

**Rethinking education in the age of technology:**

**The digital revolution and schooling in America**

EDUC 5306: Educational Applications of Technology

This essay is a contribution of the following team members:

Caroline Perry

Gloria Chen

Deridre Craft

Janelle Whitson

Estefani Velasquez

Melissa Perez

November 24, 2013

Dr. Wilson

## Rethinking Education in the Age of Technology

Many innovative technological techniques of teaching have shaped our current system of education. This digital revolution in the classroom has been known to improve the quality of learning throughout time. Teaching with technology is not a new idea. The use of technology to educate the masses has been around since the invention of the printing press. Education evolved from the apprenticeship model of education to the universal schooling model to meet the needs of the different societies in a different time era. This traditional universal school model has not kept up with the current technology, making life more difficult for teachers as new skills are required to integrate technology in the classroom. However with the rapid, ever changing technologies and social media revolution, education has to evolve in order to produce life-long learners. Currently there are a number of opportunities developing for learning alternatives such as homeschooling, learning centers, workplace learning, and distance education. More and more people are taking charge of their education by taking advantage of the latest technology as platforms of learning that enables them to learn different technologies on their own terms.

In their book, *Rethinking Education in the Age of Technology*, Collins and Halverson (2009) focus on two main arguments regarding the advancements of technology. The first argument is the job market demands technological knowledge of spreadsheets, statistical programs, e-mail, creating social networking sites, making presentations with PowerPoint, etc. So, competent individuals must have expertise in technology and keep up with the different technology advances to stay competent. Students need to be prepared to meet the technological demands of the job market; thus making it necessary to transition schools to embrace technology. The second argument is that schools should take advantage of the capabilities of technology to enhance the way teachers educate learners and reshape education. Moving from a traditional

model to a life long learning model can be accomplished through customization of what students want to learn, teachers providing 'just in time' learning opportunities to solve complex problems, student-digital interaction, and control of the learner to direct their learning in the direction that interest them. In other words, there is more than one way to reshape education.

The authors state, "School fosters just-in-case learning while technology fosters just-in-time learning" (Collins and Halverson, 2009). Skeptics believe schools are designed to teach students the things they need to know in later life. They want to focus on teaching the knowledge that civilization has accumulated over the course of history, rather than the latest technology innovations. The amount of information available today is astounding; therefore, there is a need to change the goals and direction of schooling. Technology enthusiasts see an entirely different approach. They believe, students should learn what they need when they need it. Technology advancements have promoted higher education in several forms: distance education, adult education, learning centers, videogames, and television. People are now able to take a class that is being instructed all the way from France in the comfort of their own home. Homeschooling has changed as well. Parents are adapting to lecturing for fewer hours and having online instruction educating their child(ren). Data over home schooling shows that students are excelling more academically and standardized testing compared to those in public schools (pg. 67). The gains seen with technology in education are focused greatly on the individuals. Students are engaged greater in what they are learning when technology can cater to their interests, predispositions, and learning needs. There is also a greater personal ownership that comes when you experience frequent and individual successes that are seen with technology, pushing the learner to become the best-educated person they can be.

Schools are faced with the task of balancing educational policies, local and national, with learner needs. Schools and teachers are under pressure to meet standards set before them while making sure that classroom learning is engaging and interactive. “Kids today spend over 6 hours per day interacting with television, video games, the Internet, instant messaging, email, and other media” (pg 113). For educators, this means adapting the system to meet these students in this digital world, including assessment. Some possibilities of doing this are through national certifications and skill-based assessment systems, which target the individual’s career goals, computer –based testing, and new technological curriculum that would place students into a curriculum path to assist them in reaching their goals, in their individual interest areas. The challenge remains of creating equity in education even with these advancements of technology in education.

The authors also discuss the need for exposure to technology coming from both school and home. There are many ways parents can bridge the technology gap at home. One technique is for parents to play video games with their child. Parents can play games like *Madden 2005* and “raise critical questions about strategies and the purpose of game-play” (pg. 123). Video games can produce critical thinking skills, problem solving skills and promote virtual communication for children if they are asked the right kinds of questions. Another way parents can bridge the gap is by encouraging interactive groups online that are based around a common interest. An example might be a gaming community that discusses a particular game, but the community can be surrounded around anything. One concern about parents encouraging so much time online is that it will take away from reading. While it could take away from reading a hard copy of a book or text, the child will be reading online. In an online community while talking about a common interest, the reading will lead to further discussion and children will be exposed to new

vocabulary. If parents use technology at home and can learn the right questions to ask, children will learn from technology and develop crucial skills for the future.

Some areas of education that may have to be reevaluated are how we learn, what should be learned, how to increase student's motivation, career paths, transition from learning to work, educational leadership, and government's role. It is no longer a requirement to be physically present in a classroom to receive an education (as clearly demonstrated by this course). Schools now seek out resources that will enable us to develop the skills necessary to have a smooth transition to the work force. Technology facilitates the research, sharing, and creation of information, therefore changing the way we go about our career and facilitating the change of a career. As a result of our technology rich generation, the education system has to reconsider everything about it, from how students must use technology in class, to how the head of the education system must be familiarized with this technology rich generation.

This book has sparked different reactions by other authors. Jenna McWilliams, from *eLearn Magazine*, was not very fond of the authors take on the technology changes in our world. McWilliams says, "I'm not afraid to set myself firmly in the enthusiasts' camp, though I take issue with the authors' depiction of us as overwhelmingly optimistic, utopian idealists" (McWilliams, 2009). McWilliams (2009) thinks that Collins and Halveston approach the technology push as enthusiasts, but their reasoning is all wrong. The authors believe that technology is creating equality, and that regular schooling is creating inequality. McWilliams believes the opposite. Lower socioeconomic groups might not have access to technology like a higher socioeconomic class might have. McWilliams criticizes the authors approach to understanding technology from inside out, "but it's impossible to understand the technologies

from the inside if you don't, won't, or can't embrace the valued mindsets emerging around those technologies, and this is a step they appear unwilling to take” (McWilliams, 2009).

Overall, *Rethinking Education in the Age of Technology* is a source of great information about important changes and trends in technology. Other critics have mixed reviews about the book but agreed that the book might bring change to the current educational practices.

Hernandez- Ramos (2010) believes that this book, ‘has the potential to significantly change attitudes and opinions, and perhaps even influence policy decisions’ (p. 609). However, Hernandez-Ramos criticizes the authors for the lack of examples of tangible projects that could be used as models for the implementation of their ideas and fails to give specific suggestions for what a policy should look like. He states, ‘their suggestions are at too high a level ... to be of much practical use to decision makers (p.611).’ Yet he recognizes that this criticism might be ‘unfair’ as he states that the book, ‘is definitely not “reforming education for dummies” (p. 611).’

Another author, Dr. Scott McLeod (2010) had an positive opinion of this book. Because the book blends a history of education with the great potentials of technology, McLeod states that, “This book is a worthy addition to any school administrator’s nightstand and should be required reading in university educational leadership preparation programs or teacher education programs’ history of education courses” (McLeod, 2010). McLeod states that the authors did a good job of arguing for both the technology enthusiast as well as technology skeptics. He goes on to say that this book hits on some of the biggest complexities and difficulties that educators are currently facing today, which is often times overlooked by technology enthusiasts. McLeod agrees with the authors on other issues as well including the great and growing equity issues.

Overall McLeod definitely points to the importance and relevance of this book to technology and educators today.

We found it interesting that students who are being homeschooled are more academically prepared than those in public schools. The book raised the concern that of young adults taking online courses having higher risks of dropping out of the class. So, here we began to question the use of online courses. Although it was stated that online classes are beneficial for employee training, adult education, and homeschooling, it could have elaborated more on ways to decrease the number of students dropping out of online courses in distance education. The discussion of a loss of social cohesion was not anything we had thought much about. While this idea of individualized education through technology seems to be a solution for meeting learners needs, we still see that the actual implementation of such a system is tricky and does tend to lead to further gaps in equality for education as discussed in the text.

The book encourages parents to get involved in the technology use at home. It is interesting and inspiring that the author wants parents to ask thought provoking questions that will help develop critical thinking skills. Technology is a part of our world today and teachers and parents need to do everything they can to teach children the correct and most efficient way to use it. We also acknowledge there still the great dilemma of the technological inequity that has slowed down the change and limit the possibilities of practical use of technology. Furthermore, we liked the fact that it did not stop at the basic. It went as far as touching upon the education system, in that leaders should take into account the role of technology in the classroom and in students. Overall, the book shed light on some very interesting points that really makes the reader think about technology and its role in the world today.

## References

- Collins, A. & Halverson, R. (2009). *Rethinking education in the age of technology. The digital revolution and schooling in America*; New York, Teachers College Press
- Hernández-Ramos, P. (2010). A. Collins, R. Halverson: Rethinking education in the age of technology. The digital revolution and schooling in America. *Educational Technology Research & Development*, 58(5), 609-611. doi:10.1007/s11423-010-9159-0
- McLeod, Scott. (2010) Book review – Rethinking education in the age of technology. *dangerously irrelevant*. Retrieved November 22, 2013, from [http://dangerouslyirrelevant.org/2010/06/book-review-rethinking-education-in-the-age-of-technolyhtml?wpmp\\_tp=1](http://dangerouslyirrelevant.org/2010/06/book-review-rethinking-education-in-the-age-of-technolyhtml?wpmp_tp=1)
- McWilliams, J. (2009). Book Review: 'Rethinking Education in the Age of Technology'. *eLearn Magazine, an ACM Publication*. Retrieved November 22, 2013, from <http://elearnmag.acm.org/archive.cfm?aid=1656386>
- Book Trailer: [https://docs.google.com/presentation/d/1QIUUISVe5VYTA7\\_-puRQHV4vj8FajJNm-8exPZi6uBo/edit?usp=sharing](https://docs.google.com/presentation/d/1QIUUISVe5VYTA7_-puRQHV4vj8FajJNm-8exPZi6uBo/edit?usp=sharing)