

Learning & Becoming

I always considered the expression, “You don’t know what you don’t know,” to be quite trivial — it just seemed so obvious. Yet, I must admit, as I prepare to graduate with my master’s degree and reflect on how my studies have changed the way I think and perform my obligations as an educator, I cannot think of a more suitable phrase to encompass my gratitude for the experiences I have cultivated over the past two years. I am amazed by what I now know about the art of teaching, learning and the role technology can — and should — play in education. While my knowledge has expanded in ways that I never could have imagined, my self-awareness — particularly my ability to assess the effectiveness of pedagogical decisions that impact my students and recognize that the learning process never ends — has evolved tremendously as both a student and an educator.

I could make the argument that each of my graduate courses in the [Master’s in Educational Technology \(MAET\) program](#) at [Michigan State University](#) played an integral role in shaping me into the teacher I am today; however, CEP 800: Learning in School and Other Settings, CEP 812: Applying Educational Technology to Issues of Practice and CEP 816: New Media Literacies for Teaching and Learning Across the Curriculum, in particular, had a profound impact on my personal and professional development.

Optimizing Assessment & Retention

In education, there is an incredible amount of emphasis on developing ways to assess students’ understanding of subject matter and the methods in which teachers gauge whether or not students fully grasp and retain the information presented to them. That said, I have come to recognize that teachers cannot be expected to implement effective assessments if they do not truly understand the following: 1) the ways in which individuals learn, 2) considerations that must be made when students participate in a strategically designed learning experience, 3) what can be done to ensure learning retention and utilization in practical settings, 4) the optimal environment in which students learn and 5) how individuals can form habits to support their learning. These topics were explored at length in CEP 800, a course that challenged my assumptions about the learning process and inspired me to reevaluate the manners in which I teach.

Tasked with articulating my own personal theory of learning at the start of the course and then revising such upon completion, I was able to witness and appreciate the evolution of my learning. Despite five years of teaching experience, I had difficulty initially developing a concrete definition of learning. I experienced it, witnessed it, and yet, describing it was seemingly arduous. Nevertheless, as I would come to learn, my attempt to coin a definition of learning fell short given the multitude of factors that contribute to it. Learning is a process — an acquisition of knowledge — and it cannot be defined by solely describing an end result. Rather, I came to understand that learning begins with awareness, is activated and enhanced by schemas, is contingent on one's environment and only possible when ample time and attention is provided. Utilizing constructivism — Jean Piaget's theory on how individuals acquire knowledge — I spend a great deal of time developing and revising lessons that respect students' prior knowledge; I use analogies and examples in my instruction that can tap into such, helping students make relevant connections to life inside and outside of school.

Further, CEP 800 urged me to think critically about the current paradigm of most public education districts and analyze whether or not the format of highly structured, subject-specific courses motivate students to learn in the first place. The course also helped me assess the environment of my current classroom, recognizing that there has to be a reason why the most forward-thinking companies — e.g., Google, Apple, etc. — design their workplaces with bright colors, collaborative workspaces and creation tools that welcome creativity and spark innovation. This begged the question, 'Why aren't schools modeling their surroundings with a similar approach?' Taking this into consideration, I proposed a [redesign of my classroom](#) and am currently in the process of creating and evolving a nurturing environment conducive for optimal learning.

In addition to positively impacting my professional responsibilities, CEP 800 had a profound impact on my general productivity and well-being. Studying and enacting Charles Duhigg's "cue-routine-reward" habit-forming process, as discussed in his book, [The Power of Habit](#), I was able to become a more mindful, patient individual. I now begin each day by taking part in a 10-minute guided meditation — a habit that has helped improve my focus and ability to be empathetic toward my students' needs and astutely aware of my own.

Fostering Curiosity, Creativity & Problem Solving

Serving as a focal point in CEP 812, and one of the favorite pieces of literature I read during my graduate studies, Warren Berger's [A More Beautiful Question](#) was both eye-opening and inspiring. *A More Beautiful Question* expresses how embracing questioning in the classroom can support curiosity, maximize engagement and help students foster a love for learning that extends beyond the classroom — one of the greatest challenges that educators face. Since completing the course, I have refined my teaching practice to design inquiry-based learning opportunities for students that offer autonomy and choice as often as possible. For example, in the STEM-related course that I teach, each week I offer students the opportunity to propose and discuss current and emerging technology trends that they have come across — purely based on their curiosities. We discuss three facets of the technology: 1) how it relates to their lives, 2) how such can be improved and 3) how it relates to their learning. Albeit a brief segment of our class, the activity gets students excited to share ideas and urges them to think innovatively about the world we live in.

CEP 812 also encouraged me to explore ill-structured problems that exist in education and, while these problems are dynamic and seemingly impossible to solve, by dissecting relevant key issues and variables it can help us understand the necessary components and take actionable steps toward forming a solution. To practice such, fellow classmates and I utilized Berger's "Why/What If/How" inquiry process to research and form [a solution to Rethinking the Role of Educators](#). The project helped me hone a wealth of skills, including critical thinking, researching, data analysis, planning, collaboration and proposal development, using a variety of digital tools. Further, the project revolutionized my understanding of how teachers must take on the role of facilitators in a student-centered learning environment and make instructional decisions rooted in [TPACK](#) — a framework developed by Drs. Punya Mishra and Matthew Koehler, for optimal technology integration, which respects the intersection of technological, pedagogical and content knowledge. TPACK would re-emerge as a major focal point throughout my graduate studies and remains to be an incredibly valuable consideration in my daily teaching practice.

In regard to the accessibility and influx of content consistently being consumed by individuals, CEP 812 helped me reevaluate the [filter bubbles](#) within which I typically find myself perusing

information. To regain control over the content I consume, I began using [Feedly](#) — a content curation tool — to create custom, categorical streams of information from a variety of different sources — i.e., blogs, news media, publications, journals, etc. The course exposed me to meaningful critical thinking tactics and productivity practices, which I continue to utilize in my lesson development and execution.

Utilizing & Designing Resources Thoughtfully & Strategically

As new media text and tools become increasingly available and accessible for educators to utilize in their instruction, so do the demands to utilize them. From top-down leadership tactics to the allure of integrating novel technology, educators are being bombarded with different types of digital tools that are designed to support student learning. CEP 816 urged me to recognize that the question educators should be addressing is not necessarily *what* types of new media text and tools should be used, but rather *if* and *how* educators should use them.

One of the greatest assets educators possess is the ability to determine whether or not students ascertain information being presented to them. As such, CEP 816 allowed me to explore the concept of cognitive load — the notion that individuals can only withhold a finite amount of information in their working memory. Whereas I used to design lessons that included what I deemed to be meaningful activities and assessments, I now think critically about the level of difficulty of the information being covered — if there needs to be scaffolding, modeling, etc. — the tools I can use to deliver the instruction and assess students' learning, and the manner in which I teach the content. This again ties back to TPACK, encouraging educators to respect the intersection of technology, pedagogy and content knowledge.

CEP 816 debunked quite a few fallacies that I believed in — one of which was that, when showing students a video, captions should always be turned on to provide information in multiple modalities. On the contrary, this can cause a split-attention effect, hindering students' ability to focus. Instead, I now spend ample time not only seeking effective multimedia content, but also creating my own. A tool and skill that was fostered throughout CEP 816 and is now consistently integrated into my teaching practice is *screencasting* — a narrated video recording of one's computer screen as they perform specific tasks. I have utilized screencasting to create a multitude of "how-to" videos, including iMovie tutorials for my Multimedia students and

Tinkercad (3D modeling software) tutorials for my Engineering students. Screencasting allows me to provide students with on-demand learning resources, helping them become self-directed, independent learners.

For my final project, I designed my own [unit on digital footprints](#), as part of my Digital Literacy, Citizenship & Safety course, using [Google Sites](#) and a variety of other tools including, but not limited to, [EdPuzzle](#), [Padlet](#), [Garageband](#), [Screencastify](#), [Google Keep](#) and [Popplet](#). The project served as an opportunity to utilize TPACK, multimedia learning theory, cognitive load theory and multiple design principles to produce meaningful, personalized, objective-oriented activities. My favorite part of this project was having the opportunity to strategically combine elements from various digital tools to create lessons — e.g., using EdPuzzle to slow the pace and disperse questions throughout an introductory video on digital footprints, Padlet to host class discussions, Google Keep to have students take collaborative notes and Garageband to record an engaging introduction to an activity for students. As a whole, the course has inspired me to continue making conscious, strategic design decisions and implement them accordingly.

Encouraging Independent Thinkers & Makers

In addition to the three aforementioned courses, another memorable topic explored in my graduate studies includes *maker culture* — the concept that individuals are innately “makers.” By offering students the opportunity to be imaginative risk-takers and work on hands-on activities, educators can harness creativity, problem-solving and collaboration skills which often unnoticed in traditional educational settings. Implementing such practices in my classroom, I provide my Engineering students with design challenges that urge them to utilize content knowledge, 3D model prototyping, and raw materials to produce a variety of creations, including bridges, wristwatches, smartphones and even their own ideal classroom design. I feel humbled yet disheartened when students express their enjoyment but also how their other courses do not offer them such autonomy. How are we supposed to create lifelong learners when students are provided limited opportunities to be creative? This is something I have pledged to make a focal point in my teaching practice and have emphasized in all of my graduate coursework in the MAET program.

Reflecting & Looking Forward

Comprehensively, my graduate studies have helped me to develop into a stronger teacher, a more critical thinker, a confident creator, and a tenacious learner. The forward-thinking, passionate instructors and classmates I have had the privilege of collaborating with and learning from have inspired me to take pride in my work and never settle for complacency. I cannot believe how fast the past two years have gone by, as it seems like only yesterday that I embarked on my first graduate course. It is yet another reminder to live in the moment and appreciate all of life's learning experiences. As I prepare to graduate from the MAET program, I know I will take with me not only a vast amount of knowledge, but also a greater desire to continue to learn and evolve amid the ever-changing educational and technological landscapes.