Synthesis Essay: It's Not About the Technology, It's About the Learning

By Jeff Pierce

I have attended, and presented, at a lot of educational technology conferences. Many of the workshops and presentations at these conferences are about specific tools. They have titles like “iPads in the Art Classroom” or “Research Made Easy with EasyBib” or “Geocaching in Hong Kong”. These conferences are often exhilarating experiences and I leave them with dozens of new tips and tools to try out.

By comparison, very little of my Master’s coursework related directly to technology. I didn’t take a single course in any specific type of tool or program. While I did learn a few new tools over the whole degree, on the whole there was nothing extremely novel or challenging. But I have not experienced any type of professional learning that has been as profoundly impactful as my Master’s work.

This was surprising to me. I must admit that I embarked on my Master’s of Arts in Educational Technology with low expectations. As I didn’t think I would learn many new tools in the program, I didn’t think I would grow much professionally. Upon reflection, I think that these low expectations were based more on my own prior failures, having started and stopped work towards a Master’s two previous times.

My professional growth occurred in different areas. It happened by focusing on the learning that happens when technology is used, not by focusing on the technology tool itself. The experience of being a student helped me view my own teaching in a different light. The focus on student misconceptions forced me to rethink how I approach my units. I gained exposure to a completely new field, design. And I finally put to good use all those hours spent playing video games, learning how to design games for learning and how to use them in education.

The first course I took, titled “Teaching for Understanding with Technology”, is a great illustration of the profound shift I experienced in the program. Much of what was covered was review for me. For example I already had my own Wordpress blog and knew plenty about Twitter, and these were the focus of three of the first four weeks of the course. But the culminating assessment, called the “Networked Learning Project” helped me to relearn, well, how to learn. In this project, I was tasked with choosing anything that I wanted to learn. The only caveat was that I could only use YouTube and help forums to learn. So I decided I wanted to learn to bake apple pies.

My initial reaction to the project was skepticism. How can this be a serious program about educational technology when I get credit for making apple pies? However after completing the project I found it empowering. It was a great reminder of the foundational concept of learning, that nobody is great at something the first time they try it. By being forced to stick with the same topic for

the whole project, I found myself getting noticeably better at it. And I came away with a real life skill! Now I consider myself to be a home baker. I am certainly not anywhere close to being able to sell my baked goods but I do feel confident that I can teach myself anything in the kitchen. That's a big change from a guy who once managed to ruin a frozen pizza!

This affected my professional practice by giving me a taste of what students feel like every day when they are faced with a task that they are not good at. Those feelings of frustration and stupidity can be everyday occurrences for some students. How then could I build my lessons acknowledging that? How can I give students the opportunity to repeatedly attempt a task until they are successful? How can I allow students to pursue their individual passions?

I also look back on this first course as a great example of online learning. It is clear that a lot of care and attention has gone into making the course work well. The simple pattern of Learn, Explore, Create, and Share, repeated over and over every week, is what I come back to when I design my own blended learning experiences for students. I also learned the value of precise organization in online courses: every little detail needs attention or students can get confused. I also learned an invaluable lesson in repurposing technology tools. Giving each student one row of a collaborative online Google Spreadsheet and having them post their work there makes the instructor's job so much easier. It also allows for better collaboration among students, as everyone's work is just a click away. I quickly adapted this for my own lessons and it has become an integral part of my practice.

Another course, titled "Approaches to Educational Research", had a bigger impact on how I approach the core concepts of each unit I teach. I was shocked to learn in this course by the way misunderstandings are so ingrained in students, illustrated in the documentary "A Private Universe". But even more impactful than the film was the article "Teaching for Conceptual Change". I found it fascinating how firmly the students stuck to their initial misconceptions despite evidence to the contrary. I also started to wonder what geographic and historical misconceptions are embedded in my students that I'm not aware of. How can I truly focus my units on student misconceptions?

Before taking this course, addressing student misunderstandings was nothing more than a box I would tick on the unit planner. If my students are learning about East Asian geography, I have them take a blank piece of paper and try to sketch the various countries and landmasses, demonstrating their "prior knowledge". I hold up the ones that are hilariously far from the mark and we all have a laugh together. Then we move on to the "real" learning. But after this course I saw just how deeply ingrained these misunderstandings truly are. I started to reorganize my units to focus on bringing out misunderstandings every lesson, not just at the beginning of the unit.

The other element of this course that I learned so much from was the teamwork aspect. In order to complete the final project, everyone had to contribute in different ways. I learned quickly in the course that my video editing skills, while passable, were not good enough. So on future video projects I swallowed my

pride and let my classmate do the final editing. Setting up and conducting the interviews was definitely not an area of strength for me, but it came naturally to some of my teammates. The way that I was able to contribute most to the team was by helping us organize our work and stay focused on the deadlines. I kept track of our progress, compared our work to the project assignment, and compiled everything on the website; this was an area where my attention to details was helpful.

But the biggest takeaway from the groupwork was just how fun it was. Even though we got stressed at times about the project, we never got mad at each other. We laughed, had a good time, and kept a positive attitude. We were together in Lansing for less than three weeks but I feel like I gained lifelong friends.

This impacted my practice because it reminded me of how group work can be a frustrating and humbling experience for students. But I also experienced the joy of being part of a strong team. Our end result was definitely much more than the sum of the individual parts.

Now I did say that I didn't learn as much about technology in this program as I thought I would. I have to say that's not completely true, as I did learn about a totally new discipline through my electives. I took the three required courses for the Serious Games Certificate from the Telecommunications College: Foundations of Serious Games (TC 830), Theories of Games and Interaction for Design (TC 831), and Understanding Users (TC 841).

These courses opened my eyes to new possibilities in education. I was exposed to new theories, disciplines, and products. The theories ranged from game design theories to theories of how people learn. The Understanding Users course was perhaps the most challenging course I took in the whole master's degree, as it forced me into a new discipline, that of design thinking. And the final course I took, Foundations of Serious Games, gave me the opportunity to practice applying these new theories and skills in the form of a game.

I came away from these courses with a completely new perspective on my work as a teacher. Now I can more clearly assess the values and limitations of games in education. I know the distinction between games for learning (in which students explore a concept through a game) and gamification of learning (in which behavior such as completing homework on time is incorporated into a game). I also have learned to see myself as a designer of an experience for my students. Considering my students not only as learners but also as users of a product (my curriculum) allows me to see gaps in how I have designed my lessons.

My eyes are also opened to totally new career paths. Gaming is an exploding industry, and these courses taught me that I don't have to know how to code to create games. I could work on a team with software engineers to help them design a game. Or I could use my expertise as a history teacher to ensure that a game for learning doesn't miss the mark and dumb down the learning, or even worse, embody a misconception.

Coming back to the title of my essay, I think it is ironic that I have not yet explicitly addressed the role of technology in my Masters, especially given that this is a Master's of Arts in Educational TECHNOLOGY. But the truth of the matter is that the technology is secondary to the core learning. The TPACK framework illustrates that technology should not be the focus, but rather should be considered as one domain along with pedagogy and content knowledge. Thus I think it is wholly appropriate that I have focused on the conceptual knowledge I have learned. The technology was always secondary to the core learning of my courses.

I learned a lot about my own limitations in technology, and also I learned how to overcome them. I saw some great models of online learning. And I dove into the world of educational gaming, exploring how new technologies are expanding this field.

While I came to my degree with low expectations, I am leaving the program brimming with confidence. While I would not say that I am an expert teacher, I feel that with all of the lessons I learned in the MAET I have a better idea of how to get there now. I am excited to apply all that I have learned about learning to my practice.