

Attitudes in Teacher Preparation Classes
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Abstract:

Why are teacher attitudes important? Do you have to like mathematics to teach it well? Do you have to like teaching the teacher preparation classes to teach them well? What happens at MUW to get students interested in being good mathematics teachers at the elementary level?

Why are teacher attitudes important?

The attitudes that our preservice teachers have will be carried into their classrooms, to influence the next generation of budding mathematicians, or to influence the next math-phobic generation.

I feel that we must do our best to be sure that our preservice teachers come out of our programs with an understanding of how to make mathematics enjoyable for their students. This doesn't seem to be a problem with the secondary mathematics majors; after all, they have chosen mathematics as their degree field, and normally have no problems showing their enjoyment of the subject to their students.

The problems arise in the elementary preservice track. So many of the students in those programs have their own problems with the subject, that their fear and sometimes loathing is immediately apparent to students.

Which brings me to my second question:

Do you have to like mathematics to teach it well?

I would rather claim that you have to understand mathematics to teach it well. We all have our favorite classes to teach (which implies there are some classes that are just not as fascinating to us). We are all capable teachers, no matter the course assignment, and we all have a self-professed love of mathematics. We might like one aspect of mathematics better than another; will that make our teaching in the less favored area deficient? I feel that we can present the material in a competent fashion, no matter our personal feelings. What we need to avoid, however, is a proclamation that a particular course is not our favorite. I'm not saying we can't announce a favorite; just don't announce the ones you don't like, to the students. If WE don't like the course, the students will think it must be a dreadful course to take.

This brings me to my third question: What if the teacher preparation content classes appear in your course load unexpectedly?

Do you have to like teaching the teacher preparation classes to teach them well?

Well...if you are trying to get some recalcitrant students to change their minds about liking mathematics, your own personal enjoyment should shine through all your discussions. I think we should place a greater emphasis on attitudes, especially at the elementary preservice level. We're the ones who will influence what happens in all the elementary classrooms around the state. Does your program need more mathematics majors? The creation of mathematics majors may begin at the elementary level, as the students experience success with the topic, and come to enjoy honing their problem-solving skills. If we want to increase the number of undergraduates in mathematics, we need to send into the field elementary school teachers who do not exhibit fear of mathematics. These teachers need to teach mathematical concepts in such a manner that the students come to appreciate the joy and fun in doing mathematics.

So, **what are we doing at Mississippi University for Women** to get students interested in being good mathematics teachers at the elementary level?

1) Journals

This is probably the best way I've found to change attitudes. I can communicate one-on-one with every student in my classes once a week, all semester long. I can provide encouragement and correct misconceptions. Students can examine their viewpoints about the teaching of mathematics, and I can push them in the direction I want them to go—providing a mathematics classroom that is stimulating for their students.

2) Manipulatives

I teach the concepts to the students using manipulatives, sometimes doing exactly what should be done when introducing a topic to a group of elementary school children. When the preservice teachers see that there are ways to teach for understanding, as opposed to rote learning, their attitudes change. They start to believe that they can teach mathematics without making it scary for their students.

3) Lecture manuals

I have prepared the entire course in advance, with all the assignments, journal questions, materials, vocabulary, and procedures for each class day. This makes the students more comfortable with the pacing. Since many students now have families of their own, should there be a family emergency, they can keep pace with the class without worrying about getting behind.

4) My own enjoyment with the course

Of all the various teaching assignments I've had (and I've taught Grades 6-12 basic, regular, and gifted students in three states, classes at two different community colleges and four different universities), teaching the elementary preservice content classes is a close second only to working with the in-service elementary school teachers. I really enjoy teaching these classes. It is a challenge to work with students who walk into your classroom with the disclaimer on their lips, "I hate mathematics!" or "I've never understood mathematics!" or "I have to pass this semester or I don't graduate on time and I've tried and dropped this class three times before" or any of the other statements I'm sure we've all heard. By the time I've worked with these students for two semesters, their journal entries begin to say things like "I think I really could make mathematics enjoyable for my students" or "I used to want to teach kindergarten so I wouldn't have to do much with mathematics, but now I think I really could teach in any elementary grade". My latest success story is a student who let me know, first day, both barrels, that she was no good in mathematics and just hoped to squeak by with a C-, who is now teaching as a mathematics specialist in Grades 7-8. If we can get the students to like mathematics (ok, at least to stop fearing mathematics), we will be doing the best we can for the children of Mississippi.