

Hamilton Hardison

Reaction to:

“Exploring Secondary Mathematics Teachers’ Reasons for Not Using Computers in Their Teaching: Five Case Studies”

By Stephen Norton, Campbell J. McRobbie, and Tom J. Cooper

This article was somewhat difficult to read as it addressed discouraging viewpoints held by educators and effects of those viewpoints on fellow teachers. The idea that mathematical understanding is rooted in rules, algorithms, and the diligent memorization and practice of these rules and algorithms is absurd. Eva and Peter neither understood the nature of mathematical proficiency nor the appropriate role of computers in mathematics education. It was disheartening to read that their views of computers were limited to manipulation of large numbers or essentially cheating students out of understanding. I wonder if either Eva or Peter taught an AP calculus course and what their opinion of the use of graphing calculators on the AP exam was. It was surprising to read that Eva had the least teaching experience, yet she seemed to be the most firmly set in her pedagogical ways. In contrast, the instructional views of Mary were encouraging and surprising considering she had 26 years of teaching experience. Even without formal computer training, she used technology more than her colleagues.

The relationship between teaching style and attitude toward computer usage highlights the different views of what mathematics is. The teachers in the study who viewed mathematics as procedural seemed to dislike computers because the computers did all of the “math”. The computers can quickly perform the calculations and algorithms that are held onto tightly by these instructors; as a result, they almost seem jealous. Mary, on the other hand, viewed mathematics as a constantly changing body of work to be studied. Due to her view of mathematics, she welcomed the opportunity for her students to examine it in new and different ways through the use of technology. The computer software was not threatening to Mary because she knew that the computer could not think and that her students could.

The effects of the opinions of the other teachers on Mary are unfortunate. More professional development is needed to convince teachers that instruction through technology is worthwhile on more than a computational level. Mary’s case is an example of when more than peer discourse is needed to have a fruitful result. It seems the best solution for a person in her situation is to switch to a scholastic environment that is more student-centered and less afraid of change and uncertainty in the mathematics curriculum.