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Culturally Inclusive Curriculum: Policy Recommendations to Address Racial Academic Achievement Gaps in Secondary Education

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Abstract

The educational system in the United States is a profoundly difficult structure to navigate, adjust, and comprehend. The system, comprised of nearly 100,000 public schools, interacts with millions of students each school year. For the 2021 – 2022 school year, the estimated total of students is 56.4 million. Each student brings individualized experiences and backgrounds to school that play an integral role in helping them form their identity. The 56.4 million students also create a plethora of diverse cultures and beliefs. The nation's public school system becoming increasingly more racially diverse is exemplifying how minority populations are trending away from being, technically, minority. While the shifts in racial demographics are clear, secondary education institutions are continuing to fail in addressing race-based gaps in academic achievement. Minority students are still significantly underperforming when compared to their counterparts and interventions on the federal and state levels have made varying impacts. This report will analyze the factors contributing to the persisting racial academic achievement gap. It will provide background and insight on culturally inclusive curriculum (CIC) and highlight potential methods of utilization and implementation for CIC to address race-based academic achievement gaps in secondary education.

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Achievement Gaps in Secondary Education

Achievement gaps across racial lines continue to persist within the education system of the United States (Startz, 2020). The issue of race-based academic achievement gaps is a multi-layered and complex problem that encompasses multiple factors such as school culture, policies, inconsistent tracking, implicit bias, and lack of professional development in culturally responsive teaching practices (Corwin, 2022). Compared to the 1970s, today's racial academic achievement gaps are close to 40% smaller yet remain substantial (Stanford, 2015). Over the past 30 years, minority students have shown a much larger and quicker improvement of academic scores than their white counterparts (Stanford, 2015), yet today's academic achievement rates show that there are still improvements to be made. Brookings Institution highlighted the academic racial disparities by analyzing standardized test scores. SAT math scores have an average of 511 out of 800. African American students average 428 and Hispanic students average 457 while white students have an average of 534 (Ramirez, 2017). Graduation rates tell a similar story. In 2019, African American students displayed a graduation rate of 79.6% and Hispanic students had a rate of 81.7% while white students graduated at a rate of 89.4% (Maine DOE, 2022). Looking at states individually and exploring racial differences in academic scores shows more inconsistencies. Research shows the racial academic achievement gap tends to vary by state. States such as New Jersey and Michigan have displayed improvements narrowing the gap, while states like Maine and Colorado display a widening (Stanford, 2015). From 2003 to 2013, 21 states show no change in the Black-white achievement gap and 28 states show no change in the Hispanic-white achievement gap (Stanford, 2015).

Educational achievement gaps play a large role in determining the future of students, their contributions to their community, and their involvement in society. As a nation that is heavily reliant and adamant on obtaining a college degree (Pew, 2016), poor academic scores early on in a student's educational career make them less likely to graduate high school or attend higher education (Fresno Pacific University, 2019) and are detrimental to their future well-being. For individuals, obtaining a college degree results in lower unemployment rates, higher earnings, and increased mobility in the job market (Pew, 2016). Investments in addressing academically underperforming populations also result in positive changes on a larger scale. By 2050, if academic achievement gaps were to close, the U.S. economy would be 5.8% larger and the cumulative increase of the GDP during that same time frame would equate to $2.3 trillion (Lynch & Oakford, 2014). While preparing for the future, the problem, however, cannot be addressed without looking at the past.

Addressing racial disparities in education has been an ongoing and challenging matter in the United States. In the early 1900s, the ethnic studies movement was initiated by scholars to challenge the negative stereotypes of African Americans. To combat stereotypes, scholars created associations and published materials promoting accurate depictions of African American history and culture (Depenbrock, 2017). During the civil rights movement of the 1960s and 1970s, inequalities and racial prejudices within the United States found their way into educational systems (Ambrosio & Banks, 2022). The combination of overt racist attitudes with the minimal representation of diverse cultures, backgrounds, and experiences in the classroom curriculum was detrimental to marginalized students. The ethnic studies movement of the 1900s was seen as an inadequate method of addressing the racial inequities in schools in the 1970s

(Depenbrock, 2017 Theorists and activists wanted structural changes to be made, such as a curriculum with more content that accurately reflected a wider range of ethnic backgrounds.

Today's advocacy for representing all students in the classroom is still promoting exactly that: the incorporation of a culturally inclusive curriculum (CIC). A culturally inclusive curriculum reflects and utilizes the cultural differences in society that are present among students within a classroom (N.S.W. Government, 2020). Materials, assignments, and instructions challenge stereotypes and promote the representation of students' individual backgrounds (N.S.W. Government, 2020). It is a research-backed approach to learning that creates in-depth classroom connections through acknowledging and encouraging individual identities and experiences (Woods, 2021). A curriculum that is representative of diverse student backgrounds can be displayed in several ways, such as historical readings of varying cultures, assignments that promote individual expression, or encouraging each student to share personal experiences with the class (Guido, 2017). Utilizing these methods, or similar approaches has been proven effective through academic and scientific studies. Research in brain science emphasizes that all learners integrate information best when it's connected to prior knowledge. Evidence also supports that incorporating materials reflecting a student's background is critical for deeper, more meaningful learning experiences (Muñiz, 2019). Culturally inclusive curriculum can be incorporated into a wide range of subjects and promoted through a variety of current teaching practices such as project-based learning, inquiry-based learning, or adaptive learning (Guido, 2017).

The task of incorporating materials, lessons, and teachings that speak to a wide range of diverse backgrounds appears simple, yet is met with multiple barriers, such as political involvement, individual beliefs, and educational requirements. The largest barrier is the federal

governments' minimal involvement and control over the public education system (ED, 2022).

The United States Constitution contains no references towards education and schooling (Guthrie,

2022). The tenth amendment states "The powers not delegated to the United States by the

Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the

people" (U.S. Const. Amend. X). The combination of no educational references in the

Constitution with the tenth amendment stating that education is overseen at the state level and

not being a constitutional right complicates the issue (Dorsey, 2020).

While there is no federal control over education, there is involvement to a certain degree.

Through the few major education laws, the United States Department of Education (ED) is

involved in providing equal access to educational opportunities and supplementing state funding

through federal financial support (Congressional Research Service, 2019). The current main

education law for public schools in the United States is the Every Student Succeeds Act (ESSA),

which replaced No Child Left Behind, the prior law existing from 2002-2015. (Lee, 2022).

Signed by President Obama in 2015, the ESSA reauthorizes the Elementary and Secondary

Education Act (ESEA), signed by President Johnson in 1965, which emphasized equal

educational opportunities (ED, 2022). The ESSA directs each state to deliver a detailed

educational plan that includes academic standards, annual testing, school accountability, goals

for academic achievement, plans to improve struggling schools, and report cards on the state and

local levels (Lee, 2022).

These requirements from the federal government effectively place more pressure on

states to address low and underperforming students and school systems. To meet the standards

outlined by ESSA, educators and administrators are frequently looking for ways to enhance the

academic performance of their students. This usually results in curriculum adjustments, more

educational services being provided, and a surplus of accommodations being written. Since it is up to each state's jurisdiction on how they meet these requirements, inequities persist. For instance, allowing for varying accountability measures between districts and states can create unequal educational practices, resulting in uneven academic achievement rates of students (Gaille, 2019). While ESSA works to promote educational equity, following the footsteps of ESEA, the flexibility that is disposed to states through ESSA has resulted in loopholes being taken advantage of, requirements being ignored, and unfulfilled ownership from state educational departments (Forte, 2018). Bellwether Education Partners and the Collaborative for student success analyzed 17 plans that states had submitted to comply with ESSA. Findings show that not one of the 17 plans appropriately addresses how it will promote equity for students of color, low-income students, and other marginalized populations (Ramirez, 2017).

The inadequate plans delivered by states to promote equity show the harm being done to those that they were meant to assist: underperforming and underachieving minority and marginalized students. As a nation that is projected to be a majority-minority population by 2045 (Frey, 2018), school systems must be utilizing cultural differences as a tool to promote student success and approach the growing population of diverse students. This paper seeks to inform how a culturally inclusive curriculum can be utilized in schools as a tool to address the racial academic achievement gap, and further the success of all students.

Literature Review

Understandings and definitions of culture can vary. Merriam-Webster defines culture as the customary beliefs, social forms, and material traits of racial, religious, or social group (Merriam-Webster, 2021). Culture is mainly referenced when acknowledging ethnic or racial identities (Roberts, 2021). Within those groups are more characteristics that can define one's

culture, such as race, gender, sexuality, cognitive or physical abilities, and socioeconomic status. A child's culturally specific experiences are heavily influenced by their upbringing and have a large influence on creating their perception of the world (Dorsey, 2020). Understanding the roles that culture plays in a student's academic experience can assist educators in teaching towards their students' strengths and giving them more motivation and meaning to engage in the classroom (Roberts, 2021).

Culture Within Secondary Education Today

While the population of the nation is transitioning to a majority minority, the public school system's educators are still predominantly white (Douglas et al. 2008). Therefore, cultural misunderstandings are more likely to occur, and traditional western epistemological practices can result in lower expectations for students of color (Douglas et al. 2008). During the 2017-2018 school year, 79 percent of public school teachers identified as white (Institute of Education Sciences, 2021). In comparison, of the 50.7 million students who were enrolled in public school during the 2017-2018 school year, 13.8 million were Hispanic, 7.7 million were African American, 2.7 million were Asian, and 2.1 million were of two or more races (Institute of Education Sciences, 2021).

Positive relationships result in higher levels of classroom engagement, a greater sense of belonging, and higher academic scores (The Education Trust, 2021). Cultural differences can greatly influence the relationships between teachers and their students, which play a key role in student success. If cultural barriers or misunderstandings between teachers and students are an obstacle, relationships can be harder to build, which harms the success of the student and a teacher's ability to connect with all members of their class (Douglas et al. 2008). Teachers can also utilize the diverse and unique backgrounds that students bring to the classroom to promote

positive attitudes towards diversity and inclusion, challenge racial injustices and prejudices, and be agents for social change (Roberts, 2021).

With new census projections indicating that the nation will become minority white by the year 2045 (Frey, 2018), promoting diversity along with culturally inclusive and accurate information in secondary education classrooms is a necessity. Adopting and implementing culturally inclusive curriculum (CIC) is a proven form of such. Utilizing CIC will assist educational systems in addressing and combatting the racial and cultural differences in classrooms, foster more positive relationships between educators and their students, engage all students with the classroom content, and better prepare students for success in an increasingly diverse world. Doing so would effectively work towards addressing and combatting the race based academic achievement gaps that continue to exist.

Relevant Psychological Theories

The role that culture plays in a child's or young adult's educational experience and attainment can be seen through well-known and respected theories such as sociocultural theory, created by Lev Vygotsky and constructivism, where Piaget is widely recognized as the founding father. Such theories emphasize how a student's perception and integration of their experiences influence knowledge construction (West Governors University, n.d.) and the role that social factors contribute to one's cognitive development (McLeod, 2020). Both theories have similar underlying themes such as an emphasis on student-led and student-focused learning, in contrast to more traditional and objectivist models (McLeod, 2020). These themes support the evidence showing that implementing CIC benefits the learning experience and academic achievement of all students.

Constructivism, stemming largely from Piaget's theory of cognitive development, is based around the idea that people are actively creating knowledge through experiences, largely from their experiences as a learner (University of Buffalo, n.d.). Within education, constructivism suggests that students don't passively absorb information, they construct knowledge by utilizing previous knowledge or experiences as a foundation (University of Buffalo, n.d.). A constructivism perspective of the classroom views the student as an active participant in the learning process, not a static recipient of information (WNET, n.d.). Specific principles of constructivism demonstrate the theories application to students in greater depth. Principles include prior experiences, beliefs, and insights being important foundations for learning, knowledge as a personal affair, and learning being contextual (West Governors University, n.d.). However, these principals are not strictly theoretical. Studies done in brain science and education concluded that building off a student's background knowledge shapes comprehension to a higher degree (Hammond, 2014), supporting Piaget's constructivism principal that students process information better when it is connected to knowledge they already have. Research supports other principals of constructivism, such as knowledge being personal. Constructivists argue that since learning is based on your own experiences and beliefs, it is a personal experience (West Governors University, n.d.). To allow a student's learning experience to be more naturally personable, materials and assignments that accurately reflect their background and personal experiences are necessary. Scientific studies show that incorporating such assignments result in a more engaged and meaningful learning experience (Muniz, 2019).

Written by Lev Vygotsky, sociocultural theory places strong emphasis on the role social interactions has on cognitive development (McLeod, 2020). Vygotsky's theory views human development as a social process, where children obtain cultural values and beliefs through

communicating with more developed members of society (McLeod, 2020). The theory can be

broken down to two main aspects, social interaction that leads to cognitive integration, and the

zone of proximal development (Vygotsky, 1978). The first aspect, social interaction to cognitive

integration, begin as inter-psychological through social experiences and become intra-

psychological as amalgamation of information occurs in the mental structure (Vygotsky, 1978).

Prior cultural experiences that have an influence on a child's cognitive development and the tools

of intellectual adaptation that have been provided through their initial sociocultural environment

often go unaddressed (McLeod, 2020). The second aspect of the theory, one of Vygotsky's most

widely recognized concepts, is the zone of proximal development, which Vygotsky defines as:

> "the distance between the actual developmental level as determined by independent
>
> problem solving and the level of potential development as determined through problem-
>
> solving under adult guidance, or in collaboration with more capable peers" (Vygotsky,
>
> 1978, p. 86).

Classroom applications of sociocultural theory are typically seen through practices relating to the

zone of proximal development, such as scaffolding techniques, which simplify the role of the

leaner but not the task required of them (Slavin, 2006). Differentiating from Piaget's mindset that

a child's development must precede their learning, Vygotsky argues that you need to reference

the social and cultural contexts imbedded within a child before you can understand their

development as an individual (McLeod, 2020). The social and cultural contexts in an individual

appear largely from language, Vygotsky's basis for social interaction. External, egocentric, and

inner speech play key roles in organizing thoughts, interpreting meanings, and internalizing

cultural beliefs (Kurt, 2020). Sociocultural theory views learning and culture as dependent on

each other. Through active engagement with their environment, Vygotsky suggests that

individuals conform their behaviors and internalize their morals and ethics to those that are

deemed acceptable by society or a community to achieve a sense of belonging (Kurt, 2020).

The psychological theories put forth by Piaget and Vygotsky illustrate approaches to

teaching and learning that make the classroom more student-centered. They address how prior

knowledge, experiences, values, and beliefs play important roles in cognitive development.

While not explicitly stating or citing CIC, the suggestions provided by both psychological

theories support its implementation within secondary education.

Forms and Methods of Implementation

Culturally inclusive curriculum can be used in many forms, but its foundation remains the

same. Core components consist of acknowledging the legitimacy of different cultural

backgrounds, connecting personal experiences with learning, using teaching strategies that

connect with all students, encouraging students to value their culture, and incorporating materials

that speak to diverse backgrounds (Ed Tennessee, n.d.). These components can be reflected

through a wide range of educational practices and can be adjusted to best meet the needs of the

students and classroom.

Figure 1

Elements of Culturally Inclusive Curriculum
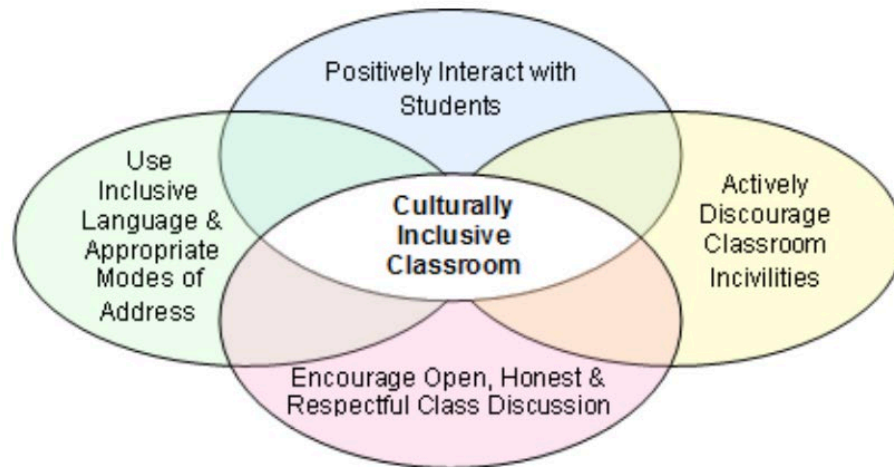
To assist with more in-depth personal connections being made between students and their teachers, demonstrating an open flow of communication for the classroom is a useful tool. By using questionnaires, surveys about learning styles, strength tests, or open classroom discussions about past learning experiences, students will feel more valued and respected. (Guido, 2017). The sense of value will allow them to place more trust in their educator and help build a positive relationship. Building relationships between teachers and students early on helps educators best accurately represent all students in the classroom, which can be a large contributing factor to their academic success (Darwis et al, 2015).

Representation in classroom curriculum has a significant impact on the motivation and involvement of students in school. For children and young adults, what they see shapes how they perceive themselves and the world around them (Thomas, 2016). To encourage and address accurate positive cultural representations in the classroom, educators can use strategies such as materials that show positive examples of diverse backgrounds or using incorporating specific

areas of community that the students or school is within to bring real life examples into the classroom (Thomas, 2016). Culturally relevant word problems are a specific example of how culture can easily be incorporated into classroom teachings. The Canadian Center for Science and Education conducted a study in 2015 that examined the use of contextual learning strategies in mathematics (Darwis et al, 2015). By incorporating student names, personal interests, and culturally specific references in the math word problems, test score of the study subjects increased by 44% (Darwis et al, 2015). By using vocabulary that is specific to students within the material that they are learning, the researchers and teachers also increase student motivation and activity within mathematics classroom sessions (Darwis et al, 2015). These results show how CIC can positively influence more than academic scores.

Representation through classroom materials is a proven way to promote student engagement and academic success. The best form of representation is when students feel reflected through their classroom facilitator. A 2015 study conducted by Economics of Education Review investigated the effect of own-race teachers on academic achievement (Egalite et al, 2015). They discovered that students, especially those that are low performing, exhibit more engagement and motivation when working with an educator of the same race. With most public secondary educators identifying as white, it can be difficult to provide that sense of representation to minority students (Institute of Education Sciences, 2021). To combat this difficulty, finding times in the curriculum to use external guest speakers who may better connect with the backgrounds of diverse students can help give them that additional sense of motivation and engagement (Guido, 2017).

Visible and Measurable Benefits

When a student can connect to a reading on a personal level, it helps them feel like they belong to the classroom which, for them, is their social group (Gonzalez, 2019). Individual identities within a social group have a substantial influence on the psychological and neurological reactions in the brain (Rock, 2009). Students have a strong urge to feel heard and seen within their classroom. This helps them feel validated within their social group. Culturally relevant stories provide them with the sense of validation and inclusion which positively impacts their academic success (Gonzalez, 2019).

Within the classroom, utilizing resources and real-life examples that speak to diversity are useful in challenging and addressing stereotypes, and avoiding systemic prejudice. Using culturally inclusive resources gives students equal opportunity and helps provide them with a least restrictive environment to learn. (N.S.W. Government, 2020). Providing culturally inclusive curriculum allows marginalized and minority students to connect with the content that is being delivered by seeing themselves represented. Incorporating curriculum that represents all cultures accurately and appropriately can combat the lack of self-representation that students of a minority population may see or feel when entering a predominantly white classroom in a school with predominantly white teachers (Beach, 2021). Teaching curricula that speak to all cultures helps the teachers better understand and acknowledge the differences that make each student unique (Johnson, 1997). A similar impact is left on students. Learning about diverse backgrounds and the cultural traditions or beliefs of their peers provides them valuable life lessons around equality, justice, and equity (Seop, 2020).

At a middle school in San Bernardino, California, which is largely populated by African American and Latino students, a middle school ELA teacher, Vanee Matsalia, collaborates with a

history teacher to co-teach units that accurately depict historical stories of the United States. While creating and delivering an assignment on Christopher Columbus, one that traditionally excludes the horrific acts committed towards indigenous people, students expressed their shock as they learned a more accurate depiction of certain historical events. Others expressed excitement:

> "After a recent assignment on Christopher Columbus's expedition to the New World, a student approached eighth-grade teacher Vanee Matsalia after class. The girl, whose family is from the Caribbean, told Matsalia that the lesson was the first time she had heard her people mentioned in school. "'I can't wait to go home and tell my dad—he's going to be so excited, but so angry when he finds out what happened,'" Matsalia remembers her saying, referring to Columbus and his fellow colonizers enslaving and killing many of the indigenous people they encountered when they landed. "I hear from students all the time, 'Why have I never seen this before?' They are often in shock," said Matsalia of the course. "The lessons resonate when connected to something students can belong and respond to." (Korbey, 2018).

Self-representation in literature helps students engage on a deeper level (Gonzalez, 2019). A 2017 study investigated the influence of multicomponent, supplemental intervention on reading fluency levels of African American students from an urban school district by utilizing repeated readings and culturally relevant stories (Bennett et al., 2017). The researchers utilized an intervention method with an additional probe experimental design to assess the success rate of repeated readings and culturally relevant stories on seven African American second grade students. Thirty culturally relevant stories were created, and students were assessed on their correct words per minute (CWPM) along with an oral reading fluency test (ORF). All

participants increased their CWPM and ORF after their experience of reading culturally relevant

stories. Improvements ranged from 38% to a staggering 306%. (Bennett et al., 2017). The higher

fluency rates resulted in students being able to better understand the content of the passages.

Participants also reported feeling more motivated and interested in the readings. The findings of

the study emphasize the benefits of providing students material where they can see themselves

reflected.

A 1992 theoretical framework by Gloria Ladson-Billings introduced culturally responsive

pedagogy from her extensive research on effective teachers of African American students and

analyzing academic studies that explored ways to incorporate culture within classrooms to

address low academic scores from students of color (Ladson-Billings, 1995). She encourages

teaching to the whole child, recognizing diversity among students, and using the cultural

knowledge and experiences that each child brings with them (University of Northern Iowa, n.d.)

Utilizing prior studies and explorations, Ladson-Billings identifies areas that need to be

addressed or expanded to continue the push in addressing academic success for students of color:

> "A next step for positing effective pedagogical practice is a theoretical model that not
>
> only addresses student achievement but also helps students to accept and affirm their
>
> cultural identity while developing critical perspectives that challenge inequities that
>
> school (and other institutions) perpetuate. I term this pedagogy, culturally relevant
>
> pedagogy" (Ladson-Billings, 1995, p.469).

Inspired to challenge deficit paradigms that heavily influenced perceptions of African American

students, Ladson-Billings adopted a paradigmatic shift by studying teachers who exhibited

success teaching African American students. Her study, beginning in 1988 and lasting over the

course of roughly two years, observed eight elementary school teachers in Northern California

who were identified as successful teachers of African American students (Ladson-Billings, 1995). Through her observations, she saw that when there was incorporation of cultural excellence within the classrooms, students exhibited interpersonal relations; supported and encouraged others; and fostered an academic community (University of Northern Iowa, n.d.). The theory of culturally relevant pedagogy has three main criteria: the production of academically achieving students, developing students' cultural competence, and teaching students to understand and challenging social issues. Along with that are three broad conceptions- regarding self and others, social relations, and knowledge- in which culturally relevant pedagogy is distinguishable (Ladson-Billings, 1995). The perspective that Ladson-Billings adopted to challenge deficit paradigms resulted in her more student-centered theoretical framework to teaching. Placing an emphasis on the teacher's role in the classroom, culturally relevant pedagogy notes the presence of initial cultural biases in educators. Through self-explorations and increasing knowledge of diverse cultures, educators can be better prepared and willing to utilize existing classroom cultural differences to create a representative and welcoming learning environment for all students (Lynch, 2016).

Culturally inclusive curriculum has the capacity to influence students in all subjects, not just those relating to literature. Rebecca Powell (2016) utilized a mixed methods study to examine the effectiveness of culturally responsive instruction (CRI). Using a culturally responsive instruction observation protocol (CRIOP), she collected data on student achievement scores from classrooms where teachers utilized CRI from the three training sessions that they were provided before the school year began and compared it among those that did not (Cantrell, 2016). Students who experienced CRI reported higher achievement scores in reading and math than those who did not. The data reported mean scores on reading tests for students who received

no CRI to be 173.423 while those receiving CRI had a mean score of 176.129. Similarly, math

tests reported mean scores of 176.817 for receiving no CRI and a mean score of 181.936 for

those with CRI.

Culturally inclusive curriculum benefits all members of the classroom, including the

educators. At large, it promotes and fosters relationships among students and families, provides

students with a larger voice and creates a greater acceptance of diversity (N.S.W. Government,

2020). Creating multicultural awareness encourages acceptance and helps students succeed while

preparing them to thrive and grow in a world that is becoming more and more diverse. (Drexel

University). It also allows teachers to better connect and address the needs of their students.

The interactions that students have with teachers play influential roles in their ability to

succeed academically. For students, having a positive relationship with their teacher results in a

higher potential for academic and social achievement (Dorsey, 2020). Cultural differences

between teachers and their students can make it difficult to build those positive relationships.

Teachers who lack an understanding on or have minimal education on multicultural backgrounds

often have lower expectations for students from diverse backgrounds (WNET, n.d.). A study by

Monica Rosalina Medina Jimenez (2014) explored South Texas school teachers' perspectives on

multicultural education. She reported evidence on questions with respect to the implementation

and benefits of multicultural education, along with multicultural education as a need. Participants

expressed benefits such as promoting appreciation of cultural diversity and a greater sense of

self, to one of the largest benefits: a vast majority of students becoming more academically

successful (Johnson, 1997). Participants also emphasized the impact that delivering multicultural

education has on them as professional educators. Incorporating teachings that represented diverse

students within their classrooms helped those teachers better understand and connect with their

students and help them succeed (WNET, n.d.).

Barriers of Implementation

Even with the identified and researched benefits of incorporating culturally inclusive

curriculum within secondary education classrooms, there is still resistance. Political agendas,

individual beliefs, and educational requirements create barriers for school systems to formally

incorporate lessons that represent all cultures. While great strides have been taken in creating and

implementing culturally inclusive curriculum, school districts are still met with challenges when

attempting to incorporate culturally inclusive curriculum into their school districts.

A 2021 survey of American educators, created by Educators for Excellence, examined

the influence that recent global and national events, such as COVID-19 and events of racial

injustice, have had on the education system (Educators for Excellence). When answering

questions addressing racism, 62% of teachers reported being concerned about systemic racism.

Concerns towards systemic racism from those working in schools with a majority students of

color reported a higher result of 72%. Even though many respondents expressed concern, only

30% reported any guidance or resources received from administration or district leaders to

address racial justice. Seventy-eight percent of teachers did report that they found it increasingly

important for civil rights protections for students and teachers to be provided from the U.S.

Secretary of Education (Educators for Excellence, 2021). While the nation's educators illustrated

the need for more culturally responsive teaching and curricula to combat the ongoing racial

injustices, barriers still exist.

Factors contributing to the opposition of culturally inclusive curriculum include political

conservatism, religiosity, nativism, perspectives on diversity, income, and gender (Johnson,

1997). Promoting ideologies that do not conform with traditional teachings or mentalities has

been at the forefront of recent educational debates. With 16 states having promoted or enacted

policies prohibiting educators from examining and teaching past or current topics surrounding

racism, (Foundations for a Better Oregon, 2021) cultural representation within classrooms is sure

to suffer. In May of 2021, Republican Governor Bill Lee signed a measure into law that bans

educators from teaching certain concepts of racism in public schools, with repercussions

including loss of state funding (Kruesi, 2021).

> "We need to make sure that our kids recognize that this country is moving toward a more
>
> perfect union, that we should teach the exceptionalism of our nation and how people can
>
> live together and work together to make a greater nation, and to not teach things that
>
> inherently divide or pit either Americans against Americans or people groups against
>
> people groups," (Kruesi, 2021).

Accurately teaching about historical events and appropriately incorporating cultural references

into curriculum and classroom environments connect educational material to a student's personal

experiences or cultural history (Foundations for a Better Oregon, 2021). As states pass

legislation prohibiting the teachings of historical and present-day racism, marginalized students

will suffer, as they will be less represented in the classroom and may draw inaccurate

representations of their ethnicity's role in the nation's history (Sawchuk, 2021). Culturally

inclusive curriculum recognizes and educates students on diversity and promotes individual

success by making all students feel represented in what they are learning (Roberts, 2021). States'

sweeping bans on educational materials discussing racism has made it increasingly difficult for

educators to include teachings on different cultures that are present in their classrooms.

Data Analysis

Research on the secondary education system of the United States produces data that emphasizes two main things: the glaringly consistent educational achievement racial gaps in public schools and the usage of culturally inclusive curriculum to combat these gaps. Exploring data on the relationship between the federal government and individual states when it comes to education gives more insight and explanation as to why these racial gaps persist.

As the racial and ethnic diversity of the United States continues to increase (Jensen et. al, 2021), as does the educational system. The changes to racial and ethnic demographics in American society has a parallel effect on schools. In 2014, the majority of students in America's public schools were no longer white (Fay, 2018), reflecting the racial and ethnic changes seen in society. The enrollment rates in public schools highlights the societal shift towards traditionally minority populations becoming the majority.

Figure 2

Comparing public school enrollment rates by race in the year 2000 and 2018
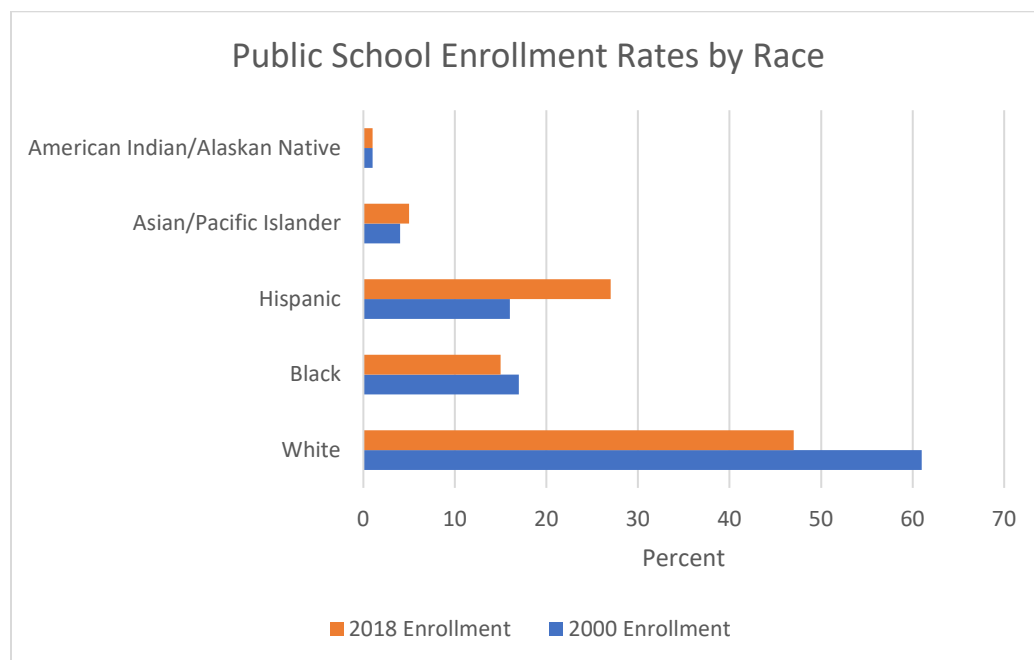
While the increase of diversity in schools gives traditionally marginalized populations an opportunity to obtain skills, knowledge, and experiences that will assist them in the future, persisting academic inequities hinder that opportunity. Secondary education enrollment rates across racial lines reflect the changes in society, yet standardized test scores, graduation rates from secondary education, and higher education enrollment show a missing link.

Figure 3

*Rates of 2019 high school graduation and higher education enrollment*
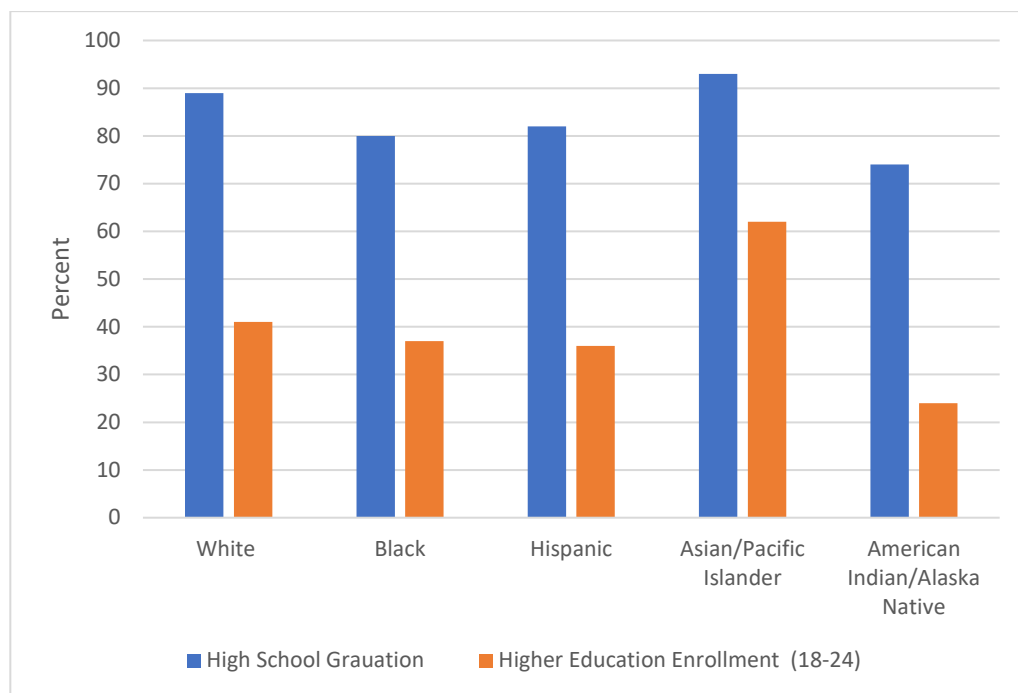
Reporting on the rates of public high school graduation, the National Center for Education Statistics (NCES) shows a stark divide. In 2019, 89% of white public high school students graduated, which is a higher rate when compared to the graduation rates of Black, Hispanic, and American Indian/Alaskan Native students who showed graduation rates of 80%, 82%, and 74%, respectively (NCES, 2021). This divide is emphasized when looking at higher education enrollment rates for the year 2019. Through the analysis of surveys conducted on the civilian noninstitutionalized population of 18–24-year old's, NCES reported on higher education

enrollment rates. Data showed 37% of Black and 36% of Hispanic respondents were enrolled in

higher education. White individuals reported an enrollment rate of 41% (NCES, 2021).

Figure 4

2019 SAT participation and benchmarks as reported by College Board and Math test scores

reported by Brookings.
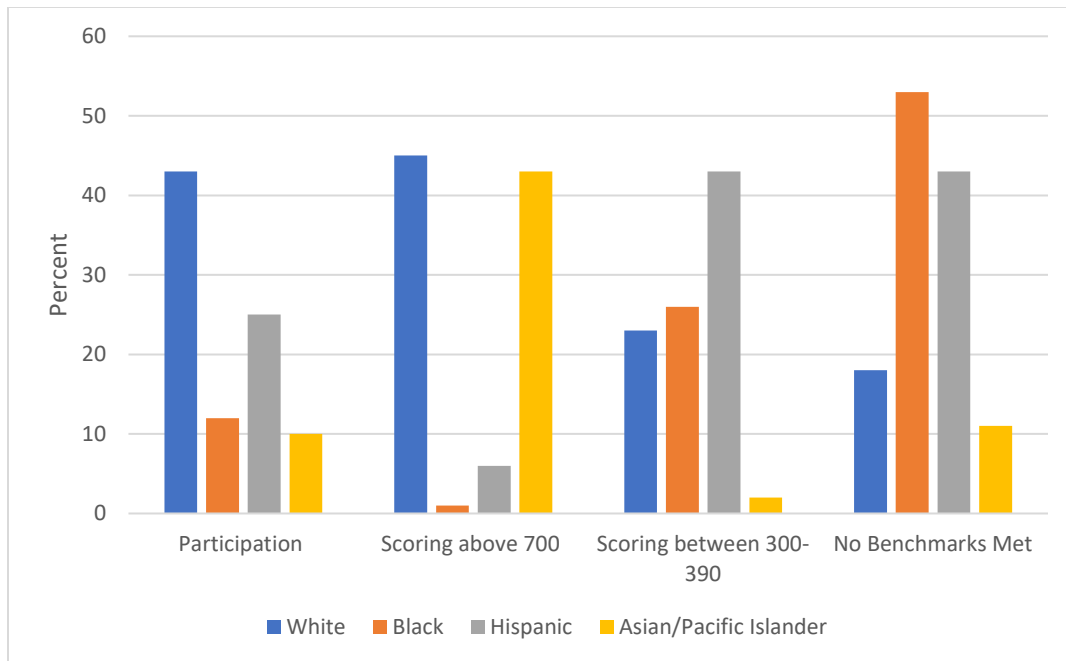
Standardized tests, such as the SAT (Scholastic Aptitude Test), are a traditional way for

schools to measure a student's readiness for college (The Princeton Review, n.d.). Results from

the class of 2019 highlight the difference across racial lines and reflect perceptions of poor

college readiness for certain populations. Looking at participation rates, 43% of participants are

white, which is a strong majority when compared to Black participants who made up 12%

(College Board, 2019). Scores reported by College Board and outlined by Brookings emphasize

this divide. Of students scoring above a 700 on the math section, 6% where Hispanic and 1%

were Black (Brookings, 2020). Of students who scored between 300 – 390 on the math section,

43% were Hispanic and 26% were Black (Brookings, 2020). The low test scores for minority

students explains why 53% of Black students who took the SAT in 2019 failed to meet any benchmarks (College Board, 2019).

Contributing to the racial academic disparities that are seen through graduation rates and higher education enrollment are variations of academic standards and curriculum between states. With education being largely a state's individual responsibility, the curriculum and standards written reflect the priorities and mentalities of the state but are also strongly influenced by the funding that is available. In the Census Bureau's 2016 Public Elementary-Secondary Education Finance Report, state revenue and town revenue made up 92% of public-school funding (Census Bureau, 2016). Since individual states contribute the overwhelming majority of funds for their education systems, oversight and control from the federal level is held to a minimum.

Figure 5

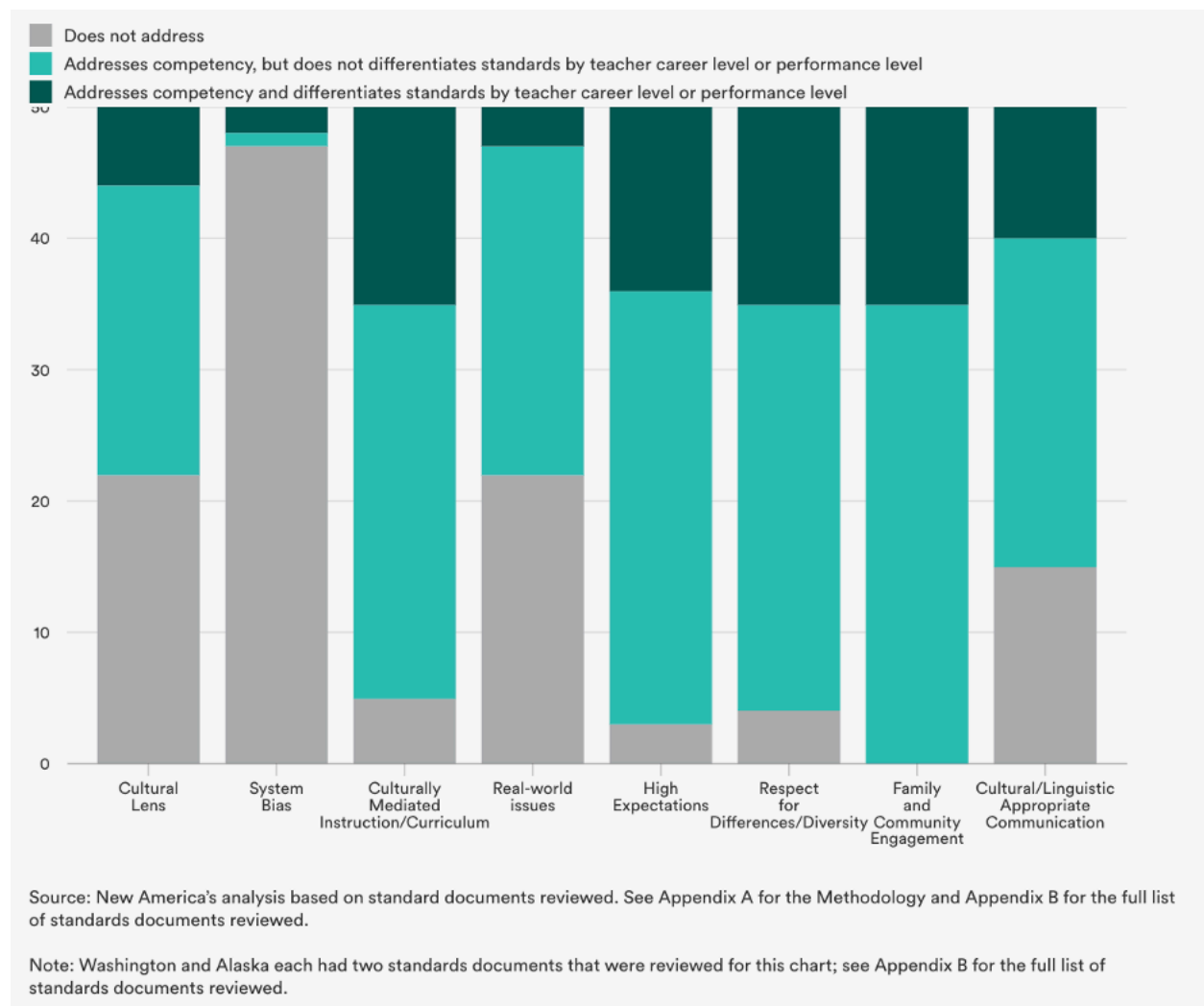*2016 Public school funding*
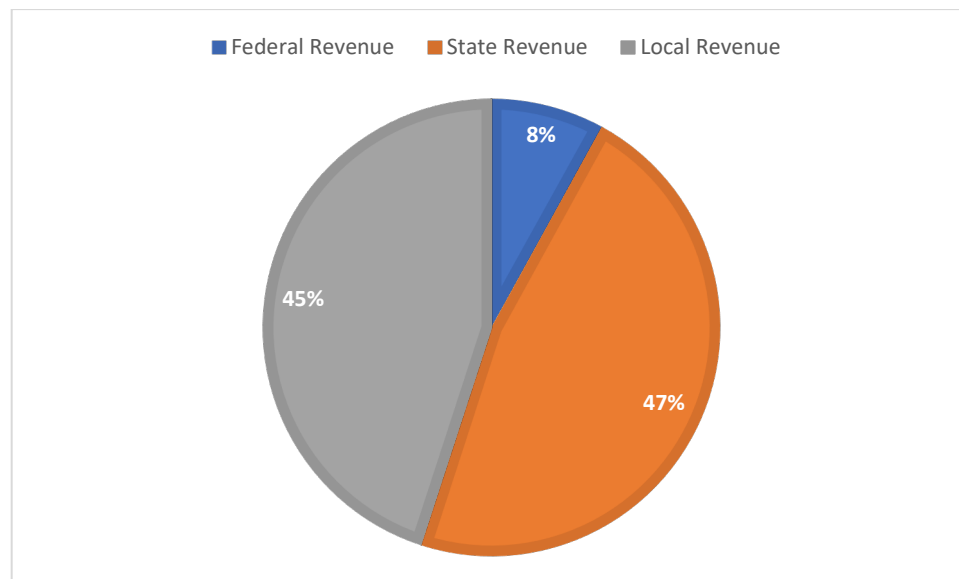
The minimal involvement on the federal level regarding educational priorities and competencies results in states having varied curriculums and teaching standards. As teaching standards vary from state to state, so do their requirements and integration of culturally inclusive

curriculum. New America, a non-profit non-partisan public policy institute, reviewed educational

standards from all 50 states to analyze the integration of culturally responsive teaching within

teaching standards (New America, 2019). The organization searched for how each state

addressed and included eight culturally responsive competencies selected by the researchers –

cultural lens, system bias, culturally meditated instruction/curriculum, real-world issues, high

expectations, respect for differences/diversity, family and community engagement, and

cultural/linguistic appropriate communication (New America, 2019).

Figure 6

What Culturally Responsive Competencies do State Teaching Standards Address?

Source: New America's analysis based on standard documents reviewed. See Appendix A for the Methodology and Appendix B for the full list of standards documents reviewed.

Note: Washington and Alaska each had two standards documents that were reviewed for this chart; see Appendix B for the full list of standards documents reviewed.

All 50 states include some mention and combination of culturally responsive teaching into their teaching standards, but the language of standards can vary, resulting in broader and unclear expectations for students and teachers (New America, 2019). Competencies such as family and community engagement and respect for differences/diversity are widely represented in some form within almost all states. Broad language used to define these competencies results in explicit guidelines or responsibilities placed on teachers going missing (New America, 2019). System bias and real-world issues, two other competencies analyzed by New America, are missing from a large majority of state teaching standards. Only three states (Minnesota, Alabama, and Washington) call for teachers to understand and acknowledge structural biases.

Recommendations

The implementation and utilization of culturally inclusive curriculum within public secondary education is no small feat. Navigating the structure of the educational system and the barriers that coincide is difficult on all levels. Incorporating CIC into classrooms can be done through a variety of approaches. Creating regulations and requirements can effectively direct school systems to include CIC within their standard curriculum, while an approach such as professional development provides educators with the tools to implement CIC but avoids written requirements. Due to the structure of the educational system, the methods of incorporating CIC are influenced by the level in which they operate. In this section, the three levels being discussed will be federal, state, and local.

Each level, federal, state, and local, has different amounts of control over the public education system. Control over what is being taught, the way curriculum is delivered, and how funds are utilized is dispersed across the multiple levels. Understanding the roles that each level

plays within the public education system provides a better understanding of ways that CIC can be promoted and utilized to actively combat the race based academic achievement gap.

Local-Level

The most straight forward approach to using CIC is at the local level. The educational responsibilities on a local level typically reside in making decisions on how schools will operate. They do so through school committees that consist of local individuals who are elected, or appointed, by the public. Members of a school committee are tasked with hiring a district superintendent, establishing curriculum, and other various duties. On a local level, school committees are also responsible for finding and overseeing roughly half of their school district's funding. These funds come from local taxes and any exemptions, both of which are largely influenced by the affluence on the district.

The powers bestowed upon the school committee provides an opportunity to enact positive and meaningful change to the represented school district. Properly vetting and hiring a superintendent that is well-versed and educated in matters of cultural diversity is an influential step. The superintendent has powerful and meaningful influence over the school district. They are responsible for day-to-day decisions regarding educational strategies, spending, and staff, all which influence serving the needs of the students and meeting district goals. School committees should seek an individual that is knowledgeable on the importance of utilizing cultural differences within classrooms to promote student success and will be more receptive and supportive of incorporating CIC in the school district.

Decisions and strategies on curriculum and funding can reflect the desire to learn and include CIC within the district. If there are no state or federal requirements on learning and incorporating CIC for schools, educational opportunities should be provided for staff and faculty

members to learn about its many forms. Professional development opportunities are selected and promoted by the school committee and superintendent. Most of which are selected based off the funds that are allocated for training opportunities. Allocating funds to provide teachers with the necessary knowledge on why and how to include CIC in their classrooms is important for the promotion and implementation of culturally inclusive materials. Barriers around CIC include a lack of knowledge and understanding of what it truly means to create a culturally inclusive curriculum. These misunderstandings can be received by educators as additional work for them to do. Providing training on CIC will help lay a foundation of common understanding that can supplement any additional work an educator might have needed to do on their own time. It also shows a level of support and initiative from school administrators to properly serve and support diverse students in their community.

School administrators can also promote curriculum that reflects diverse cultures in an accurate and positive light. Studies have shown that making learning a personal experience benefits student. By creating opportunities for classroom materials to reflect the cultural differences of all students, administrators can effectively improve the engagement levels and academic scores of all students.

State-Level

At the state level is where most decisions on educational matters are made. Each state's department of education sets educational standards that school districts are required to meet. They evaluate districts individually and assess which schools need assistance to meet performance standards. Within each state, these standards vary. Since state educational departments write these standards, they can modify them as they see fit. Educational

departments add or remove certain areas based on their perception of its impact on student

academic achievement.

What is unique about a state's oversight of education is their ability to decide how

students are tested to assess their level of readiness for future education and meet federal

requirements for testing of core subjects. Each state has developed their own approach to

administering such testing. To best assess the readiness and knowledge of students, state-level

testing should include components of CIC to gain a clearer picture of the academic performance

levels for students of diverse backgrounds. Culturally accurate and representative readings or

writing passages would allow all students to connect with what is being tested and accurately

reflect the level of knowledge they have in the subject. Data and evidence show that minority

students underperform their white counterparts on standardized testing. For an education

department to adjust and modify its statewide secondary education testing procedures would

mean it is accurately representing and acknowledging the impact that cultural differences have

on a student's learning experience. By acknowledging these differences, students are given a

greater opportunity to succeed academically. Adjusting secondary education standardized testing

would have a profound impact on school districts and their approach to preparing students for

those tests. Much of a school district's evaluation is from state standardized testing. By making

the testing content more culturally responsive, school districts' teaching practices and curriculum

standards would follow suit.

To promote the inclusion of culturally inclusive curriculum, state education departments

can require school districts to have teaching and educational standards that reflect culturally

inclusive competencies. Standards for teachers can include requiring educators to be aware and

responsive to how external factors, such as economic status, cultural backgrounds, and

community experiences influence a student's learning experience. Curriculum requirements for educators to employ culturally inclusive curriculum would allow school districts to evaluate the impact of CIC and adjust its delivery based on academic scores.

Federal-Level

The minimal control and enforcement over educational regulations and requirement by the federal government makes policies difficult and legally impossible to enforce. The current educational policy, Every Student Succeeds Act, places a large emphasis on educational equity and promotes providing all students with an equal access to education while addressing and closing educational achievement gaps. To further the diminishment of race-based academic achievement gaps, adjustments to the federal policy are warranted.

Accountability plans are a key portion of the ESSA. The individualized plans submitted by states provide an overview on their plans to address elements such as academic standards, goals for academic achievement, and plans to support struggling schools. Requiring states to incorporate culturally inclusive curriculum within their individualized plans is a policy adjustment that would aid in reducing the race-based academic achievement gap. Some of the requirements for individualized plans include how states will assist underperforming students. A policy adjustment to incorporate culturally inclusive curriculum within those plans would hold states accountable for assisting their underperforming students, while also promoting the usage of CIC to do so.

While the federal level cannot enforce compliance from states on educational matters, all states follow federal guidance, to a certain extent, because of funding. Funding is distributed through direct funds and a variety of grants. The offered federal grants provide states an opportunity to obtain valuable funds by meeting certain requirements or addressing specific

goals. Creating or transforming grants to specifically incorporate culturally inclusive curriculum is an asset that the federal education department can use to promote the incorporation of culturally inclusive curriculum in secondary education. Grants can vary from professional development opportunities for educators to updating materials and resources to be more culturally responsive.

Conclusion

The disparities of academic achievement that continue to exist across racial lines exemplify the need for a modified approach to promoting student success. A growing minority population from diverse backgrounds emphasizes this need. Culturally inclusive curriculum is a practiced and proven approach to promoting educational excellence of all students by using the diversity found in this nation's classrooms to an advantage. Rather than attempting to create a one-size-fits-all model and directing students to conform and adapt to rigid and outdated methods of classroom instruction and material, educators, administrators, and policy makers can use culturally inclusive curriculum to work with students and teach to their needs, styles, and experiences. Creating a more personal and representative learning experience for students will effectively address the racial disparities in the secondary education system and promote the excellence of all students.

References

Ambrosio, J & Banks, A. J. (n.d.). *Multicultural education.* Education State University.

   https://education.stateuniversity.com/pages/2252/Multicultural-Education.html

Barker, M., Frederiks, E. & Visit, F. B. (n.d.) *Designing Culturally Inclusive Learning and*

   Teaching Environments - Classroom Strategies. GIHE Good Practice Resource Booklet

Beach, H. (2021, February 12). *Why representation matters to BIPOC teachers and their*

   students. XQ Institute. https://xqsuperschool.org/rethinktogether/bipoc-teacher-

   representation/

Bennett, G. J., Cartledge, G., Council, R. M., Gardner, R. & Ramnath, R. (2017). Second-grade

   urban learners: preliminary findings for a computer-assisted, culturally relevant, repeated

   reading intervention. *Education and Treatment of Children, 40*(2), 145-186.

Cantrell, C. S., Corell, P., Malo-Juvera, V. & Powell, R. (2016). *Teachers College Record.*

   Operationalizing culturally responsive instruction: preliminary findings of CRIOP

   research. https://www.tcrecord.org/Content.asp?ContentId=18224

Congressional Research Service (2019, January 23) *A Summary of Federal Education Laws*

   Administered by the U.S. Department of Education. U.S. Department of Education.

   https://crsreports.congress.gov/product/pdf/IF/IF10551

Darwis, M., Ekowati, K. C., Tahmir, S. & Upa, P. (2015) The application of Contextual

   Approach in Learning Mathematics to Improve Students Motivation at SMPN 1 Kupang.

   International Education Studies, 8(8), 81-86. http://dx.doi.org/10.5539/ies.v8n8p81

Dorsey, D. (2020, September 17) *Education is still (for now) not a fundamental right under the*

   U.S. Constitution. Kansas Policy Institute. https://kansaspolicy.org/education-is-still-for-

   now-not-a-fundamental-right-under-the-u-s-constitution/

Douglas, A., Douglas, B., Garrison-Wade, D., Lewis, W. C. & Scott, E. M. (2008). The impact

of white teachers on academic achievement of black students: an exploratory qualitative

analysis. *Educational Foundations,* 47-62. https://files.eric.ed.gov/fulltext/EJ839497.pdf

Drexel University. (n.d.) *The importance of diversity & cultural awareness in the classroom.*

Retrieved December 17, 2021, from https://drexel.edu/soe/resources/student-

teaching/advice/importance-of-cultural-diversity-in-classroom/

Educators for Excellence. (n.d.). *Voices from the classroom: a survey of americas educators.*

https://e4e.org/sites/default/files/teacher_survey_2021_digital.pdf#page=23

Egalite, J. A., Kisda, B. & Winters, A. M. (2015) Representation in the classroom: The effect of

own-race teachers on student achievement. *Science Direct, 45,* 44-52.

https://doi.org/10.1016/j.econedurev.2015.01.007

Foundations for a Better Oregon. (2021, May 26). *To confront disinformation, oregon must uplift*

culturally responsive education. https://www.betteroregon.org/news-story/to-confront-

disinformation-oregon-must-uplift-culturally-responsive-education

Frey, H. W. (2018, March 14). *The US will become minority white in 2045, census projects.*

Brookings. https://www.brookings.edu/blog/the-avenue/2018/03/14/the-us-will-become-

minority-white-in-2045-census-projects/

Gonzalez, V. (2019, October 30). *Why representation in classroom books is important:*

culturally inclusive books. Seidlitz Education. https://seidlitzblog.org/2019/10/30/why-

representation-in-classroom-books-is-important-culturally-inclusive-books/

Guido, M. (2017, September 14) *15 Culturally-Responsive Teaching Strategies and Examples*

and Downloadable List. Prodigy. https://www.prodigygame.com/in-en/blog/culturally-

responsive-teaching/

Hammond, Z. (2014). *Culturally Responsive Teaching and The Brain: Promoting Authentic*

    Engagement and Rigor Among Culturally and Linguistically Diverse Students. Corwin

Institute of Education Sciences. (2020, June 30). *Bar chart race: changing demographics in*

    postsecondary enrollment. National Center for Education Statistics.

    https://nces.ed.gov/blogs/nces/post/bar-chart-race-changing-demographics-in-

    postsecondary-enrollment

Institute of Education Sciences. (2021, May) *Race/ethnic enrollment in public schools.*

    https://nces.ed.gov/programs/coe/indicator/cge

Institute of Education Sciences. (n.d.). *Race and ethnicity of public school teachers and their*

    students. Retrieved December 16, 2021, from

    https://nces.ed.gov/pubs2020/2020103/index.asp

Institute of Educational Sciences. (2018, February). *Culturally inclusive practices and student*

    outcomes. Regional Educational Laboratory Program.

    https://ies.ed.gov/ncee/edlabs/regions/west/Ask/Details/2

Johnson, R. D. (1997). *The resistance towards multicultural education in public schools:*

    religious and political dimension (Publication No. 9734634) [Doctoral dissertation,

    University of Nebraska]. ProQuest Dissertations and Theses Goobal.

Korbey, H. (2018, May 23). *A history in which we can all see ourselves.* Edutopia.

    https://www.edutopia.org/article/history-which-we-can-all-see-ourselves

Kruesi, K. (2021, May 25). *Tennessee bans teaching critical race theory in schools.* PBS.

    https://www.pbs.org/newshour/education/tennessee-bans-teaching-critical-race-theory-in-

    schools

Kurt, S. (2020, July 11) *Lev Vygotsky: Sociocultural Theory of Cognitive Development.*

   Educational Technology.

Ladson-Billings, G. (1995). Toward a Theory of Culturally Relevant Pedagogy. *American*

   Educational Research Journal, 32(1), 465-491. http://links.jstor.org/sici?sici=0002-

   8312%28199523%2932%3A3%3C465%3ATATOCR%3E2.0.CO%3B2-4

Lynch, M. (2016, April 21) *What Is Culturally Responsive Pedagogy?* The Edvocate.

   https://www.theedadvocate.org/what-is-culturally-responsive-pedagogy/

Lynch, M. (2016, August 3) *Examining the Impact of Culture on Academic Performance.* The

   Edvocate. https://www.theedadvocate.org/examining-the-impact-of-culture-on-academic-

   performance/

McLeod, S. (2020). *Vygotsky's Sociocultural Theory of Cognitive Development.* Simply

   Psychology. https://www.simplypsychology.org/vygotsky.html

Merriam-Webster. (n.n). *Merriam-Webster.com dictionary.* Retrieved December 16, 2021, from

   https://www.merriam-webster.com/dictionary/culture

Muniz, J. (2019, March 28). *Culturally Responsive Teaching: A 50-State Survey of Teaching*

   Standards. New America.

N.S.W. Government. (2020, May 6) *Cultural inclusion.* Multicultural Education. Retrieved

   December 15, 2021, from https://education.nsw.gov.au/teaching-and-

   learning/curriculum/multicultural-education/culture-and-diversity/cultural-

   inclusion#tabs-51

Roberts, J. (2021, September 30). *Culturally responsive & inclusive curriculum resources: what*

   is culturally responsive curriculum. Portland State University Library.

   https://guides.library.pdx.edu/c.php?g=527355&p=3623937

Rock, D. (2009). Managing with the brain in mind. *Psychology Today, 56,* 2-10

Sandilos, L. & Rimm-Kaufman, S. (2010) *Improving Students Relationships with Teachers to*

    Prpvide Essential Supports for Learning. American Psychology Association.

    https://www.apa.org/education-

    career/k12/relationships#:~:text=Improving%20students%27%20relationships%20with%

    20teachers%20has%20important%2C%20positive%20and%20long,students%27%20aca

    demic%20and%20social%20development.&text=The%20student%20is%20likely%20to,

    achieve%20at%20higher%20levels%20academically

Sawchuk, S. (2021, May 18). *What is critical race theory, and why is it under attack.* Education

    Week. https://www.edweek.org/leadership/what-is-critical-race-theory-and-why-is-it-

    under-attack/2021/05

School of Education Online Programs. (2020, May 19). *What is multicultural education? An*

    educator's guide to teaching diverse students.

    https://soeonline.american.edu/blog/multicultural-education

Slavin, E. R. (2006) *Educational Psychology: Theory and Practice.* Pearson.

Tennessee Department of Education. (n.d.) *Culturally Inclusive Practices.* Tennessee

    Government. https://www.tn.gov/education/student-support/special-education/culturally-

    inclusive-practices.html

The Education Trust. (2021, May 17). *The importance of strong relationships.*

    https://edtrust.org/resource/the-importance-of-strong-relationships/

Thomas, L. (2016, August 22) *Why Representation Matters.* Edutopia.

    https://www.edutopia.org/blog/why-representation-matters-laura-thomas

University of Buffalo. (n.d.) *Constructivism: Creating experiences that facilitate the*

    construction of knowledge.

    https://www.buffalo.edu/catt/develop/theory/constructivism.html

University of Northern Iowa. (n.d.) *Culturally Responsive Teaching.*

    https://intime.uni.edu/culturally-responsive-teaching

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*.

    Cambridge, MA: Harvard University Press.

West Governors University. (n.d.) *What is constructivism?* https://www.wgu.edu/blog/what-

    constructivism2005.html

WNET Education. (n.d.) *Constructivism as a Paradigm for Teaching and Learning*

    https://www.thirteen.org/edonline/concept2class/constructivism/