

During my teaching tenure, one of my responsibilities has been to introduce students to future careers and how to reach their career goals. One of the main messages I consistently provide is to always consider the role of technology in their career choice. I regularly challenge students to learn about careers which are reliant on science, technology, engineering, and math (STEM) skills as these careers will be the most in-demand and well paid. I also relate to students the influence of technology on careers which do not require a university degree. I have continuously asked students to prepare for a career shaped by technology. When I chose to pursue the Master of Arts in Educational Technology (MAET) through Michigan State, I did so knowing I was finally taking my own advice. As I complete my degree, I can now examine how choosing this program has changed and benefited me.

One major benefit of my experience has been the elevation and improvement of my educational technology skills in the classroom. To teach a computer applications class in Michigan, there is no more required than evidence of professional development and a certificate to teach at the grade level. Essentially, any certified teacher can be an instructor for this class. However, to be a genuinely good computer applications teacher, a teacher must have a high level of experience and skill with technology. Today's students are hungry for more than learning basic typing, word processing, and spreadsheet skills. My exposure to the wide variety of tools used in the MAET program provided me the confidence to use engaging and useful resources within the classroom setting.

There have been numerous occasions when I have introduced concepts and activities into the classroom that I used during the MAET courses. Specifically, I have incorporated SketchUp, litteBits, Audiotool, model making, iterative design, website creation, and many more. For example, I developed lessons for a weeklong project in my computer applications class based solely on SketchUp. I was introduced to this software during CEP 811 as a tool to create the optimal learning environment. I saw the potential for this software to be used as a design tool for nearly anything. Students become immediately engaged when they are exposed to the creative power of SketchUp. They enjoy creating three-dimensional objects and are enthralled with the design process, just as I was when I used the software. Without being exposed to SketchUp via the MAET program, I would not have been able to deliver high quality lessons with such a technical tool.

Beyond the classroom, I have grown into a role as a technology mentor to my fellow teachers. I have been able to provide information, resources, guidance, and feedback over a wide range of issues related to the use of technology in the educational setting. I would not have as great of confidence to step into this role if not for the time I have put into the MAET program. Throughout the entirety of my classes, I have been asked to dutifully collaborate with many other educators as we worked through projects of all sorts. While in-person, video conferencing, or through electronic communication, I continuously worked with others to improve our understanding of concepts and develop projects. I learned to effectively discuss and maintain dialogue while solving problems. All of these communication skills has now directly translated

into my professional workplace as I handle educational technology issues with other teachers with ease.

One of the most transformative classes I experienced in the MAET program was CEP 811 - Adapting Innovative Technologies to Learning. The course itself revolved around the “maker movement” and the concept of remixing. The maker movement and remix culture is a creative and progressive culture based on the fundamental aspect of play. Makers create just about anything in an effort to satisfy some want or need. The motivation can be as simple as figuring out what a given material or materials can do. Before beginning this class, my experience with the maker movement was nil. Because of my lack of experience on the subject, the learning curve was steep, but the content made the learning incredibly enjoyable.

Similarly to many kids growing up, I really enjoyed building with K’nex and Legos. My parents were sure I would go into engineering or architecture based on the amount of time I would spend building and the projects I created. However, there was a gap between what I was learning and building at home with my education at school. When I was growing up, STEM was not a priority in education and the maker movement did not exist. There was no reinforcement or motivation from my schools to further my learning or interest with what I had been doing outside of the classroom. As I progressed through CEP 811, I saw and experienced what I had missed out on. Since this course, I have become an ardent proponent of making, tinkering, and play.

There has been a direct translation of what I learned in CEP 811 to my teaching practice. This is mostly displayed in the computer applications class I teach. I have been able to teach sixth, seventh, and eighth grade computer applications and this has provided me a range of opportunities. The current technology standards set forth by the State of Michigan are outdated by any account and I have relied heavily on the ISTE (International Society for Technology in Education) standards to guide my instruction. These standards are relatively vague and focus more on STEM skills rather than specific targets. Based on the ISTE standards and my learning in CEP 811, I have created lesson based on making, play, and tinkering. For example, students have used computer programming to create games and tell stories. Based on my a project completed in CEP 811, we used my personal littleBits kit to create a variety of electrically based inventions. I drew on my inspiration from the course to develop lessons for students to create board game using the iterative design process. All the while, I have emphasized the importance of taking time to play. In turn, this has developed my students innate enjoyment of making into skills supported by their educational institution.

Another course which brought about great personal change and fully engage me was CEP 812 - Applying Educational Technology to Issues of Practice. From the beginning, my inquisitive mind was hooked, especially considering we focused so heavily on the importance of questioning during the course. I can divide the course and the effects of it into two separate influencers. The first being our reading and discussion on the importance of questioning in the classroom and the importance of questioning for life. The second influence relates to the

process and product of our “Wicked Question” project about rethinking teaching. As a result of this course, I grew into an more motivated educator focused on the impacts of my teaching practice.

As part of the course, I had to read from Warren Berger’s “A More Beautiful Question.” While the book is not dedicated solely to improving teaching pedagogy or improving content knowledge, it did emphasize the importance of questioning and the role questioning should have in the classroom. One of the most eye-opening concepts of the book revolves around the decrease in questions asked by students over the time they spend in the classroom. Young students asked hundreds of questions during the day to people all around them as they learn about the world. They are highly motivated to learn and eager to find answers. But, as students progress through life and through the school system, they lose the motivation to ask questions and do not develop the skills necessary to continue asking questions. I used this reading and subsequent conversation to refocus my energy in the classroom towards questioning. I have used a “Wonder Wall” in years past in which students are free to post questions in specific place which they want answers to. The questions did not have to be specifically content related, but they did need to be school appropriate. I have since modified the use of my “Wonder Wall” by taking time for students to develop a list of questions about a new subject and then select the question which interests them the most for them to post within the classroom. I then use these questions to help guide my instruction to cover the more complex questions posted by my students.

The major project from the CEP 812 course came in the form of a wicked problem. The problem addressed was rethinking teaching and it definitely was wicked. During the project, I worked with a group to develop an understanding of how can we teach teachers the skills necessary to create hands-on activities for students and to help students create their own questions to construct their own understanding. My small group created a planning document to ask nearly 100 questions to better understand the problem. Our understanding of rethinking teaching evolved as we incorporated new research and data. We developed our own survey designed to reveal information concerning teacher collaboration, inquiry-based learning, and educational legislation. All of our research and analysis was then distilled into a final project which provided a thorough and nuanced view of the problem. As a result of all this work, I was able to share the results with a wide variety of people. I found this project to be inspirational to me as I felt the project could be used to help shape district policy and even statewide practices. I feel confident about being able to develop solutions and discuss some of the most challenging problems of today’s educational world.

The final course which was truly impactful on me was CEP 800 - Psychology of Learning in School and Other Settings. This course came in the bundle of classes I took on campus during the summer hybrid session on campus. As a result of CEP 800, I was able to check two major boxes off my professional to-do list. First, I was able to attend my first educational technology conference and I was given the privilege of presenting to a group of fellow educators

at STEAMlab 2017. I continued adding to my professional skills as I was finally introduced to the grant writing process as part of the DreamIT project.

After hours of work developing a topic dedicated to a skill needed for STEAM success, I took part in a truly enjoyable presentation. The topic of Modeling Across Disciplines was developed by the group I was a member of – Mighty Ninja Collaborative Learners, or Ninjas for short. Our one hour presentation revolved around the practical usage of creating models and the benefits they bring to the learning and understanding. Each of my groupmates discussed how models can be used across content disciplines and covered very different methods to literally construct meaning. I have since used the model which I presented with in my own social studies classroom and continue to find ways to adapt models to be used when covering content. The experience not only provided me confidence in my demonstrative skills, but also pushed me to continue improving my teaching pedagogy.

In CEP 800, the DreamIT project was designed to develop a grant for educational technology specific use. I was influenced by my CEP 811 course in my grant subject as I proposed the inclusion of the littleBits Pro Library into my district. Normally, people are not keen on grant writing as the grant writing process can be lengthy and arduous. However, I looked forward to this project as I have had big ideas for my classrooms but never had the funding to put my ideas into place. Learning how to write a grant was hugely important for me as this skill can be transcendent within a school district. While I have not submitted my grant application yet, I remain inspired to do so and look forward to using my grant writing skills in the future.

The Master of Arts in Educational Technology program has been a tremendous challenge and has provided me with extraordinary results. My teaching, collaborative, technology, and leadership skills have all grown exponentially over my time in the program. I feel more prepared now to be effective in the classroom and know I have the skills and resources to continue being effective in whatever future roles I will hold.