



Improving the Teaching and Learning Culture of Mathematics for Immigrant Children

Guillermo Mendieta

Abstract

Immigrant children are bombarded with negative messages that impact their beliefs and dispositions about schooling, authority, and themselves. Schools can counteract this by providing instruction that includes strategies such as: faculty discussing challenges immigrant students face, focusing on the big mathematics ideas, using multiple representations, and using generative language.

Discussion And Reflection Enhancement (DARE) Pre-Reading questions:

1. How far are you personally willing to extend yourself to advocate (at the school or district level) for curriculum that serves all students? What are some specific actions you could do?
2. Have you had the experience of being able to teach and reach children more effectively after first establishing a culture of mutual respect and understanding? What specific things did you do to establish and maintain this culture?
3. What can we do to make immigrant children feel valued just as much as all other children?
4. How are roles of teacher and advocate similar? How are they different?

“DARE” Post-Reading questions appear at the end of the article. This article (without DARE questions) originally appeared in Fall 2006 *Noticias de TODOS*.

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A few years ago, I made the decision to go on a hunger strike to try to reverse the Los Angeles Unified School District's decision to eliminate all NCTM aligned curricula. The district's own data indicated that such curricula had significantly increased the percentage of Latino and African American students who successfully completed the college preparatory course sequence. Scores of activists, researchers, teachers and students spoke and wrote to the board about how their decision was going to deny tens of thousands of minorities access to college. They told the board that since the difference between the income of college and non-college graduates is around \$15,000 per year, this decision was going to rob minority communities in Los Angeles of billions of dollars in future income. However, decisions about teaching and learning, like for most things, are often not made based on knowledge, on research or even on the best interest of students. Decisions are made based on politics: who has the power, who knows who, and who is well-connected.

Today we find ourselves in a similar, and perhaps worse situation. This time, the issue is not just about deciding between hands-on learning and the back-to-basics curricula. We are facing a nationwide anti-immigrant movement that has added fuel to the fire of most educational policy decisions. Unfortunately, the most vulnerable, the ones without power or the vote, the children of the poor, the children of minority parents, are the ones that suffer the long-term

consequences of the bad educational policies that spring from elitist and xenophobic political rhetoric.

Imagine yourself as an immigrant child in this country. Every day, in the media you see and hear authority figures refer to immigrants as undesirable, criminals, and worse. You hear them say immigrants should be denied health care and education. As a child, you don't hear or understand the nuances about immigration law. All you hear is that you are not wanted, that you are a criminal, that you are undesirable. Now picture yourself going to school and trying to learn in the middle of this hostile environment. What should the school do to help you learn, to help you feel safe and to help you trust enough to take the types of risks that learning requires of you? As I thought about these issues, Herbert Kohl's book *I Won't Learn From You* came to mind (Kohl, 1994). Like Mr. Kohl, I have come across hundreds of Latino students who will actively resist learning, who will not give a teacher the pleasure of learning from them if they do not feel respected.

There are so many different issues and challenges intrinsically woven and spinning seemingly out of control for teachers working with immigrant students, there is not enough room to address them in this article. However, given my background as a math educator and as an advocate for minority students, I would like to offer four suggestions that would help schools in general,

and math teachers in particular, create a more supportive and effective learning environment for their immigrant students.

Learn and Discuss The Specific Challenges Facing Immigrant Children With The Entire School Staff.

Regardless of the judgments anyone might make about the decisions made by the parents of immigrant children, most people would agree that immigrant children are facing a multitude of challenges and pressures that impact the schools' teaching and learning culture. A staff that knows and understands the challenges immigrant children face, from the perspective of their students, will be better able to connect, support, and create the type of relationships and learning environment that are needed to improve teaching and learning.

Focus In-Depth On Three To Four Key Standards Or Main Concepts Throughout The Year While Making Connections With Other Strands.

Researchers have pointed out that the curriculum in countries where students perform well on international comparison tests, such as Japan, is an inch wide but a mile deep, while the curriculum in the U.S. is a mile long and an inch deep. Disadvantaged students in general and ELL students in particular are particularly vulnerable to the prevailing "coverage-driven curriculum" that emphasizes superficial coverage of material at the expense of in-depth teaching. Kindergarten teachers might focus on number representations and patterns, first-grade teachers might focus on addition and subtraction, and fifth grade teachers might focus on fractions, ratios and percents, etc.

Help Teachers Learn To Use Effective Multiple Representations In Their Teaching. Focusing on fewer concepts should not

mean giving more symbolic representations to students. The most important and effective teaching strategies in mathematics are the use of effective multiple representations, the translations among them, and the transformations within them.

Use Model-Generative Academic Language To Teach Mathematical Concepts.

The language we use when teaching a mathematical concept with ELL students can either open up or obscure the ideas we are trying to represent. Teachers should learn to use language that carries with it a mental model of the ideas or processes involved. For example, when teaching how to multiply $1\frac{1}{2} \times 2\frac{1}{2}$, a teacher might read and talk about this exercise in these ways:

One and half groups of two
and half each

Two and half repeated one
and a half times

One group of $2\frac{1}{2}$ combined
with half of $2\frac{1}{2}$

Associating such language with a pictorial example will help students generate a mental model of how to work such problems.

Conclusion

Challenges faced by immigrant children and their teachers are being magnified by anti-immigrant rhetoric sweeping the country. Schools that want to be more effective in helping immigrant children learn should help teachers learn more about specific challenges faced by immigrant children.

REFERENCE

Kohl, H. R. (1994). *I won't learn from you': And other thoughts on creative maladjustment*. New York: The New Press.

Discussion And Reflection Enhancement (DARE) Post-Reading Questions

1. Which of Mendieta's four suggestions have you tried (or would be most likely to try)? Discuss any possible pitfalls and benefits of this approach.
2. Are Mendieta's suggestions aligned with the NCTM Standards? Discuss.
3. Do his suggestions seem like they would be effective for non-immigrant children as well? Explain.
4. Compare the fourth suggestion with the way traditional books in the past represented fraction arithmetic. What are advantages of Mendieta's approach?
5. Read Mendieta's book or visit his website (mentioned in the author bio at the beginning of this article) and identify an additional useful idea.

“The Equity Principle demands that high expectations for mathematics learning be communicated in words and deeds to all students.”

—*Principles and Standards of School Mathematics* (NCTM, 2000, p. 13).

“DARE to Reach ALL Students!”

