https://studentsatthecenterhub.org/research/culturally-responsive-mastery-based-education/

An Investigation of Culturally Responsive Mastery-Based Education



Culturally responsive education (CRE) and mastery-based education (MBE) are two student-centered approaches that advance educational equity in different ways. At its core, culturally responsive education is concerned with educational spaces where historically marginalized students, like students of color, students with disabilities and multilingual learners, can thrive; where their cultures, ways of knowing, being and demonstrating are foundational to classrooms in the same way that white middle class students’ cultures are.

At its foundation, mastery-based education is concerned with centering students’ educational experiences around continuous student learning that is responsive to students’ individual needs and regarding students as collaborators and leaders in their own learning process. Collectively, CRE and MBE have the potential to make large inroads towards equity, but only if mastery-based practices are reimagined through a culturally responsive lens.

The Research Project and Team

The Culturally Responsive Mastery-Based Education (CR-MBE) research project investigated how schools incorporate both CRE and MBE practices. This project was ignited by New York City educators and practitioners who recognized a need to incorporate culturally responsive practices into existing mastery-based systems to create better educational experiences for students of color, students with disabilities and multilingual learners.

Starting approximately in 2017, schools in the [Mastery Collaborative](http://www.masterycollaborative.org/) network, which now includes over fifty public middle and high schools, began learning about and incorporating culturally responsive education. Network schools were able to further their understanding of culturally responsive practices through quarterly convenings, trainings that centered anti-racism and professional development sessions. This research focused not on Mastery Collaborative and its ability to provide network schools with culturally responsive training, but on the schools themselves and their efforts to practice both culturally responsive and mastery-based education.

The Framework

[Critical Race Theory](https://www.researchgate.net/publication/233153707_Just_What_is_Critical_Race_Theory_and_What's_It_Doing_in_a_Nice_Field_Like_Education) (CRT) is the view that institutions are inherently racist and that race itself, instead of being biologically grounded and natural, is a socially constructed concept that is used by white people to further their economic and political interests at the expense of people of color. Within the study, CRT was used to guide the selection of data samples to foreground marginalized students’ experiences and illuminate how culturally responsive and mastery-based education approaches operate in New York City public schools.

[Dis/ability Critical Race Studies](https://www.tandfonline.com/doi/abs/10.1080/13613324.2012.730511) (DisCrit) is the primary research framework and an outgrowth of  CRT and concerns the intersections between race and disability.  DisCrit is comprised of seven tenets:

* centering the intersection of race and disability
* valuing multidimensional identities and intersecting identities
* emphasizing social constructs as context for understanding norms around race and disability
* privileging the voices of marginalized populations,
* considering legal and historical aspects of race and disability,
* recognizing whiteness and ability as property
* taking action and supporting forms of resistance

[The opportunity gap framework](https://books.google.com/books?hl=en&lr=&id=v5aQ2GPpa8YC&oi=fnd&pg=PP1&dq=carter+welner&ots=mhBhGCeu6U&sig=mUmJmXsw6Wz8jhS9Lk-pnU1Qshc#v=onepage&q=carter%20welner&f=false)differs from the achievement gap in that it shifts the focus from outcomes to inputs and context; that is what institutional factors, resources, attitudes and policies create access to educational opportunities for some and lock out others.

Research Questions

1. What school-wide, culturally responsive and mastery-based practices and policies are implemented at participating Mastery Collaborative schools? What resources, activities and conditions support or hinder their implementation?
2. What culturally responsive and mastery-based mindsets, practices and skills do teachers at participating schools report? What resources, activities and conditions support or hinder teachers in implementing culturally responsive and mastery-based education?
3. What mastery-based education and culturally responsive education experiences did students at participating schools report? What resources, activities and conditions support or hinder students in experiencing culturally responsive and mastery-based education?

What is Culturally Responsive Education (CRE)?

There are three key areas of culturally responsive education: academic success, cultural competence and sociopolitical consciousness. Rather than perpetuate damaging social hierarchies that exist outside of school, culturally responsive education positions schools and classrooms as [potential sites of transformation](https://meridian.allenpress.com/her/article-abstract/84/1/85/32145/What-Are-We-Seeking-to-Sustain-Through-Culturally?redirectedFrom=fulltext) when they actively promote and sustain linguistic diversity and cultural pluralism as a necessary part of schooling.

Culturally responsive education practices disrupt inequitable, deficit-oriented environments by calling for the deliberate embedding of students’ cultures into the practices and structures of school and to addressing systemic inequities that limit students’ achievement and well-being.

What is Mastery-Based Education (MBE)?

Mastery-based education is a continuous improvement approach to teaching and learning where students’ individual needs are supported through differentiated instruction and student decision-making about what they learn, how they learn it and the way [they demonstrate their knowledge.](https://www.youtube.com/watch?v=ZBYgd1k9NXA)

Mastery-based education proposes several key shifts from traditional models of instruction and assessment. In traditional classrooms, students advance when the semester or unit is over and they’ve submitted sufficient work at an acceptable level to “pass.” A mastery approach, however, gives students the opportunity to advance after they [demonstrate independent mastery](https://journals.sagepub.com/doi/abs/10.1177/0031721716677261) of a specific set of well-defined concepts and/or skills. As such, assessments are distributed based on students’ readiness to demonstrate their mastery rather than at arbitrary points across the school year.

So what's the difference between culturally responsive and mastery-based education?

Culturally responsive and mastery-based education both offer critiques of traditional schooling but for different reasons. CRE describes a philosophical shift that makes visible the White assimilationist project of schools and places responsibility on the [educator to critically examine](https://meridian.allenpress.com/her/article-abstract/84/1/85/32145/What-Are-We-Seeking-to-Sustain-Through-Culturally?redirectedFrom=fulltext) the power structures that exist in all present and historical aspects of their work.

Mastery-based education urges a paradigm shiftaway from student progress measured by arbitrary markers like grades and deadlines designed around seat time rather than [mastering skills](https://aurora-institute.org/our-work/competencyworks/competency-based-education/). Though the two approaches can inform and bolster each other when expertly blended, there are tensions in the way they each conceptualize and operationalize students’ cultures, student agency and student-centeredness.

Without a meaningful foundation in CRE, mastery-based schools and teachers could easily avoid issues of race, identity, culture and the relationships of these to power. And without a meaningful foundation in MBE, efforts to enhance the cultural responsiveness of classrooms and schools may perpetuate problematic assessment strategies known to have a disproportionately negative effect on marginalized learners.

The table below provides a comparison of key concepts related to CRE and MBE:

Key Concept

Culturally Responsive Education

Mastery-Based Education

Philosophical standpoint

Traditional schooling is a White assimilationist project (Paris & Alim, 2014). Instead, education should sustain BIPOC languages and cultures.

Traditional schooling involves processes and measures such as seat time that are arbitrary to learning (Levine & Patrick, 2019). Instead, education should focus on mastering skills and concepts.

Use of Culture

Culture refers to the knowledge, ways of seeing the world, ways of thinking, linguistic practices, etc., that are present within a school. Because schools traditionally oppress BIPOC cultural forms, the cultures that students bring into the school must be made the central to all aspects of schooling.

Culture describes the classroom climate, understandings of teaching and learning and teacher and student roles. MBE requires a culture of transparency with students, such as clear expectations and pathways to learning for shared power between the teacher and the students.

Student Agency

Students can take ownership of their learning because they see themselves and their communities represented in what they are learning in school. Agency includes students using their critical consciousness to be agents of social change.

Students can take ownership of their learning because, with transparency, students are able to develop self-efficacy skills. Agency is also possible because in MBE learning is about supporting students’ intrinsic motivations and addressing their individual needs.

Student-Centeredness

Student-centeredness goes beyond close adherence to student languages and cultures and is also about situating individual students within collective work as a classroom community.

Student-centeredness is about supporting students’ individual pursuits of learning through, e.g., addressing their individual needs and personalizing their learning pathways and the feedback they receive.

Want to dive deeper into how culturally responsive and mastery-based practices can work together?

[**LEARN MORE**](https://studentsatthecenterhub.org/resource/the-mastery-collaborative-approach-student-centered-culturally-responsive-and-competency-based/)

Data Collection and Analysis

Participants

A total of 77 teachers from eight schools participated in the teacher survey, 35 teachers participated in interviews,12 administrators and staff participated in interviews and 29 students participated in surveys.

All the school names shared in the table below are pseudonyms. Each participating school had a student population that represented a sizeable number of students of color, students with disabilities and multilingual learners. Grouping the schools as indicated in the table below allowed for comparison and counterfactual analysis.

Data collection

**DOCUMENT, ADMINISTRATIVE DATA AND OBSERVATION ANALYSIS**

Study participants submitted an enrollment policy, lesson plans, curriculum maps, rubrics and learning targets for analysis. Researchers reviewed each document by school and school group to analyze patterns, similarities and differences between artifacts. Researchers compared aggregated data for each participating school by school and by designated group to look for patterns or similarities in the data.

**STUDENT SURVEY AND TEACHER SURVEY**

The teacher survey data were downloaded, de-identified and analyzed using software. In addition to descriptive analyses, researchers also conducted statistical tests to understand relationships between schools, school groups, race and CR-MBE perceptions, skills, attitudes and practices.

**INTERVIEWS AND FOCUS GROUPS WITH TEACHERS, ADMINISTERS AND STAFF**

Teacher, staff, administrative and student interviews and focus groups were digitally recorded, transcribed, de-identified and uploaded for qualitative analysis and coding. Researchers engaged deductive approaches rooted in the research questions and instruments with inductive approaches to allow for unanticipated findings to emerge. Researchers analyzed interview excerpts by school and school group focusing on themes of CRE and MBE practices.

Want to use research as an equity tool? Dive deeper into the user-friendly tool that shows how to collect and analyze data when working with schools.

[**LEARN MORE**](https://studentsatthecenterhub.org/resource/equity-practice-tool/)

Key Findings in the Research Study

Key findings concerning school structures

**Finding:**All schools shared strong mastery-based education systems and practices across multiple classrooms and policies provided a structure and expectations for mastery-based education. However, there was little evidence of culturally responsive systems beyond the implementation of advisory groups.

Student-led conferences

* gave students the opportunity to share what they have mastered in school with their families and teachers.
* allowed students to organize and lead the conference and take ownership of their work and progress with guidance from teachers.

However, no teachers provided details about how their guidance helped students root the conference in their cultural values, funds of knowledge, modes of communication or backgrounds.

For additional success implementing culturally responsive practices, schools should work with students to co-construct a definition of success (including cultural values, actions or projects that demonstrate sociopolitical consciousness and learning targets) and assist students with designing conferences that reflect those definitions.

Advisory groups

* Provided opportunities to implement culturally responsive and mastery-based practices by giving space and time to address the socio-emotional needs of students beyond the classroom.
* Connected advisors to students’ families and facilitated greater relationship building and critical conversations

For additional success implementing CRE and MBE, it is important for schools to reflect on how their advisory group centers issues of culture, including race, dis/ability and language. Teachers should facilitate discussions around equity, values, life outside school and/or students’ mental health.

Key findings concerning teacher practices

**Finding:** Most teachers in the study had a limited or simple understanding of how or why culturally responsive and mastery-based education interact with each other.

Most teachers perceive culturally responsive and mastery-based education to be very similar or even interchangeable, which is an oversimplified understanding of culturally responsive education. This oversimplification could lead teachers to have an inflated sense of confidence when it comes to CRMBE practices and represents a huge challenge for teachers focused on advancing their equitable practices because it diminishes the value of culturally responsive practices in the classroom.

Several teachers described culturally responsive and mastery-based education as “symbiotic,” “intersecting” and “linked” but struggled to specify the nature of the connections between them.

If schools are aiming to help educators have a dynamic understanding of CRE and MBE, it is important for educators, support staff, administrators, families, and students to consider:

1. What is deemed important for kids to learn is rooted in cultural beliefs which are often reflective of white middle-class values
2. The way students demonstrate mastery can also be rooted in white middle-class cultural values
3. How they foreground representation in curriculum choices
4. Ways they provide choices in how students demonstrate mastery
5. How to avoid a rigid tracking system when implementing CR-MBE

**Finding:** Teachers, staff and administrators relied on school collaborations, professional development and feedback from students to inform their collective practices and policies.

Teachers shared that their most valuable resource were other educators who brought different lived experiences and content knowledge to help deepen practice. They also found great value in anti-racist training, professional development, book clubs and opportunities to collaborate across departments

For additional success implementing culturally responsive education, schools will want to share strong, reliable and consistent [CRE resources](https://crehub.org/) with teachers. While promoting collaboration and professional development, school leaders will need to be aware that educators are coming from a predominantly privileged population that may not demonstrate clear understandings of CR-MBE and help to fill in the gaps.

**Finding:** Most teachers in the study are either beginning to or are fully implementing a “teacher as facilitator” model of practice-based mostly on making learning accessible to students. We call these “access-based practices” which we juxtapose with “transformative practices.”

Some teachers push beyond mere access to incorporate CRE techniques such as fostering critical consciousness to unpack oppression and promote social change. We call these “transformative practices” because they are designed to go beyond inclusion by positioning students as agents of change in their communities and beyond.

Below we sketch some of the differences between access-based practices and transformative practices based we noted in our teacher interview data.

Area of Schooling

Access-Based Practice

Transformative Practice

Curriculum

The teacher generates a list of book options from which students can choose for a class activity. Choices represent different cultures and reading levels.

The teacher makes curricular decisions by first finding what social issues students want to learn about.

Planning

Each student follows their own individual pace for mastering the learning target.

The teacher balances differentiated instruction with communal learning when that communal learning would help foster critical consciousness or allow for students to learn from each other’s cultures.

Teaching

The teacher makes room during class time and activities for students to provide examples or bring their interests and identities into the lesson.

The teacher and students make decisions about how to approach learning. During the learning process, the teacher stops to reevaluate power dynamics in the classroom. If ideas or specific students are falling through the cracks, the process is reevaluated by all.

Classroom Structure

Students are grouped by assets the teacher identifies (e.g., the teacher may notice one student is a strong leader, another is most interested in the subject, another likes to provide linguistic support, etc.). Grouping is expected to leverage student assets so that they can support one another in reaching the learning goals.

Besides collaborating on assignments, students collaborate with one another in order to make decisions about what to learn, the issues they want centered in the classroom and to introduce new thoughts or ideas. The teacher then meaningfully integrates these thoughts and ideas into the classroom structure and curriculum.

Key findings concerning student experiences

**Finding:** Most students had favorable experiences with mastery-based education and described the benefits of being in MBE classrooms.

Overall students’ experiences with culturally responsive and mastery-based were varied, but there were several common experiences across students interviewed. First, most students had favorable MBE experiences and described the benefits of being in MBE classrooms. Alisha, a student at Bear River Middle and High School, shared:

*[Mastery] really teaches you that a number doesn’t define who you are and you shouldn’t care about what other people think. Because at the end of the day, getting a “not-yet” isn’t the end of the world. Because it means you’re not there yet, it doesn’t necessarily mean that you’ve got zero on anything.*

**Finding:**In stark contrast to mastery-based education, most students have never heard of culturally responsive education but described their schools’ efforts to be more focused on symbolic heroes and holidays.

Most of the students interviewed were not familiar with the term “culturally responsive education”; only one student had ever heard of it because after several inflammatory racist incidents at school, Black and Latinx male students led efforts to educate everyone on CRE during advisory meetings. When students were asked to describe their CRE experiences using non-technical language, they mostly shared one day diversity events and/or discussions during their advisory class. The diversity events included potluck meals, block parties, music, dancing, poetry and other cultural expressions.

Student perceptions of equity at their school highlighted the importance of disaggregating student experiences beyond whether or not they are students of color to gain a better understanding of how different groups experience schooling, MBE and CRE. While the vast majority of students felt that their schools were equitable, most students also contradicted themselves when probed about whether all students would describe their schools as equitable. Overwhelming, students reported that Black and Latinx students and students with disabilities faced inequities at their schools.

The Investigation into Culturally Responsive and Mastery-Based Education

In order to truly have a culturally responsive and mastery-based education system, there should be no expectation that mastery-based practices have the capacity to combat the institutional oppression that materializes as racism, ableism and language discrimination. New approaches implemented within unchanged systems will never achieve the levels of equity that youth facing injustice most require. Consequently, the blending of CRE with MBE offer opportunities not just for instructional and assessment reforms, but also for a reprioritization of what schooling should do and who it should serve.

Schools and teachers can drive this transformation by considering how CRE and MBE are similar, how they differ and where productive tensions between culturally responsive and mastery-based education may be explored and resolved. Doing so will allow educators and stakeholders to make decisions about which school-wide practices and policies need improvement, and which may need dismantling.

Funding for this study provided by the Nellie Mae Education Foundation, Oak Foundation and Overdeck Family Foundation.  
*Photo courtesy of Allison Shelley/The Verbatim Agency for American Education: Images of Teachers and Students in Action.*