

## *In Focus...*

# The InterMath Experience: A Student's Perspective

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In this paper I give a personal account of my experience as a student in an InterMath course. InterMath is a non-traditional course that focuses on mathematical content and technology. In the discussion I highlight particular experiences that stood out for me as well as what I learned through the experience.

As a student taking math courses in college, I wished for an opportunity to participate in classes that would allow me to grow conceptually but would be non-threatening to my GPA and eliminate the fear of failing the course. I wanted a depth of knowledge but I did not know where I could get it without facing the apprehension of getting in over my head, or feeling inadequate in front of other students. I experienced similar feelings during professional development workshops after becoming a teacher. Finally, along came InterMath.

The timing was perfect. The area of mathematics that I consider to be my weakest is Probability and Statistics, which happened to be the InterMath course offered. After reading through the course information, I thought it sounded too good to be true. I looked up InterMath on the Internet and read through the web page. Again, it sounded too good to be true. In addition to this course claiming to be exactly what I had always hoped for, they were going to pay me for meeting the course requirements.

During the day of the first class I wondered what I had gotten myself into. I would work all day from 7:30 am to 4:30 pm and then voluntarily agree to sit in a class from 4:30–8:30 one night a week for an entire semester. However, that class went very well and was over before I knew it. What most impressed me was that I had learned a great bit about probability without actually being taught in a traditional way. The teacher did not stand up in front of the class, demonstrate and lecture on how to do the work, and then assign a bunch of problems for homework. There was not a huge, thick textbook that I had to purchase. All of the resources were web based and we used a lot of technology. The entire course was very non-traditional and extremely performance based.

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As student participants, we sat together and discussed our mathematical and teaching weaknesses. We looked at problems together and then worked through them as a collaborative effort. We posed questions to our instructor, who acted as a facilitator to help us work through our inquiries. When we asked questions, we were directed with questions from the instructor that prompted our thinking. She never gave us answers but guided our thoughts so that we worked through finding the answers together as a group. Our thoughts and ideas generated more thinking and working together allowed us to solve the problems and develop our own conceptual knowledge. We were not told formulas and procedures that we had to memorize. Instead, we worked through the problems and developed our own thought processes, which gave us ownership of the problems. It became a part of us through our experiences.

I have previous experience with professional developments that attempted to implement standards-based reform. With the new Georgia Performance Standards (GPS), professional development of this sort is more important now than ever because we want out teachers to experience the teaching style that we would like to see them implement in their own classrooms. I immediately recognized how well InterMath supported the GPS by modeling this style of teaching where students experience learning by using concepts in a range of situations and in complex problem solving, representing concepts in multiple ways, and explaining concepts to other students.

As a participant in the class I found that I was gaining a deeper understanding by using mathematics, representing mathematics, and explaining mathematics, which provided evidence that performance-based learning has a much deeper, conceptual meaning to students as opposed to the traditional methods. I was provided the opportunity to choose which problems I wanted to solve. If there were problems that seemed to overwhelm me, we worked those out together as a class under the guidance of our facilitating instructor. By offering her support and guidance, I gained

confidence in my weaker math areas and came to recognize how well coordinating actions with others assists the learning process.

InterMath provides the opportunity for teachers to participate as students in learning important mathematical concepts and processes with understanding. Research shows that one of the most important indicators of student achievement is teacher quality (Hill & Ball, 2004). InterMath promotes professional growth and development to strengthen teacher content knowledge in mathematics and models performance-based teaching and learning, supporting the new Georgia Performance Standards (GPS). In turn, taking an InterMath course should lead to student achievement.

After completing this course I became very interested in the next course being offered, a GPS alignment course. While a conflict kept me from enrolling in the GPS alignment course, I often sat in on the course just for the fun of it. If I am able to fit in other courses being offered, I plan to attend. Otherwise, I will again sit in on as many of the classes as possible to learn from the same instructor and offer my assistance to all of the system teachers to whom I have expressed this to be one of the best opportunities

they will ever have to take an in-depth, non-threatening course that will provide them with professional growth and development. I firmly believe InterMath will provide teachers with a stronger understanding of math and technology, model performance-based teaching, and prepare the teachers to promote an increase in student achievement by providing students with opportunities to demonstrate their conceptual understanding of math concepts that go beyond recall because this ideology matches my experience in the InterMath course.

#### **Author's Note**

The opinions expressed in this paper are those of the author and do not necessarily reflect the views of the Rockdale County Public School System.

#### **Reference**

- Hill, H., & Ball, D. (2004) Learning mathematics for teaching: Results from California's mathematics professional development institutes. *Journal for Research in Mathematics Education*, 35(5), 330–351.