Discussion:

I have learned that technology should be used as a tool for teaching math, not a distraction. An example of it being used as a distraction that the article gave was “adding so many bells and whistles into a PowerPoint slideshow that the mathematics gets lost.” It is important not to spend class time only learning the technology, but to briefly get acquainted with a new program, and then the *focus* should be on the assignment, project, or concept. I liked when the article stated that “teaching a set of technology or software-based skills and then trying to find mathematical topics for which they might be useful” is comparable to teaching procedural skill without context. Also, students should get a basic understanding of a concept without using technology, and then technology can be introduced to extend that understanding and to prove multiple cases or show what might happen after 10000 tries, which is simply impossible to do tangibly in class with the time that is given. In addition, technology should be integrated within activities or it should introduce real-world applications to help the students’ conceptual understanding. It is a great way to visualize mathematics for those who learn best in that way. The article said that students “have difficulty connecting the verbal, graphical, numerical and algebraic representations of mathematical functions,” which is where technology can be used as a tool. Lastly, I learned what a PST was and that they often need to do just as much work as the students do in order to learn technology skills and know how to extend their knowledge using technology smoothly, not too much and not too little. I personally feel semi-confident in my technology skills, but I definitely need to continue learning about programs, applets, and websites that are helpful for teaching certain concepts.

Response:

The guidelines that the article has given are: Introduce technology in context, address worthwhile mathematics with appropriate pedagogy, take advantage of technology, connect mathematics topics, and incorporate multiple representations. I agree with all of these guidelines, but one change I might make would be to add using technology to embrace creativity in math. I was at a conference last semester that talked a lot about how a lot of the way math is taught lacks creativity. There are definitely resources out there that introduce the idea to students that math can be creative while also correct.

Questions and Comments:

I have still been very curious about the effectiveness of gamification in mathematics. In clincials, I have witnessed students resort to blooket.com the second they get the chance to, showing that they like it more than the assignments, even if it is the same content. Does that mean it is too distracting, or should it be the preferred way to practice a concept while keeping them engaged? I also would like to know if tests taken on a computer are better or worse than those taken on paper? Lastly, I have enjoyed visualizing mathematical concepts more since coming into college, especially because I feel like my teachers rarely did that in middle or high school. I wonder if the age or math level makes a difference in visualizing math using technology. I noticed the article used more advanced math for most of the examples.

AI statement:

I used Speechify's basic plan to listen to the article. Speechify is not specifically an AI tool, but I believe it uses some AI programming to be able to read the text aloud. Since I

listened to it, I knew what it talked about, but I didn't know where I got the references, so I asked Speechify to provide me with the specific locations in the article where it said certain things.