

Differentiation Matters! Six Successful Cross Curricular Strategies That Provide Process Support for African American K-6th grade learners

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Abstract

This article provides an in-depth examination of differentiation, instructional strategies that cater to all learners. Differentiation is beneficial when teachers can select content, process, and products that meet student's needs. While teachers incorporate differentiation to modify instruction with struggling students, gifted and talented students, English Language Learners, and culturally diverse learners, this article specifically focuses on African American learners in K-6th grades. Elementary-level African American students can benefit from differentiation that include culturally relevant processes. Teachers of elementary grades must be prepared to teach all curricular areas including English language arts, reading, math, science, social studies, and history. English language arts, history, math, science, and social studies strategies are explored in this article. Recommendations have been made to make them culturally relevant pedagogy. Six strategies are introduced that provide examples of the recommended processes for various curricular areas that can be used with African American students.

Introduction

Teacher educators in today's schools of education are aware of the rising numbers of diverse students in the public classrooms. According to the National Center of Educational Statistics (May 2021), the numbers of students from diverse backgrounds is eye opening:

Between fall 2009 and fall 2018, the percentage of public-school students who were Hispanic increased from 22 to 27 percent. The percentage of public-school students who were White decreased from 54 to 47 percent, and the percentage of students who were Black decreased from 17 to 15 percent (n.p.).

In addition, this statistic is enlightening since enrollment in public elementary and secondary schools increased from 49.4 million students to 50.7 million students during this same time. Public school classrooms had a much different composite.

As African American professors in a midsize university in Texas, we encounter students preparing to teach in K-6 classrooms. We instinctively have a connection to current students who share in our cultural backgrounds. This connection to African American students is ingrained in our persona, making sure that all Black students are recognized as equals as they should be. Acknowledging the current increase in numbers of children of color in public schools, we were compelled to find more effective procedures to share with preservice teachers at our university, for both the white teachers and the teachers from diverse backgrounds n who will need to know effective teaching processes.

Hispanic and Black students are not residing in the same regions either due to great moves or transitions to new locations. Their families are relocating and creating homes in

different areas (Shiffman, 2019). Hence, the schools of today look very different than twenty years ago. Even though classrooms are diverse and inclusive, teachers still need some help selecting strategies that accommodate for all their students.

Accommodation is an action that not only includes providing a welcoming safe space, but it also describes how the teacher must adapt lesson plans to fit each child in the classroom. Each state provides objectives that all districts, schools, and teachers must adhere to for their students' success. In the state of Texas, objectives are created and written by experts in all curricular fields and provide the framework for classroom instruction. Teacher educators prepare student teachers to plan and justify instructional practice, preparing them to learn to select the appropriate standards to match student outcomes. Professors also encourage preservice teachers to anticipate outcomes for their diverse students, understanding that all students are on various academic levels. Teacher educators approach this space in different ways; however, it is most often described to students as providing accommodations for special populations in classrooms, it is called differentiation (Tomlinson, 1999, 2014). For a teacher to be effective, they must provide a more customized way to differentiate instruction.

Customizing Differentiation

Differentiated instruction, which is called simply differentiation, is a process in which teachers enhance learning of the curriculum by keeping in mind their students characteristics and interests. Differentiation allows for students to meet the same state objectives, using various instructional methods. According to Hall, Strangman, & Meyer (2003), differentiation provides teachers with varying entry points, learning tasks, and outcomes that match a student's needs. Differentiation is not a single instructional practice; it is a conglomeration of several strategies that better meet the needs of students. Teachers provide differentiation in three different ways: content, process, or product. Content is the information that a teacher must provide for instruction. This is usually based on the determined objectives of learning as regulated by the state.

The process is the set of effective procedures instructors use to confirm understanding of the key skills required to apply the information. Reading teachers may allow a student to use textbooks that provide illustrations or allow auditory learners to use audio books. Product differentiation is the most common form of differentiation. Teachers also allow choices when students may select a form. Students are also able to select their own designs. It is key that teachers make sure all the various ways to differentiate instruction still align with state standards. Through differentiation practices, teachers can custom fit all content, processes, and products to all students (Tomlinson, 1999, 2014). To initiate the customization for students, teachers must acknowledge students race and ethnicity.

Culturally Responsive Pedagogy is a Process Option

Researchers indicate that pedagogies are not culturally responsive, though need to be (Acosta, 2016). Acosta's (2016) research explains that specifically in literacy education, frameworks need to be challenged and changed from being deficit based. This idea has been the norm since the beginning of educating African Americans and continues. The national reading scores of fourth grades reflect that there has been little improvement, "according to the National Assessment of Educational Progress standardized reading assessment data, less than 20 percent of African American fourth graders read at or above proficiency levels (U.S. Department of

Education, 2014). Literacy is not simply an academic focus practiced in K-12 schools each day, it is the foundation of understanding life and language.

Race and society have been inherently connected to literacy, particularly with African Americans (Ladson-Billings, 2012, Lee & Slaughter-Defoe, 2002). African Americans were denied the right to learn to read and write. There were anti-literacy laws observed in most states forbidding slaves to read or write. It was clear to African Americans that literacy was important because of this denial and learning to read and write became even more desired. After Nat Turner's revolt in 1831, though there were laws still in existence, Black slaves worked even harder to read and write (Coleman, 2020). Though conditions have improved drastically, some African American students still struggle with literacy. Hence, researchers began to inquire to find answers to the questions about the best ways to assist African American students who needed help with reading and writing. Analysis determined that when students who had highly effective teachers also show signs of encouraging student engagement and motivation, reading and writing instruction was successful (Gay, 2000, Ladson-Billings, 1994). Each of those elements of student engagement, high motivation, successful reading and writing instruction are all positive effects of Culturally Responsive Teaching (CRT).

With the knowledge of culturally responsive teaching and its influence on students, it is important to bring additional connections to the authentic elementary classroom in support of African American learners. This is done through differentiation, specifically the differentiation component of process, because it can be a critical way to assist all children. Waterman (2013) recommends that teachers plan literacy instruction that begins before reading and teaching, including ways to activate prior knowledge and grab student attention, which have been found as necessary to aid in comprehension of texts (McCullough, 2013).

While differentiation and culturally relevant teaching are not new terms, we would like to expound on our knowledge of culturally relevant teaching to influence creative strategies for differentiation. Here are six strategies that could be used in cross curricular areas. Specifically, noted below are recommendations of culturally relevant teaching strategies that can be used as different processes for teachers to use. Keep in mind that the process is the instructional techniques used to teach new content.

Six Culturally Relevant Instructional Processes

These six culturally relevant processes are meaningful and relevant for K-6 grade African American students because they foster positive identity development, promote agency and voice, and create conditions that will empower African American children to succeed in school (Wright, 2019):

Learn about Your Learners

Content area: Social Studies

The first way to incorporate culturally relevant teaching in your classroom is having a relationship with students (Guido, 2017). A process that will help teachers learn more about their students is interviewing. Teachers interview students to learn their learning styles, interests, and family experiences. With this knowledge teachers can better tailor individual instruction. It also brings forth an assets mentality by appreciating what students bring to the classroom (Gonzales et al., 2005). Here are some examples of interview questions to include.

1. What languages do you and your family speak at home?
2. What activities do you enjoy doing with your family?
3. What hobbies or pastimes do you do independently when you are at home?
4. What types of lessons do you enjoy?
5. How do you study and learn best?

Another process teachers can utilize to get to know their students are surveys. A survey is a method of gathering information using relative questions about the child, much like the questions asked during an interview. Research (Parsons & Morton, 2022, Walls, 2012) found that Black students would feel more comfortable with surveys and questionnaires if ethnically diverse people are mentioned in the questions and scenarios rather than people in the majority. Therefore, a culturally relevant survey would be an effective way to get personal information from African American students.

Once the procedure of interviewing or surveying students has been completed, teachers will be able to adjust the application and outcome to match students. This recommendation is suited for the social studies curricular area. It is more engaging to African American students when they can verbally discuss and share family stories, pictures, and mementos from their homes. The process of giving interviews and surveys are effective culturally relevant teaching practices tools to support Black students if they include questions and narratives using ethnically diverse people, like the real world.

Incorporate Relevant word problems

Content Area: Math

A culturally relevant teaching process that can also be used when providing instruction in mathematics. An example of a scenario using math concepts is through the use of word problems (Guido, 2017). Word problems are written in a narrative format, and they give students a context to situate their learning. Once it is revealed that differentiation is necessary, the process should include techniques to support cognitive apprenticeship, formative assessment, cognitive apprenticeship, language learning and strategies, relevant content, scientific practices, or non categorical pedagogical strategies (Brown et al. 2019). See Table 1 for descriptions of each.

Understanding that not only math, but all STEM categories (science, technology, engineering and math) culturally relevant teaching is situated differently. For example, if a teacher assigns word problems using a culturally relevant process, it will include both language learning and strategies and relevant content. (Brown et al., 2019). Examples of word problems:

- What is the distance of (a student's name) long pass in a game of football?
- What is the circumference of your favorite pizza? A doughnut? A pancake? Or a pie?

Table 1. Types of Culturally Responsive Theory and Practice (CRE) in Math and Science

Code Name	Code Description
Cognitive Apprenticeship	These are phases of interaction in which teacher uses one or more of the cognitive apprenticeship strategies, “model, coach, fade.”
Formative Assessment	These are phases of interaction in which teacher uses formative assessment strategies to judge or measure student understanding of scientific concepts or vocabulary.
Language Learning & Strategies	These are phases of interaction in which teachers use pedagogical strategies that specifically target student learning of scientific language.
Relevant Content	These are phases of interaction in which teachers relate content to topics that are relevant to students’ lives in some way.
Scientific Practices	These are phases of interaction in which teachers and/or students engage in scientific practices or elements of the scientific method.
Non-Categorical Pedagogical Strategies	These are phases of intersection in which teachers use other pedagogical strategies that are not explicitly formative assessment, language learning, cognitive apprenticeship, relevant content, or scientific process.

Deliver Forms of Learning Through Content Stations

Content Area: Science

Ullucci (2011) analyzed from her study that African American students perform well in a workshop model. This model is reflected in the time, space, and several tasks. When students are provided with an opportunity to be treated with more independence when identifying the tasks they want to do, and in an order of their choosing students were more productive. Teachers who also allow for more space for active movement, as well as not enforcing a required time for a due date provided in a classroom setting that is culturally responsive to students.

Elementary teachers who can allow for more flexible time, space, and multiple tasks would find great success when allowing students to work in small groups and rotate through stations. Teachers also integrated formative assessment, language learning and strategies, relevant content, as well as the scientific practices (Brown et al., 2019; Guido, 2017). This

provided an opportunity for differentiation of the process as a powerful modification for students who may have struggled with these science concepts.

Elementary Science Stations:

- Exploration Stations: Stations where students can explore objects around them. There is no right or wrong answer.
- Explanation Stations: Stations where students can make sense of what they have explored. They are expanding their initial explanations, reviewing materials, and even clarifying concepts learned. This can be done by watching videos, reading, and note-taking.
- Elaboration Stations: Stations provide an opportunity for students to apply the information learned to real life situations (VanTassel, N. 2022).

Engage in Peer Teaching

Course Area: Social Studies

Another culturally responsive teaching practice teachers can encourage with African American young learners is based on the development of oral language and “talking the talk” (Ullucci, 2011, p. 398). When students can express themselves orally and “talk the talk” in a variety of discourses. In the case of Ullucci’s (2011) study, she found evidence of teachers allowing students in a dialect that they believe is most appropriate. For example, young African American students were able to talk appropriately when necessary and more comfortable discourse when talking with friends and family. Having the ability to “talk the talk” in appropriate situations is an acquired, and necessary skill. “Talking the talk” is especially important for young students to practice when studying social studies.

Think-Pair-Share

The Think Pair Share strategy give students the opportunity to think individually and reflect on a topic (Guido, 2017). After they have been given time to think about a topic, they get a partner and take turns sharing their individual ideas. After meeting in pairs, a small group can create a group and share their thoughts.

Debate

In groups of four to six, students can be given a topic such as “the 1980s”. Students could be given the opportunity to research the pros of the 1980s. After creating a script, teams can face off in a debate beginning with a four-minute affirmative argument by team one. Team two is allowed a three-minute rebuttal. Team two presents a negative argument. Then team one is allowed a three-minute rebuttal. Team one presents a four minute pro discussion, then team two presents a three minute negative response. This continues until both teams have presented three pros and three cons.

Explore Literature Circles

Content Area: English Language Arts and Reading (ELAR)

Literature circles are another culturally responsive teaching strategy that would be ideal for African American students. Literature circles involve a process that incorporates diverse literature, engaging in discussions, and immerse thinking into writing. While providing

differentiation for students, using this as a process would encourage more understanding for all students. Literature circles is an instructional practice that engages small groups (5-6) of students to read a common book. The book is selected by students, so it of interest to the entire group. Once the group has selected a book, participants are able to respond to the chapters of the book to reassure comprehension of the book for all (Harvey, 2006; Tompkins et al., 2017)

Literature circle books choices that feature African American characters appropriate for upper elementary grades:

Table 2. Examples of 3-6th grade Literature Circle books featuring African American characters

Book Title & Author	Summary
<i>Brown Girl Dreaming</i> by Jaqueline Woodson	A memoir written in verse by the author sharing her life as a child.
<i>Garvey's Choice</i> by Nikki Grimes	Garvey's father always wanted him to be an athlete, but Garvey likes every topic but athletics like astronomy and science. Once Garvey find a love for singing and joins the school choir, be find a talent that he would share with this father.
<i>Ghost</i> by Jason Reynolds	Ghost is Castle's nickname, and he loves running. Though he loves running, it has never been for a track team. He ran for baseball. He begins to run to deal with his anger and finds healing though running and teamwork.
<i>New Kid</i> by Jerry Craft	New Kid is a graphic novel featuring Jordan Banks who is going to a new middle school. The new school is very different, especially since it is not as diverse as his previous school. After a few challenges, he finds his way through his art.
<i>The Boy Who Harnessed the Wind</i> by William Kamwamba and Bryan Mealer	This story tells the tale of a 14-year-old boy who lives in a village that was hit by a drought. When he was not able to go to school, he went to the library. His studies helped him create a way to get electricity back to his village. This was the beginning invention of other elements that would help his community.

Build Relationships with Parents

Content area: History

In line with “talking the talk” and getting to know your students, history class provides a excellent source of stories from not only African American children, but all diverse students. African American families have a wealth of knowledge about the history of their families and

culture. Teachers should capitalize on this information and provide ways to incorporate each individual classes' funds of knowledge (Gonzalez et al., 2005)

Home-School Newsletter

According to Goodman and Hooks (2016) telling stories is another way for teachers to get to know their students. Oral stories from families can be shared in class. This family literacy activity allows parents to share their lived experiences and have voice in the class. Its also a great opportunity for parents and children to bond and create a home-school conversation which is a part of teaching.

Conclusion

The title "Differentiation Matters!" is a play on words from the recently expressed motto of Black Lives Matter that became popular again in 2020. The slogan Black Lives Matter is a reminder that African American or Black lives matter equally to all people in the United States. In that vein, this information is showing that differentiation is process that occurs in classrooms by teachers that provides equal access for all students. Teacher educators teach preservice teachers that it is important to differentiate for struggling students, English Language Learners, gifted and talented students, as well as diverse cultures. To inform preservice teachers as well as inservice teachers, this article presents culturally responsive teaching that is research based and targeted for African American K-6 students.

Six successful strategies have been shared that have been found to be positive for Black students across various curricular areas: learn about your students, use relevant word problems or applications, deliver forms of learning through leaning stations, experiment with peer teaching, explore literature circles, and build relationships with parents. With each of these culturally responsive teaching practices, teachers will be able to create a safe and accepting space for all learners.

References

- Acosta, M. (2016). Reauthorizing Excellence in Literacy Teaching for African American Learners. In Scott, L. M., & Purdum-Cassidy, B. (Eds.) Culturally affirming literacy practices for urban elementary students. Rowman & Littlefield Publishers.
- Brown, B. A., Boda, P., Lemmi, C., & Monroe, X. (2019). Moving culturally relevant pedagogy from theory to practice: Exploring teachers' application of culturally relevant education in science and mathematics. *Urban Education*, 54(6), 775–803.
<https://doi.org/10.1177/0042085918794802>
- Daniels, H. (2006). What's the Next Big Thing with Literature Circles? *Voices from the Middle*, 13(4), 10-15.
<https://login.proxy.tamuc.edu/login?url=https://www.proquest.com/scholarly-journals/whats-next-big-thing-with-literature-circles/docview/213930702/se-2?accountid=7083>
- Gay, G. (2000). Culturally responsive teaching: Theory, research, and practice. Teachers College Press.
- Gonzalez, Moll, L. C., & Amanti, C. (2005). Funds of knowledge: Theorizing practices in households, communities and classrooms. Erlbaum.
<https://doi.org/10.4324/9781410613462>
- Guido, M. (2017). 15 Culturally-Responsive Teaching Strategies and Examples + Downloadable list <https://www.prodigygame.com/in-en/blog/culturally-responsive-teaching/>

- Hall, T, Strangman, N, & Meyer, A. (2003). Differentiated instruction and implications for UDL implementation. Wakefield, MA: National Center on Accessing the General Curriculum <http://aim.cast.org/learn/historyarchive/backgroundpapers/differentiated>.
- Ladson-Billings, G. (1994). *The Dreamkeepers: Successful teachers of African American children*. Jossey-Bass.
- Ladson-Billings, G. (2012). Through the Glass Darkly: The persistence of race in education. In J. Banks & C.A. Banks (Eds.) *Handbook of Multicultural Education* (second edition, p. 340-62). Jossey-Bass.
- McCullough. (2013). The relationship between reader response and prior knowledge on African American students' reading comprehension performance using multicultural literature. *reading psychology*, 34(5), 397–435. <https://doi.org/10.1080/02702711.2011.643531>
- National Center for Education Statistics. (2022). Racial/Ethnic Enrollment in Public Schools. Condition of Education. U.S. Department of Education, Institute of Education Sciences. <https://nces.ed.gov/programs/coe/indicator/cge>.
- Parsons, & Morton, T. R. (2022). My best science teacher: The views of Black students and implications for science education reform. *Cultural Studies of Science Education*, 17(1), 63–83. <https://doi.org/10.1007/s11422-022-10106-7>
- Tomlinson, C.A. (1999). *The differentiated classroom responding to the needs of all learners*. Association for Supervision and Curriculum Development.
- Tomlinson. (2014). *The differentiated classroom: Responding to the needs of all learners* (2nd edition.). Association for Supervision and Curriculum Development.
- Ullucci. (2011). Culturally relevant pedagogy: Lessons from elementary classrooms. *Action in Teacher Education*, 33(4), 389–405. <https://doi.org/10.1080/01626620.2011.620>
- Van Tassel, N. (2022) <https://iexplorescience.com/how-to-science-stations/>
- Walls. (2012). Third grade African American students' views of the nature of science. *Journal of Research in Science Teaching*, 49(1), 1–37. <https://doi.org/10.1002/tea.20450>
- Waterman. (2013). *Handbook on differentiated instruction for middle and high schools*. Routledge. <https://doi.org/10.4324/9781315856230>
- Wright, B.L. (2019). Black boys matter: strategies for a culturally responsive classroom. *Teaching Young Children*. NAEYC.org <https://www.naeyc.org/resources/pubs/tyc/apr2019/strategies-culturally-responsive-classroom>

Children's Books

- Craft, J. (2019). *New kid*. Harper Collins.
- Grimes. N. (2016). *Garvey's choice*. Wordsong.
- Kamwamba, W. & Mealer, B. (2012). *The boy who harnessed the wind: Creating currents of electricity and hope*. William Morrow.
- Reynolds, J. (2017). *Ghost*. Athenium Books.
- Woodson, J. (2016). *Brown girl dreaming*. Nancy Paulsen Books.

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