

Building Learning Communities in Multilevel Classes

Problem Statement

One of the principles of the Teachers Investigating Adult Numeracy Project is that students working together and communicating with one another about math increases their opportunities to learn math. This idea is often the one that is the most jarring at first if teachers come from programs with totally individualized math classes. While the motivation behind individualized instruction is understandable—most classes in ABE/GED classes are multileveled, attendance can be erratic, and teachers want to make sure each student gets what is most helpful—we question the effectiveness of silent, lone-wolf math as the primary pedagogical practice.

As we work to transform our classes into the best math learning communities possible, we might consider drawing upon four design characteristics suggested in *How People Learn* (National Research Council, 2000):

- *the community-centered lens*—developing a culture of questioning, respect, and risk-taking
- *the learner-centered lens*—beginning instruction with prior knowledge and what students think and know
- *the knowledge-centered lens*—being clear about mathematics content to be taught, why it is taught, and evidence of its learning
- *the assessment-centered lens*—providing frequent opportunities for students to make their thinking and learning visible as a guide for both teachers and students

(*National Research Council, 2005. 12-13 and adapted by Murray & Jorgensen, 2007, 9*)

Multilevel classes where students work together on worthwhile mathematical tasks demand skilled facilitation for all students to be included. “Differentiated instruction” is a practice whose goal is to meet the needs of everyone in the class. The authors of *The Differentiated Math Classroom* describe DI this way:

“First and foremost it is *not* individualized instruction. Differentiated instruction implies a purposeful process for adapting the teaching and learning processes of the classroom to accommodate the needs of all learners. For us, it is an especially useful tool for ensuring that all students have access to and are appropriately supported in their acquisition of important mathematical knowledge. Differentiated instruction encompasses a versatile collection of strategies that have developed over the years, including flexible grouping and tiered activities” (Murray & Jorgensen, 2007).

We invite you to read the account of a Rhode Island TIAN teacher’s experience in the classroom working to design a lesson that meets the needs of the students in her multilevel class. You can find her story on the TIAN web site at

http://adultnumeracy.terc.edu/TIAN_WS2_RI1.html

Questions to Guide Discussions

After reading the Rhode Island teacher's story, discuss these questions in your local or regional group.

1. In what ways did the teacher pay attention to individuals' needs within the group?
2. Do you have other suggestions or how the teacher could have paid more attention to individual needs but keep the community of learners intact?
3. Use each of the four lenses to describe, evaluate, and suggest next steps for the teacher.

References

- Murray M. & Jorgensen, J. (2007). *The differentiated math classroom: a guide for teachers, K-8*. Portsmouth NH: Heinemann.
- National Research Council. 2000. *How People Learn: Brain, Mind, Experience, and School*. Expanded Edition. J. Bransford, A. Brown, and R. Cocking, eds. Division of Behavioral and Social Science and Education. Washington, DC: The National Academies Press.
- National Research Council. 2005. *How Students Learn: Mathematics in the Classroom*. Committee on *How People Learn*, A Targeted report for Teachers, M.S. Donovan and J. D. Bransford, eds. Division of Behavioral and Social Science and Education. Washington, DC: The National Academies Press.