Assessing the Effects Social Media has on Online Learning

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Online learning is social and participatory activity and demands more collaborative pedagogy for active learning. The purpose of this research is to review empirical studies to determine the effects social media has on learning. Social media is one of advancements in technology that has been instrumental in enhancing communication, collaboration, entertainment and learning. Social media is now being widely used in educational endeavors. Using thematic analysis, the review of literature of empirical studies identified four effects social media had on learning. These included acquisition of new knowledge, continuous learning, increased students' engagement, and immediacy of learning with access to experts.

INTRODUCTION

Learning is integral to advancement and development. The rapid and continuous advancements in technology have changed our behavior patterns, the way we conduct business and even the way we learn. (Jalali, Sherbin, Frank & Sutherland, 2015). George, Dreibelbis & Aumiller, 2013 researched the changing landscape of medical education and how it is reflective of the global paradigm shift. Dron & Anderson (2014), in their e-book Teaching Crowds: Learning and Social Media, stated that network learning, which is the most common form of informal and self-directed learning, is rapidly becoming a dominant mode of learning.

Kind & Evans (2015) and Dron & Anderson (2014) stated that online learning demands new models of teaching and fosters engagement, active and continuous learning. They further purported that the social media greats emergent connections that empower learners allowing them to access information from networked world of expertise allowing them to be more prepared self-directed learners. Social media is providing a wide range of new resources and opportunities for online learning. Castro (2012) inferred from his research on art teaching that teaching identity is not fixed but shifts throughout social media.

Social media is one of the biggest opportunities that educational institutions have to connect directly to learners. Nielsen (2016) reported that social media users can be receptive to endeavors, especially heavy users, who spend over three hours per day on social media (Casey, 2017). Pikalek's (2010) research revealed that not only are more and more students utilizing social media, they are expecting campuses to be on social media.

Problem Statement

The landscape of learning is changing, and more and more students are gravitating toward online learning. Online learning is social and participatory activity and demands more collaborative pedagogy for active learning. According to the Nielson 2016 Report Generation X (ages 35-49) are spending the most time on social media about seven hours per week versus Millennials, who are spending just over six hours per week. The report also stated that the use of social media is reaching across culture with females spending 25% of their time online on social media and males 19% (Casey, 2017).

Greenwood, Perrin, & Duggan (2016) stated that "68% of all U.S. adults are Facebook users, while 28% use Instagram, 26% use Pinterest, 25% use LinkedIn and 21% use Twitter". They further stated that Facebook has retained the first-place spot due to older adults joining the site, and in addition, the share of Facebook users who check in daily has increased to 76% of Americans users, up from 70% in 2015.

Purpose Statement

The purpose of this research is to review empirical studies and to determine the effects social media has on learning. Social media is one of advancements in technology that has been instrumental in enhancing communication, collaboration, entertainment and learning. Social media is now being widely used in educational endeavors. A study by Xie, Watkins, Golbeck & Huang (2012) revealed that older adults' perceptions of social had moved from a strongly negative to a more positive and cautious and a willingness to participate in social media learning.

This qualitative research examined several empirical studies that investigated the top five social media tools effect on learning. A thematic approach was utilized to analyze the results and major themes were highlighted.

Social Media

According to Dictionary.com (2017) social media can be defined as "websites and other online means of communication that are used by large groups of people to share information and to develop social and professional contacts". According to Nations (2017), common features a site must possess to be designated a social media/networking are:

- User accounts: Allows visitors to create their own accounts that they can log into
- Profile page: Allow users to develop a page which is necessary to represent them
- Subscription: Allow individuals to use their accounts to connect with other users and to subscribe to certain forms of information
- Real-time up: The information is updated in real-time via their news feed.

This review examined empirical studies that researched the top five social media sites. Maina (2016) sited the top five most used social media sites as:

1. Facebook - which is the biggest social media network on the Internet, both in terms of total number of users and name recognition. "It is estimated that more than 1 million small and medium-sized businesses use the platform to advertise their business".

2. Twitter - which has more than 320 million active monthly users who make use of the 140-character limit to pass on information. Businesses can use Twitter to interact with prospective clients, answer questions, release latest news and at the same time use the targeted ads with specific audiences.

3. LinkedIn - the most popular social media site for professional networking. The website is available in 24 languages and has over 400 million registered users.

4. Google+ - a must-use tool for any small business.

5. YouTube - the largest and most popular video-based social media website. It has over one billion website visitors per month and is the second most popular search engine behind Google.

Learning

Learning involves a significant change in behavior resulting from external stimuli (DuBrin, 2017). Classical conditioning learning suggests that individuals acquire habits and traits complimentary to the learning process. These traditional habits are common in everyday life and most people perform these tasks without much thought or planning. Further, the concept of classical conditioning precludes that other more complicated methods of learning ultimately lead to e-learning and social media (DuBrin, 2017).

For example, Lindshield & Adhikari (2013) studied e-learning and textbook usage differences. The conclusion supported a premise that students are cognizant of transitioning beyond printed textbooks to electronic sources of the same textbook material. Qui, Tang, & Whinston (2015) referred to learning or observational learning as informational externalities which is information that is held in private is conveyed through direct or indirect communications and is a beneficial payoff. Qui et al., (2015) further stated that sharing information allows people to engage with others that they might not interact with and it can be an emotional intellectual reaction which is a positive payoff.

Weiner (2015) stated that Kirkpatrick's four-level model of criteria is a validated tool to study learning. The four criteria are reaction (students' affective reaction to learning), learning (direct measures of learning outcomes), behavior (evidence that students use knowledge and skills), and results (career success and service to society). It is suggested that when students are happy, excited, involved, and critically not bored by teaching learning is more conducive.

Piotrowski (201?) research findings suggested there is a positive attitude toward the implementation of social media for instructional purposes,

LITERATURE REVIEW

The purpose of this research is to review empirical studies and to determine the effects social media has on learning. Several empirical studies that investigated the top five social media tools effect on learning were examined and thematic methodology was used to highlight results.

Using Twitter as a Learning Tool

Jalali, Sherbin, Frank & Sutherland, (2015) conducted a study exploring methods in which social media can facilitate learning in medical education. The objective of the study was to determine whether the use of Twitter during an academic conference can promote learning for participants.

In the study, the tweets from the participants in attendance at healthcare conferences were coded and recorded. Symphur, a tool that is used to collect healthcare conference data and produce transcripts, was used for retrieval and organization of the data. By 2014 Symphur had over 400 healthcare conferences registering their hashtags and have an average 34 tweets per hour during the conferences.

The results of the study revealed that Twitter appears to be most effective at stimulating individuals' preconceptions which is salient acquisition of new knowledge. The study asserted that "Twitter can be an ideal tool to use as a broker for impact, that is, one or two posts from a medical conference may point hundreds of people to information they never would have sought on their own (Jalali, et al., 2015). According to Jalali et al. (2015), a limitation to the study included the degree to which learning improved. Social media assisted-learning could not be determined by their qualitative study. They stated that further randomized studies are needed to achieve this outcome.

Blogs, Video Feed and Wiki & Collaborative Applications as Learning Tools

Kind & Evans (2015) conducted a qualitative research on social media and lifelong learning. They reviewed peer-reviewed literatures that reported the use of social media usage in learning. They presented their results in thematic format and used three social media tools as the themes - blogs, video feed and Wiki & collaborative applications.

The researchers concluded that there are opportunities for social media tools to be used to enhance the traditional education and to provide innovative ways to engage the learners. They stated that Blogs and

collaborative applications are innovative tools for the classroom and also as a stepping off point to extend learning beyond the classroom.

The social media tools, they stated, were instrumental in increased learner participation and interaction and had the potential to break down hierarchy and facilitate questions among peers and trainers (Kind & Evans 2015).

Although the researchers concluded that social media learning parallels the traditional learning process and could be a good tool for continuous learning, they cautioned that there is the possibility that the it can drift away from the learning task because content is user-generated and not verified by experts, such as the cases with wikis. They also found that there were no one ideal method for education using social media tools. Whichever tools that promote learners' engagement and provide up to date and accurate information are the most effective (Kind & Evans 2015).

Using Social Networking for Learning

Vasbo, Silseth & Erstad (2014) utilized an ethnographic study to explore how two students in a multiethnic community use a social network platform – Space2cre8 (S28) to augment their learning. The study was conducted over 60 hours of classroom time during one academic year. The participants were videotaped for 35 of those hours and their online activities were also observed. Three types of triangulation methods were used to assess the data. Thematic analysis was used to represent the results (Vasbo, Silseth & Erstad, 2014).

The findings of the study suggested that the social networking site provided different learning and knowledge for the students with different identities and led to improved performance. The students used the S28 both for learning school knowledge and every day knowledge from spaces outside the school. The researchers concluded that students by using the S28 social networking site were able to build bridges between different types of knowledge that enable them to explore connections and contradictions between theirs and others' understandings of the world (Vasbo, Silseth & Erstad, 2014).

Using Google Docs and SurveyMonkey as Learning Tools

George, Dreibelbis & Aumiller (2013) conducted a pilot study to evaluate medical students' usage pattern in lectures when Google Docs and Survey Monkey were integrated in the lectures. The pilot study consisted of 22 hours of lectures with 154 students participating in the study. The students were instructed to bring their laptops/tablets/smartphones to class. They were given rules for participation, but participation was not mandatory. The lecture room was set with a screen for the PowerPoint lectures and another screen to show students anonymous responds through Google Docs and Survey Monkey.

The results from the study indicated there was increased engagement with both technologies through the entire semester which generated student-driven content for the lecturers to address. When lecturers answered questions, there were also follow-up questions for further clarification. Students also shared news articles links that were relevant to the lecture topics. No unprofessional incidents were observed (George et al., 2013).

The researchers concluded that social media technology tools were appropriate as complementary resources for educators and that there was preliminary evidence that they can increase engagement and active learning in lecture-based courses. They further stated that there were limitations to the tools and they should not be considered as replacement for innovative active learning methods (George et al., 2013).

Using YouTube to Identify Learning

Qui, Tang, & Whinston (2015) built an analytical model of individuals' beliefs that can capture learning process with a Bayesian learning model. Their hypothesis on learning is "In the presence of learning (informational externalities), a video that has positive disconfirmation would have a higher growth rate of viewership than a video that has negative disconfirmation over time" (pg 86). They purported that informational externality exist when payoffs depend on information that is held privately

by others. Disconfirmation, they stated, is the expectation the viewers have of the videos they will view (Qui, et al., 2015).

The research methodology consisted of data collection of newly posted YouTube videos uploaded by the top 1000 YouTube providers for one month in March 2012. A regression summary model was done for videos rating, favorites and comments. The results revealed that videos with significant positive disconfirmation have 5 percent higher growth rate of viewership. They concluded that social media content is affected by learning and network effects (Qui et al.,2015). The researchers stated the limitation to their study did not consider the effect of network characteristics and topological structure on social contagion (Qui et al., 2015)

Assessment of Social Media Facilitating Continuing Education

Dadich (2014) put forward a theory how citizen social science can be operationalized through the use of social media. Citizen social science is described by Dadich (2014) as combination of crowdsourcing and citizen science. The former crowdsourcing is defined as the "process of posing a question or problem to a large group of people to try to get the best answer quickly" and the latter citizen science is "systematic collection and analysis of data; development of technology; testing of natural phenomena; and the dissemination of these activities by researchers on a primarily avocational basis" (pg 195).

Dadich (2014) purported that with limited time and other resources most healthcare workers do not get the opportunity for continuing professional development. This lack of development can have considerable implications for patient care. Social citizen science, Dadich (2014) stated, could be the solution by creating a platform that can offer immediacy and value for money. The participants can benefit from the collective expertise of clinicians and can also invite them to collaborate as co-researchers to enhance the continuing education resources.

RESULTS AND ANALYSIS

Using thematic analysis, the review of literature of empirical studies identified four effects social media had on learning. These included acquisition of new knowledge, continuous learning, increased students' engagement, and immediacy of learning with access to experts.

Acquisition of New Knowledge

Jalali, Sherbin, Frank & Sutherland, (2015) research results revealed that Twitter appears to be most effective at stimulating individuals' preconceptions which is salient acquisition of new knowledge. Kind & Evans 2015 and Vasbo, Silseth & Erstad (2014) studies also showed social media having a positive effect on learning. Acquiring new knowledge is one of the tenets in knowledge management. Most organizations are using knowledge management as a strategic tool (Lawson, 2013). If social media tool can be used in the knowledge management process it will be a great asset not only for learning in the academic setting but in organizations.

Increased Students' Engaged

The results from all studies researched indicated some level of increased students' engagement from their interaction with social media. George, et al (2013) results indicated that the two technologies kept the students engaged through the entire semester. Weiner 2015 inferred that when students are happy and involved in the learning process it can aid in learning. It is then highly probable that engaged students could have greater retention of knowledge and would be more likely to exhibit this change in career endeavors.

Immediacy and Access to Experts

Some of the empirical results indicated that using social media may be able to decrease the learning curve and provide students a shorter path to learning. Students having proximity to information and texperts seemed to have a higher probability of greater and faster learning. Dadich (2014) advanced the

citizen social science theory as a method that can used to easily and quickly access information that can lead to analysis and development of technology. Vasbo, et al. (2014) ethnographic study results could infer that social network sites could be used to bridge the divide in the access to information of different groups.

Continuous Learning

Some of the studies' results concluded that there are opportunities for social media tools to be used for continuous learning. Kind & Evans (2015) stated that Blogs and collaborative applications are innovative tools for the classroom and also as a stepping off point to extend learning beyond the classroom. Dadich (2014) stipulated that social media can be used for continuing inter-professional education thus leading to improved and sustained workplace learning.

CONCLUSION AND IMPLICATIONS

All the empirical studies results highlighted a positive correlation between the use of social tools and learning. Four effects social media had on learning were identified. These included acquisition of new knowledge, continuous learning, increased students' engagement, and immediacy of learning with access to experts. Although the empirical studies reviewed showed that social media has a positive correlation to learning, they all cautioned that it is a complementary tool for learning and not a replacement. Kind & Evans (2015) concluded that social media learning parallel the traditional learning process and could be a good tool for continuous learning. They further stated that there were no one ideal method for education.

Whichever tools that promote learners' engagement and provide accurate information, are the most effective. Weiner (2015) sited that he saw the positive social media effects of increased knowledge, immediacy access and increased engagement but some areas are still nebulous. He stated he does not see where role for social media in effecting professionalism and clinical excellence.

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