

Culture in the Mathematics Classroom Community Engagement Project

The purpose of this assignment is to help you begin to gain culturally grounded community knowledge of some (or one) of your students. This assignment is premised on the belief that the lived experiences of the students and communities form a critical part of the knowledge base for teaching. The assignment asks you to engage personally with questions such as:

- How do we gain access to community knowledge?
- What questions might I ask my students (or a student) that would give me insight/resources for community knowledge?
- How might I incorporate students' parents in my quest for community knowledge?

I do not assign a specific task for you to complete in this assignment. Instead, you will choose and/or design an activity that fits your personality, comfort level, and knowledge of your students and their communities. The task is meant to support you in gaining initial access to community knowledge; such knowledge and subsequent relationship building should be deep and sustained over time – this is just a first glimpse.

Suggestions include (but are not limited to):

- (a) Neighborhood Walk for Teachers: Go on a community walk or ride the bus home with one or more students. A group of teachers could together go on a walk home with at least one child. You could take photographs if that seems as if it would be a useful record for you to have to support your reflection. If it is not possible for you to walk or ride home with a student, you could go on a walk in the neighborhood of the school. Spend some time walking around the neighborhood, observing and listening. Pay attention to things such as geometric shapes in building designs, kinds of stores that are present (and patterns you see within this, including prevalence), styles of music played, kinds of games children play, and so forth. Refrain from making judgments about the neighborhood. The goal of the neighborhood walk is to learn what the student(s) know of their neighborhood and/or what issues are of importance to students so that you are able to incorporate this knowledge into your reflection. It is an opportunity for the student to show you things that interest them (or puzzle them) in the neighborhood that can then serve as resources. It is also an opportunity for you to think about mathematical problems that can be posed in contexts meaningful to your students. If you do not go with students but instead choose to take pictures, ask yourself (a) What does this community care about? (b) What are the needs of this community? (c) What are the opportunities, resources, and offerings in this community? Take pictures of objects that might serve as the foundation for a mathematical task. Develop a series of questions that can serve as discussion points with a group of high school students. Try to steer away from superficial questions. For example, asking students to count the number of stairs in a picture would be superficial because it does not uncover the mathematical purpose of the slope.
- (b) Mapping the Community Get a city map, or print a map of the area on the World Wide Web. Then interview at least 4 people who you believe are members of the community, and try to get a sense of common as well as diverse perspectives about who and where the community is. Ask questions such as: (1) Tell me about this community or neighborhood. Who are the

people in the community? How would you describe them? (2) Show me on a map where the community is, exactly. Where do most people live? (Some communities are geographically scattered, others are geographically fairly distinct. Don't assume things are one way or the other; get people to describe it for you.) (3) What makes this a distinct community? What do the people have in common? (4) What are the most important places or events where people in the community come together? (5) What are the most important things you would like people who aren't members of this community to know about it?

(c) Sources of Information about a Community The purpose of this activity is to identify "inside" sources of information about a community or neighborhood, to help you with other activities in this section as well as with construction of multicultural curriculum. This activity works best as an interview. (1) Who do members of your community see as their leaders or spokespeople? Why? (2) If I wanted to find out what the community is like, who would be good people to talk with? (3) What churches do community members attend? (4) Are there any particular organizations community members belong to? Are there any community centers or organizations (such as NAACP) that serve the community? (5) Are there any particular newspapers or newsletters that people in the community like to read? Magazines? (e.g., church bulletins, community newsletters) (6) What radio stations do community members prefer to listen to? What TV stations do community members tend to watch? (7) Do people gather in any particular places where I would be welcome to visit?

(d) Community Assets Use the sources you identified in the activity "Exploring Sources of Information about a Community" to explore community assets. Get information from at least 5 different people or sources. Ask questions such as the following: (1) What are the main assets of this community? (2) What are people in this community especially good at? (3) Describe how you would like this community to be 10 years from now. (4) What does the community have going for itself that will help it reach that goal? (5) What are the main barriers to reaching that goal? What is the community doing to address those barriers? (6) What needs does the community have? (7) How can my future profession (teaching) best contribute to the community?

(e) An activity of your design

Write Up:

Please share the results of this experience with me in one of the following ways: (a) write a 3-5 page paper, (b) create a collage or some sort of visual representation of your experience (photo book, video, etc.), (c) write about your experience in an interview format, perhaps with you as the interviewee, or (d) choose a creative method of your own with which to share this experience.

This write up can take many formats. However, all should address the following questions to the best extent possible (knowing that some questions will "fit" better with particular experiences than others):

- Describe in detail (with pictures or words) the activity you participated in
- Why did you choose this activity (with respect to developing community knowledge)?

- How did you feel as you engaged with this activity?
- What did you expect before engaging in this activity? Did your expectations/preconceptions change because of this experience? In what ways?
- What did you learn from this experience, if anything (a) about yourself, (b) about your students, (c) about your students' informal mathematical knowledge, (d) about your students' community knowledge?
- Do you feel this experience will affect your teaching? Explain.
- Are there other reactions/thoughts you would like to share, or questions you would like to address that I did not ask you in this list? Insert these questions here!

A key component of this assignment is connecting the activity to building your community knowledge. Be sure to think carefully about what this means for you, for the teaching of mathematics, and to describe it as clearly as possible (with pictures, words, or some other medium). Otherwise, the grading of this assignment will follow this general rubric:

- Is the work of the student thoughtful, rigorous, and prompt?
- Has the student developed insights beyond a superficial reaction to the experience?
- Is the student's argument or explanation clear, coherent, and thoroughly developed?

“A” indicates excellence (23 or more points): The assignment is of excellent quality and contains no technical errors. Writing shows evidence of understanding, synthesis, and reflection upon course material.

“B” indicates good work (20 – 22 points): The assignment is of good quality but not exceptional and contains only minor technical errors. Writing shows evidence of understanding the course material.

“C” indicates competency, yet reflects poor performance (18-19 points): The assignment is of acceptable quality but contains numerous or serious technical errors. Writing shows incomplete or inconsistent understanding of course material.