

Armed and Ready  
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In the summer of 2009, after finishing a crazy, fast-paced, difficult, and fulfilling first year of teaching, I decided to embark upon my graduate learning journey. I wanted a program that would enhance my career, and make me a more marketable teacher in times where each year can turn into a nerve-wracking job or no-job situation. I debated whether a Reading Specialist degree, or an Educational Technology degree would serve me better. Since everyone needs to take a reading assessment course to renew certification, I started there. Although I enjoy reading, and I will continue to use some aspects of TE 846 throughout my career, I decided to go in a direction that I knew would make me a unique and marketable employee, the MAET program.

The first course I took in the MAET program was CEP 810, the first of three 8 week accelerated courses in the MAET certificate program. My first reaction was that I would never get out alive! The 8 week courses were vigorous, fast-paced, and jam packed with information that I had only ever heard about, but never experienced. I spent many evenings, and much of my weekend time creating and responding to online posts, watching tutorials, downloading new programs to my laptop, and troubleshooting all the new technology we were expected to use. After the 8 weeks were over, however, and I caught my breath, I felt so empowered! In just a short amount of time I had created Podcasts, managed an AFS space, started my own blog, created an RSS feed with all my favorite educational journals (of course, some things just for fun too), and revisited all the popular Microsoft Office tools that I use daily, just with different purposes. This, along with other life changing events such as purchasing a house with my then boyfriend (now husband), gave me motivation to make and to meet my goal of completing my Master's degree before I have children (since I knew that teaching full time, taking graduate courses, and a baby would probably put me over the edge of sanity).

My next two courses in the MAET program, CEP 811 and CEP 812 were just as rigorous as the first in the certificate program. Although I learned many new tools to use in the first course, these subsequent courses had a large impact on my teaching and continued learning through the program with the concepts and ideals they introduced. In CEP 811, among other things, my classmates and I were introduced to the Universal Design for Learning (UDL). The concept of UDL is based on the fact that classroom instruction and lessons should be designed in such a fashion that the needs of all students are addressed with customizing and differentiation in mind, rather than the typical "one-size" fits all lesson plan. As a teacher of students with many different abilities and needs, UDL really spoke to me and how I need to plan lessons in my classroom to meet the needs of special education students, average ability students, and even my gifted students. Technology, I feel, is the piece that makes UDL relevant and accomplishable in a classroom where I, in a typical year, service 150 students with many different needs. One example of my application of UDL is the STAIR (Stand Alone

Instructional Resource) project I created for a lesson on plate tectonics. The premise behind the STAIR is that students receive information input at their own pace in a PowerPoint style presentation. After the information has been presented, students continue to go through slides that have a quiz component. When the student selects an answer, immediate feedback is given so that the learner can either continue through the quiz at his or her own pace, or go back and review the information that they need to view again. This gives the learner independence, and frees up the teachers' time to monitor student progress and provide interventions (both remediation and extension) when necessary. With the concept of UDL now in my hypothetical "toolbox", I feel that the lessons I design are more adaptable to meet my students' needs than they were before.

Another course that UDL helped me with was CEP 820, Teaching K-12 Students Online. As I was designing my online Moodle course, the principles of UDL were constantly in the back of my head with everything from selecting an appropriate CMS (Course Management System) for my middle school students, to incorporating lessons with clear instructions that sixth grade students could do without the face to face presence of an instructor. The three main components of UDL; multiple means of representation, multiple means of action and expression, and multiple means of engagement were all at the heart of the lessons and activities I chose to incorporate in my sample Moodle course.

After CEP 820, I chose to try a new path with my online master's degree, and participate in a three-course, hybrid program that would allow me to work face to face with other MAET students on campus at MSU for two weeks, and then work at my own pace in an online environment for another four weeks. Although I was working a summer job at the time, as well as planning my wedding, I knew that this was a very unique opportunity that would not come along again, and I had to take it, despite the stress it may cause me to endure. The Year Two summer cohort program, that combined CEP 800, 815, and 822 was the single-handed best experience I have had at MSU in the MAET program.

What made the Year 2 cohort program so unique, besides its hybrid face to face/online approach was that for the first time since starting my Master's degree, I was in a room of like-minded people with common interests. By no means did we all have the same knowledge, and by no means were we all coming from the same types of classrooms. The diverse population of people; public school and private school teachers, veteran and novice teachers, United States and Abu Dhabi teachers, and some folks who weren't teachers at all, made our conversations rich, challenging and constantly thought-provoking.

The summer program covered multiple topics. Technology and leadership, educational research, and learning in schools and other settings were all discussed in a variety of ways and demonstrated in a variety of hands on technology projects. Encompassing all of these things, however, was the text we studied by Willingham called Why Students Don't Like School. One of the things professor Dr. Punya Mishra discussed at length, and Willingham also addressed in his text was the role of working memory versus long term memory, and how we either teach or don't teach to allow

those memory types to function properly. Many days, I need to stop to remember that my students in a typical day, get seven different instructional lessons. Those lessons may or may not interest them, but when the brain is exposed to so many different topics in such short amounts of time, it is not likely that the information is stored in a students' long term memory, and also likely that it doesn't even get to their working memory. The information that Willingham provided, and Dr. Mishra expanded upon, is that in order to increase student knowledge, experiences need to be had, and emotional connections (those that tie to personal experience) need to be made. Teaching in a rural district where more than fifty percent of my students qualify for free or reduced lunch services, I realized that in order for my students to retain information, I would need to create those experiences for them, since many do not have the opportunity to gain those experiences on their own outside of a school setting. Once again, I feel that technology can assist to solve the constraints of a brick and mortar environment. When I heard other teachers talking about how their students (even kindergarteners!) posting to blogs, tweeting, using FaceTime , Skype and other technology tools, I knew that I too could begin to create these experiences with my students as well.

Thinking about the overall message and ideology of the entire MAET program, I feel that through all the courses I have taken, there has been an underlying theme. What I interpret that theme to be is that there will always be problems in education, but how can we use technology to our benefit to solve the problems? There were certain projects and courses that focused on small aspects of this theme, like the Wicked Problem Project for CEP 812, the Dream It grant-based proposal for the summer cohort program, and even the CMS creation for CEP 820. The great thing about MAET, and finishing this degree, is that I know I have the tools to conquer many of these issues in a modern, efficient, and progressive way. Besides the concept of UDL that I mentioned above, another concept, TPACK (Mishra and Koehler) will take my teaching, learning, and leading to an entirely new level.

TPACK, or Technological Pedagogical Content Knowledge is a way to ensure that incorporating technology in the classroom doesn't become just for show, doesn't take away from content, and is taught in such a manner that UDL and best practices are always considered. Looking back at the technology I used in my first year of teaching, which amounted to an overhead projector and many transparency copies, and then to the technology I have available in my classroom now, which includes one to one mobile devices for every student, I know that it can be very easy to get caught up in showy technology, no matter the content, and setting aside what we as educators know to be best practices for something that looks fancy, complicated, and innovative. I strongly believe that the knowledge I have about the importance of balanced "TPACK" will get me through many waves of new classroom tools, using them appropriately combined with my expert science content knowledge, and my knowledge of classroom best practices.

So, what now you may ask? In a few short weeks I will have met my goal of completing my Master's degree. When I told my sixth graders that I would be graduating soon, the first thing they asked was "So, do you, like, want to be a computers teacher instead of a science teacher now?" My answer puzzled them a bit. I told them

that I wanted to be both, simultaneously. I want to be a science teacher who is at the forefront of technology with my lesson plans. I also want to teach my students the skills in technology they will need to become successful learners in the 21<sup>st</sup> century, while giving them experiences that will help to build their content knowledge of science. Whether I continue to use the skills I have acquired to teach middle school science, or if I decide to use my knowledge to assist other teachers with incorporating technology, I feel that the MAET program at MSU, with the principles it has taught me, the experiences it has allowed me to participate in, and the personal learning network I have developed, has left me armed and ready for whatever I may need to make me a successful professional educator in my future, for whatever circumstances life may bring.