I find mixed-methods research, combined with experimental research to be the most appealing. I think it is important to have elements of all three in order to tell the whole story. I love numbers and putting numbers together into charts that prove a hypothesis. One of the most exciting things for me is to see a pattern or trend emerge from data. That being said, I also don't believe that any set of quantitative data can stand on its own. In the Information Systems world we define information as data plus context. In this case, context being the qualitative data. In other words, you don't get information with either one on its own. You need the data (quantitative research) and the context (qualitative research) in order to be able to present a full argument.

I think that quantitative and qualitative research only get the researcher so far though. Those data can prove the validity of a hypothesis, or can prove that a problem exists, but in my opinion, without experimental research specific to the hypothesis, no point can be effectively proven. If a piece of research doesn't give me experimental data proving their hypothesis in the wild, then critical thinking tells me to be weary. If, on the other hand, a researcher makes a hypothesis, backs it up with quantitative and qualitative research and then goes and gets the proof from experiments in the classroom, I can then start to reason with him/her.

For my research I certainly want to focus on educational technology. But I also want to focus on the effect of school adoption and teacher education on the success of educational technology. So, is a school really automatically better off because say, it has a 1-to-1 program where all students have laptops? Or is it possible for a school to give all of its students laptops, tablets, netbooks, or whatever device they choose, and then fail to offer enough teacher training such that the 1-to-1 program is rendered ineffective? I find that all too often technology gets dumped into teachers' hands (or more literally their classrooms) at a significant cost to the school, and the teacher doesn't have the resources (or desire) to learn how to use it. For example, I worked in a High School where every classroom had a SMARTBoard or an Epson Interactive whiteboard. Having not done actual research, I can only speculate, but I would say that 25% of the teachers actually consistently used the technology available to them. And of those 25% only 25% used the technology to its fullest or close to fullest potential. When the school spent $80,000 on the technology, an adoption rate of 6.25% is ridiculously wasteful. That doesn't even take into account the effect that the technology has on student learning.

Since I am currently working with a course builder product, and focusing on online course delivery, I want to direct my research at LMS type technology, and online learning whether in Higher Ed or K12. This is a hugely problematic area since schools are encouraging more education to take place online. But they aren't training their teachers to teach courses properly online. Instructional Designers are only just starting to understand what online instruction should look like, and schools are only just starting to get on board. I'm hoping to be able to prove that a) schools should spend the bulk of their resources on training teachers and instructors, while spending very little on an initial investment in hardware and software. And b) that schools who simply dump technology on teachers without the resources to properly train and educate them are doing a disservice to the entire educational community in doing so.

My Response to Thomas Crawford

Being a huge fan of data I want to completely disagree with you that qualitative data is the MOST useful research. I will concede that maybe right now the way we collect data and the limits of

what data we can collect make quantitative research fairly unimpressive. But, if you look at the advances companies are making in quantifying things like employee happiness, employee performance, team production, etc. then you start to see how possible it is that one day quantitative data won't matter. Given the ability to collect enough data points, anything can be measured far more accurately than through qualititative research. Hooking students up to brain scans, MRIs, FMRIs, etc. isnn't going to happen any time soon, but if it did it would tell us so much more about the way they learn, the stimulation they get from certain teaching practices, and the way the respond to any kind of stimulus. This will give you hard data, quantifiable data, and irrefutable data. If you ask a student how much he likes the way his math teacher teaches his answer could change based on any number of factors.

I think that testing is far and away the best way to achieve success in education. HOWEVER, not the way it is currently being done. I used this example in a previous class: Let's say that instead of the MCAS, students were asked to don Virtual Reality goggles. Those goggles would then present the student with any number of random scenarios to play out using what he or she has learned. For example, the goggles put the student into the same room as the founding fathers for the Continental Congress. The student then has to participate in the debate using what he or she has learned. All the while, the goggles are measuring brain function, as well as a number of other data points that can tell not only the binary whether the student understood the material, but how well it was understood, with what sort of complexity the student was able to re-enact what was learned, and even any physiological issues the student had with remembering what was learned. And that's not even the exciting part (for me at least). The exciting part is putting all of this data together (similar to the way we do now with MCAS) and looking at the myriad of results we are given and being able to identify exactly what's wrong and exactly where we can invest in improvement.

Some of you may roll your eyes and suggest this will never happen. But the technology exists today to make this happen, and the benefits are clear. So once cost and complexity decrease, it's possible that THIS is the kind of standardized testing we will see in the future.

After saying all that, I will concede that for right now qualitative research is needed to complement quantitative research because we simply can't collect the information we need. But that's not to say that will always be true. There will come a time where qualitative data will take a very distant backseat to quantitative data simply because of what we can collect.

My response to Elizabeth Wilcott

That's so exciting that your students will be getting iPads next year. I think you'll find some interesting results when you look into whether technology impacts student engagement and particularly student achievement. One of the reasons I think you'll find it interesting is that in my opinion it has nothing to do with the technology. It depends entirely on HOW the technology is used. If a teacher uses technology to do something that was already being accomplished just fine beforehand then it's pointless to use the technology and student engagement and achievement will probably reflect that in the long run. But, if there is a gap in a teacher's instruction that technology can fill, or it provides a supplement to an assignment currently done without technology, then I think it can provide enormous benefit. For example, handing all students and iPad and asking them to take notes and write essays on it is pointless. Students

have ways of doing this already and an iPad is not going to help them learn how to do it better. But, if you hand students an iPad and ask them to create a photo essay, or a video of what they learned, then you might see a significant uptick in a students personal investment in the project (i.e. student engagement) and then you will probably see a much better final product in terms of degree of comprehension (i.e. student achievement) because the student was able to use technology to get the tedious part out of the way and spend the rest of their energy on learning. All in all, I'm very excited to see what you come up with for a research topic, and would love to hear more about how you use technology in your classroom.