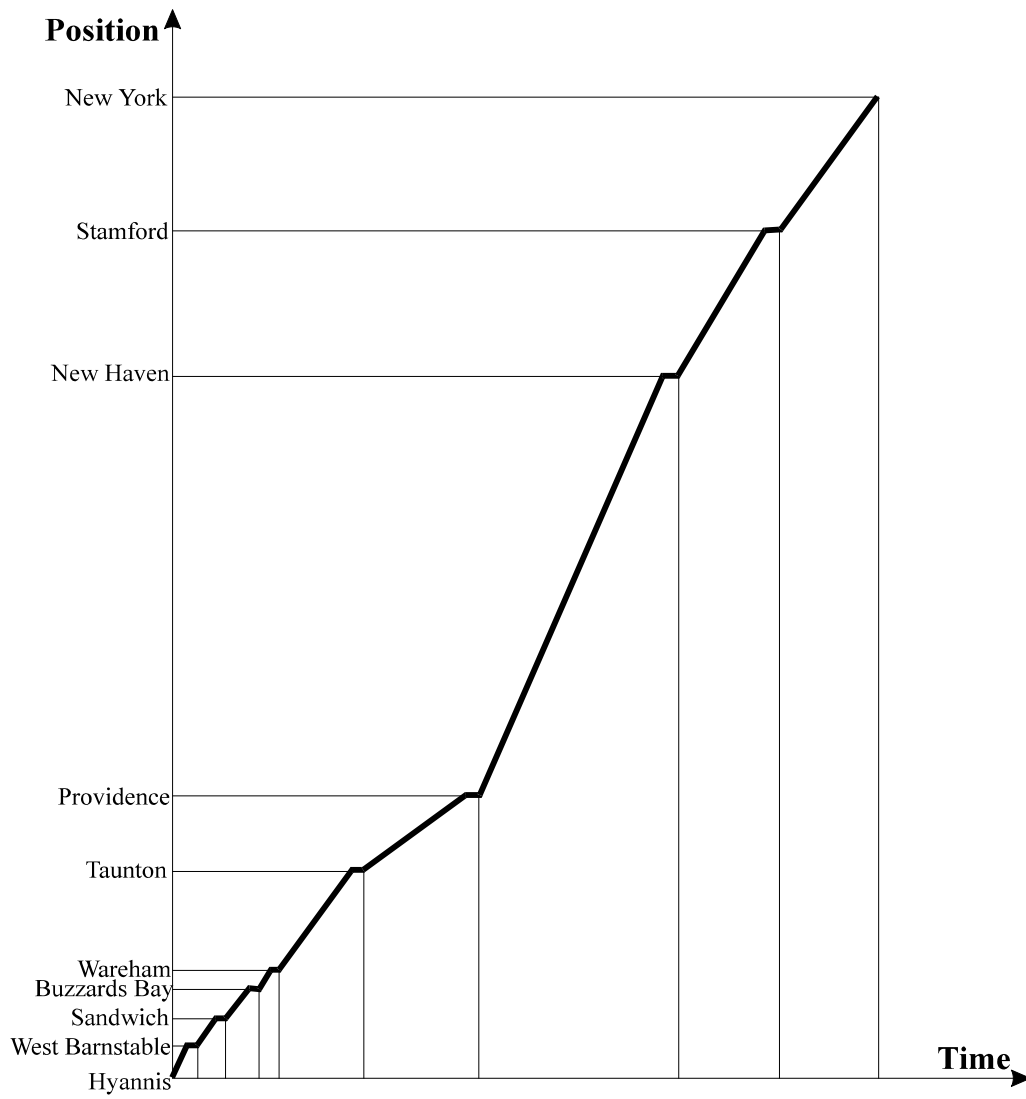
Inspecting the timetable for Train 234 leads us to expect a similar but not identical graph. First of all, if one plots the stations along the distance axis in the same way as they were plotted for Train 235, then the graph will always have either zero or negative slope, as opposed to Train 235's graph which always has zero or positive slope. Here is a graph of Train 234's distance as a function of time (overlaid on that of Train 235 reflected).
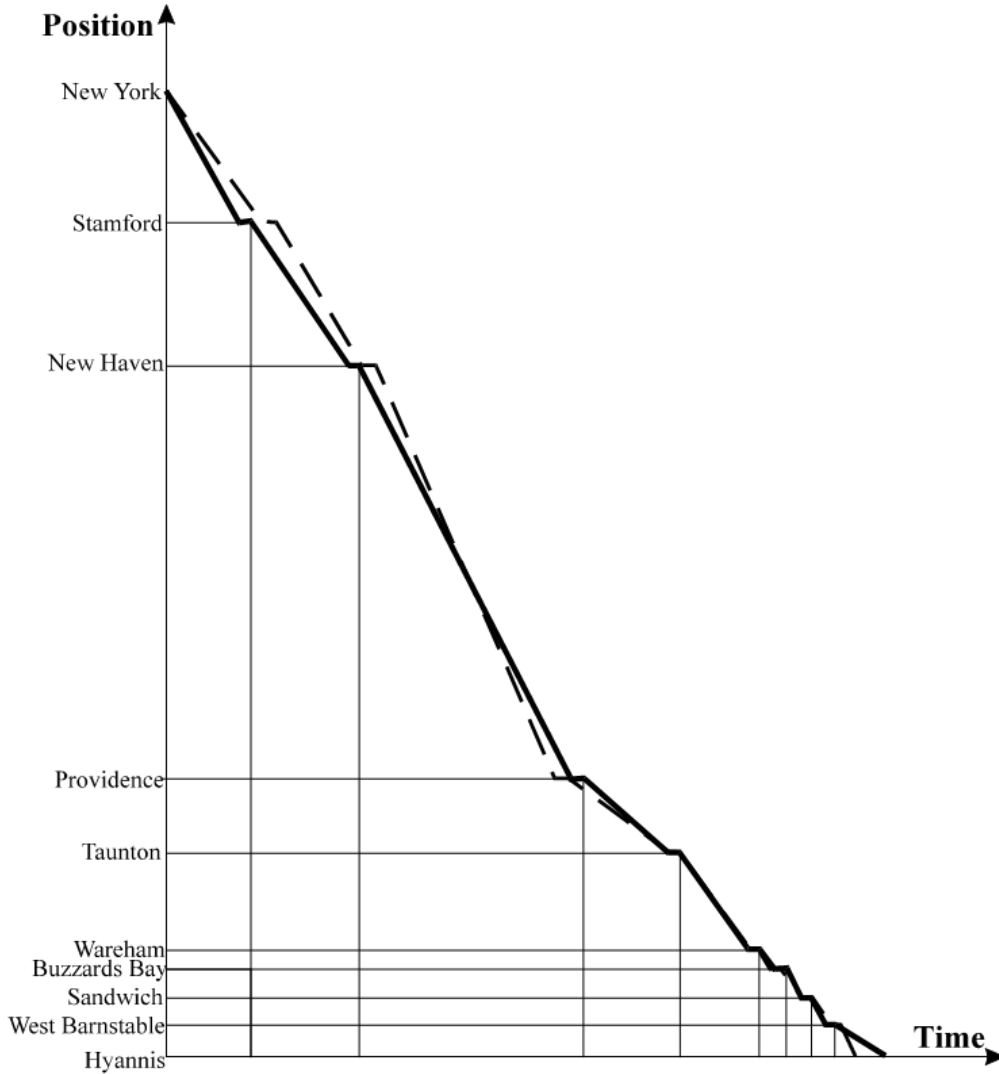
There are some interesting discrepancies between travel times in the two directions. The time from Hyannis to West Barnstable is 13 minutes while the time from West Barnstable to Hyannis is 28 minutes.

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	partial level	**full level**
Modeling/ Formulating (weight: 2)	Sketch a graph reflecting the given time and distance data.	Sketch a graph reflecting the given data and including sensible assumptions about amounts of time spent in stations and differences between arrival and departure times.
Transforming/ Manipulating (weight: 2)	Provide some of the following: appropriate scales on graphs accurate plotting accurate calculation of time intervals (clock arithmetic) accurate computation of speeds	Provide all of the following: appropriate scales on graphs accurate plotting accurate calculation of time intervals (clock arithmetic) accurate computation of speeds
Inferring/ Drawing Conclusions (weight: 3)	Demonstrate a clear understanding of relationship between slope of graph and speed of train.	Recognize the relationship between the two graphs. Recognize the similarity of slopes (aside from sign) in corresponding segments of the two trains' travel.
Communicating (weight: 2)	Present graphs with minimally adequate labeling and explanation. Express all numerical statements clearly.	Clearly state the assumptions and considerations involved in producing the graphs. Provide a discussion, in response to questions **3** and **5**, that is clear and persuasive.

Appendix M: Rebecca's Lesson Plan

Lesson Plans

CP English 10
Lesson plan 1

Intro:	Vocab 3, power point definitions/images of vocab words. Test is next week. Images from power point tie a visual to the word for students.
Grammar:	parallel structure: review rules. Complete worksheet in pairs. Go over. Complete second exercise individually, turn in to be graded.
Novel:	*The Glass Castle*. Students will read the chapter where Jeanette goes swimming with Dinitia.
	Discuss: Welch, VW, and its cultural background. Remember time period- early 70s. What racial conflicts are there? How does Jeanette view her black classmates? Other black citizens? Provide specific examples. How do her views differ from Grandma Erma's and Uncle Stanley's views of Welch's black population? Provide evidence.
	Discuss: What other novels provide similar examples of Jeanette's experiences and views concerning the themes in this novel. What events that have happened in society that can relate to Jeanette and her family?
Homework:	Continue reading *The Glass Castle*. Read the next 15 pages for class. Study vocab words, do Vocab.com practice.

Appendix N: Mark's Lesson Plan

CP Physical Science Lesson Plan – 9/17/16

- **Purpose:** Apply what you know about density to determine the composition of a group of unknown solids.

- **Due:** Density of unknowns graph

- **Agenda:**
  1) Review graphing homework and answer questions.
  2) Density wrap-up day – Students will complete the following assignments throughout the class period.
     a. Diet Coke and Mentos Lab Conclusion – Students who have not turned this lab in yet are failing. This should be their number one priority today. This needs to be completed and submitted to Schoology before they move on.
     b. Density Unknown Graph – If students didn't complete this for homework, they need to complete this. Understanding the relationship between slope and density is crucial to understand the density simulation they will work on today.
     c. Density phet simulation – This begins today's work. Students will work within the simulation to identify several unknown materials based on their density.
     d. Archimedes Writing – Students will read several articles related to Archimedes and his contribution to the understanding of density. They will then write a paragraph outlining how Archimedes used the steps of the scientific method to explore the concept of density.

- **Homework:** Complete any of the work from today you didn't finish in class

Anatomy and Physiology Lesson Plan – 9/13/16

- **Purpose:** Be able to identify all 18 tissues by sight under a microscope and know the location and function of each of the tissues.

- **Due:** Summary of the Day; Self graded lab simulation

- **Agenda:**
  1) Daily quiz over previous days notes – Self grade
  2) Complete unit notes – Muscle and nervous tissues
  3) Students will have the remainder of class to work on what they need to in order to be ready for the lab exam last class.
     a. Complete work with microscopes to be ready for practical exam.
     b. Complete and self-grade cell transport simulation.
     c. Work on producing study materials and flow map for lab exam next class.

  Homework: Prepare for lab exam next class.

Appendix O: Dedication

Dedicated to my mom

June Kabbes Doyle

1949-2023