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Creating a Community of Learners Online: Connect, Engage & Learn

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The emergence of new communications technologies, coupled with accessibility of internet and world wide webs have made them viable choices for both educational learning and knowledge oriented applications. These technologies (i.e., weblogs, wikis and podcasts etc.) possess the capacity to generate active learning, collaboration, practical and reflective learning. This has raised questions regarding the validity and usefulness of "connectivism' as a learning theory for digital age. This paper will discuss the theory of connectivism, its limitations and its implications for management education.

Keywords: technology, collaborative learning, connectivism framework, management education

INTRODUCTION

There has been a surge of interest in information technologies and its various tools, its usage and effectiveness in management education and within the classrooms. Technologies such as wikis, blogs, web-conferencing, social networking sites such as Twitter, LinkedIn and Facebook, along with virtual worlds like Second Life are transforming the notion of teaching environments (Billsberry and Rollag, 2010). Moreover with adult learners becoming an integral part of our educational system, online teaching, virtual universities and experiential modalities are becoming important. There has been an emphasis on experimenting with new platforms to deliver materials, for instance MP3 players, Wimba, You Tube, iTunes etc (Billsberry and Rollag, 2010). There has been a gradual acceptance of group based learning and technological classrooms. This has led to a number of questions regarding existing learning theories. Are the existing theories appropriate and complete to examine issues pertaining to learners of the technological age? Some researchers such as Siemens (2005), Downes (2006) etc. have come forth with a theoretical framework known as connectivism to understand learning. They have argued a new theory is required to react to the increasing use and complexity of information resources and the accessibility and participation which web sites and internet facilities provide to the learners of present generation. Siemens (2004) believes connectivism with its capacity to generate learning in a web based environment is the answer. However, this theoretical framework lacks empirical evidence

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which can demonstrate its overall effectiveness and outcome in terms of teaching and learning (Verhagen, 2006; Kop & Hill, 2008). This paper will make a contribution in the areas of learning, technology and education by examining the arguments of connectivism with empirical data from an educational institution. The paper has been divided into three sections. Section one discusses the various theories of learning, the role of modern technological tools in education and learning and issues pertaining to epistemological and methodological leanings of the author. The second section engages with empirical evaluation of the case study. And the last section provides concluding thoughts and directions for further research.

THEORETICAL BACKGROUND

Siemens (2006) argues that contemporary educators face the challenges of defining the meaning and process of learning in a digital age and aligning curriculum and teaching with learning and higher development needs of society. They are unable to explain how technology can effectively become the enabler of new means of learning, thinking and being, thereby transforming the image of education. Siemens (2004) continues, traditional, existing theories of learning are unable to explain and justify the type of learning occurring in today's digital age and neither do they "meet the needs of today's students" (Siemens, 2004, p. 1). Today's students are "digital natives" who have got used to receiving information really fast. They like to parallel, process and multitask. They prefer their graphics before their text rather than the opposite. They prefer random and they function best when networking. They thrive on instant gratification and frequent rewards. They prefer games to serious work (Prensky, 2001). Prensky (2005) further opines that today's learners are not interested in or capable of learning in environments which do not effectively reflect or incorporate their personal experiences. Students have access to a myriad of wired devices such as cell phones, laptops and ipods. They, in fact use them in class during lectures and other course activities. They are constantly texting and responding to their peers through continuous, spontaneous exchange of knowledge. Their lives are rich in media, communication, and creative opportunities outside of class, contrary to some arguments that today's students have short attention spans. Prensky (2005) points out students only seem disinterested when using old ways of learning. They seem to thrive when surfing on internet, downloading games, movies and music from websites. It therefore becomes essential to design curriculums and adopt pedagogical tools which weave in these digital learners. It therefore becomes essential to design curriculums and adopt pedagogical tools, which can combine technology with a "messy, chaotic, social, collaborative and connected with other activities and interest" (Siemens, 2005, p. 5).

Earlier teaching paradigms emphasized print based materials for instruction, printed textbooks, paper-based instructional materials and written tutorials (Hsu, 2007). But with advent of digital technologies, teaching and learning has the opportunity to go beyond printed materials, towards more collaborative and social interactive learning techniques. The internet with its tools ranging from blogs, wikis and podcasts provide opportunities to work and learn collaboratively, explore, analyze, engage in discussion and learn in new and innovative ways (Hsu, 2007).

Research on these technologies consisting of wikis, blogs and instant messaging has considered issues pertaining to their uses, implications on education, teaching and learning and the various educational theoretical frameworks (Hsu, 2007). Ferriter (2009), examines the usefulness of blogs and wikis in higher education, how they can be incorporated into classrooms as collaborative discussion tools. Witney and Smallbone (2011) explore the experience of undergraduate students using a wiki, role of wiki in

increasing levels of motivation and benefits of collaborative learning. Shu and Chang (2011) look into the behavior patterns of wikis users and reasons behind its usage. Cui, Miller and Roberts (2009) and Kane and Fichman (2009) provide evidence for the importance of wikis in business, teaching, research and publishing. Lamb and Johnson (2009) and Chawner and Lewis (2004) trace the origin of wikis and other electronic based internet tools. Wagner (2004) explains how wikis could support knowledge creation and sharing in various organizations. Some like Chang, Morales-Arroyo, Than, Tun and Wang (2011) critically evaluate the ability of wikis to increase levels of learning. They in fact suggest the need for further research to link learning process with learning outcomes when using these types of collaborative tools.

So far, theoretical frameworks like constructivism, cognitivism and behaviorism have been used to interpret the role of wikis etc in higher education and learning. But however, these learning theories, are unable to reflect the type of learning which occurs in today's digital age and neither do they successfully meet the requirements of today's students (Siemens, 2004). The theories, fail to address how learning occurs outside individuals, through information stored within technological tools.

The entire process of learning is influenced by the educator's perceptions and what constitutes knowledge and valid sources of knowledge. There are presently three major epistemological frameworks which are objectivism, pragmatism and interpretivism. In objectivism, reality is external to the mind of the individual and knowledge and perceptions are gained experientially (Kop and Hill, 2008). Next, pragmatism believes that knowledge is a function of reason. Therefore learning takes place through negotiation between reflection and experience and inquiry and action (Kop and Hill, 2008). While for interpretivism, knowledge is internal and is informed through socialization and cultural cues (Kop and Hill, 2008). Downes (2006) questions these three traditional epistemological frameworks to introduce a fourth underpinning, known as distributed knowledge. This last framework sees knowledge as "composed of connections and networked entities…" (Siemens, 2008, p. 9). Learning within the distributed knowledge theory takes place through "network like structure evident in online interactions" (Siemens, 2008, p. 12). Figure 1 aligns the epistemologies with respective learning theories.

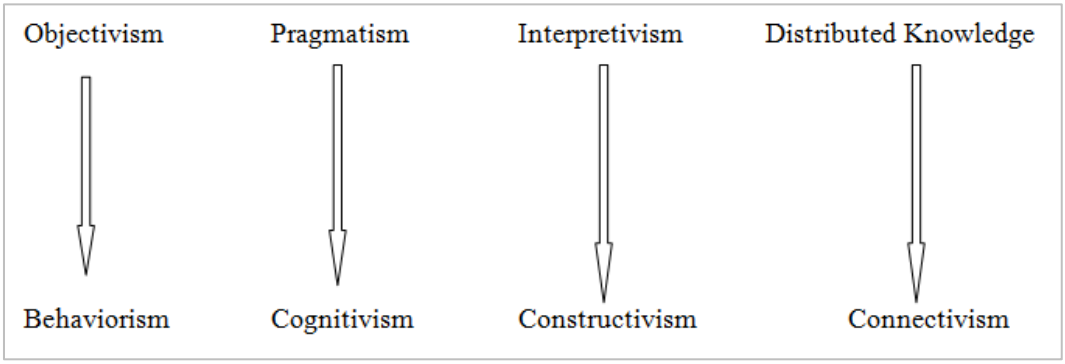

Figure 1. Alignment of Epistemologies and Learning Theories (Source: Kop & Hill, 2008.)

Connectivism's origin can be traced to the theories of constructivism and communities of practice (Kerr, 2007). Learning takes place when the learner is exposed to external knowledge. Teachers need not always be the embodiments or sources of knowledge. Information could be acquired from computers as well. With internet

becoming highly popular, technological sources such as wikis, blogs and podcasts can allow interaction between brain, mind and environment to generate learning.

Lave and Wenger (2002) further argue that people are social beings, and can acquire knowledge through active engagement. In other words, learning need not always take place within an educational institution. Learning, to contradict Wenger's (1998) opinion, is not always an individual process which "has a beginning and an end, that is best separated from the rest of our activities and that is the result of teaching" (Wenger, 1998, p. 3). Instead, individuals can learn by communicating with others i.e., by making sense of their surroundings in a social setting (Lave &Wenger, 2002).

Connectivism thus believes knowledge gets constructed through connections between networks. When individuals connect to these networks, learning takes place. Learning can also be a network (Siemens, 2006). Connectivism is different from the traditional theories of learning. It argues that knowledge and learning need not always be through language and logic, it can also occur through connections and clusters online. (Downes, 2006). Knowledge is, in this theory, literally the set of connections formed by actions and experience. Knowledge need not reside in the mind of an individual. Instead it can be located in a distributed manner across a network. Learning then becomes an act of recognizing patterns shaped by complex networks (Siemens, 2006).

In connectivism, learning occurs when a learner connects to and feeds information into a learning community. A community consists of a group of people with similar interests who share, interact, dialogue and think collectively to generate and disseminate new knowledge. (Siemens, 2004). A learning community is a network of knowledge from where individuals can acquire and feed knowledge into. Learning takes place when the learners connect to a network, filter knowledge, retrieve information, assimilate it and use it. Learning in connectivism occurs through informal exchange of information; it is organized into networks and available via technological tools. It is a process of continuous, lifelong systems of network activities (Bessenyei, 2007). Bessenyei (2007) further clarifies that the process of acquiring knowledge is more motivating if it takes the form of a cooperative networked activity. Individuals learn through cooperative activities, personal social networks which enable informal exchange of expertise and communities. The emphasis is shifted from "how" and "what" to learn towards the question of "where to learn".

The knowledge no longer rests with the institutions but instead learners themselves become active participants in the creation of knowledge (Darrow, 2009). Each person assimilates and contributes to the knowledge and the "entire community as a whole becomes the curriculum and the classroom" (Darrow, 2009, p. 5). Connectivism can be described as a learning process which occurs through groups of people who use computer-mediated communication networks to learn at their convenient times and pace (Siemens, 2008). It is a type of networked individualism where people use personal, digital networks to acquire knowledge, collaborate with others and secure social membership and a sense of belonging (Haythornthwait and Wellman, 2001). When individuals join network communities, they contribute data and information which benefits the entire network. "In a sense network grows in intelligence" (Siemens, 2005, p. 17). The entire community creates knowledge through discussion and collaborative contribution. The "learner controlled and driven community helps to shape, construct and reconstruct the knowledge base…Members of learning communities are responsible for engaging in the knowledge building process" (Cornier as cited in Darrow, 2009, p. 20). The process of knowledge creation is flexible (Darrow, 2009).

Learning, thus in connectivism, is dependent on two important skills—ability to seek out current information and the ability to filter secondary and extraneous information. The "capacity to know is more critical than what is actually known" (Siemens, 2008, p.

2). In other words, "the pipe is more important than the content within the pipe. Our ability to learn what we need for tomorrow is more important than what we know today" (Siemens, 2004, p. 5). The entire concept of connectivism rests on the following principles:

- Learning and knowledge is dependent on a variety of opinions.
- Learning is a process of connecting to specialized sources of information.
- Learning may reside in non-human appliances.
- The ability to connect to sources of information facilitates continuous learning. (Siemens, 2004).

The entire process of learning now shifts to the learners. Learners are the focal point of learning, rather than the tutor and the institution. Learners are instrumental in determining the content, levels of communication and their collaborators as well. The role of the instructor or tutor also changes altogether. The learning environment is no longer controlled by them. Instead they gradually emerge as facilitators (Kop, 2008).

Norris (2001) argues a community of peers might eliminate critical and reflective discussions and interactions. Usually in classrooms, teachers generate dialogue and debates as a medium of learning and knowing. This critical engagement may be lacking within networking environments. However, a tutor is necessary even in networked learning environments to guide students through resources and activities, to validate information and to critically engage them in the course content (Kop, 2008).

To summarize, the potential of connectivism is tremendous in this digital age. This theoretical framework might enable unlocking and making sense of the new role of information technology in today's learning processes. But connectivism as a theory has not been extended beyond the philosophical domain. It still remains "unsubstantiated philosophizing" (Kop & Hill, 2008, p. 7). Presently, connectivism is lacking an extensive body of empirical research literature to lend it support (Kop & Hill, 2008). This paper will make a contribution in the area of connectivism by providing empirical evidence gathered from a qualitative case study to examine issues revolving around the practical implementation of connectivism as theory, its capacity to generate learning, the role of the teacher and its overall effectiveness. This paper discusses how an institution experimented with the connectivist model of education. The process of connectivism revolves around generating learning through online communities and networks. The learning is blended in the social networks used and preferred by student participants. To comprehend the model of connectivism there is a need to understand the participants, their perceptions, behaviors and contexts. The next section will examine the case study, the effectiveness of the pedagogical and technological aid which was adopted, with the feedback gathered from 20 student participants.

THE QUALITY ENHANCEMENT PLAN (QEP) AT ALBANY STATE UNIVERSITY: A CASE STUDY

THE CONTEXT OF THE CASE STUDY

Albany State University (ASU) is a predominantly historical black college and university (HBCU), in a small rural town of Albany. According to Zumbrum (2009), Albany, is one of USA's ten most impoverished cities. With a population of 158,415, the per capita income is $21,359 and the income of the bottom one-fifth of people living in Albany is $8,350. There are 8.4 percent of the people earning below 50 percent of poverty line and 17 percent of the people are food stamp recipients. ASU is a completely black institution with 90 percent of the students and staff of African American origin. Its

faculty is very diverse, consisting of Whites, South Asians, Chinese and Africans. The university values its mission and vision objective of providing education to minority students. It follows an "open door" policy when admitting students adding to the teaching challenges of its limited faculty members. The administration constantly introduces and trains its faculty in new teaching software or pedagogical methods to increase student engagement and retention, to boost the graduation rates and increase learning amongst the student population.

As a part of the reaffirmation process, Southern Association of Colleges and Schools (SACS) core requirement, all accredited universities are required to develop and implement a Quality Enhancement Plan. QEP, as defined by SACS, is a "carefully designed and focused course of action that addresses a well-defined topic or issue related to enhancing student learning" through an institution wide initiative (QEP Handbook, 2003)**.** The QEP at ASU is entitled "Writing Realized: Developing Writing Literacies in a Technological Age". The five QEP Literacies are: information acquisition (research), critical thinking, technological application, visual constructs and reflective practice. The plan was based on research that demonstrated both student and faculty concerns that more attention was needed on student writing and the use of technology.

Beginning academic year 2009, the QEP office at ASU recruited ten faculty members annually across the campus to train and develop them as QEP educators. The author joined the QEP cohort for the academic year 2010-11. When she joined the QEP cohort in May 2010, she had absolutely no idea about what it entailed except that it was about using Technology to improve the writing skills of students and was an important component of the accreditation process. During summer, she was introduced to the ideology of connectivism and its ability to teach students to become better communicators. She chose her course MGMT 4126—Organizational Learning—as the QEP class for Fall Semester 2010.

MGMT 4126 class met face to face weekly for 75 minutes. The course introduced students to contemporary ideas and evolving concepts relating to the theory, practice and strategic importance of the individual, group, organizational and community learning and the development of "learning organization". As part of the ASU's QEP, the course had to extensively use writing and computers as two of the primary tools for teaching and learning. Students were given ample opportunities to use writing and computers as tools for learning and then as tools for sharing and learning with the class. The course had to weave in pedagogical and grading methods to hone five skills of students—ability to gather research information, think critical, connect and collaborate through technology, communicate with multimedia and reflect on knowledge.

A class wiki was designed (Figure 2 illustrates the template; see Appendix A) by the end of summer 2010. The wiki consisted of instructor information, course content (i.e., syllabus) and a set of written activities (Table 1 provides a detailed list of all activities; see Appendix B), one for each week. All activities were simple allowing the student to reflect and introspect and provide practical examples, to demonstrate or explain the theory taught in class. The author allocated 40 percent of the course grade for QEP activities. All QEP activities were placed on a class wiki on the Google. Each activity was related to the topic covered in class during that week. At the end of the week, the author reminded the student of the QEP activity on the wiki. She then initiated a class discussion and cited possible research or information resources. The students then, conducted independent research, wrote their opinion on the Google site and responded to the views of their classmates. All students were also required to undertake a collaborative, team based research project. Each team was required to select a company and then identify all the ten facilitating factors in the company to develop a Learning Portfolio to determine whether the company could be classified as a Learning Company.

Students were required to acquire knowledge from various web resources. The author thus made an effort to integrate technology and its tools like wikis, Google and blogs etc. into her medium of teaching.

This study will analyze the overall impact of incorporating technology, with emphasis on wiki, as pedagogical technique and its overall effectiveness in increasing learning within the students. It will evaluate whether technology in combination with collaborative and cooperative learning, teaching with student centered topics and examples, with teacher as the focal node to facilitate critical engagement, interest and guide learning had greater chances of connecting the instructor and students at ASU thereby increasing student engagement and enhancing their learning.

RESEARCH QUESTIONS

This study will answer the following research questions:

1. How does learning take place through online network communities?
2. How can technological internet tools be integrated within classrooms?
3. What is the role and responsibility of the instructor in these classrooms?

PARTICIPANTS

The course MGMT 4126, Organizational Learning was a management elective for all business degree students at ASU. The class size was a maximum of 25 students. In Fall 2010, the class enrollment was 20 students. All students were either juniors or seniors, African Americans in the age group of 20-23 years. All students, belonged to Generation Y and were avid users of Facebook, Twitter and constantly texted themselves on their cell phones (Hellriegel and Slocum, 2011). Table 2 (see Appendix C) demonstrates the various characteristics of Gen Y'ers. Gen Y'ers, for instance are those born between 1978 and 1999, have never experienced life without a microwave, computer, ATM card or a television remote. They are a generation which has always used e-mails, instant messaging and cell phones since childhood. Networking prone Gen Y'ers, enjoy working on blogs, connect via Facebook and constantly use Blackberry and iPods to check in with their peers. They are too impatient and prefer short, concise, crisp messages via Twitter. Unlike, the previous generation who preferred learning on their own, Gen Y'ers prefer community learning and are dependent on their parents and friends for advice and career direction (Hellreigel and Slocum, 2011). They don't recognize authority and prefer to treat their managers, superiors and instructors as friends and equals (Hellreigel and Slocum, 2011).

All Gen Y'ers, participants also happen to be African American students with their own unique learning styles and culture. African American students are field dependent and are dependent on teachers for more direct instruction. These students need to be taught using examples which reflect their own lives, problems and situations. It is essential for teachers to "allow [student] to speak in their own voice in order to develop their voice, rather than adopt the voice of the teacher" (Melear and Richardson, 1994, p. 17). African American students prefer to work in collaboration and community for them is very important (Ladson-Billings, 1994).

PROCEDURES

The author conducted a research based study on her student participants. All students, at the end of the semester, were given an open ended questionnaire to gain insights on

their views, opinions and perceptions about teaching with support of technology, multimedia and instructor over the duration of the semester.

The author undertook a thematic analysis. Thematic analysis means categorizing information gathered empirically into themes or categories. Themes are fundamental concepts which one is trying to describe. Concepts are compared against each other and if appear to be similar are grouped together under a common heading, label or "themes" (Ryan and Bernard, 2003). The author read, reread all empirical data and then categorized it on the basis of emerging themes such as community of learners, variety of learning styles and the new role of teacher. The next subsection will discuss the themes.

FINDINGS & DISCUSSION

COMMUNITY OF LEARNERS

Lave and Wenger (1998) comment that people are social beings who can acquire knowledge through active engagement. Individuals can learn by communicating with others (Siemens, 2004, Bessenyei, 2007). A community consists of people with similar interests who share, interact, dialogue collectively to generate and disseminate knowledge (Siemens, 2004). Knowledge can be situated within a community and people can generate and acquire knowledge by building on their earlier experiences and knowledge. The class wiki with weekly QEP activities created an online community into which the students started to connect into and feed information into. This online community encouraged learning through interaction, sharing, dialoguing and thinking together. As a student explained: "It gave me practice in conveying my thoughts and opinions in a community of my peers. I also enjoyed reading what my classmates wrote…"

Another student further clarified: "Using the wiki helped me to better prepare my essays, making them clear and concise…," and "use of the wiki on Google was a very positive experience for me…"

In other words, a wiki which enables a creation of a community or cluster does generate learning amongst individuals. Learning takes place through exchange of "diverse opinions". Learning becomes a collaborative and group initiated process. Knowledge does not reside in one location but instead is a "confluence of information arising out of multiple individuals seeking inquiry related to a common interest and providing feedback to one another…" (Kop and Hill, 2008, p. 4).

LEARNING STYLES

Students could possess different learning styles (Kolb, 1984). A participant commented briefly "students have different learning styles… keep the interest of the student…" It can be argued some students are able to learn better in collaboration with their peers rather than in complete isolation. As explained earlier African American digital learners prefer working in groups, and prefer community and collaborative learning (Ladson-Billings, 1994; Hellreigel and Slocum 2011). Learning for this student population would occur through collaboration, engagement, group work, reflection and dialogue with peers. Pedagogical techniques like lectures and presentation of factual information may not be that effective. The framework of connectivism describes a suitable process, i.e., virtual collaborative network learning. The virtual open writing environment, where topics were posted weekly, enabled students to read others opinions, reflect and form their own independent perception of the subjective content. Instead of just assimilating a lecture, students were forced to participate and interact using a medium they preferred. Students' feedback supported these beliefs, as a student

responded: "…the online writing environment gave me the chance to enhance my learning…to fully understand the subject matter…" Another student explained the reason why: "…the chance to view other students' comments… give you feedback on how to answer the discussion questions…"

Overall, the networked learning environments evoked positive responses, as one student put it: "…in this class we learn, interact with other students and also participate…this type of learning encourages you to want to learn and understand…"

This reinforced the ideology that learning can be outside the educational institution and the instructor, it need not reside in printed textbooks or papers. In fact, "…this class showed me that there are more methods to learning than just one… " (Student)

This is similar to the philosophies of Downes (2006), Siemens (2006) and Kop and Hill (2008) who all argue that learning can take different forms, beyond the boundaries of traditional classroom teaching. In future learning may occur online by connecting to clusters of communities, by adding and acquiring information socially as a group.

NEW ROLE OF TEACHER

It is possible to design learning environments, without a teacher and yet ensure critical reflection, learning and interaction. The teacher now becomes a facilitator, a guide or a steward who designs a learning environment and determines the road map within which learning takes place (Kop, 2008; Norris 2001, Siemens, 2008). The author uploaded open-ended weekly assignments onto the wiki. These weekly assignments required the students to conduct independent research, apply theory taught in class and then come up with a reflective response online. Students commented on how these weekly assignments forced them to think critically and concisely:

> I enjoyed online writing…an assignment asked us to describe a learning organization in ten words…it challenged me to express my thoughts, through writing in a more concise manner…

Similarly another student supported:

> …lessons that are enjoyable to do in this class are the writing assignments which allow students to write on a specific topic and give their opinions on that topic…

Moreover, the community environment allowed students to view the work of their peers, receive feedback and improve themselves. As a student rightly pointed out:

> …this assignment is beneficial because it pushes the students to become better writers, by allowing their work to be displayed in class…lets the students improve their writing style on a weekly basis…

In fact, the learner gradually becomes, independent, capable of determining the content of learning and discussing the nature and levels of communication (Siemens, 2008). As a student observed: "since this is a weekly thing our writing gets better week by week…"

However, Siemens (2006)'s argument that within a distributed network, it is possible to completely eliminate the tutor and the institution seems to be farfetched. All learning however autonomous, taking place outside the classroom setting and institution still needs to be directed and controlled by an instructor. As a student summarized: "…we were exposed to several forms of accelerated learning techniques by our instructor…".

The instructor still remains the focal point of learning. S/he determines how and in which direction the learning will flow. A tutor is necessary in networked learning environments to guide students through resources and activities, to validate information and to critically engage them in the course content (Kop, 2008). But it can't be ignored that the easy direct relationship existing within classroom settings might be impossible to

replicate. The wiki, in spite of its collaborative characteristic, is unable to provide immediate feedback to its participants and some students found this annoying. One student said, "…the wiki was convenient but it lacked something that I could get instantaneously in class—a rapid response…"

However, overall students reacted positively to the various elements of wikis---online environment, open feeding and connecting to information, social bonding with peers with the instructor becoming more of a designer and critical facilitator.

The students' ability to research, think, reflect, write, and respond improved over the period of weeks. The whole idea was to train students to become independent, capable of reflecting critically, connect to a community of peers and then engage online in learning how to write better over a series of weekly activities. Students would learn to acquire information, use information, see its impact within their community and improve themselves.

CONCLUSION

Technology has transformed the way students learn, acquire and disseminate information and communicate with each other. Gen Y'ers are digital learners who have a learning style which is conducive to collaborative and community learning with subtle guidance from friends and teachers. Blogs, wikis, Facebooks and Twitter provide this social space to learn and share information as a collaborative group (Hellreigel and Slocum, 2011). Therefore, in order to connect to these digital students, educators need to use these technological mediums daily in their classrooms (Prensky 2001, Prenky 2005). Moreover, if one accepts this practical view, then all current learning theories seem inadequate. These networking environments demand a new theory which can explain how technology can be integrated into the classroom and curriculum (Siemens, 2005, Siemens 2006, Siemens 2008).

The theoretical framework of connectivism with its ability to generate learning in a web based environment seems to be the answer. Connectivism believes that learning can occur through connections and clusters online. Knowledge need not reside in the mind of the individual. Instead it can be located in a distributed manner across a network. When a learner connects to this virtual network, s/he learns by connecting to and feeding information into this community. Knowledge no longer rests with the institutions but instead the learners themselves become active participants in the creation of knowledge. Individuals learn through cooperative activities, personal social networks which allow informal exchange of views and opinions (Siemens, 2008; Darrow, 2009 and Bessenyei, 2007). However, these theoretical assertions remain empirically unexamined.

This study makes a contribution by empirically testing the theoretical claims of connectivism theory. The empirical study reveals that connectivism is an appropriate and comprehensive theory for the digital learners or Gen Y'ers. The QEP program at ASU required all faculty participants to adopt one technological resource as a pedagogical technique. The author designed a wiki, and then posted short, provocative and reflective weekly writing assignments on it. The students' feedback revealed positive comments of effective knowledge acquisition in a supportive, collaborative environment of peers. Learning took place by feeding into and assimilating information from a virtual community created by the author. Learning was no longer relegated to an instructor, classroom or textbook. Instead it occurred through online social networks. This supports the views of Kop (2008) and Siemens (2008).

Moreover, online environments need not always eliminate or minimize critical reflection and introspection. On the contrary, the teacher can take up the role of a facilitator and guide students to reflect and question theoretical concepts and

implementations. This supports the views of Kop (2008) but contradicts Norris (2001) who argued that a community of peers eliminates critical and reflective discussion and interactions.

This study provides the much needed practical support to the connectivism philosophy. However, there is still scope for further research. It might be interesting to compare empirical data across subjective disciplines and institutions. All participants in this study were traditional students of African American origin. Would other sections of student populations also react favorably to technological tools like wikis and blogs if integrated into the classrooms? Also, this study provided the students' perspective. What is the view of the instructor? How has it changed his/her teaching style and philosophy? are some issues worth investigating. Management educators could also measure statistically if learning increases when these modern technological tools are integrated into the curriculum and teaching modalities.

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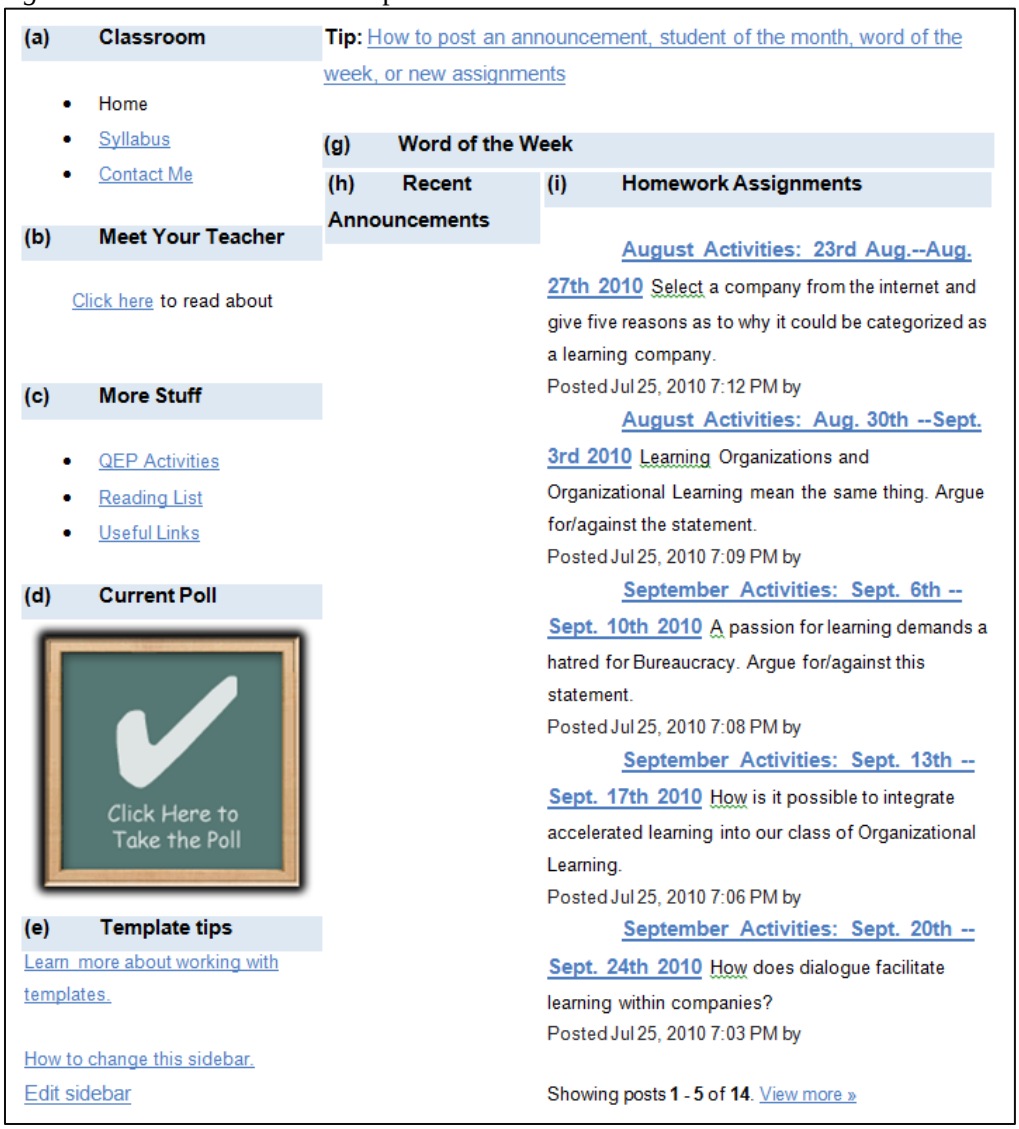
APPENDIXES

APPENDIX A

Figure 2. MGMT 4126 wiki template for Fall Semester 2010



APPENDIX B

Table 1. *QEP Activities*

Week	Activities
August 23rd – August 27th 2010	Select a company from the internet & give five reasons as to why it could be categorized as a learning company.
August 30th—Sept. 3rd 2010	Learning Organizations & Organizational Learning mean the same thing. Argue for/against the statement.
Sept. 6th –Sept. 10th 2010	A passion for learning demands a hatred for Bureaucracy. Argue for/against this statement.
Sept. 13th – Sept. 17th 2010	How is it possible to integrate accelerated learning into our class of Organizational Learning.
Sept. 20th – Sept. 24th 2010	How does dialogue facilitate learning within companies?
Sept. 27th – Oct 1st 2010	How do new roles of managers facilitate learning within companies?
Oct 4th – Oct. 8th 2010	Read the paper on KM. Summarize the paper on KM in 10 lines.
Oct. 11th – Oct 15th 2010	Give personal examples of how the four patterns of knowledge creation could take place in your life: • tacit to tacit • explicit to explicit • tacit to explicit • explicit to tacit
Oct. 18th – Oct. 22nd 2010	Which do you prefer classroom training or E-learning? Why?
Oct. 25th – Oct. 29th 2010	Describe a learning organization in ten words.
Nov. 1st – Nov. 5th 2010	Give personal examples of the following: • Systems Thinking
Nov. 8th – Nov. 12th 2010	Give personal examples of the following: • Shared Vision • Personal Mastery
Nov. 15th – Nov. 18th 2010	Give personal examples of the following: • Mental Models • Team Learning
Nov. 2nd – Nov. 26th 2010	Why I enjoyed/not enjoy writing in Organizational Learning class?

APPENDIX C

Table 2. *Characteristics of Gen Y'ers*

Gen Y'ers bring to the job several desirable traits:

- Tech-savvy: They can locate details about anything in seconds because they have grown up with the Internet.
- Adept at global and diversity issues: Through online social networks, they have found ways to reach beyond their own location and have established relationships with others through Facebook, MySpace, and other social networking portals.
- Team oriented: Gen Y'ers measure their accomplishments by their peers.
- Multitaskers: Most Gen Y'ers feel that listening to an iPod while working improves their job satisfaction and productivity.
- Focus on work/life balance: Having flexibility about when and where to work is very important for keeping them loyal to their organization.

Gen Y'ers also bring some behaviors that organizations need to be aware of:

- Lack of independence: Because they are so connected to others, including their parents they often need more direction than Gen X'ers or boomers.
- Lack of discretion: Because many of the Gen Y'ers have discussed everything from musical tastes to dating habits with their friends, this lack of confidentiality can have a major impact on the organization. There will no no secrets between manager and subordinates. Gen Y'ers will need to adopt acceptable standards of behavior. They will have to figure out what they can share with their friends and what they should not share.
- Unrealistic expectations: Gen Y'ers believe that they can change the world quickly. The problem is that they lack the experience and political savvy to make it happen.
- Impatience: Gen Y'ers have played video games that show players how they are doing instantly in organizations, they will need to learn to wait for semiannual or annual performance reviews that rely on a manager's subjective evaluations in the area of leadership, teamwork and communications.
- Relaxed work ethic: Many are unwilling to work hard and make personal sacrifices to get ahead.
- Weak interpersonal competencies: E-mail and instant text messaging reduce opportunities for face-to-face communications but strong interpersonal competencies are required to be successful in most organizations.

Source: Hellriegel, D. & Slocum, J. (2011). *Organizational behavior*. Ohio: Cengage Learning.