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# Access to Mathematics: A Story of Possibilities

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## What Diversity Do You See?



## What Diversity Did You See?

- Visible Diversity
- Invisible Diversity

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## The Value of Diversity

- “Learning environments comprised of students from diverse backgrounds provide an enhanced educational experience for individual students. Interacting with students who have different perspectives and life experiences can raise the level of academic and social discourse both inside and outside the classroom; indeed, such interaction is an education in itself.”

U.S. Department of Education, Office for Civil Rights (2012).  
<http://www2.ed.gov/about/offices/list/ocr/docs/guidance-pse-201111.html>

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## Getting Past Not Knowing

- “Behaving as though you know what you do not know about cultural differences can be more disabling than acknowledging that you do not know much about other cultures.”

<http://dtui.com/diversityblog/tag/managing-diversity/>

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## Cultural Competency

- “Cultural competence is having an awareness of one’s own cultural identity and views about difference and the ability to learn and build on the varying cultural and community norms of students and their families. It is the ability to understand the within-group differences that make each student unique, while celebrating the between-group variations. This understanding informs and expands teaching practices in the culturally competent educator’s classroom.”

<http://www.nea.org/home/39783.htm>

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## Equity/Awareness Assessment

1. What is your cultural identity?
2. Describe the cultural identity of students you currently or have previously interacted with?
3. What commonalities exist between you and the students you currently or have previously interacted with?
4. What differences exist between you and the students you currently or have previously interacted with?

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## NCTM Position Statement: Access & Equity

- “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.”

<http://www.nctm.org/Standards-and-Positions/Position-Statements/Access-and-Equity-in-Mathematics-Education/>

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## Strategies Developing Cultural Competence

- Seize opportunities to learn about people of different backgrounds, cultures and experiences—whether through a book, a film, or a conversation
- Examine your own attitudes and beliefs about people who are different from you
- Foster discussion in your schools about diversity
- Assess the diversity in your school and how students of different backgrounds are faring
- Pursue ways to create diversity awareness or to celebrate diversity in your school community.

National Education Association

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T.L.A.

And so here I am!



Dr. Thomasenia Lott Adams

## Follow-up Session

- What's your story of unexpected interest and success in mathematics?
- Scenarios of cultural diversity in the mathematics classroom
- Resources related to cultural diversity in the mathematics classroom (See following slides.)

## Resources

- Halai, A. & Clarkson, P. (2015). Teaching and learning mathematics in multilingual classrooms. Springer.
- Ladson-Billings, G. (Summer, 2001). Teaching and cultural competence. What does it take to be a successful teacher in a diverse classroom? Rethinking Schools Online, 15(4), p. 2, [www.rethinking-schools.org/archive/15\\_04/Glb154.shtml](http://www.rethinking-schools.org/archive/15_04/Glb154.shtml).
- Martin, D. B. (2010). Mathematics teaching, learning, and liberation in the lives of Black children. Routledge.
- Marzano, B. (2004). *Building Background Knowledge for Academic Achievement: Research on What Works in Schools*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Nasir, N. S., Cabana, C., Shreve, B., Woodbury, E., & Louie, N. (2014). Mathematics for equity: A framework for successful practice. Teachers College Press
- Sheridan, D. (April 2006). Cultural competence in the classroom: An advocacy guide (Mimeograph draft). Washington, DC: National Education Association.

## Resources

- U.S. Department of Education. (2007). *The condition of education*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, <http://nces.ed.gov/programs/coe>.
- Walker, E. N. (2015). *Building mathematics learning communities: Improving outcomes in urban high schools*. Teachers College Press