ABSTRACT

Despite the perception that face-to-face classrooms provide speaking opportunities, studies by Fassinger (1995), Nunn (1996), and Weimer (2013) have conveyed that there is limited interaction in a traditional college lecture setting. Social media networks such as Twitter provide an opportunity for instructors to utilize popular mobile technology to create a discussion beyond the classroom. Twitter’s 140-character maximum creates an efficient method of communication that can be spaced over time. Spacing practice has the potential for improving classroom learning (Dempster, 1989). This mixed-methods study utilizing a convenience sample tested if Twitter could serve as a more effective method of review than a traditional paper study guide in an introductory college history course. No significant differences were found in the posttest performance of both groups. Participants found Twitter easy to use, were unconcerned about their privacy on social media, and reported that Twitter did not increase student engagement when used only as an information distribution tool.

KEYWORDS

Concept Learning, Distributed Practice, Microblogging, Mobile Communication, Social Media, Spaced Practice, Twitter

INTRODUCTION

The problem of engaging students in a traditional college classroom setting is not a new one. Studies by Fassinger (1995), Nunn (1996), and Weimer (2013) have reported that only a select few students participate in face-face-speaking interaction during a traditional college lecture setting. Social media networks such as Twitter may provide a popular mobile platform to get more students involved and extend class discussion beyond the walls of the classroom.

Social media has changed the world drastically over the past decade as it continues to explode in popularity and global use. According to statistics from the Pew Research Center (2014) Twitter’s audience rose by 27.7% (from 18% to 23% of all Internet users) from 2013-2014. This research also found that Millennials are the biggest users of Twitter with 37% of 18- to 29-year-olds using it.
Despite sharing similarities to other social networks, Twitter is unique in a number of ways. It serves as a micro-blogging tool that provides users with the ability to “re-tweet” a friend or followed user’s tweet (Kieslinger, Ebner, & Wiesenhofer, 2011). A re-tweet promotes affirmation of other users’ comments and is the ultimate form of flattery for a producer of Twitter content. Boyd, Golder and Lotan (2010) found that re-tweeting provided broader sharing of information and a method for attracting new followers to a given Twitter account.

Instructors who choose to avoid incorporating social media may cite a variety of potential hazards. Dhir, Buragga, and Boreqqah (2013) found that Twitter could be addictive and distracting, while causing students to waste time when they could potentially be on task. In a one-year study conducted by the Crimes Against Children Research Center at the University of New Hampshire, an estimated 2,322 arrests were made for sex crimes against minors that were initiated using social networks (Wolak, Finkelhor, & Mitchell, 2010). While students may be at risk, instructors have also found themselves in legal troubles as a result of their online behavior using social media on a number of occasions (Eckes, 2013; Downey, 2011; Oppenheim, 2013).

Although there are some potential hazards that accompany Twitter use, the platform has grown in popularity making it difficult to ignore it as a potential educational tool. Millions of students are part of the 485 million active Twitter users in the world. According to a report from the Pew Research Center at Harvard, teen Twitter use has risen from 16% in 2011 to 24% in 2012. The report also stated that 33% of all Twitter users were logged in on a daily basis (Pew, 2013). It is imperative for educators to understand how their students utilize Twitter in order to best serve their needs.

While Twitter is a relatively new phenomenon, founded by Jack Dorsey, Evan Williams, Noah Glass, and Biz Stone in 2006, literature exists about its use in education. Dhir, Buragga, and Boreqqah (2013) discovered that Twitter had a positive impact on informal learning, class dynamics, motivation, and academic development. McKerlich, Riis, Anderson, and Eastman (2011) reported that Twitter enhanced a variety of learning outcomes in a college marketing course. Additionally, Rinaldo, Tapp and Laverie (2011) found that Twitter can be effective as a pedagogical tool if students are properly motivated and the content is relevant to them.

Twitter’s website explains that hashtags were organically created by Twitter users employing the # symbol to mark keywords or topics in a tweet. A case study by Trueman and Miles (2011) found that by using hashtags, Twitter could be used to create interactive flash cards that can be used for review. In the study, the instructor found it simple to search for other flashcards from the class and organize them accordingly. Twitter makes a good forum for this type of activity, because as students tweet flashcards in live time, it may serve to prompt ideas for flash cards from other students. Similarly, students are able to post each individual flashcard as they think of them, as opposed to emailing them all or posting them all at once on the learning management system Blackboard.

**PURPOSE OF STUDY**

The primary purpose of this study was to determine if sending tweets with examples and non-examples related to predetermined major concepts would assist students in effectively learning concepts through distributed practice. Twitter interactions through “flashcards” can take place at any time beyond the class period and therefore can serve as a means to provide spaced or distributed practice (DP). Literature exists within the field of education on the effects of spacing the study of primary concepts versus providing comprehensive information at one time.

German psychologist Herman Ebbinghaus conducted research on memory and practice effect in as far back as 1885, when he tested subjects on their recall of nonsense syllables. Cepeda, Pashler,
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