

Access and Equity in Mathematics Education

A Position of the National Council of Teachers of Mathematics

Question

What is required to create, support, and sustain a culture of access and equity in the teaching and learning of mathematics?

NCTM Position

Creating, supporting, and sustaining a culture of access and equity require being responsive to students' backgrounds, experiences, cultural perspectives, traditions, and knowledge when designing and implementing a mathematics program and assessing its effectiveness.

Acknowledging and addressing factors that contribute to differential outcomes among groups of students are critical to ensuring that all students routinely have opportunities to experience high-quality mathematics instruction, learn challenging mathematics content, and receive the support necessary to be successful. Addressing equity and access includes both ensuring that all students attain mathematics proficiency and increasing the numbers of students from all racial, ethnic, linguistic, gender, and socioeconomic groups who attain the highest levels of mathematics achievement.

Practices that support access and equity require comprehensive understanding. These practices include, but are not limited to, holding high expectations, ensuring access to high-quality mathematics curriculum and instruction, allowing adequate time for students to learn, placing appropriate emphasis on differentiated processes that broaden students' productive engagement with mathematics, and making strategic use of human and material resources. When access and equity have been successfully addressed, student outcomes—including achievement on a range of mathematics assessments, disposition toward mathematics, and persistence in the mathematics pipeline—transcend, and cannot be predicted by students' racial, ethnic, linguistic, gender, and socioeconomic backgrounds.

To close existing learning gaps, educators at all levels must work to achieve equity with respect to student learning outcomes. A firm commitment to this work requires that all educators operate on the belief that all students can learn. To increase opportunities to learn, educators at all levels must focus on ensuring that all students have access to high-quality instruction, challenging curriculum, innovative technology, exciting extracurricular offerings, and the differentiated supports and enrichment necessary to promote students' success at continually advancing levels. Providing all students with access is not enough; educators must have the knowledge, skills, and disposition necessary to support effective, equitable mathematics teaching and learning.

Achieving access and equity requires that all stakeholders—

- ensure that all students have access to a challenging mathematics curriculum, taught by skilled and effective teachers who differentiate instruction as needed;
- monitor student progress and make needed accommodations; and
- offer remediation or additional challenges when appropriate.

Taking these steps requires that mathematics teachers work collaboratively with other education specialists, including those in special education, gifted education, instructional technology, and English language development. This collaboration is essential to ensure that all students have the necessary support to maximize their success in the mathematics classroom. In addition, teachers need to collaborate with colleagues to implement the mathematics teaching practices that promote a growth mindset in their classrooms and school. High-quality educational opportunities for teachers across the professional continuum are imperative for realizing this vision.

States, provinces, districts, and schools must review policies to ensure that systemic practices are not disadvantaging particular groups of students. This review should include an examination of the use and impact of tracking, protocols for student placement in mathematics, the availability of opportunities for both remediation and enrichment, and student outcomes, including persistence within the pre-K–12 mathematics pipeline over time.