

Synthesis of Learning:

The Connection Between Progressive Education and 21st Century Skills

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When the first generation iPad was released, I was excited by the possibilities of its use in the classroom and became one of the first teachers at my school to pilot iPads in my classroom. Because the iPads arrived in October, there was no time to play with, explore and learn about them as a teacher before students started using them. The app store was overwhelming and reviews were limited so I loaded each iPad with what I thought would be age-appropriate apps to engage my young learners. At first, students used the iPads to consume content. They often worked alone as they read ebooks, watched videos, and practiced math facts or spelling skills through games. Although my students were engaged, I knew these devices had more potential to impact student learning.

The next year, I discovered an app called [Book Creator](#) that changed my thinking about technology integration. Using Book Creator, students designed digital books, collaborated with peers and shared their ideas with an authentic audience. Using photos and audio, students demonstrated their understanding and expressed themselves creatively through design and content. This one app empowered student voice, creativity, collaboration, and communication. I began to recognize the iPad as a transformative tool that could support my learning goals and my progressive education approach to teaching. I was inspired. iPads were no longer just a tool to passively consume information. Students could use them to collaborate, create, and share their learning in dynamic and engaging ways. This was my "a-ha" moment. I continued to explore and try new technologies and apps in my classroom that could have a similar impact. Purposeful technology integration that supported my progressive education pedagogy became a goal and a passion.

As iPads were added to each Primary School classroom, I watched other teachers struggle with the technology and grow frustrated by its purpose. Teachers had little professional development and the iPads were not transforming their teaching or student learning. Instead, the iPads were substitutions for what teachers were already doing with paper and pencil. I became an unofficial teacher-leader as I helped colleagues integrate technology into their curricula in more meaningful and authentic ways. I enrolled in the [Master's of Art in Educational Technology](#) (MAET) program at Michigan State University because I wanted to deepen my own learning about effective and meaningful technology integration and find better ways to

support colleagues. A year into the program, my teaching role shifted from a second grade homeroom teacher to the Primary School Computer Science Teacher and Technology Integration Specialist for Nursery-Grade 2. As I faced new challenges and opportunities, the MAET program took on a new significance and focus.

The [University of Chicago Laboratory Schools](#), founded by John Dewey in 1896, has been my teaching home for 20 years. Dewey's progressive education principles have shaped my approach to teaching and learning and are embedded in my curriculum and the learning life of my students. The Laboratory Schools value experiential learning where children are active and engaged as they explore their own ideas, questions and interests. Teachers are encouraged to design learning activities that are authentic and meaningful, with a focus on choice, creativity, collaboration, problem-solving and critical thinking. The MAET program helped me discover the strong connection between this progressive education approach to teaching and learning, and the skills required for student success in the 21st century. A few classes highlighted this connection and have influenced my thinking about technology integration, my teaching practice and my role as a technology leader.

A recent [report](#) from the World Economic Forum (2015) describes,

"To thrive in a rapidly evolving, technology-mediated world, students must not only possess strong skills in areas such as language arts, mathematics, and science, but they must also be adept at skills such as critical thinking, problem-solving, persistence, collaboration and curiosity" (p.1).

It was with this idea of how to best prepare students for the future and my progressive education lens that I began [CEP 810, Teaching for Understanding with Technology](#). After reading Bransford, Brown and Cocking's (2000) *How People Learn: Brain, Mind, Experience and School*, I developed a theoretical foundation for learning and understanding and explored one definition of learning in my first [essay](#). I examined mindsets and dispositions needed to support 21st century learners and allow teachers to teach effectively with technology. As I reexamined my own teaching practices, I was inspired to expand my Professional Learning Network (PLN). I learned that through networking, knowledge and experience are shared, relationships are formed, and meaningful conversations and collaborations are possible. Today, my PLN helps answer questions, inspires ideas for curriculum, and gives me an opportunity to reframe my own thinking.

CEP 810's [Networked Learning Project](#) taught me that, as an educator, it is important to put myself in the role of learner. In the process of learning something new, I experienced frustration, made mistakes, and made adjustments based on reflection. This is what I expect of my students and I became more empathetic to their learning frustrations and setbacks. The final product (that my young students worry most about) is not what is most important. Instead time, energy and focus should be spent on the process of learning and how to make it most meaningful. The Networked Learning Project continues to serve as a powerful reminder about the importance of the learning process. How students experience learning and the process are essential considerations in assessing student learning and understanding.

Finally, CEP 810 introduced me to the [Technological Pedagogical Content Knowledge](#) (TPACK) framework. TPACK changed the way I approach technology integration. In my new roles as a Computer Science Teacher and Technology Integration Specialist, I am starting from scratch as I redesign the curriculum and support teachers as they use technology with their students. While I still have a strong understanding of good pedagogy, I approach teaching with a different lens because I am no longer an expert in the curriculum like I was when I taught second grade. Each new lesson is a work in progress as I reflect and iterate. TPACK is even more important to me now as I design curriculum and make new decisions about technology integration. It helps frame my decisions and supports best practice as I support colleagues.

[CEP 811, Adapting Innovative Technologies in Education](#) was a favorite course in the MAET program because it provided one of the strongest connections to progressive education. I explored the Maker Movement, constructivism, and reimagined teaching practices and learning spaces to foster 21st century skills.

The idea of "making" isn't new in educational theory and it's one of Dewey's foundational ideas. The power of learning lies in the experience, in the "doing." When the learner is active and engaged in the process of learning, he or she is able to construct meaning. As Sylvia Martinez and Gary Stager (2013) write in *Invent to Learn*, "Students engaged in direct experience with materials, unforeseen obstacles, and serendipitous discoveries may result in understanding never anticipated by the teacher" (Chapter 3, Section 4, para. 2). Children are self-directed. They play, design, innovate, make mistakes, modify, and adjust their thinking. Once something is created, children are eager to share and proudly take ownership.

In CEP 811, I became a “maker” as I learned to use [Circuit Stickers](#) and later repurposed them in a way that supported my curriculum and my second grade learners. It was an innovative, hands-on learning activity that gave me my first experience in applying the Technological Pedagogical Content Knowledge (TPACK) framework. When I began this class, I knew little about Maker Education. I felt nervous and intimidated and thought, “How can I possibly teach this to my students?” That's what Maker Education is all about. Through CEP 811, I learned that it's about not knowing all the answers. It's about the process involved in collaborative problem-solving. Now I am excited to learn right alongside my students. I will embrace the process and the mistakes that go along with it, just as I encourage my students to do! Maker Education is empowering and it is something that should be a part of every child's experience.

Another class that focused on the importance of the learning process was [CEP 817. Learning Technology Through Design](#). Following Stanford's [d.school Bootcamp Bootleg](#) framework, I defined a problem of practice that was relevant to my teaching and worked to find a solution. Each step of the Design Thinking process (empathize, define, ideate, prototype, and test) required me (the designer) to clarify my intentions, narrow the focus, reframe the problem based on user feedback, generate new ideas, and modify after prototyping and testing. This hands-on work gave me an appreciation of the process and its challenges. It also helped me to recognize the benefits of the design process on student inquiry, problem-solving, and learning. Through active engagement in the design thinking process I realized that, as a teacher, I am already a designer. When developing lessons or activities for my students, I consider student learning needs, strengths and challenges. With empathy, I differentiate. I reflect, modify, and make adjustments. Each new year and each new group of students bring new challenges and new iterations of the same lessons. To me, this is the art of teaching. It is a continuous cycle of testing (lessons/curriculum) and my users (students) are automatically built into the process. I used to think that design was all about the product or the outcome. I now understand that Design Thinking is foremost about the learning that occurs through the process. It's a process that requires intention, focus, time, creativity, and empathy for the needs, motivations and perspectives of the users. If done well, it can help us to find meaningful and authentic solutions to even the most complex problems and support our students along the way.

In my new role as a Technology Integration Specialist, I was eager to acquire new ideas and strategies for how to be an effective technology leader in my school. [CEP 815. Technology and Leadership](#) informed my understanding of what it means to be

an effective technology leader and how to best synthesize complex issues related to teaching, learning and technology to make sound policy decisions. I examined different leadership styles, ways to communicate with stakeholders and the importance of building relationships. Through the process, I identified my own strengths and personal constraints that might impact my leadership work with others. As with all my MAET courses, I approached assignments and projects with the intention of adding meaning to my own teaching context and challenges. In one such activity, I crafted a vision statement for educational technology integration and a professional development model for teachers. My [vision statement](#) speaks to an authentic problem of practice at my school and I plan to present it to my administration. Although I have more to learn, CEP 815 has given me the confidence and skills to affect positive change at my school in my new technology leadership role.

The MAET program has provided an important foundation for my new roles and pushed my thinking about the way I approach teaching and learning with technology. I now recognize that the skills and mindsets my students need for future success echo the progressive education principles I value. Technology is always changing. We must adapt and lean into change with a mindset of openness, flexibility, and growth. Technology integration is not about teaching a specific tool or app. Instead it's about an approach to using technology in new, innovative, and purposeful ways that wouldn't otherwise be possible. As I reflect the MAET program, I am reminded of the importance of the learning process and what students experience as they create, reflect and share. Students who have developed competencies in collaboration, creativity, problem-solving will better be able to face new challenges and opportunities with persistence, curiosity and initiative. My experiences in the MAET program have helped me refine my beliefs about teaching and learning. I also recognize now that Dewey's principles are just as relevant, if not more important today, as technology and change become more ubiquitous.

References

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