

Chapter 1

Enhancing Inter–Cultural Mathematics Teaching Competencies: What Must Mathematics Teachers Do?

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ABSTRACT

In the global village we live today, inter-cultural competencies are imperative for mathematics teachers if their teaching is to cater for all learners in their classrooms. The author argues that intercultural competency is the key to helping such mathematics learners achieve their potential. Content analysis is done to find out what inter-cultural competencies are required of mathematics teachers to be able to handle diverse learners. Data was also collected through observation in a class that the author taught at an ITE to find out what occurs when the researcher puts in aspects of students' diversity in teaching mathematics. The findings show that inter-cultural competency is improved through teachers' self-introspection of their practices and presumptions about other cultures, including learners' diverse cultures in the curriculum, learning about non-verbal communication in different cultures, learning about the modes of learning in different cultures, studying the power of teachers in different cultures, handling conflicts in different cultures, and others.

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INTRODUCTION

Imagine the story given in Figure 1.

One asks; Would not a similar scenario occur in a mathematics classroom with learners from diversified backgrounds? Figure 1 illustrates the constant dilemmas that teachers encounter daily as they teach learners from multi-cultural backgrounds; a single problem begetting different answers. Yet all answers are correct depending on the cultural basis of respondents. It highlights the need for developing cultural competence for all teachers including mathematics teachers who teach mathematics across the globe.

PURPOSE AND RESEARCH QUESTION

This book chapter interrogates and discusses pre-service teacher education strategies that enhance global mathematics teaching and learning through intercultural competence. How can teacher education promote intercultural awareness and intercultural competencies in preservice mathematics teachers?

Figure 1.

Suppose you are on a boat with your mother, your spouse and your child. Suddenly, the boat begins to sink. You determine that you can only save one of the other passengers. Whom do you save?

According to survey results, 60% of Americans save their spouse, 40% save their children. The reasons typically offered run along these lines:

- Save Spouse: "My spouse is my partner for life and I can have more children.";
- Save Child: "Children represent the future, so it is vital to protect them first. Probably, my spouse would support this decision."

However, among Asian cultures, or Americans of recent Asian descent, nearly 100% of respondents state that they would save the mother. The rationale I have heard offered is this:

Save Mother: "My mother gave me life; I owe her my life. I can marry again; I can have more children, but I cannot replace my mother or otherwise repay the debt I owe her." (Texin, 2002)

Story adapted from Martin and Vaughn (2007)

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