

Effects of Curricular Integration of Students' Identities

Reanne B. Rivera
Illinois Wesleyan University
EDU 498: Educational Inquiry
Dr. Leah Nillas
May 02, 2023

Abstract

The curricular integration of students' cultural identities is a critical component of maximizing students' learning as educators bridge their students' lived experiences and cultural backgrounds to their learning (Ladson-Billings, 1995). Another component of students' identities entails their learning styles. When students' preferred learning styles are implemented into the classroom they show higher levels of academic achievement and engagement (Lauria, 2010). A final component of students' identities explored in this classroom research includes students' interests. *Engagement* is learning when students' choices and interests are considered for their learning (Beecher & Sweeny, 2008). The significance of this research project is to analyze the effects of curricular integration of students' identities. Student identities in the context of this research can be defined in three sectors. The first sector includes *cultural identities*, which is how students define themselves as part of different groups such as ethnicity, religion, etc. The second sector includes *learning styles* defined as the modes and methods in which students prefer to learn to better engage and maximize their achievement. The final sector includes *students' interests* such as extracurricular activities, sports, games, etc. This research was conducted in a third-grade classroom with 18 students in a bilingual school, in a school district in Central Illinois. Culturally Relevant Pedagogy (Ladson-Billings, 1995) and Engagement Theory (Kearsley & Shneiderman, 1998) are the theoretical frameworks that align with this research synthesis.

Keywords: Student identities, Engagement, Cultural Identity, Student Interests, Learning Preferences, Curricular Integration

Introduction

My research synthesis begins first with the methodology of this study, discussing the study participants, methods of data collection, and theoretical framework that form the basis of this classroom research. Literature review provides the basis of what other research studies relate to this topic. I discuss in the results and data analysis section the three different sectors of student identities and the effects the incorporation of their identities has on their academic performance and engagement. Lastly, I summarize my findings from my research and discuss implications for preservice and in-service teachers currently in the field. I explain what can be done in future studies to strengthen the findings and implications in this field of research.

The primary focus of this research study is to observe the effects that curricular integration of student identities may have on student engagement levels. This self-study is primarily framed by elements of culturally relevant pedagogy (CRP). CRP is an educational principle that refers to incorporating student identities, cultures, and interests into the curriculum. Based on CRP, integrating students' lives and identities has a positive impact on student engagement and achievement levels through allowing them to create meaningful connections to the curriculum. Through this self-study, I explore ways to incorporate CRP principles by integrating student identities into the curriculum to maximize their learning and engagement.

Diverse student identities represented in the curriculum promotes students' sense of belonging. School curricula don't always represent students of diverse experiences and backgrounds. In 2018, children's books main characters consisted of fifty percent being White main characters and twenty-seven percent being animals or other non-human characters (Huyck & Dahlen, 2019). This means that only twenty-three percent of main characters were of other

cultures that were not White. Diversity in children's literature is critical as it allows for students to see themselves represented in the materials that are used for their learning. Furthermore, it allows them to feel valued and important in the classroom.

During the years of COVID as xenophobia became more prevalent, students of diverse backgrounds were more prone to feel devalued and othered. Furthermore, in recent years after the height of COVID-19 instances of police brutality have increased causing a political polarization in the United States as well. Therefore, classroom implementation of students' identities is critical to allow them to feel valued and feel welcomed into the classroom and a part of their learning.

Teachers play a critical role in promoting students' sense of belonging and engagement in the classroom through student identity integration. The results of this self-study inform pre-service teachers like me and in-service teachers to better support and engage students in the classroom to ensure teachers meet their needs and foster their strengths. Furthermore, through integrating different identities, I provide my students with literary texts that serve as windows, mirrors, and sliding doors (Bishop, 1990) through which they can connect with or learn about one another and different identities that exist within the world around them. Introducing my students to different cultures and identities also paves the way to them becoming more knowledgeable and active citizens.

During the course of my research I found methods of incorporating student identities to promote student learning. For example, I incorporated student identities through the use of books, using student names in word problems, and using student learning profiles to guide my planning of learning activities. My curricular integration allowed my students to see that there are people like them represented in success, in literature, and in their curriculum at school.

In addition to this, studying curricular integration informed me of ways to tailor my classroom to student identities and their interests. Knowing their interests acted as a basis for my development of lesson plans to ensure I was engaging my students and their learning. My students displayed higher levels of academic performance and emotional engagement to learning and school.

Literature Review

Culturally Relevant Pedagogy and Cultural Identity

Student cultural identities is the first sector of student identities defined for this research synthesis. Cultural identity is important because these are the cultures, values, and beliefs students use to navigate the world and their learning. Gloria Ladson-Billings (1995) explored the use of Culturally Relevant Pedagogy (CRP) as a means to create bridges for students to facilitate their learning using their experiences and cultural backgrounds. Finding ways in which students can maintain their own cultural identity while simultaneously succeeding academically is a critical role for schools and educators (Ladson-Billings, 1995). Ladson-Billings (1995) conducted her research with a sample where the majority of students were predominantly African-American who attend a low-income school district. This student population had the ability to support her argument for utilizing student's cultural identities to facilitate student learning. Furthermore, Ladson-Billings (1995) argued that incorporating students' cultural identities leads to higher achievement through higher levels of engagement and motivation. The emphasis of using students' cultural identities to make learning meaningful and relevant to

students is important because it bridges the learning students are doing to the experiences they encounter outside of school.

As educators, learning about students and their communities provides critical information that guides teaching in order to promote student learning and achievement. For example, becoming a part of students' communities through living in that community, or volunteering or working in that community provides a plethora of opportunities to learn more about individual students and the demographics and backgrounds of which they come from (Ladson-Billings, 1995). Without the interpersonal connections between students and teachers and teachers and the communities to which their students reside and belong to, teachers will not have the knowledge they need in order to bridge student learning and their experiences to help students connect.

In addition to this, cultural congruence and cultural synchronization build off of this idea of using student cultural identities to facilitate student learning. Ladson-Billings (1995) defined these two terms as the interpersonal connections between students and teachers, which allows teachers to accept their students' morals, forms of communication, and other aspects of their culture in order to maximize their students' learning and achievement. Ladson-Billings' (1995) student population in particular also supported the idea of integrating students' identities in order to move away from curriculum that only reflects the dominant cultural norms. These terms are critical to curriculum integration as it reflects students' cultures and identities to which they belong which makes learning more accessible and relatable for students that then in turn maximizes not only their engagement but their achievement and understanding as well.

Similar to Ladson-Billings, Howard (2003) discussed the importance of seeing students as bringers of cultural capital to the classroom. *Cultural capital* pertains to how individuals experience the world around them, traditions they have that exist from their culture, what they understand and how they speak linguistically (Howard, 2003). This is similar to the idea of teachers creating interpersonal relationships with their students because they need to see their students' identities and minds as mining areas for knowledge on how to make learning more accessible and engaging for their students (Ladson-Billings, 1995).

Howard (2003) furthered both his own and Ladson-Billings (1995) argument for the importance of students' cultures by exploring the effects of students from diverse backgrounds not adhering to dominant cultural norms. Students may not understand cultural norms presented in instruction which leads to disengagement that puts them at an academic disadvantage (Howard, 2003). To address this, educators can create curriculum and teaching styles that reflect students' cultural backgrounds and norms by further discussing the ways in which students with diverse backgrounds are at a disadvantage when the curriculum is not reflective of their identity.

One proposed controversial teaching philosophy is *deficit-based thinking* which refers to a belief that students have different abilities to learn and engage with material based on their cultural backgrounds. Ladson-Billings (1995) and Howard (2003) argued against the use of deficit-based thinking in the classroom. They argue that rather than deficit-based thinking, teachers must approach their students with asset-based thinking where all students are capable of learning and engaging with material (Howard, 2003; Ladson-Billings, 1995). This means that regardless of cultural identities all students have the same capability to learn and succeed academically, but that learning should be made accessible to them through being reflective of their own identities.

Howard (2003) further argued that it is a teacher's responsibility to integrate student identities into the curriculum by arguing for critical reflection. *Critical reflection* is a process through which educators understand their own implicit biases, prejudices, and how to battle

those in order to better scaffold their lessons for their students to not fit only the European middle-class norms (Howard, 2003). This aligns with asset-based thinking through advocating for teachers to understand their own thought processes and how this may affect the ways in which they interact with students to reflect their beliefs about them.

In summary both authors advocated for the importance of integrating students' cultural identities into the curriculum. This integration promotes student engagement and maximizes student learning through allowing students to make connections with the materials they are learning from and the concepts they are learning. Furthermore, Howard and Ladson-Billings also argued that teacher reflection and the ways in which teachers think of their students is another critical part of CRP and maximizing student learning.

Implementation of Students' Cultural Identities

To put CRP into perspective with regards to implementation, the following discussion will be about different research studies implementing ways in which teachers applied CRP to their own teaching and instances. Different integration strategies could include incorporation within the literature through the books made accessible to students and the experiences in which educators create and frame their learning to apply and connect to their experiences.

Henderson et. al (2020) inventoried their libraries in order to analyze the inclusiveness and the diversity of their classroom libraries. They included three college professors that were a part of the literature department at their university. The classroom teachers that were taking inventory of their classrooms taught a range from first to third grade. Two of the classrooms had a majority of the students who identified as African-American, whereas the last classroom had a percentage of 39% of her students who identified as African-American (Henderson et. al., 2020). The methodology of these teachers' self-study is important because the classroom libraries needed to be inventoried to see if they were reflective of their students' cultures and experiences, making it reflective and analytical. In particular, Henderson et. al (2020) found that they had limited availability of books that reflected their students' interests and identities in their classroom libraries. Based on Ladson-Billings's and Howard's arguments these classroom libraries wouldn't maximize student engagement or learning as there would be no connection between the material and student experiences and identities.

Culturally diverse literature allows accessibility which is a critical component of students' motivation and achievement in a literary environment (Henderson et al, 2020). Furthermore, to not reflect children of color in the literary curriculum could lead to further risk of marginalization of students, which can lead to disengagement and disinterest (Henderson et al, 2020). What this means for teachers is that finding literature that represents the demographics of students is critical for student engagement and interest, but furthermore that finding literature outside of students' experiences may also be helpful as it allows them to understand the lives of others. For students, this argument advocates for their representation in literature to better support and maximize their learning as they navigate the curriculum and materials they are learning.

A final argument is that if the literature is not made visible or accessible to the students (i.e. too tall of a shelf to access, not wheelchair accessible, etc.) they will not be able to read the literature or know that it exists there for them (Henderson et al, 2020). Therefore, making the diverse books visible and accessible to students allows them to engage with the cover, the pages, etc. to decide whether to read the book or not.

Similar to Henderson et al, Djonko-Moore et al (2018) argued for allowing students to connect with their learning through familiar experiences. However, the difference lies in that Djonko-Moore et al (2018) believed in the use of experiential learning in an environment that students are familiar with and have within their communities. *Experiential learning* is defined as hands-on experiences that allow students to develop problem-solving skills and reflection skills for students to understand their thinking and values from what they've learned (Djonko-Moore, 2018). However, in relation to cultural identity, experiential learning could be critical to maximizing student learning when done in an environment which students are familiar with because it comes from their community, a place they visit all the time, one they pass on the way to school, etc. Using a familiar environment allows students to make connections to the learning as they connect it to their community and their experiences with that environment or location.

Djonko-Moore and colleagues (2018) conducted this study in Colorado where students attended a one-week long summer camp. The ages of the students ranged from third-sixth grade and eighteen of the students identified as African-American, twelve of the students identified as Latinx, and four of the students as Biracial (Djonko-Moore, 2018). All of the students attended a school district in which 87-91% of the students had access to free-reduced lunch (Djonko-Moore, 2018). The research sample is particularly important because it allowed for adjustment of curriculum to reflect minority groups of students who didn't belong to the white majority. Furthermore, these students came from a low-income background which is important to both their environment and community.

As mentioned previously, students are bringers of cultural capital which influences the way in which they experience the environment and the way in which they interpret their learning and experiences (Djonko-Moore, 2018). What this means for teachers is that understanding their students' cultural backgrounds allows them to reflect on that to adjust their teaching and the way in which they frame their teaching to provide students with bridges to connect their learning and their own experiences. Furthermore, students experiencing learning in their environment could strengthen their engagement as they create a concrete understanding of the concepts through hands-on, experiential learning.

When students are learning about subjects like science in their own environments in their own community, they are more likely to want to engage in political action, which in turn increases their engagement (Djonko-Moore, 2018). Teaching subjects like science in a familiar environment makes the learning more accessible through reflecting the students' identities, while also making the learning more connected to them as it takes place in their own community that affects their own lives. This concept also relates back to the framework of CRP previously discussed in this literature review because students are seeing themselves and their community reflected within the curriculum.

The curricular integration of students' cultural identities is a critical component to increasing student levels of engagement and motivation. This curricular integration leads to an increase in their sense of belonging in the school community. To further support student learning, it's important to ensure that the integration of cultural identities is both accurate and relevant to the students. Not only is it important for students to be culturally represented in the classroom, their preferred learning styles and interests outside of the classroom are a critical component of their identities.

Positive Effects of Multiple Intelligences and Learning Profiles

A second part of student identities includes students' learning preferences. For the purpose of this self-study, their learning preferences include their preferred method of learning and the environment in which they like to learn. McMahon and colleagues (2004) defined *multiple intelligences* as individuals having different degrees of skills and abilities in distinct areas. The 10 different areas of intelligences as defined by McMahon and colleagues (2004) include linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, intrapersonal, interpersonal, naturalistic, moralist, existentialist. For the purpose of this self-study, the main types of intelligences discussed are linguistic, spatial, bodily-kinesthetic, intrapersonal, and interpersonal. The highlighted types of intelligences as defined by McMahon and colleagues (2004) are listed below:

1. Linguistic: Where learners learn through auditory and verbal communication.
2. Spatial: Learners learn through visualization.
3. Bodily-kinesthetic: Learners learn through physical activities and when there is bodily movement involved.
4. Intrapersonal: Learners prefer to work on their own and focus on their inner-self.
5. Interpersonal: Learners can work and learn with others through relation and can collaborate well with others.

It is important to define the different types of intelligences for this research synthesis as it creates categories for which students can fit into based on their preferred learning styles. Student learning profiles were the second sector of identities referenced for this research synthesis. Preferred student learning styles are a critical part of student identities as it affects the ways in which students comprehend and retain new information and material.

Lauria (2010) argued that differentiation maximizes student growth through recognizing students have different preferences on methods of learning, different interests, different ways in which they process information and instruction, and they have different methods of self-expression to show their learning. Differentiated instruction has shown to promote student learning and achievement because it tailors the instruction and assessment in ways that account for student learning preferences. Differentiation is important because instruction is then based on this sector of students' identities. Student investment in their learning affects their motivation levels which can potentially lead to higher levels of student achievement.

However, it is important to note that Lauria (2010) utilized the Dunn and Dunn Learning-Style Model rather than Howard and colleague's definition of multiple intelligences, which included the ten different areas of intelligence listed previously. Instead, Dunn and Dunn's (1975) Learning-Style Model defined five distinct strands of learning-style elements that affect the level of engagement students have with the material and concept they are learning. The five strands of learning-style elements according to Dunn and Dunn (1975) are environment, emotional, sociological, physiological, and psychological.

These learning strands are similar to McMahon and colleagues (2004) use of Gardner's definition of *multiple intelligences* because the learning styles still reflect students' learning in context of social situations (groups vs independence) and context of ways in which they process learning and learn best. However, these strands are also important to this research synthesis because learning identities are formed by the learning-style elements mentioned as it relates to the way students process and retain new information (Lauria 2010).

With the use of the Dunn and Dunn's model Lauria (2010) discussed multiple experimental research studies with middle school students that showed significantly higher scores on achievement tests when they are learning experiences aligned with their preferred

learning styles. Lauria (2010) also implemented environmental changes such as noise level, light level, etc. and experienced higher achievement and engagement levels. This means that when students' learning styles and multiple intelligences are taken into consideration and implemented in instructional methods they are more likely to achieve academic success and higher motivation levels through engagement with the curriculum. This is important for this research because the effects in which learning styles of students are implemented into the classroom will be later explored in the data analysis of this paper.

To further emphasize the environmental strand of the Dunn and Dunn's learning model, Oyserman and Dawson (2021) explored the effects of virtual learning versus traditional learning on students. This is particularly important because different students would be more engaged in the learning process than others. For example, students who are spatial learners or students who are linguistic learners may adjust well to e-learning, but students who learn better bodily-kinesthetically may not experience high engagement and learning as e-learning doesn't include much movement.

Oyserman and Dawson (2021) argued that well-designed learning environments can support and maximize student learning. Furthermore, learning environments that normalize difficulty and effort in learning promote students' motivation and perseverance in learning through shaping their thinking around learning (Oyserman & Dawson, 2021). This aligns with Lauria's (2010) finding that students need an environment that is tailored to their learning styles and needs as it promotes learning and engagement for them. This is important because initially for this self-study learning identity only included multiple intelligences, but arguably learning identity may also include learning needs based on environment and more.

Similar to Ladson-Billings (1995) that was covered in the previous section of this literature review, Oyserman and Dawson (2021) argued that teachers need to frame learning and teaching in a way that is relevant to students' developmental capacity, prior knowledge, and lived experiences in order to maximize learning. This is important because this also relates to students' cultural identities and learning styles to promote students' learning and engagement. Furthermore, Oyserman and Dawson (2021) discussed that higher engagement rates lead to higher achievement and confidence in learning and comprehension as students' contexts of learning are relevant to their lived experiences and prior knowledge. Overall, studies have found that the incorporation of student learning preferences led to higher levels of comprehension and retention.

Counter Arguments for Multiple Intelligences and the Effects on Learning

On the other hand, research studies have found that using multiple intelligences as the sole basis of differentiation and incorporation of student identities was not effective. In a study conducted in two school districts in Chicago and Evanston where 288 fourth-grade students attended, McMahon and colleagues (2004) argued that the Teele Inventory of Multiple Intelligences (TIMI) showed little evidence of a relationship between students' learning style preferences through Multiple Intelligence and reading achievement contrast to Oyserman and Dawson (2021). It is important to note that McMahon et al (2004) also analyzed the reliability of the different subsets in the TIMI and found that measurement was inconsistent and may need further refinement and development. This means that although the data produced by their study showed little evidence, they acknowledged that there is a low reliability of the assessment tool

they used which could have caused the data to show little evidence for a relationship between multiple intelligences and reading achievement.

McMahon and colleagues (2004) also argued that alternative assessments may be used in order to identify diverse learners such as gifted and talented, but also that more authentic assessments that may reliably identify the effects of matching teaching to multiple intelligences could include problem-solving activities. This means that although the TIMI showed little evidence to support matching learning activities and processes to multiple intelligences, there may be other assessments that could potentially argue for the positive effects of matching teaching to multiple intelligences and students' preferred learning styles.

Katz and colleagues (2002), conducted a research study with ten students, five of which were said to be intellectually disabled based on physician assessments, in two different classrooms. All of the students were a part of general education classrooms where some of the students (both those who may have had a disability and those without one) may have been a part of general pull-out programs throughout the day (Katz et al, 2002). Similar to McMahon and colleagues (2004), research data showed that students in both classrooms and schools showed similar levels of engagement. One classroom was in a school that followed the Multiple Intelligences framework, whereas the other classroom was in a school that did not follow a specific framework to guide teaching and curriculum (Katz et al, 2002). The research conducted was through observational study of the different activities being implemented in the classroom, which was different from McMahon and colleagues (2004) because they used the TIMI.

Furthermore, Doyle and Rutherford (1984) argued that although learning style is a critical component of students' identities and that it is likely to affect their classroom behavior and achievement through levels of engagement in significant ways, it couldn't be the sole basis of guiding planning of instruction and learning activities. It was also found that there is not enough research evidence on learning styles to define it as effective for classroom and learning achievement (Doyle & Rutherford, 1984). Therefore, the curricular integration of students' identities must include all three sectors of identities as defined in the previous sections of this paper, cultural identities, learning identity, and student interests.

Student Interests for Differentiation and Student Choice

Student interests are the final sector of student identities defined for this research synthesis. As previously defined, student interests refer to hobbies, extracurricular activities, shows, movies, etc. Cornett, Paulick, and van Hover (2020) defined differentiation as tailoring instruction to students' strengths and needs based on their learning styles, interests, and readiness. Furthermore, Cornett and colleagues (2020) discussed four different methods of differentiation. "Content," is the first method of differentiation described which refers to the material or skill students are learning and how they will gain access to the material or skill (Cornett et al., 2020). The second method mentioned is the "process," which involves the activities that students engage in to make sense of the content they learn and the learning activities that are used to review, practice, or reinforce the material (Cornett et al., 2020). "Product," is the third method of differentiation discussed which refers to the ways students are allowed to demonstrate their knowledge, understanding, and ability after periods of practice and learning, which can also be referred to as the assessment (Cornett et al., 2020). The final method of differentiation described is through "affect," which involves students' feelings and emotional needs throughout the lessons and unit that need to be taken into account (Cornett et al., 2020).

Cornett and colleagues' (2020) categorization of differentiation is important because it prompts educators to incorporate students' different sectors of their identities into instruction. For example, differentiating content through teaching the concept with materials that reflect their interests and cultures to which they belong to make it accessible and more engaging for students.

One way to discover more about students' interests and cultural backgrounds is through conducting home visits. Cornett and colleagues (2020) observed a teacher that conducted home visits with thirteen different students' families in rural Virginia. The teacher found that when she was able to learn about the interests and families in which students have outside of school, she was able to implement this new knowledge into her teaching style and the content in order to make learning more accessible to her students. For example, she found that one of her students liked to build things, he was interested in engineering and creating, so she used that interest as his focus in a writing task where he described what he would like to create.

Learning about students' interest and family background is important because it supports not only the incorporation of the students' interests through activities they like to do, but it also takes into account the learning style and cultural background of the students as well. Through going to their houses, the teacher also learned the learning style and structure needs a student may need based on student-parent interactions (Cornett et al., 2020). Furthermore, in the case of a teacher in Virginia, she was able to learn the different cultures experienced in these homes, like familiar-structure, the child's role in the household, etc. Although knowing about students' like outside the classroom supports the integration of cultural and learning identity integration, it relates to student interests as well through knowing what students might find a mismatch in when accessing content and instruction.

Similar to Cornett and colleagues (2020), Servilio (2009) advocated for differentiation in the classroom to increase student engagement and learning for all students. However, Servilio (2009) argued for differentiation through student choice. Student choice can be defined as allowing students to choose the methods of learning and/or the material they are learning about. There are seven steps which Servilio (2009) identified in order to reach differentiation through student choice. The most important one for integrating students' interests is the differentiation of material. However, the differentiation of material in this process is allowing for students to choose the material they are using to learn. For example, the books they are choosing to read to practice a strategy, the topic they are choosing to research if learning how to find content in non-fiction, etc. Student choice as a means of differentiation is important because they are going to choose what they are interested in, whether to learn more about, if they have prior knowledge, or if it's just a topic of interest to them.

Methods of Student Interest Integration

Giordano (2011) argued that the classroom library is an integral part of the classroom where you can differentiate and account for the varied students' interests and reading levels. The process by which she promoted her students to find books is through the process of CLICKS defined as:

1. **Connect:** Displaying a variety of books for students to see if they connect with it in any way. This may be where reflecting students' cultural identities is important, or doing student interest inventories because your library could reflect extra curricular activities they commit to as well.

2. **Length:** How many pages are in the book, and how long it would take for the students to read.
3. **Interest in Topic:** Student inventories are also important here because in order for students to fully engage with the book, they need to be interested in the topic they're reading about. Otherwise, they might find the book boring and find it hard to complete the book.
4. **Count 5 unknown words:** This gauges difficulty, if there are two to three unknown words this is a just right book.
5. **Knowledge:** What students already know about that author, illustrator, topic. The knowledge they have about these things help inform their choices because they will likely already have knowledge about authors, illustrators, and topics they are interested in.
6. **Sense and Understanding:** How students are understanding and making sense of their reading. Check-ins could be with the educator, other peers, family members at home, etc. If they aren't interested in the book, they might have trouble understanding and making sense of the content they are reading about.

Giordano's (2011) book choice process is important for integrating student interests because it allows students to make book and reading choices based on their interests which can lead to higher engagement and higher comprehension rates with the books they're reading as well. Furthermore, it advocated for students to learn more about topics they may not know a lot about, but that they may find interest through reading more, while still accounting for reading ability as well.

Similar to Giordano (2011), White and Kim (2008) also advocated for using reading as a means to integrate students' interests. Through their voluntary summer reading program, they scaffolded reading with teachers and parents to promote summer reading in elementary aged students in a suburban school district (White & Kim, 2008). Through this reading program, they provided appropriately challenging books (at varied levels) and high-interest books, which they found through their teachers and families. At the end of the summer, White and Kim (2008) found that voluntary reading when the books are of interest to the students could increase which further led to the enhancement of reading achievement in ethnically diverse students.

White and Kim's (2008) findings are important because they emphasized the importance of integrating students' interests into the curriculum through instruction and materials students need for instruction. When students' interests are incorporated into what they are learning they are more likely to become better engaged, retain more information, and to want to read more as they want to learn more about their interests.

A different method of incorporating students' interests into instruction is through the learning activities they are participating in. This is what Cornett and colleagues (2020) defined as differentiating the process. Beecher and Sweeny (2008) discussed three different types of learning activities. However, the one that is important for incorporating students' interests is the third type of learning activities. Type three learning activities require students to act and think like practicing professionals as they learn through investigative activities, artistic productions, etc. (Beecher & Sweeny, 2008). Students were allowed to choose what their topic and project for the product they would like to present to demonstrate their learning (Beecher & Sweeny, 2008).

These activities and allowance of student choice is important because they support students' interests as a means to access and retain information and preferred learning styles as a means to demonstrate the knowledge they learned to their peers and educators. Furthermore, it

allows students to learn about high-interest topics in a way that they feel is most effective and interesting for them. These activities are differentiating the process of learning, where the choice of presentation is differentiating the learning product as defined by Cornett and colleagues (2020).

Methodology

With the aim of further investigating the effects of culturally relevant teaching, I conducted this self-study during my student teaching in a third-grade classroom. For my research, I first developed my knowledge of my students' interests, cultural backgrounds, and identities. With this knowledge, I furthered my research through incorporating my students' identities and interests into the teaching of the subjects reading, math, and science through read-alouds, mathematics problems, and hands-on STEAM activities. In this self-study, I focused my investigation on the research question: *How does integration of students' identities into the curriculum affect their engagement?*

In order to better understand my search topic, I referred to *identities* in three different sectors. The first aspect included cultural identity defined as relating to how an individual sees themselves as a member of a specific group (Schwartz et al, 2006). For example, the social categorization includes nationality, ethnicity, race, gender, religion, etc. Physical descriptions such as hair color, hair length, eye color would not contribute to this definition. The second aspect of identity included students' learning profiles defined as their preferred methods of learning. Examples of learning methods include visual, tactile, kinesthetic, and audible. The final aspect of identity used for this research synthesis relates to student interests defined as hobbies they have outside of school, or things such as music, movies, and shows they were interested in. Examples of student interests included painting, sports, different shows they were interested in.

For my self-study the participants consisted of 18 third graders attending elementary school in a district that hosts residents from Central Illinois. The students' ages ranged from 8-9 years old with the majority being 8 years old as they entered third grade. Eight of the participants in this study were non-White students. Seven participants had non-traditional family structures, which includes divorced parents, step parents, grandparents as primary parental figures, and single parents. The majority of my students also participated in extracurricular activities such as sports, art classes, dance classes, and more.

For my integration of student identities, my data included lesson plans that included diverse literature for read-alouds during the reader's workshop. I created mathematics word problems using students' names and interests, reflected student interests and experiences, and adjusted teaching styles in order to adapt to their learning identities as well. While I taught these lessons, I also kept daily anecdotal records, which are qualitative data sources that allowed me to have a written narrative of student conversations, verbal reactions, and behaviors throughout the day. My final data source included field notes, which included observations of informal surveys and student responses to my integration of student identities and interests.

I designed this self-study based on the theoretical framework of *Culturally Relevant Pedagogy (CRP)*. Ladson-Billings (1995) emphasized the critical need for educators to promote achievement and not allowing students to choose failure and that students must accept and affirm their cultural identities. For the purpose of this self-study, I focused on the second part of this framework because I specifically integrated students' cultural identities and analyzed the effects my integration has on student engagement. Furthermore, Ladson-Billings discusses the need to

“match student interests,” in the curriculum in order to enhance their engagement and learning. This part of the theory supported my integration past just students' cultural identities.

I used Engagement theory as a second framework to guide my research synthesis. This theory states that student involvement intellectually, behaviorally, and socially leads to enhanced learning (Kearsley & Shneiderman, 1998). In relation to my self-study, this theory highlights the connection between student and curriculum that leads to engagement to promote student learning. The understanding of this theory is critical for the discussion of this self-study as I discuss my analyses of student engagement based on my integration of students' cultural identities and interests.

For the purpose of this study, I referred to *student engagement* as students having a positive attitude, a sense of belonging, and a higher interest towards their learning and the material presented to them (Connell & Wellborn, 1991). The definition of engagement that I used for this research synthesis refers to students' emotional engagement, therefore focusing on their feelings and emotions towards instruction and materials. Examples of student engagement include a student saying they enjoy the lesson or a student showing active participation during class. Examples of student disengagement include a student remaining quiet during a lesson, zoning out, and limited participation during learning activities.

Using CRP as a primary framework for my self-study, I've applied the three different elements of student identities defined previously. I used Ryan and Bernard's (2003) thematic analysis technique of theory-related materials to guide my own analysis of data based on the three different sectors of student identity. Furthermore, within these sectors of identity I looked for patterns of repetition, similarities, and differences in student behavior, comments, reactions to my curricular integration of their identities.

Results and Data Analysis

Students' Cultural Representations to Increase Engagement

Throughout my student teaching semester my students discussed their cultural backgrounds with me, my cooperating teacher, and their peers. Using this knowledge, I developed lesson plans that were designed to reflect their cultural backgrounds as a means to increase their engagement through cultural representation. Table 1 features these lesson plans, including topic, content area/ subject, and a brief description of what we did during the lesson.

Table 1
Culturally Relevant Lesson Plans (Lifestyle Based)

Topic	Content Specific Strategy	Lesson Plan Description
Text-to-World Connections	Reader's Workshop	We read <i>A Day's Work</i> which explores the topic of immigration from Mexico to America and the experience of looking for a job by waiting on the corner of the street. I gave students opportunities throughout the text to discuss with peers around them about connections they had made to their own

		community. Students used their own independent reading books to complete a graphic organizer of text-to-world connections.
Characterization	Reader's Workshop	I decided to use <i>The Can Man</i> because the book has instances with the main character where his character traits as we follow the story, he doesn't have a consistent character trait throughout. While reading aloud the book. I had students turn and talk throughout different phases of the character's change in traits and asked them if they still felt as though the character had the same character trait as they initially thought. Then after the read-aloud, I had students go back to their seats and use their own independent reading books to fill out a graphic organizer.
Characterization	Reader's Workshop	I used <i>The Invisible Boy</i> by Trudy Ludwig to model giving characters character traits based on events that happen in the story. Throughout the read aloud, students were asked to discuss with one another character traits they would give the main character. For independent work time, students completed a graphic organizer for the main character of their independent reading books.

The school I student taught in consists of a majority of the students coming from a low-income household. Furthermore, I had students who receive free/reduced lunch and other services from my school as a means to provide for their families. I designed the Text-to-World Connections lesson plan and the Characterization lesson plan (see Table 1) to represent my students who come from low-income families.

Howard (2003) argued that students are bringers of cultural capital which affects the way they navigate and understand the world and their learning. Therefore, I acknowledged that lifestyles that students may live such as low-income and displacement affect the ways students navigate their learning. Using this knowledge, I chose to incorporate their lifestyles to allow them to create meaningful connections.

From my anecdotal records, during their turn-and-talks I heard many of my students discussing how they have seen people in their community on corners of the street or at traffic lights to ask for food or money. One of my students in particular was very active in her discussions with her partner and was even willing to share with the class that she herself has had to sell cans before because her family had no money to be able to feed themselves. Another student, Pauline (pseudonym), talked about her own experiences of having to walk the streets to earn money, although in a different way from collecting cans. Furthermore, there were many of my students who discussed not being able to receive presents for their birthdays, the new toy they wanted, a new jacket, or new clothes. These are all examples of my students actively participating and engaging with the read-aloud through connecting with the material emotionally through their own experiences and being able to participate because of these connections. Ladson-Billings (1995) argued for the implementation of students' cultural identities to create bridges between students' learning and their lived experiences.

Table 1 also featured a lesson plan that reflected how students saw themselves in relation to their peers both in the classroom and in the school environment as a whole. The characterization lesson plan that included *The Invisible Boy* was meant to reflect my students who were new to the school and had not attended the same school from kindergarten to third grade. From my anecdotal records, Amelia (pseudonym) is a student who moved from a different state, so she was completely new to the school this school year. Throughout the read aloud, I heard her discussing with her partner about her own feelings of fear of not being able to make friends when she came to the school. Her partner, Junie (pseudonym), left school during second grade to be homeschooled because of COVID and shared with the whole class that she first felt like no one wanted to be her friend. Ladson-Billings (1995) further argued that the incorporation of students' identities leads to higher levels of engagement and motivation. For this self-study, students feeling valued and a sense of belonging in the classroom is defined as part of engagement. With this lesson, my students could feel as though they were represented in the classroom that led to them being able to share their own experiences and connect more meaningfully to the material used for instruction.

Table 2

Culturally Relevant Lesson Plans (Nationality and Ethnicity Based)

Topic	Content Specific Strategy	Lesson Plan Description
Character Traits	Reader's Workshop	I used the book <i>Amazing Grace</i> for this read aloud to model giving characters character traits. Students were prompted throughout the read aloud to discuss with their partners what character traits they would give the main character.
Dia de los Muertos (Day of the Dead)	Video and Presentation	I showed a short video explaining what Dia de los Muertos was, who celebrates it, and what celebrations for this holiday could look like. I also had one of my students who celebrates this holiday share with the class her traditions and celebrations that she and her family participates in. I had my students turn and talk to one another about what they enjoyed learning most about Dia de los Muertos.
Hispanic Heritage Month	Centers	I did not design this lesson but one I had my students participate in. For the Hispanic Heritage Fair each of the grade-level commons had a different Latino country that would be presented by different volunteers, including students, parents, teachers, or other staff and community members. The students get 15 minutes at each of the grade level commons to ask questions, engage in being taught about the country, or engage in different activities. These countries included Mexico, Venezuela, Ecuador, Honduras, Puerto Rico, and Guatemala. There was music, food, books,

		presentations, and different wardrobes all presented.
Diwali	Student Presentation	We had a student present to his 5th grade class discussing what Diwali was, how it is celebrated, when it is celebrated, traditions his family participates in, and why it is celebrated. Since my cooperating teacher had had him previously he was able to come in to talk about Diwali to my class as well. Then he had a family member come in and complete a Rangoli outside of the school and I was able to let my class see it.

Eight of my students identify as non-white students. Therefore, I wanted to plan lessons with characters of diverse ethnicities or nationalities to represent my students of color, but to also present my white students with windows of different cultures. Table 2 features lessons that specifically reflect different ethnicities, nationalities, traditions, and holidays.

The school I student taught in is a bilingual building. Therefore, despite my student teaching class being a monolingual class, morning announcements and events included Hispanic cultures and traditions. For example, Table 2 features lesson plans about Dia de Los Muertos and Hispanic Heritage Month. I have three Hispanic students who come from Spanish-speaking households. I found that one of my students specifically, Pauline, was very engaged during the Dia de los Muertos lesson because she was able to talk about her own traditions like going to her grandma's house and different foods they eat for this holiday.

During our Hispanic Heritage Fair, some of the presentations were presented in Spanish by guest speakers. I found that the three Hispanic students were the most engaged because they could understand the language and relate to traditions and foods that were being presented. Pauline once again, talked about eating tamales in her own home with her family as well. It is important to note, that these students were reflected in the lesson, but the rest of my students who could not understand Spanish immediately disengaged through zoning out, scanning the room, talking to one another because they couldn't understand what was being discussed. From my anecdotal records, when my students who spoke Spanish listened to the presentations they were most engaged. I knew these students spoke Spanish at home based on parent-teacher conferences notes. This use of Spanish created a familiar sense of environment that Djonko-Moore and colleagues (2018) argued for the use of. My students hearing Spanish was a familiar experience to them and created a meaningful connection between learning and their cultural identity.

Of the eight non-white students in my class, I also had four African-American students. Using the book *Amazing Grace* in my character traits lesson plan allowed me to represent these students through a courageous and bright African American girl as the main character. Jenny (pseudonym) was discussing with a partner when I overheard her say she felt like she was like the main character because she is fearless and brave, and also African American. Jenny's interaction with the text shows her positive emotional connection with the material used for instruction because she could see herself reflected. Henderson and colleagues (2020) argued for the use of diverse literature in classrooms as a critical component for students' literary achievement and motivation. Therefore, my implementation of a read-aloud book with a diverse character is important because it represented my African-American students.

Lastly, I had only one student who comes from an Indian background. For the Diwali lesson plan, a different student came in to present about the holiday, different traditions they

participate in, foods they eat. I found that my student who comes from a similar background seemed very engaged by asking a lot of questions particularly about food. However, he never mentioned to his peers, my cooperating teacher, or myself about whether or not he celebrates the holiday himself.

Table 3

Culturally Relevant Lesson Plans (Family Dynamic Based)

Topic	Content Specific Strategy	Lesson Plan Description
Text-to-Self Connections	Reader's Workshop	I read Patricia Polacco's <i>My Rotten Redheaded Older Brother</i> . Throughout the lesson. I was making my own text-to-self connections to model for students what it looked like to make text-to-self connections. Students were given opportunities to share with their peers text-to-self connections they made with the book. Afterwards, students used their own independent reading books to practice making text-to-self connections.
Text-to-Text Connections	Reader's Workshop	I did an interactive read aloud of <i>The Pain and the Great One</i> which is a book similar to <i>My Rotten Redheaded Older Brother</i> . Throughout the read aloud, I had students discuss connections they could make with the book and their own experiences and also connections between <i>The Pain and the Great One</i> and <i>My Rotten Redheaded Older Brother</i> . Students were given a graphic organizer to complete with their own independent reading books.
Fictional Summaries	Reader's Workshop	This lesson included a read aloud of the book <i>Charlie Anderson</i> . Students were asked to turn and talk during the book to discuss main events occurring in the story that we would include in the summary of the book. Afterwards, students were told to complete a fictional summary with their independent reading books.

With the use of the lesson plans described in Table 3, I consistently found students who felt the lessons were culturally relatable for them were more engaged in the materials chosen to represent their identities. For example, looking at the Text-to-Self Connections and Text-to-Text lessons. I planned these lessons and read alouds for these lessons with the knowledge that many of my students had a sibling regardless of older or younger siblings. One of my students, Lucia (pseudonym), who has both a younger and an older sibling that attends the same school as her, found a connection to the book because the main character and her brother fought, just like Lucia and her siblings. I could tell she was particularly engaged with this lesson because she was active

in her participation during turn-and-talks with her partner, raised her hand to tell the class her connection, and talked to me about things she argues with her own siblings about. Similarly, I had two other students who discussed their own experiences of arguing with their siblings. I did have three students who raised their hands to having no siblings and I found that their participation was minimal. I had to guide them to use an example of a cousin, friend, or other person they could think of to make a text-to-self connection. Therefore, it is important to note that the increased engagement occurred when the students felt as though they related to the topic of learning.

As previously mentioned Howard (2003) argued for the use of students' lived experiences to bridge their learning and their experiences from outside the classroom. My use of the book *My Rotten Redheaded Older Brother* represented my students who had siblings and further those who fight with their siblings. Therefore, my students were able to create meaningful connections and feel represented in the literature.

The fictional summaries lesson plan described in Table 3 featured a book about a cat as the main character having two different families and going between the two different families day to day. I chose this book for this read aloud because I knew many of my students had parents who were divorced, furthermore some had parents who remarried. During morning meetings students would share their weekend plans of being with one parent rather than the parent they normally live with. During this read aloud I asked the students how many of them related to Charlie Anderson because they had two different families they go to, and I had four students raise their hands. These students were active in participating and discussing their own experiences of having two different families. This lesson was another example of using Ladson-Billings' (1995) argument for using students' lived experiences to allow students to make meaningful connections and make learning relevant to students.

Overall, throughout my student teaching experience I found that when I incorporated my students' cultures and lived experiences in the curriculum, they were able to make meaningful connections that allowed their learning to be relevant to them. Additionally, my students showed a higher sense of belonging as they discussed with one another about their experiences that they were reminded of during lessons that represented them. Thus showing the importance of student cultural representation in the curriculum.

Differentiation through using Student Learning Styles to Maximize Student Learning

Another sector of students' identities that my research question explores is students' learning styles and preferences. For the first few weeks of my student teaching, I observed students as my cooperating teacher taught which allowed me to learn and observe students' learning preferences and the ways I saw they were learning maximized. Using this information, I was able to plan my learning activities around their learning preferences to maximize student learning. Below is a table of lesson plans where I intentionally changed a method of delivery, a learning activity, or assessment style to better fit the needs of my students.

Table 4

Lesson Plans Created to Accommodate Student Learning Styles

Topic	Content Specific Strategy	Lesson Plan Description
Tattling vs Reporting	SEL (Social-Emotional Learning)	I made a jeopardy to review the difference between tattling and reporting and scenarios in which students would tattle versus report. After this lesson, I informally assessed students' thoughts on how they liked this form of review. I asked for a thumbs up if they liked this review and would do it again or a thumbs down if it wasn't really for them and they would not do it again.
Unit 1 Review	Review Game	I used a jeopardy game to review different skills students were taught during unit 1 of Math. I had students do it on their own first, then talk to their tables, and then I had tables show me the answers they had come to a consensus for. I went around to each table giving them categories and points of their choosing. At the end of the lesson, I asked them how they felt about using jeopardy to review math and if they liked using jeopardy as a way to review for math (thumbs up, in the middle, or down).
Word Problems	Review Game	I used an escape room that had different word problems in a google form. Students could only move onto the next question if they got the previous answer correct. Students were allowed to work with partners.
Equal-Sharing Word Problems	Manipulative	I used Goldfish, miniature fish-shaped crackers, as a math manipulative for students to visualize and to make equal-sharing problems more hands-on for my students. I made my own slideshow instead of using the district-provided materials in order to use student names in the slideshow as well as their interests in the word problems. We did 10 different problems to practice splitting the goldfish into equal groups. I did a student self-assessment where I had them tell me if they felt as though they were ready for the test or not.
Bridges	STEM (Science Technology Engineering and Math) Project	Students were shown two different videos about why bridges are built with certain structures. Students formed groups with their tables and brainstormed designs of what they wanted their bridges to look like. Students were given different materials to build their bridges. Students were involved in a contest of who could hold the most unifix cubes on their bridge.
Houses in a	STEM	This lesson was a Mystery Science lesson where students

Windstorm	Project	were given model houses and other materials. I first showed a video to show the effects windstorms can have on houses. Then students were given the opportunity to brainstorm ways in which they could use the materials given to create a house that could withstand a windstorm. At the end we tested all of the houses using a windmaker made out of paper.
-----------	---------	--

I incorporated Jeopardy as a review game twice in my student teaching class for mathematics and SEL (see Table 4). I first used it as a closing activity for our SEL unit of Tattling versus Reporting. The students were in groups of 3-4 based on how big their tables in the classroom were. I found that there was one student from each table that dominated the conversation because of these students' strong leadership skills, the interpersonal learners. These students controlled the answers they gave out loud and the discussions. However, in turn my students who were more intrapersonal learners and preferred to work on their own and were quieter in conversations didn't contribute answers as often. I had five students who I could see zoning out, disengaging with the material, and not speaking in their group conversations because of the dominating personalities as well. At the end of this lesson, I chose to survey students on their feelings and reactions to the game as a review method (see Figure 5 to see results).

Lauria (2010) argued for using students' learning-style strengths because students received higher achievement scores when instruction was aligned with their preferred learning styles. Therefore, I decided to use Jeopardy once again because my students showed interest in using it as a means to review. When I used Jeopardy in the instance of mathematics, I decided to give a little more guidance to ensure all students were participating. I had students first solve the problem on their individual whiteboards first. I would have students show each other their answers and discuss which answer they think is correct. I do have three students who I knew were struggling with unit 1 in mathematics, therefore while other students were working my focus while walking around during individual work time was on these students. Two of my students, Pauline and Nova (pseudonym) were two students who dominated the conversation with their groups and eagerly answered questions in the whole-group setting. Pauline and Nova were students who also dominated conversations during SEL Jeopardy. All of the students were active and worked well individually on their whiteboards, but I once again found that the students who are more quiet and hesitate to answer questions were once again quiet in group discussions, hesitant to disagree, and disengaged. I chose to survey students once again on their thoughts towards Jeopardy (see Figure 5 for results).

Figure 5
Student Responses to Surveys about Jeopardy

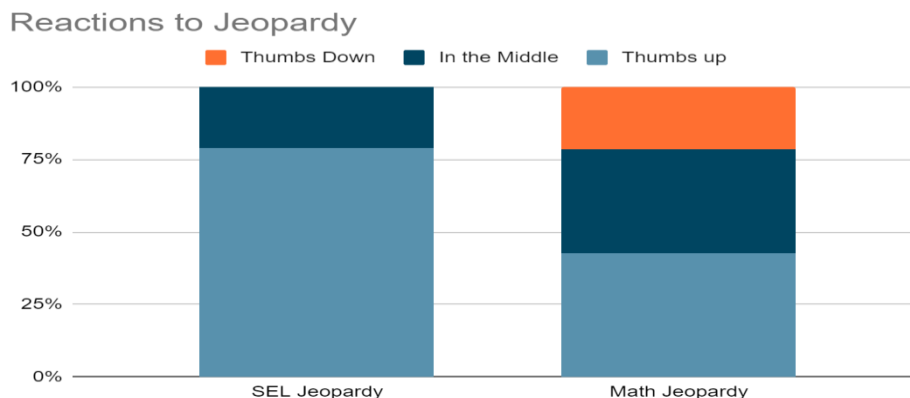


Figure 5 shows students' responses to both the jeopardy games we played in class. Students were given the option to put their thumbs up if they liked jeopardy, their thumbs in the middle if they did not know if they liked or did not like jeopardy, and their thumbs down if they did not like jeopardy at all. When I initially introduced jeopardy to my students there were no thumbs down, but when jeopardy was used once again for math the number of students who did like jeopardy in total decreased. It is important to note that it is possible that using jeopardy for SEL may be preferred by students, but other math review types might be better for my class. Some limitations of Figure 5 include that the number of students present for the jeopardy games were different based on student attendance, if one of my students moved, and students who were not present in the class at the time because of intervention programs, etc. For example, for SEL jeopardy I had all 19 students present that day, but for math jeopardy one student moved away and many were absent due to illness so I only had 14 students. Therefore, the students who were absent were not accounted for in the survey.

Based on student reactions to using game-based learning, I decided to implement a different type of review game, an escape room (see Table 4 for word problems lesson). Lauria (2010) encouraged teachers to reflect on their teaching methods to allow students to discover and utilize their own learning styles. I consistently implemented game-based review as I reflected on my students' comments and reactions to these types of review activities. As I was walking around I heard Amelia tell her partner Junie that she thought the activity was kind of fun and that she likes these kinds of review activities. Pauline and Nova, who are both high-achieving students, also noted that they really liked being able to use the word problems as clues to solve a problem for the escape room. I did find that some pairs of students worked better with one another than others. Four students let me know that they actually preferred games as a review activity more than interactive google slides or worksheets. Furthermore, when students ran out of time for the activity there was an audible "awwww," from multiple students in the room.

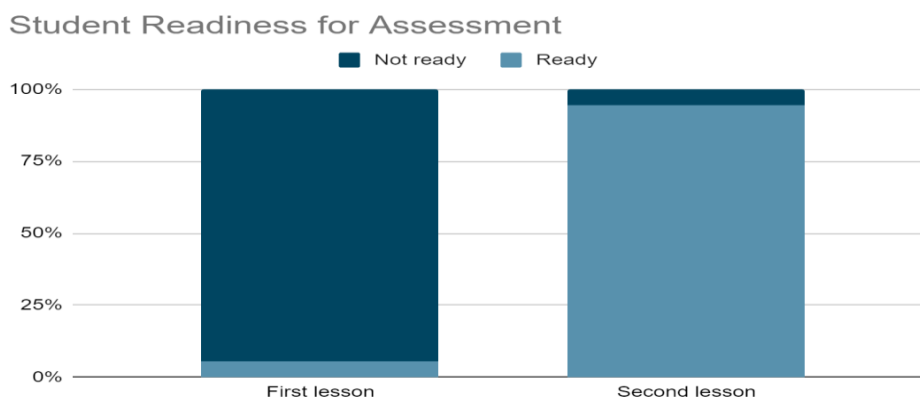
Initially when I taught equal-sharing problems to my students I used a visual instructional method. McMahon and colleagues (2004) defined my initial instructional method as spatial because I used a visualization method. Furthermore, McMahon and colleagues (2004) argued for tailoring teaching styles to students' preferred learning styles. I would ask students to try and complete examples after my demonstration with their whiteboards and we would review them as a class and I could see that my students weren't understanding as they weren't getting the problems correct, some were disengaged, some didn't even have anything written on their board because they didn't know what to do. At the end of this lesson, I informally assessed students, asking them how many of them thought they would receive a passing grade on the test for this

skill if I gave it to them tomorrow (see Figure 6 for the results). After reflecting once again, I decided to try a different instructional delivery method.

When I taught equal-sharing problems again, I decided to use a hands-on approach (see Table 4). I decided to teach this lesson using a hands-on approach because throughout the semester I observed higher student readiness and achievement levels. Using Lauria's (2010) reflection method allowed me to tailor my teaching methods to students' learning style preferences. I would show the problem up on the board and walk students through the process of splitting a number of goldfish into x number of groups, depending on the problem. I had problems shown on the board and then had students try the work independently without my guidance. From there I could see all of my students using the manipulatives to solve the problems, they were all participating in showing their math problems, and asking for help if they were confused. Amelia explicitly let me know that she felt much better on the math skill because she liked having something physical to split into the groups. Three other students shared the same sentiment as Amelia. I then had students put their heads down again to informally assess them.

Figure 6 shows the feelings of readiness in students after each lesson. The visual lesson is titled as the first lesson and the goldfish lesson is titled as the second lesson. All 18 of my students were there both days. Initially I only had one student who felt confident enough in their ability to solve equal-sharing problems, but after the use of a different instructional method I found that I then had 17 students who felt ready for the test and only one who was still struggling with this skill. Similar to Lauria (2010) my students showed higher levels of readiness and comprehension of the skill after instruction was tailored to their preferred learning style.

Figure 6
Student Readiness for Assessment on Equal-Sharing Problems



Every week I allotted 45 minutes to go to the STEAM lab where students get to participate in different grade-level STEAM activities. For the bridge lesson, I initially had students working in groups of four with those at their table. However, I found that many of my students felt better working in smaller groups. I gave them the option halfway through the lesson to decide if they would still like to work in groups of four, or if they would rather work in partners. I decided that this was the best decision as Oyserman and Dawson (2021) argued for tailoring learning environments to students to support learning and identity exploration. I had six students immediately switch to partnerships and they became more active in helping design their

bridges and creating their bridges. Furthermore, I saw a lot of students feel more motivated because it was a competition type of activity for strengths in bridges. For example, Jake was bragging to the rest of the students about how his group had won the competition and was encouraging his group in building his bridge as well. Lauria (2010) described seeing higher levels of student engagement, readiness, and investment in learning when the environment was tailored to student learning needs and preferences. Similarly, I observed my students in conversation with one another about bridges, higher participation rates in building, and higher levels of confidence in students' bridges.

Lastly for the windstorm lesson (see Table 4), I had students work at tables once again, despite knowing that some of my students like working with partners better because this STEAM activity required more teamwork. I once again found that there were team leaders at each table that immediately took over decision-making and building roles. Pauline, Jake, and Maggie (pseudonym) were once again a part of this group of team leaders that felt that they should take control of the group and lead. Jake in particular seemed to get frustrated when he felt his group didn't agree with his own ideas, Maggie was similar where she felt she had the best ideas and seemed very upset when others argued.

Overall, I observed that my implementation of students' learning profiles was effective in reaching higher levels of student readiness in learning new content and for assessment. It's important to note that for the lessons featured I was also including student and staff names in word problems to incorporate student identity as well. Furthermore, I included known student interests as a part of the word problems. Doyle and Rutherford (1984) counter argued that despite the positive effects differentiation through learning styles has on student achievement and engagement, learning cannot be the only means of student identity incorporation and differentiation. Therefore, higher student levels of engagement in lessons and achievement are partly due to cultural identity and student interest integration alongside implementing learning preferences.

Incorporations of Students' Interests to Increase Student Engagement

The final section of students' identities that I incorporated into the classroom included students' interests. As defined previously, student interests included any activities or things they enjoyed outside of school. For example, a sport they play, a TV show, hobbies they have, etc. Throughout the day, my students would talk to one another, to myself, and to my cooperating teacher about hobbies and interests they had.

Table 7
Lesson Plans Incorporating Students' Interests

Subject-Specific Strategy	Content Area	Lesson Plan Description
Read-Aloud	Reader's Workshop	After students complete their independent reading graphic organizers, we do a read aloud when time permits. For this read aloud, we had not yet started a chapter book so I used <i>The Pigeon Will Ride the Rollercoaster</i> .
Equal-Sharing	Key-words	For this lesson, I decided to make a review slideshow with

Word Problems		different word problems on it. We underlined keywords we thought we needed to know for the problem, then we decided together the mathematics operation we need to do in order to solve the problem and the equation we were solving, then we'd solve it. I knew my students were struggling with identifying mathematics word problems and the operations to use with them so I used this lesson as a review before we had the test the following week.
Dot-Grid Arrays	Manipulatives	Students were given mini-boards with pegs assorted in a five-by-five manner to have a manipulative while completing the problems. I showed a math problem on the board that required students to make an array, then demonstrate the making of a dot-grid array. Students were shown a problem on the board and needed to make the dot-grid arrays themselves using their manipulatives.

Before lunch some days, I would read aloud from a chapter book that we chose as a class. Servilio (2009) argued for the use of student choice in books to increase their interest and investment in their reading. Furthermore, Servilio (2009) described seeing students being eager to read and enjoying the content they were reading. For the lesson plan highlighted in Table 7, we had not yet voted on our chapter book for the read aloud. Therefore, I decided to implement a book from the *Pigeon Series*, which is a series of books that follow a pigeon in different events of their life. A second grade teacher who had many of my previous students told me that my students were big fans of the *Pigeon Series* books and offered to let me borrow one for the read aloud, since they did not get to read this specific book last year in their class. I decided this book would be a good fit for my class because of Beecher and Sweeny's (2008) argument for using students' interest to increase their engagement in learning. I learned that my students enjoyed reading these books in previous school years, therefore, I implemented it to tailor to their interests.

I first showed my students *The Pigeon Will Ride the Rollercoaster* and two of my students immediately started jumping up and down in their seats, showing excitement for this read-aloud. Another student mentioned that she was a part of the class that read a lot of these books in second grade and that one of the students who was jumping up and down had a collection of all the books. I asked the students how many of them were familiar with these books and liked these books and all seventeen of the students who were present for this lesson raised their hands excitedly, waving their hands in the air, jumping up and down in their seats, and blurting out about their favorite books. As I was reading, many of my students were laughing in response to what the pigeon did in the book, which showed me that they were actively paying attention to the read-aloud. Some lines began to repeat in the book, so I started to have my students chorally say that line altogether and many of them could remember what the line was and when to repeat it, once again showing they were paying attention. Furthermore, many of my students after the read-aloud asked me if they could read the book during independent reading time, showing their high interest in these books.

For equal-sharing word problems, I decided to create my own word problems using students' names and interests to create a bridge between student learning and interests. Cornett

and colleagues (2020) discovered that when learning materials and instruction incorporated student interests and hobbies students showed higher investment and readiness for learning and completing learning activities. For example, my student Nova in particular, I knew she was a soccer player and really enjoys playing it, therefore I used her name and soccer balls as the item being split into equal groups. Another student, Lucia, enjoys wearing hair bows to school and likes to show them off and talk about them to her friends. Therefore, in her example problem, I used her name and hair bows as the item that needed to be divided into equal groups. During the lesson, she was actually wearing a hair bow, which Nova and several other students pointed out and started laughing about. Their laughter and acknowledgement of Lucia wearing a hair bow showed me they were paying attention and were positively connecting with the material they were learning. Appendix A contains the rest of student reactions to seeing their own and their peers' names in word problems. Overall, I observed my students having positive reactions to hearing their names in problems through laughing, smiling, talking about it with their peers, and showing higher participation rates.

Similar to my approach for integrating student interests into equal-sharing word problems, I used students' names and interests in dot-grid array word problems as well. This time I made sure to use students' names and interests that I had not used in any previous lessons or students who may disengage with the material during math instruction. During parent teacher conferences, a student's parent told me that she loved to paint and that she had a huge amount of paint bottles arranged on her desk at home. I decided to use this in the word problem to describe arrays. When this student heard her name and the fact that she liked to paint, she started to laugh and smile. She later on asked me how I knew she liked to paint because she had never told me before, which I told her how I knew because of her mom. She let me know that she thought it was funny that I put her in the problem, thus showing she was paying attention and connected more with the material. I also put a problem in about another student and those having Pokemon cards because I knew a handful of my students enjoyed these trading cards. Nova immediately looked at the student I was talking about and started to laugh while the student himself was smiling and jumping up and down in his seat in excitement to his Pokemon cards. Further student reactions and examples are described in Appendix B. With regards to this activity my students displayed very positive emotional reactions to hearing their interests and names in word problems. They displayed positive feelings by blushing, dancing in excitement, laughing, and smiling to hearing their names in the problems.

Nova was a student in particular that I frequently conversed with. Therefore, I had the opportunity to learn about her interests. For example, Nova was an avid soccer player, she also joined basketball in the winter, and she was also very interested in Pokemon. I used these interests to my advantage and incorporated them into smaller activities. For example, for a practice activity I made a google sheet that would reveal parts of a mystery picture for every right answer to a math problem. The picture that displayed at the end of the activity was a soccer ball and Nova came up to me after she finished the activity and said that the activity was perfect for who she was and she told me I was the best. This reaction from Nova shows how meaningful it was for her to see something she was interested in in her classroom activities.

Aside from lesson plans, I also used brain breaks as a means to incorporate student interests. My brain breaks included fitness runs from youtube, breathing exercises, and freeze dance videos from youtube. I allowed students to choose the brain breaks between topics I knew they were interested in. For a brain break, I used a Pokemon fitness run. Beecher and Sweeny (2008) argued that their students showed higher engagement in learning when they provided

instances for student choice in the classroom. Immediately, Nova and three of my other students who I know enjoy Pokemon jumped up and down by their seats and yelled from joy. Everytime a different Pokemon appeared on the screen they were able to identify them with their specific names. I knew these students would engage with the brain break well because I had students come in in Pokemon pajamas, shoes, and sweaters before. My students' reactions to this brain break showed me how engaged and excited they were because of seeing something they are interested in.

Another brain break I implemented was an Among Us brain break. Among us is a game that can be played on computers and hand-held devices. I knew two of my students would specifically engage well with the Among Us fitness run because they have worn sweaters with the characters on them before and I have also heard them talk to one another about it. When I played this brain break, my student who wears the sweatshirt with the characters on it immediately started flailing his arms in excitement and joy. His friend who he knows also loves Among Us immediately started to yell in excitement.

Overall, based on field notes and anecdotal records I observed students showing higher levels of interest in their learning. Many of my students displayed this interest in their learning through higher participation rates, positive comments to me or peers about lessons and materials in class, and expressing readiness to learn about new content. Using student interests within the curriculum alongside cultural identities and student learning profiles has maximized student learning.

Conclusion

Based on my incorporations of students' cultural identities I found that students were able to make meaningful connections to instruction when they saw their cultures represented in the curriculum. Furthermore, allowing my students to make meaningful connections led to better comprehension of skills and material learned through making it relevant and applicable to their own lives. Students also had a higher level of emotional engagement, which means that they were interacting with instruction in a positive way and showed higher interest in what they were learning. Similarly, data showing the incorporation of cultural identities and students' interests showed higher levels of interest in the material they were learning and participated more in activities.

Another way to promote student learning included using their learning preferences. When incorporating students' learning preferences and profiles into my lesson plans, I found that student learning was maximized and student achievement improved. It is important to note that learning preferences were not the only factor of differentiation and student identities used when lesson planning. As Doyle and Rutherford (1984) discussed, it is difficult to understand the effects of incorporating students' multiple intelligences as a sole factor of differentiation alone, thus why I mention that I incorporated other sectors of identities for students and differentiated instruction in other ways too (such as rigor).

It is critical for preservice teachers to explore ways in which they plan to incorporate their future students' identities into the curriculum. Furthermore, for in-service teachers to identify ways in which they already incorporate student identities into their curriculum and classroom. If in-service teachers find that there are not many ways that they incorporate students' identities into the classroom, then it is critical for them to explore ways they can change that. Incorporating student identities into the curriculum can be making books with diverse main characters available to students, it could be ensuring your classroom posters have diverse people

shown; it could be incorporating student interests into a word problem for math, etc. School personnel should ensure their own rooms and hallways also promote diversity, if in a school where many students speak Spanish, have Spanish-translated posters and other incorporations given to in-service and preservice teachers apply as well.

Concerning limitations for this study, I do believe that one of the limitations includes this study being conducted in a single semester. Furthermore, I did not teach all subjects for the entirety of this semester, therefore, there is a lack of depth in terms of integrating students' identities across different subjects. For future research, I believe that a full school-year length study, where the teacher remains the same and teaches all lessons may be useful as this would eliminate possible factors such as inconsistency in different teaching methods, different activities, etc.

Overall, my research strongly supported the importance for students to see themselves represented in their curriculum, classroom, and their school environment. Not only does this allow students to feel more valued leading to higher interest in school, it creates a bridge between the lives they lead as children and their identities they have outside of school and the students as learners and the material they need to learn.

Appendix A

Student Reactions to Names in Equal-Sharing Word Problems

Response/ Quote from Student
Laughed really hard at some of the math word problems because they were about his classmates - especially laughed at (6)'s horses word problem, kept blurting out during science because he was so excited
"Hey!!! That's a problem about me!!!" She had a smirk on her face and laughed a little bit at the problem because it was about horses
Giggled and smiled at me when I read her name from the problem and immediately paid more attention once she heard her name in the math problem
Blushed a little bit when I said his name and footballs in math problem, didn't know what to say and even turned a little red

Appendix B

Student Reactions to Interests in Dot-Grid Array Word Problems

Pointed out that a classmate was wearing a bow in her hair right that second and thought it was funny that that was what the problem was about
Was super excited when she was a part of a word problem on the board, even laughed a bit and said to her table that she was just playing with dominoes just this morning during soft start,
Was laughing hard when (19)'s name was on the board for a word problem, was really happy
When he read (20)'s name on the board he was laughing really hard
Started dancing and laughing when she saw her name in a word problem up on the board, laughed because she even had a little eraser on her pencil
Was really excited to see her name in a word problem, ironically she was wearing a hair bow today so she was laughing
Immediately looked at a classmate when she read the word problem about him playing with unifix cubes, thought it was very funny because the classmate looked a little embarrassed despite liking the word problem
Blushed really hard when he saw that the math problem was about him today and that it was with pokemon cards, did a little dance at his seat because he was excited to see it
"Hey!! I was playing with unifix cubes earlier" when the math problem was about him playing with unifix cubes and stacking them, laughed pretty hard about it

References

- Beecher, M., & Sweeny, S. M. (2008). Closing the Achievement Gap With Curriculum Enrichment and Differentiation: One School's Story. *Journal of Advanced Academics*, 19(3), 502–530.
- Bishop, R. S. (1990). Mirrors, windows, and sliding glass doors. *Perspectives: Choosing and Using Books for the Classroom*, 6(3).
- Cornett, A., Paulick, J., & van Hover, S. (2020). Utilizing Home Visiting to Support Differentiated Instruction in an Elementary Classroom. *School Community Journal*, 30(1), 107–137.
- Djonko-Moore, C. M., Leonard, J., Holifield, Q., Bailey, E. B., & Almughyirah, S. M. (2018). Using Culturally Relevant Experiential Education to Enhance Urban Children's Knowledge and Engagement in Science. *Journal of Experiential Education*, 41(2), 137–153.
- Doyle, W., & Rutherford, B. (1984). Classroom Research on Matching Learning and Teaching Styles. *Theory into Practice*, 23(1), 20–25.
- Giordano, L. (2011). Making Sure Our Reading “CLICKS.” *Reading Teacher*, 64(8), 612–619.
- Henderson, J. W., Warren, K., Whitmore, K. F., Flint, A. S., Laman, T. T., & Jagers, W. (2020). Take a Close Look: Inventorying Your Classroom Library for Diverse Books. *Reading Teacher*, 73(6), 747–755.
- Howard, T. C. (2003). Culturally Relevant Pedagogy: Ingredients for Critical Teacher Reflection. *Theory Into Practice*, 42(3), 195–202.
- Hyuck, D., Dahlen, S. P. (2019). *Diversity in children's books 2018* [Infographic]. Sarah Park Dahlen PhD. <https://readingspark.wordpress.com/2019/06/19/picture-this-diversity-in-childrens-books-2018-infographic/>
- Katz, J., Mirenda, P., & Auerbach, S. (2002). Instructional Strategies and Educational Outcomes for Students with Developmental Disabilities in Inclusive “Multiple Intelligences” and Typical Inclusive Classrooms. *Research and Practice for Persons with Severe Disabilities*, 27(4), 227–238.
- Kearsley, G., & Shneiderman, B. (1998). Engagement Theory: A Framework for Technology-Based Teaching and Learning. *Educational Technology*, 38(5), 20–23.
- Ladson-Billings, G. (1995). *Toward a Theory of Culturally Relevant Pedagogy on JSTOR*. (n.d.).
- Lauria, J. (2010). Differentiation through Learning-Style Responsive Strategies. *Kappa Delta Pi Record*, 47(1), 24–29.

- Mahon, S. D., Rose, D. S., & Parks, M. (2004). Multiple Intelligences and Reading Achievement: An Examination of the Teele Inventory of Multiple Intelligences. *Journal of Experimental Education*, 73(1), 41–52.
- Oyserman, D., & Dawson, A. (2021). Successful Learning Environments Support and Harness Students' Identity-based Motivation: A Primer. *Journal of Experimental Education*, 89(3), 508–522.
- Ryan, G. W., & Bernard, H. R. (2003). Techniques to Identify Themes. *Field Methods*, 15(1), 85–109. <https://doi.org/10.1177/1525822X02239569>
- Servilio, K. L. (2009). You Get to Choose! Motivating Students to Read through Differentiated Instruction. *TEACHING Exceptional Children Plus*, 5(5).
- White, T. G., & Kim, J. S. (2008). Teacher and Parent Scaffolding of Voluntary Summer Reading. *Reading Teacher*, 62(2), 116–125.