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EDTECH 592
Reflection/Research Paper

Creating Meaningful Nodes of Learning and Existence through Education Technology

Introduction

Before starting the Boise State MET program I have had a been accustomed to hearing certain jargon from this world such as 21st century learning, technology integration, and interactive learning. However, this class created a much deeper understanding of education technology and the perspective of integrating technology at various levels of the system from IT professionals in EDTECH 552 and learning how technology can be integrated school-wide in EDTECH 554. The culmination of my experience in this program is this portfolio and it was quite astonishing to uncover all of the work that I have completed for this program. In total, I would say that this program is an in-depth survey of the world of education technology. However, it is just a peek into the expansive and changing world of education technology. I understand that after completing this masters program my learning does not stop here. I hope to continue my pursuit of understanding the different ways that technology is affecting the learning and development of young people, especially the so-called digital natives, of which, my one-year-old child be a part.

The crucial learning that has taken place in this program revolves around understanding the concept of connectivism and the idea that the chaotic, yet

connected nature of the digital world create the potential for an infinite number of networked, virtual learning experiences. The idea that “actionable knowledge” can exist outside ourselves in a network environment (Siemens, 2000). I find this idea fascinating and understand how relevant this is to the modern consumer of smart devices. However, I am critical of our increasing dependency on devices to organize our learning, thinking, and processing. It is also important to note the effects of devices on levels of empathy, critical thinking and sustained focused on young people (Bauman, 2014). With these considerations, I am certainly not anti-devices in the classroom. I think that they are a marvelous tool for learning, organization, and access to information. In my experience, devices help learning and teaching, but they do have their cost. I will continue to understand more about this relationship as I continue in the teaching profession.

Lesson One: Reflections on Learning

I would like to focus my response to this question by centering on one class that I took during this program that had an impact on me. That would EDTECH 543, Social Networked Learning. The course began by asking us to connect through Facebook, Twitter, and WordPress. I did not expect to be spending so much time in this class on Facebook. At first, it was overwhelming to sign up for so many different services. I already had a Twitter and Facebook account, but I mostly used it to gather information, connect with friends and sharing some content and media. Before this class, I was not tapped into the powerful capabilities of social media networks for education. Now I

believe that it is not possible to be an education technologist without being tapped into these networks. I previously assumed that social media networks having to do with my professional life were exclusive to sites like LinkedIn. However, I now feel very much adept at using social media to connect professionally with outside world. I also feel experienced at using social media in the classroom. This is an exciting new world for me in the area of teaching.

The creation of a networked learning environment is also very exciting and seems to be on the forefront of current epistemology. A concept that was new to me before this course is constructivism. It recognizes the importance of mental activity to create meaning and place central importance on the experiences of the individual (Ertmer, 1993, 62). I believe that social network learning combines this mental activity with the power of a network to create experiences and social interactions centered around learning activities. In my particular world of religious studies, I delved into the realm of belief almost constantly. Accordingly, personal experiences are centered around beliefs (Ertmer, 2005, 32). If this is the case personal experiences would be centered also changing beliefs. This aspect of constructivism is important to me because I am very much concerned with how students can change prejudices and misunderstand particularly concerning world religions. This is a critical aspect of my mission in education and I believe that there is an opportunity for positive change through the use of technology change people's beliefs about different groups of people, particularly Muslims.

Lesson Two: The Art & Science of Teaching

One particular aspect of my learning in the area of the “art and science” of teaching concerns constructivism and new understandings of the millennial generation and cognitive science, especially concerning religious studies. As a religious studies teacher, it is often difficult to present new information to students or to make content relevant to students beyond what they already know or already think they know. When information is freely available students often feel a little detached from a responsibility to memorize or internalize what I present to them. In several peer-reviewed articles, I have encountered theories and data that support the need for an educational experience that presents a cognitive dissonance or self-transcendence. Constructivism, as an approach, lends itself toward self-transcendence. Self-transcendence is a process through which learners become aware of how they mediate objects and subjects by recognizing their own viewpoint and going beyond it to be, "enabled to choose religious and other world-views responsibly and freely" (Carmody, 2013, p. 814). The benefit of this experiential learning is critical to allowing the millennial mind to break free of the plateau of learning built out of the information age.

There is research to support the idea that millennials have a different relationship with technology which involves embodiment or changes in function the of the brain given an increase in the availability and use of technology (Bauman, 2014, p. 302). Given these

concerns, it is important to understand how educators can create student-centered cognitivist or constructivist learning experiences that respect religious beliefs and encourage what philosopher-theologian, Bernard Lonergan calls, “self-transcendence” to allow students to go beyond the limits of their own individuality (Carmody, 2013, p. 814). This research and scholarship have changed how I view learning in the 21st century. Students require experiences that require an emotional connection to the content. This is possible in the religious studies classroom, based on the unique content that we cover. I look forward to using technology to enable constructivist learning experiences in my classroom and in online environments. This is a pattern of thought and a body of research, of which, I was not aware.

Lesson Three: The Design and Evaluation of Instruction

In EDTECH 503, we examined Streamlined ID: A practical guide to instructional design, written by Larson and Lockee. This text provided the structure for our culminating instructional design project. Before this course, I had never taken the plunge into instructional design. This was a much different experience to lesson planning. The goal of the instructional design is to create a comprehensive of the instructional document that covers all aspects of the learning, teaching and design process. It was apparent to me after completing this course that design is very data driven. This is systematically reinforced through the ADDIE model. This model stands for Analysis, Design, Develop/Produce, Implement and Evaluate (Larson and Lockee, 2014). Clearly, this model is driven toward making decisions based on real needs and outcomes.

In my teaching experience, I have become accustomed to the Understanding By Design approach that was articulated by Wiggins and McTighe in their seminal 1994 eponymously named text. The approach while based on desired outcomes and resources is much less comprehensive and fewer data driven from the onset. Teaching new students every year you often aim for the best based on previous years teaching the same subject. For many new teachers, you are working with the best rational approach based on your education and limited experience with the curriculum. The instructional design approach that is outlined above involved gather a wealth of data, needs assessments, student characteristics, etc. before developing any curriculum material. This has proven to be a very useful experience as I am now working on an instructional design project at my current school is online education. We are planning to create an online course in Religious Studies for a student who withdraws from school and need to make up credits in Religion. This course would allow them to make up these credits where in many cases that would have been waived or replaced with another non-essential course, such as P.E. to fulfilled the missing credits towards graduation.

Lesson Four: Networking and Collaboration

In EDTECH 543 Social Networked Learning, we studied the various ways that connectivity is enhancing areas of learning and teaching. In this course, we studied several keys and concentric learning groups that affect every learning and teacher.

They are communities of practice and personal learning networks. Communities of Practice according Etienne Wenger have a recognizable life cycle, which passes through the stages of planning, start-up, growth, renewal, and closure (Wenger, 2002.). These are more organic and fluid than formal learning networks. They concern specific goals and projects that one can accomplish in a given window of time. The history of the activity within the community may be well documented and used for later events, but there is a definite end point.

Collaboration is an essential element of learning and teaching. This idea of communities of practice is connected to the theory of connectivism in that it draws on chaos, self-regulated learning and a “cross-pollinating” learning environment (Siemens, 2004). In EDTECh 543, we created a piece of art to represent these networks. Since, in my mind, I see the networks as having the behavior of a fractal and looking very dendritic, I created a piece of music based on arpeggiation to explain personal learning networks (PLNs). Each note of each melody set of a string of other notes played in time to a midi clock. As the piece of music moves on, you hear different harmonies and disharmonies, but the melodic theme is still there throughout. As time progresses, connections between these notes and other notes, chords or rhythms become the more complex as peripheral groups form around the center. When reflecting on the nature of a network, I also brought in the image of raindrops on a body of water. The rain starts with a couple drops here and there, which would represent PLNs. As the rain intensifies, each drop or note and its resulting ripple create many overlapping

ripples spreading out forever until the intensity of the ripples dies. Eventually, this rain will cease, but the water (knowledge) left behind will remain there until another effect acts on that body of water (stored actionable knowledge).

Lesson Five: The Research-Practice Connection

In EDTECH 501, we created a lesson plan that was based on research completed for the class. For this assignment, I chose to focus on the Horizon Report for the year concerning creativity in the classroom. In my experience, observing modern society and my own habits there is a great tendency to have our existence defined by the quality of our consumption rather than the quality of our creation. I believe that this lack of creativity creates in us a great unhappiness. Dissatisfaction arises from a lack of creative outlet. Passive activities like shopping, watching tv and playing video game abound. There is documentation of a rise in depression (Blaszczak-Boxe, 2014) in America and an increase in the abuse of medication (Abuse, 2014). I believe that the arts contribute to a happier, more well-rounded individual and society and science (Leibowitz, 2016) backs this up.

In my experience, it is often found that primary school education is very passive. I was happy to find in the Horizon Report this title, “Shift From Consumers to Creators,” (Johnson, 2009). This has been a goal of mine for some time in the past few years. Strangely, it is met with mixed results and reactions from parents and students. Some students are on board and relish the opportunity to work hands-on with a

subject-matter in a new and interesting way. Other students are not so creative with their own creative potential and see arts integration as anti-academic. I strongly oppose this view and see art as a cathartic and meaning way to express one's ideas, especially on a topic that is challenging to grasp.

Creativity in any form is the new currency of the marketplace, valued by CEOs above integrity and global thinking (Briggs, 2014). The challenge with successful arts integration is implementing it in a meaningful way for students. Scholars have identified these criteria for successful implementation:

> "Students should see connections and walk away with bigger ideas.
> Students should take their work seriously.The expressions and activities in the arts should genuinely speak to important areas of the academic curriculum. This also means that the content is seen through more than one form, for example, beyond the traditional written and spoken word. The content lesson and the artistic lesson should be of equal importance. The experience should have a planned assessment with rubrics and scoring guides. The lesson plan should grow from state curriculum standards in both content areas and the arts."
> (Catterall and Waldorf 1999, 58)

In a lesson that I have attempted in my classroom several years now, I have found that these criteria are difficult to meet. Students' experience and development at the Sophomore level make it sometimes a challenge for students to take the artistic element of my class seriously. Often students do not feel like something is worth their

time if they will not be tested on it. This is a challenge that I look forward to overcoming.

Closing Thoughts

As I reflect on my experience at Boise State, there is a lot of considering. From the creative Makey Makey Projects in EDTECH 597 to the details of network administration in EDTECH 552 and that was only the first semester. I am very grateful for the opportunity to go through my work for the program through this portfolio because now that this material is one place, I can easily recover a lot of the learnings and products of this masters program. In the next few years, I plan to use this information in online course design and online teaching. This is a new and exciting arena for me and it would not have been possible without the EDTECH program. I have gained so much from working at Boise State and I am very proud soon be calling myself a Master of Education Technology.

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