

Response to:

“Technology in Support of Middle Grade Mathematics:  
What Have We Learned?”

This article brings up a wealth of information regarding the use of technology in middle schools. As in the previous article, it is encouraging to see that students see technology use as a positive experience. The TIMMS data was particularly interesting as it supports the fact that nonroutine use of technology results in increased student understanding and achievement. It was frustrating to read that for every study that shows a positive experience for students, there is another that shows no effect. The article mentions that technology can result in insignificant or positive effects on student achievement, but none of the studies examined report negative effects; however, the analysis of the TIMMS data did indicate a negative association between calculator usage and student achievement for Japanese students. The article mentions the benefits associated with technology have more to do with the way technology is implemented than the frequency with which it is used.

I was shocked to read that only 74% of the 104+ secondary teachers surveyed reported using graphing calculators at any time. Even more surprising is the fact that 83% agreed that students should be introduced to the graphing calculator. Why is it that 9% of the teachers studied feel that technology is important but do not incorporate it into their classroom activities? I agree with the author that this is probably a result of access and training issues. Training, as mentioned in the teacher attitudes section, can have a positive effect on teachers' opinions of technology. Studies suggest that if teachers had the time, resources, and training for implementation of technology in the classroom they would use it. Teachers need to be exposed to technology and technology instruction more so that they can effectively use technology in their classrooms.

Toward the beginning of the article a quote regarding the situation of middle school teachers reads “We are not as stuck following the book. We have fewer restrictions that high school teachers.” Middle school mathematics material is basically recycled for three years. From my observations, students learn the same concepts in grades six, seven, and eight. Students get bored when every lesson begins with “You should remember doing this from last year”. Since this is the case, topics should be elaborated on and presented in several different ways to reach all students. With fewer restrictions and essentially less material to cover the middle school situation is ideal for the introduction of technology into the curriculum.