

My Unforgettable Online Journey in Educational Technology

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The Master's in Educational Technology (MAET) program at Michigan State University (MSU) has had a significant impact on me as an educator over these past three years. All ten of my courses within the program have challenged me and influenced me in some way. My very first course in the program was entitled "Teaching for Understanding with Technology". All of my online courses at MSU have belonged to the Department of Counseling, Educational Psychology, and Special Education (CEPSE). This initial course would become the first step in influencing the way I now approach teaching, learning, and educational technology itself. During this initial course, I set up an educational technology blog through www.wordpress.com. I began to blog about my teaching and learning experiences. Right away, this addition to my teaching habits caused me to reflect more often about the processes of teaching and learning by themselves, and also about ideas revolving around my own students' progress. Over the next three years, I went on to study and experience many new ideas, concepts, methods, technologies, and educational platforms that have positively impacted the way I approach education and teaching.



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My personal blog can be found here: <https://crcavalieri.wordpress.com/>

Very early on in the MAET program, I began to study learning, understanding, and conceptual change. I had done this as an undergraduate at MSU from 2002 through 2007, but I needed to analyze these concepts once again. When I began analyzing the ideas that I had learned as an undergraduate once again, (now as an experienced teacher), I noticed some things that I had missed before. As a teacher, I read some of the same books, essays, and texts that I had before, but now with "fresh eyes". I read that in the year 2000, researchers Bransford, Brown and Cocking observed that "cognitive researchers are spending more time working with teachers, testing and refining their theories in real classrooms where they can see how different settings and classroom interactions influence applications of their theories" (Bransford, Brown and Cocking, 2000, p. 3). Many teachers today understand that when students come to their classrooms, they have myriad preconceptions about how the world works. Learning with understanding cannot be achieved unless teachers challenge or (at least) engage a student's initial understanding about something, so that students will not revert back to their initial

preconceptions when they go home. I believe that this lesson about learning is true, and I keep it in mind whenever I am teaching today.

Another key concept regarding teaching that I learned during my first course within the MAET program was that novices and experts solve problems in different ways. Almost every learner is a novice in one area while simultaneously being an expert in at least one other separate area. Bransford et al wrote about several key principles relating to how experts and novices perceive learning and instruction in different ways. A key idea for teachers to focus on is that “experts recognize features and patterns that are not noticed by novices” (Bransford, Brown and Cocking, 2000, p. 36). It is suggested that teachers should provide students with learning experiences that can enhance their abilities to recognize those meaningful patterns of information during situations in their own lives. For instance, in a school computer network setting, an expert might recognize that every computer is connected to the same network; so each computer can retrieve identical files from a shared drive. The same is true with any information that is stored within “the cloud” (i.e. Google Drive). However, a teacher needs to realize that a novice might not understand this concept at all. The novice student might think that their computer, (which is actually within the network), is completely separate from all of the other machines in the school. In my own teaching practice, I usually remember this lesson well. I teach knowing that my elementary students could be complete novices in regards to the topics that I am covering. With that in mind, I tend to teach initial ideas slowly while also discussing upcoming vocabulary terms and basic concepts first.

The MAET program re-introduced me to the concepts of building a Professional Learning Network (PLN) and a Getting Things Done (GTD) system. While doing my Master’s work I created a “visual board” that displays my PLN, using www.popplet.com! My PLN popplet can be found [here](#). Creating that popplet forced me to really analyze my Professional Learning Network. I started to realize the important role that my family and close friends have on my PLN. My parents both worked as special education teachers for many years. A cerebral hemorrhage in 1998 forced my mom to retire earlier than she had planned, but she survived the experience and has been a major inspiration to me. My dad taught for the Dickinson-Iron I.S.D. in the Upper Peninsula of Michigan for forty-two years! He has been my biggest role model throughout my life. A reliable PLN is something that all professionals should utilize. Whenever I get “stuck” with a problem or challenge, I can reach out to people who are in my Professional Learning Network. As a busy educator and graduate student over these past three years, I almost always have been able to depend on someone from my PLN being there to help me out in various situations. As someone who really likes to work independently and “figure out things on my own”, I have gradually learned to ask for help more often.

Another concept that I learned about and use today is my unofficial Getting Things Done (GTD) organizational system. Toward the beginning of the MAET program, I started using all of the Google Apps more frequently, especially in collaboration with my iPhone. I based my efforts on the work of productivity analyst and author David Allen. I already had been a regular Google Apps user, but thanks to my MAET course, I began pushing myself to utilize these applications

in an even more productive and educational sense. With Google Calendar, I have been able to create appointments, keep track of birthdays (students, friends, and family members), and even create multiple calendars when I have wanted to. I often set alarms on Google Calendar that remind me of upcoming appointments and school events. I usually have Google Calendar send me e-mails or pop-up notifications on both the computer and smartphone. I usually get the notifications sent to me one day in advance of the upcoming event. This system has stuck. I constantly use Gmail, Google Docs, Calendar, Drive, Chrome, and Search to get all of my professional and personal tasks as an educator done as quickly and efficiently as I can.



Gmail



Cal



Drive



Docs



Chrome



Search

Google Apps image courtesy <https://edu.google.com/>

Even though I started using Facebook in 2004, I really only started to utilize various social media as professional learning tools after starting the MAET program. Throughout my MSU Master's courses, I started to learn about and think about the numerous uses of Facebook, Twitter, Pinterest, Instagram, and several other sites as the powerful learning and social networking tools that they can be. I believe that learning and understanding is a lifelong (and social) endeavor. Through the use of social media, my Professional Learning Network has continued to grow and develop throughout my current school year.

In my course entitled "Adapting Innovative Technologies in Education" (CEP 811), I learned a great deal about the international Maker Movement. Before starting this program at MSU, I knew little about it. In this course, I started to utilize more educational technology tools as well. In fact, I created a [Piktochart](#) infographic to showcase the top five reasons why every educator should embrace the Maker Movement. My infographic can be found here: [Top Five Reasons Why Educators Should Embrace the Make Movement](#). Another major aspect of this course included the concepts of thrifting, repurposing, and making for educational purposes.

In one of the major assignments for this aforementioned course, I acquired a very cool "Maker Kit" from the [LittleBits Company](#). This particular kit was called the Star Wars Droid Inventor Kit. The kit comes with 30-plus pieces, which allows any maker to create, build, and play with a droid (similar to R2-D2) that they end up making themselves. In addition to the acquisition of this

interesting Maker Kit, I also decided to repurpose a few household items to create an obstacle course for my droid. The household items that I grabbed included some blue plastic cups and some rolls of bathroom tissue. Regarding these interesting LittleBits kits, they come with a large card that says "START HERE" on them. The very first step in creating a droid is to build a simple circuit (using what LittleBits refers to as, funny enough, "Bits"). This simple circuit ultimately becomes the "brain" of one's droid. This educational but fun project taught me more about the process of "making", and got me much more excited to teach my students about it. After that experience, I have fully embraced the Maker Movement.

The Maker Movement is a modern culture that represents a technology-based group of do-it-yourself (DIY) people. The Maker Movement is all about tinkering with existing devices and the subsequent altering of those devices or even the creation of new inventions. As I thought about my main reasons for embracing the Maker Movement, several ideas came to mind. One great thing about the Maker Movement is that it allows everyone, especially kids, to get really creative. In addition to that, it becomes fun for almost everyone who gets involved in it. This great movement has been continuing to bring new inventions to the world. I have been heavily promoting this culture to my own students over this past year or so. It is great to see my students embracing the Maker Movement and realizing that they can become inventors and developers of the future.

In addition to this, my CEP 811 course taught me that the Maker Movement also promotes sharing and communication. Every year there are several Maker Faires held around the USA and around the world. Making is continuing to grow within the educational world. It is becoming one of the greatest ways to promote creativity, ingenuity, science, technology, engineering, art, and mathematics. As I learned throughout this quality course (and truly believe), everyone can become a Maker (Dougherty, 2011).

During CEP 820 (Teaching Students Online), I learned many new ideas and strategies for constructing and implementing online curricula for various students. One of my main focuses was studying and working with Google Classroom. Google Classroom is rather simple to use, and if a person is used to any Google application; it works very well. As a teacher, I love the easy ability to create announcements, assignments, questions, and reuse posts with just two clicks (or taps if using a touchscreen). Users of Google Classroom can also add to a Class Drive folder, Classroom calendar, Google Calendar, or add new topics on the left side of the page with virtually one click. "Classroom" is a very useful learning management system (LMS) for teachers and students alike.

I am passionate about teaching elementary students! Kindergarten through 5th grade students are simultaneously *so fun* and *so challenging* to work with on a daily basis. I love to see children's inquisitiveness and imagination on display each day. Kids can be so hilarious too. Every day I laugh (loudly) along with my students. However, elementary students are *really tough* to teach as well! Every student has their own unique personality, learning style, and life situation. In conclusion, my Master's in Educational Technology program through Michigan

State has taught me invaluable lessons that I will take with me now and into the future. I have studied and analyzed a wide variety of teaching, technology, and educational concepts that include design thinking, online learning, research methods, and the creation of a portfolio.

References

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