"Life is a journey, not a destination.'" *- Ralph Waldo Emerson*

Technology is Changing the Course
by: Elizabeth Collins

As I sit at the cusp of the mountain that is completing my Master of Arts in Education, I must stop and look back to the initial point I have travelled from and also peek at what is just over that horizon. It is a beautiful scene and I must pause and take it in. If it had not been for technology, I would not be sitting here in awe today. It changed how I got here and it will certainly change the road ahead. Come and sit with me for a moment as I explain how technology is changing the course.

Technology changed the course of my life. I began the program knowing I wanted to be involved with technology and learning because I saw the opportunity that technology brought to my life. I was a young mother, my husband and I had our first child when I was only 19 years old. She was an amazing gift, but one that many felt would diminish my opportunity for success. You see, these were my elders who had experienced in their lifetime that becoming a young parent meant giving up on many things. However, when I began college hybrid classes and online classes made it possible for me to still achieve the dreams I had set for myself. Despite the odds, technology changed the course of my life.

Technology changed how I took courses. Whenever possible I would register for online or hybrid classes. Not only did it fit my schedule better, I loved the way online classes were designed. Most of my online classes were self-paced. This really worked for me because I could work ahead when I had time or take a few days off from classes if I needed. ED 800: Concepts of Educational Inquiry, EAD 860: Concepts of a Learning Society, and EAD 882: Seminar in Education Administration were all self-paced courses. This type of course really forces an individual to learn time management skills. I enjoy online classes. The collaboration

and learning is very different than a face-to-face class.

Technology changed the purpose of the course. Almost immediately all of my courses began to have dual roles in my education. The primary part was the actual learning of the subject matter. The second was the learning of the integrated technology. I enjoyed learning the subjects, but even more so I loved learning about the different technologies that were integrated by my instructors. For example, in one of my classes at MSU we had to write a poem and then create a video short for it. I had never used iMovie or MovieMaker prior to that course. I felt so involved in the project; I spent hours honing my skills until I felt my video was just right. I felt a strong sense of pride in the finished product, much more than I had felt about my original poem. It just brought it to life and that is how technology is changing many courses. It is bringing them to life in a way that requires the use of multiple senses. Not only were courses different in their delivery, but each course itself changed the course of my thinking.

Technology changed the course of how I thought about teaching. CEP 820: Teaching K12 students Online, allowed me to develop a better sense of the differences in teaching students online versus in a traditional classroom. I learned about the roles and responsibilities of online learners and teachers, how to build a virtual classroom and a Learning Management System, how to assess student learning, and about virtual classroom management. These were things that I felt I knew a lot about from my teaching experiences, but they are changed in an online environment. The importance of teaching students about using the internet and web safely and also about netiquette are now fundamental aspects to my teaching pedagogy. This course was the roadmap for me in developing a better understanding of what it meant to teach students in a virtual world. It literally changed the courses I plan to teach because I knew after completing this course I want to be part of a virtual learning environment.

Technology changed the course of how I lesson plan. CEP 816: Teaching and Learning Across Curriculum introduced me to the concept of creamy versus chunky learning. Creamy learning is

linear learning in which students read a text, answer the questions and then move on to the next chapter. This is how textbooks and worksheets were designed to work and was the standard teaching model for a long time. Technology has created chunky learning in that teachers can now piece together lessons in very different ways. Instead of a textbook, the learning now comes to life in a presentation. Within that presentation teachers can embed links that allow me for expansion on the subject. Video, audio and other forms of multimedia can be added too. Suddenly we have lessons that are engaging and introduce students to the technologies we are integrating.

Technology is changing the course of how students learn. In a traditional classroom the teacher is the head of the class. The teaching style is a one-to-many approach where the teacher holds the authority and the knowledge. Students must learn from what the teacher presents. However, technology has now allowed students to take control of their learning. The answers to many questions are simply a click away for many students. Some worry that this is making our students stupid. In ED 800: Concepts of Educational Inquiry, I did a great deal of what the class title suggests, inquiring into educational concepts. An article that I read in this course was Nicholas Carr's "Is Google Making Us Stupid?" in which the author suggests that because information is so readily available, people no longer care to become experts on topics because they can merely Google it. I disagree with Carr because I think that the ease of access actually allows students to research more. I remember writing papers when I was in high school and I was allowed to go to the library and check out three to five books that I would use for research. Now when students are tasked with research they will more than likely visit dozens of pages and have to make informed decisions about which sources to use. I believe this is allowing students to work smarter.

Technology is changing the course of the achievement gap. It is unfortunate that in our nation such a large achievement gap exists between the lowest and highest achieving students.

Instead of the achievement gap continuing to broaden, technology is allowing it to be closed. In CEP 850: Tech, Literacy for Mild Disabilities I was introduced to many assistive technologies that will help students who have mild disabilities. Even something as easy as a text to audio convertor can help students who struggle with reading comprehension. As a teacher I want to do everything I can to help students achieve. I am willing to spend extra time and effort with any student, but as much as I am willing to do that, the assistive technologies that exist can provide the student so much more than a tutor or even I can provide. DragonSpeak is an assistive technology that takes notes by changing audio into written text. This tool alone can give a student the ability to pay attention as I am teaching because they are not struggling to gets the words on paper. The tech tools we learned in this class are priceless when it comes to helping to see all students achieve. They can equalize the learning experience for a wide variety of physical handicaps; hearing and vision impaired students along with students whose actual classroom presence may be problematic for them.

Technology is changing the course of student engagement. In CEP 883: Psychology of Classroom Discipline we researched the TARGET model of classroom management. Within this research we learned a great deal about what really could be effecting student motivation and learning in the classroom. One major problem is that teachers often teach to the middle. By teaching to the middle, the students who need more help fall behind and the students who excel are bored. The solution to this is technology because it allows for differentiated learning. Students can work at their own pace, thus students who need more time to grasp a concept can take the time do so before moving on. Students who excel can still work at their own pace, but the teacher is aware of it and therefore can provide additional information to those students that will keep them engaged. This class taught me that by differentiating the learning and moving away from a rote teaching style, students will be motivated and engaged in the course. I fully believe this will close the achievement gap because the teacher can more closely monitor each

student's progress and provide guidance. No student should ever be left behind when the class moves to a new concept. This method allows the teacher to layer and deepen the material according to the needs of the student, not just progress to the next topic.

Technology is changing the course of the American Education System. In EAD 882: Seminar in Educational Administration I developed a strong understanding of the new era of education Americans are in as a result of technology. There was a time in the American education system in which only the elite had access, now access to information is plentiful. Information used to be printed in textbooks that were outdated shortly after they began being used. But the cost was so high that schools could not afford to replace books each year. Technology is changing the education system because textbooks are being replaced with iPads, chalkboards are being replaced with SmartBoards. Encyclopedias and Dictionaries are moving from the shelves to the computer. Underwriting these changes is not always the burden of the taxpayer, corporate sponsorship is increasingly common. All of the changes to the education system are necessary in order for students to be productive and competitive in the 21st century. Technology is changing the course of society. EAD 860: Concepts of A Learning Society illustrated that society is moving to a learning society in which education is extended beyond formal learning into informal learning that is lifelong. People in society can continue to learn and grow throughout their lifetime. A tremendous amount of information is available to them all with the stroke of a keyboard.

My great grandmother, Catherine Niehardt Puffer, taught K-12 in a one room schoolhouse in South Boardman, Michigan in the early 1900's using a chalkboard and books. A century later the one-room, many level concept has evolved to a massive virtual classroom with unlimited tools and resources. Weblogs, Wikis, Podcasts, RSS feeds, Social Networks, Twitter, Flickr, Skype and live streaming are technological advancements which can be used to enhance the learning experience. These are exciting, engaging tools adaptable to countless technological

devices. Familiarity with them begins before any formal schooling starts. These types of advances stimulate a basic desire in students to learn to communicate, written skills are increasing exponentially along with the use of each product. Any hobby can be explored online; art, photography, travel, all can be experienced without ever changing from your pajamas or leaving the breakfast table. Students can discover what appeals to them, discover whole communities with the same interests and find tutorials and educators to broaden that interest. Online learning and sharing of knowledge can be learner-centric or devolve from the educational system. Technology and learning is a symbiotic relationship, using the technology results in increasing the learning aspect. Using these technologies and the inherent devices also prepares the user for their applications in future employment, and the possibilities involved in developing new technologies and applications. While the course I followed was not the typical one for my parent's or even my generation, I believe it to be the course of the future and am grateful to have taken the less travelled road.

Two roads diverged in a wood, and I -
I took the one less travelled by,
and that has made all the difference

- Robert Frost

http://youtu.be/CnQ8N1KacJc