
INTRODUCTION

BACKGROUND

In preparing to write this book, Yvelyne (first author) attended a number of multicultural sessions at National Council of Teachers of Mathematics (NCTM) conferences. In one of the sessions, Jean, a Navaho teacher of Navaho students from a reservation school, presented the general characteristics of her students as well as the math curriculum offered at the school. (The names of all teachers in this chapter are fictitious). Although Jean commented on the school's sensitivity to the culture of the students, Yvelyne noticed that it was directed towards behavioral "dos and don'ts" such as the following: "The teacher should not expect eye contact from students before students become comfortable with the teacher."

Thinking that the case of teacher and students' sharing the same cultural heritage should have some beneficial effects on classroom interactions or pedagogy, Yvelyne asked: "Given that you share the culture of your students, are there methods or strategies that you use with your students that you might not use with, say, Asian or African students?" Yvelyne thought it was an innocent question until Jean snapped back: "I don't teach my students any differently than I would any other students!" Yvelyne immediately realized that Jean may have interpreted the question as a negative cultural comment: "Do you dumb down your curriculum for these poor Indians?" Thinking that it would take more than a clarification of the question to get her meaning across to Jean, Yvelyne kept quiet and made a mental note: "Be careful of your questions because some may trigger assumed racist implications."

The difficulty of writing a book on multicultural classroom interactions became clearer to Yvelyne as she stopped random groups of participants at the conferences and asked questions such as "Do you think the NCTM standards *really* work for all students? Do they work for *your* students?" To these questions, Mary, one in a group of three African American women teaching African American students replied, "Some of the approaches don't work for our students. Take collaborative learning, for example. It is ineffective for groups of more than two of our students. Larger groups result in a waste of time. They don't come to us knowing how to work in groups." I mentioned her comment to two African American men, Ben and Dante. Dante immediately said, "That is *not* true! Our students *can*

work in groups. They may, however, have to be taught *how*. Beginning with groups of two and then extending to larger groups will help them work productively in groups of four." He then cited research showing how cooperative groups increased achievement of African Americans. His tone and inflections caught Yvelyne's attention more than his words. "I noticed," she said to him, "that you sounded offended by Mary's comment." He laughed at the insight and agreed. She continued: "Should I not write this book or ask such questions? My goal is not to offend people. Can I hope to make any difference, or will I just be viewed as a narrow-minded racist?" Ben replied, "Yes, they are sensitive questions, but they are also good questions demanding thoughtful and difficult responses. Educators need to discuss them openly, just as we are doing now. Go for it!"

Yvelyne invited Kathie (second author) to join her in this quest for two reasons. First, Kathie had impressed her with insights on reformed-based mathematics through the submission of a profile for one of Yvelyne's other books (Germain-McCarthy 2001a). Second, Yvelyne needed help wrestling with whatever issues might arise from the topic, and she felt Kathie's Euro-American background would provide alternative perspectives for discussions.

PURPOSE OF THIS BOOK

This is a book for anyone interested in how the reform movement in mathematics, as advocated by NCTM, is being effectively implemented with students of different ethnicities. Our intention is not to present unique lessons, but to show how reformed-based strategies are being implemented in the classroom. It depicts teachers' and students' actions that unite the goals of multicultural education with the mathematics curriculum. The teacher profiles that constitute the heart of the book are descriptions constructed from classroom visits, written statements, interviews, and videotapes of how teachers implement standards-based lessons in their classrooms. It highlights profiles of teachers across the nation who have gone beyond mere awareness of reform recommendations in mathematics to conceptualizing and implementing new curricula for students of different ethnicities. It shows how teachers implement effective classroom instruction and how their students respond.

Teachers and teacher educators will find the book useful for exemplifying NCTM reformed-based strategies for preservice and inservice teachers. It also provides some answers to a question many preservice students and teachers ask: "Where are the real teachers who are doing this stuff and how are they doing it?"

THE SENSITIVE QUESTIONS

Readers will find that this book provides fertile ground for launching discussions centered on multicultural issues in education. We believe that sensitive questions will arise as readers reflect on the approaches used by the teachers

profiled. It is difficult to anticipate all of these questions because we all have lenses tinted by our personal experiences through which we view and interpret the world—as Yvelyne’s experience with the Navaho teacher demonstrated. Readers are encouraged to read the profiles and to avoid making quick generalizations about any group since *no ethnic group is homogeneous*; people of the same ethnicity may differ in their history, culture, and language. Yvelyne, for example, is a naturalized American who may be classified as African American. Her ethnic identity, however, is more specific than that because she was raised within a Haitian culture where she spoke only French and Creole at home. Thus, she would classify herself as Haitian-American. Kathie’s heritage is German, and she grew up in a rural area of New York State. When she moved with her husband to southern Mississippi, she embraced the diverse cultures (Euro-American and African American, predominantly) of the deep south and used that richness to enhance her teaching of middle school mathematics and science.

We have taken care to present an overview of the students and the school’s community so that each profile may be read as representing one example of how one teacher, teaching students within an ethnic group having particular characteristics, successfully challenges students to think about and do important mathematics. Thus, to help eliminate stereotyping of any group, it is important to keep in mind that each profile was selected as one instructional example among many variations. Finally, we wish to apologize in advance for using any ethnic name that may be offensive to some groups. The literature provides little help in selecting acceptable descriptors; we found a number of different names used to identify the same or related groups. Even within the same work we see the descriptors Euro-Americans vs. Whites; African Americans vs. Blacks; Latinos vs. Hispanics; people of color vs. minorities; traditionally underserved group vs. marginalized group or students of color and low socioeconomic students; English as a second language learners (ESL) vs. English-language learners (ELLS), limited English proficiency (LEP) or language minority students, or linguistically and culturally diverse learner (LCDL). We have decided to use the first descriptor given above for each group except when referring to the work of others who use another descriptor, or if a given descriptor is a clearer indicator of a group under discussion, e.g., LCDL vs. ESL learners.

CHAPTER OVERVIEWS

Chapter 2 presents overviews of NCTM’s reform recommendations and some of the research that provided the rationale for their constructivist framework. It also describes key elements of exemplary practices in mathematics education. Chapter 3 presents definitions of and research on multicultural education. The profiles in the remaining chapters are of teachers who are successfully implementing standards-based practices with ethnically diverse students. Each chapter also includes a “Discussion with Colleagues” section where we clarify

or expand on ideas from the profile; a “Commentary” section that highlights the specific standards, issues, or research that informed the strategies the teachers used; and a “Unit Overview” in a lesson plan format that summarizes key ideas for implementing the lesson. Although the unit overviews specify grade levels or a particular ethnic group, readers will find that the units can be easily modified to fit the needs of different grade levels or types of students. Ideas for extensions of the curricula emerge because of the richness of the activities and because the lessons move from the concrete to the abstract. The profiles incorporate a number of different content standards. They all reflect the NCTM principles for equity, curriculum, teaching, learning and assessment, and the processes of problem solving, reasoning, connection, and communication.

Finally, the summary chapter discusses the vision behind the NCTM standards and what this vision means for students and the mathematics community, both now and in the future. Figure 1.1 summarizes the ethnic group and the NCTM principles and standards addressed in each profile. The profiles presented in this book show that multicultural education is a vision of what education can be, should be, and must be for all students. Join us in learning from these exemplary teachers!

FIGURE 1.1 ETHNICITIES AND THE NCTM PRINCIPLES AND STANDARDS REFLECTED IN THE PROFILES

<i>Teacher/Grade/Ethnicity</i>	<i>Principles</i>	<i>Content</i>	<i>Process</i>
4. Lynne Godfrey: 6th African Americans	1–5	Numbers and Relations, Algebra	1–5
5. Georgine Roldan: 4th Latino immigrants	1–5	Numbers and Relations, Data Analysis	1–5
6. Tim Granger: 5th Native Americans	1–6	Numbers and Relations, Measurement, Geometry, Algebra, Trigonometry	1–5
7. Renote Jean-François: 6th Haitian immigrants	1–6	Numbers and Relations, Measurement, Geometry	1–5
8. Samar Sarmini: 5th Arab Americans	1–5	Numbers and Relations	1–5
9. Diane Christopher: 4th Euro-Americans	1–6	Numbers and Relations, Geometry, Measurement, Algebra	1–5
10. Charlene Beckmann, Kara Rozanski, and Tara Plummer: 8th Ethnicity given in “Commentary” section	1–6	Algebra, Measurement, Geometry	1–5