

2006 Summer Mathematics Courses Draw Crowds and Excellent Reviews

The Greater Birmingham Mathematics Partnership (GBMP) exceeded expectations for its mathematics courses in the summer of 2006. Instructors from the Mathematics Education Collaborative (MEC) led multiple offerings of the courses entitled ***Patterns, Functions and Algebraic Reasoning, Probability and Data Analysis, and Numerical Reasoning***. These nine-day courses focused on mathematics content taught in a way that modeled best practices for developing mathematically powerful students. The GBMP team invited teachers from partnership schools, parents of school children, IHE (institution of higher education) faculty and pre-service teachers to participate. Teacher demand required that we add an additional section of the Numerical Reasoning Course bringing the number of courses provided to 9 for the summer, 1 more than we had planned at the outset. In total, we had 284 teachers in this year's summer courses including: 55 from grades K-4, 199 from grades 5-8, 20 from grades 9-12, and 10 pre-service teachers. Also taking courses this summer were 3 school administrators, a parent, and 15 IHE faculty members.



And here are the results. After tabulating all the responses on post session surveys for each of the courses this summer, we found:

- ◆ Between 98.6 and 100% of the participants in each course agreed or strongly agreed that the course they took improved their mathematical skills and understanding.
- ◆ Between 98.6 and 100% agreed or strongly agreed that the mathematical ideas presented in the course they took will be useful in their teaching during the upcoming year.
- ◆ Between 97.9 and 100% agreed or strongly agreed that the teaching model in the course they took will be useful during the upcoming school year.
- ◆ Between 96.8 and 100% agreed or strongly agreed that the course improved their understanding of pedagogy/teaching practices.
- ◆ Between 97.9 and 100% agreed or strongly agreed that the course was interesting and engaging.

Here are a few samples of the participants' reactions after completing their courses...

"I feel very empowered and can't wait to engage my students with all that I have learned."

"The experiences in this class deepened my mathematical understandings, allowed me to meet and work with knowledgeable people who helped me build persistence in mathematical problem solving, and allowed me to experience the joy of learning mathematics. Teaching mathematics for understanding is the only way to prepare our students for the future! Excellent course. This is my 4th course in 5 years. They've helped me immensely."

"The most important thing that I am taking with me from this course is how to effectively teach mathematics. I have always known that this would be a better way to guide students' understanding but wasn't sure how and didn't have the resources. I feel like I'm now equipped with both! Also, I now understand algebra! if I had learned it this way to begin with, life would have been a lot simpler! This course has been a true asset to me personally and professionally!"

"I cannot believe how much stretching I was forced to do in this course...My growth in understanding math has been enormous!"

"I would summarize my experience these past two weeks with two words: enlightening and altering....my previous opinion of mathematics clouded my vision. I was under the impression that there was one set of steps to get the correct answer. Wow, was I wrong! Instead, what I saw with my own two eyes was the opposite."

"This course really inspired me. I felt as many of my students do when approached with a mathematical thinking problem. I felt unsure and scared. I didn't really feel like I had a strong grasp of mathematical thinking when it came to Algebra. I now notice patterns and make connections to other things. I feel I can understand. I no longer have to just accept an answer or strategy because the instructor tells me that's how it is done. I can take ownership of my own learning and come to an understanding for myself."