Twitter as an Emerging Technology for Business School Students: Learning and Engagement in a Cross Cultural Environment

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Abstract: Given the explosion of Twitter, as both a personal communication tool and as a business productivity tool, this paper explores ways to incorporate Twitter into higher education business courses. The paper reflects on the use of Twitter in a month-long project comprised of upper-class undergraduate students. The purpose of the project was for students to learn about and use Twitter as an emerging Web 2.0 social networking technology and evaluate its potential as a business tool. In order to provide an opportunity to explore the use of Twitter across different cultures, students from two business classes – one from the United States and one from South Africa -- were brought together to work in virtual teams. The paper ends with a summary of student experiences highlighting the challenges encountered in the project, and lessons learned.

Introduction

What is Twitter? For those who do not yet know, **Twitter** is a free social networking and micro blogging service that enables its users to send and read messages known as *tweets*. Tweets are text-based posts of up to 140 characters displayed on the author's profile page and delivered to the author's subscribers, who are known as *followers*. Senders can restrict delivery to those in their circle of friends or, by default, allow open access (www.twitter.com, 2010).

Introduced in 2006, Twitter has over 80 million users today, including hundreds of companies, with over 6 million new accounts created every month. Many third-party software solutions have been built, by companies such as iPhone and Blackberry, to help users manage Twitter feeds, upload photos, link to photos, or even find "Twitizens" who are near the user geographically (Johnson, 2009). The numbers are deceptive, however. Forty percent of all accounts have never sent a single Tweet. In a single month, December 2009, only 17% of registered Twitter accounts sent a Tweet – a small fraction of the Tweeter universe and a very small fraction of the cell phone and internet community (RJMetrics, 2010). It seems that the vast majority is simply "in the pool" and figuring out how, or if, they want to use it. Meanwhile, third parties are still building applications in order to be ready for the expected explosion of active users. According to Johnson (2009), that explosion is coming. "Every major channel of information will be Twitterfied in one way or another in the coming years: News and opinion, Searching, and Advertising."

If Twitter is likely to impact business in such a profound manner, business students will need familiarity with Twitter as a business tool – both as a company tool and as an individual productivity tool. This paper explores ways to incorporate Twitter into college courses, specifically, business courses. The paper reflects on the use of Twitter in a month-long project comprised of upper-class undergraduate students. The objectives of the project were for students to learn about and use Twitter as an emerging Web 2.0 social networking technology and evaluate its potential as a business productivity tool. In order to provide an opportunity to explore the use of Twitter across different cultures and gain experience working in virtual teams, students from two classes -- each in a different country -- were brought together to work in virtual teams. The two classes included an Information Technology honors course with students from South Africa (SA) and a senior level Operations Management course in the United States (US). The paper provides a background on the use of twitter in business today, the use of twitter in the college classroom today, the assignment design of a course project for a business class including its goals and objectives, a summary of student experiences which highlight the challenges encountered in the project, and lessons learned.

Business Uses for Twitter

Twitter is a little different from other communication environments. It is not a phone call. It is not instant messaging. It is not an email. As David Carr (2010) of the New York Times succinctly states: "On Twitter, anyone may follow anyone, but there is very little expectation of reciprocity." One posts to Twitter, that is, and creates a Tweet, and the

content sits in cyberspace waiting for one of that person's followers to connect and view its content. Choosing who to follow becomes key. Carr continues, "By carefully curating the people you follow, Twitter becomes an always-on data stream from really bright people in their respective fields, whose tweets are often full of links to incredibly vital, timely information." That can be extremely valuable as a productivity tool for any individual in a company trying to stay current and competitive in our rapidly changing world.

But that is just the beginning. Business uses of Twitter continue to emerge. Hundreds of large companies use Twitter for marketing. Starbucks Coffee announces promotions. Whole Foods uses Twitter as a living FAQ for its 1.7 million followers. Jet Blue provides Twitter followers with flight information. Ford wants to hear feedback from their customers (Knouse, 2010). Companies use Twitter for a variety of organizational purposes including as a marketing or public relations tool (e.g., notifying customers, events update, getting feedback), to share ideas or communicate about what projects they're working on (internally and externally), and to keep track of what competitors and others are doing (e.g., networking with friends; linking to others' websites and articles). In addition, small businesses are using Twitter to track comments about their company and respond to problems. A 14 seat ice cream shop keeps their 300,000 followers up to date on the latest flavors (Pattison, 2010).

247WallSt (2009) identifies ten current uses of Twitter in business that will change how business is done in the future:

- making old world advertising work by encouraging Twitter feedback from outdoor media like billboards;
- hyper-local marketing by having customers and owners of local, small businesses (e.g., a pizza shop) – thereby creating one-to-one communication between the customer and the store;
- turning Wall Street on its head when like-minded people (e.g., people interested in a particular stock) connect and share current information through Twitter;
- making blogs count as Twitter becomes more pervasive and thus becomes a more powerful channel for current information – further pushing aside traditional news sources such as cable;
- new ways to get consumer data, nearly instantaneously;
- helping TV and print by adding Twitter as a complimentary channel that is more pervasive;
- expanding the power of micropayments where Twitter is used (in conjunction with a paypal-like function called twitpay) to pay for day-to-day expenses;
- changing the telecommunications business model since Twitter is less of a load on a telecommunications systems than instant messaging;
- a new way for the government to reach you, for example, during a natural disaster;
- charity begins online where non-profits can communicate quickly and cheaply through Twitter (and even secure donations).

So, while Twitter is not yet mainstream in business, its use is already significantly changing how many businesses conduct their business. The next section discusses twitter as a pedagogical tool in higher education.

Twitter Usage in Higher Education

Twitter, one example of a Web 2.0 tool as noted above, creates new possibilities for use in teaching and learning. McLoughlin and Lee (2008, p.16) discuss how Web 2.0 tools have created a mechanism for "Pedagogy 2.0," highlighted by opportunities for participation, personalization, and productivity. Twitter is one of the current social networking tools that are being used in a growing number of universities as a learning tool, both inside and outside the classroom. What Twitter's impact will be in higher education is only now evolving, and research on the use of Twitter for classroom instruction and application is just beginning to emerge.

One of the few studies so far conducted on Twitter's use in Higher Education is a *Faculty Focus* (2009) survey, "Twitter in Higher Education: Usage Habits and Trends of Today's College Faculty." The authors surveyed nearly 2000 higher education professionals. Their findings indicated that about one third (30.7 percent) had used Twitter in some capacity; more than half (56.4 percent) indicated they had never used Twitter while the remaining 12.9 percent had experimented with Twitter but no longer used it. Of those using Twitter the most common uses include staying current on news/trends, networking with colleagues and experimenting with Twitter use in the classroom. Those respondents who were not currently using Twitter cited reasons such as questioning its educational relevance, concerns that it may create poor writing skills, lack of knowledge of how to use it and not having the time for exploring it. Overall, as in business, Twitter is at the stage where there are many examples of its use but not much history allowing one to determining its effectiveness.

Dunlap and Lowenthal, (2009a) provide an overview of how Twitter can be effectively used in instruction. They argue: ". . . if Twitter participation is initiated by a learning need and subsequently driven by learning goals and

objectives then the activity is relevant and purposeful, and Twitter time is well spent." They highlight the following as benefits of using Twitter:

- allows for the just-in-time, free-flowing connection between and among students and faculty needed to support student engagement, especially in on-line-education settings
- helps students build relevant PLNs (personal learning networks) that support their learning and professional development while enculturating them into the professional Community of Practice (CoP)
- encourages students to reflect on what they share publicly and how to use Web 2.0 tools like Twitter to establish a professionally appropriate footprint
- allows us to continue our connections with students long after our courses end.

Faculties are experimenting with Twitter using a variety of class room related applications. We think of these applications as "toolkits" for instructors (Sherer & Shea, 2002) and for student applications of Twitter. Based on Johnson's (2010) lists of Twitter uses, applications may include:

Instructor's Toolkit for Classroom Instruction: These applications mainly focus on increasing communication between and among faculty and students. They include: engaging students in discussion in large group classes; conducting out of class discussions; using as a backchannel during lectures; polling; providing students additional resources and current events related to course topic; sharing learning experiences across distances in small manageable chunks; summarizing/synthesize articles or other media precisely; and helping connect students with people of other languages, viewpoints, perspectives.

Student's Toolkit for Learning: These applications mainly focus on student learning and the development of their own Personal Learning Environment (PLE). They include: researching a topic; creating an online social presence; creating a learning network; gaining professional exposure; sharing of articles and other media relevant to course topic; asking questions; seeking help or advice on a project, requesting and sharing resources; sharing blog posts; following leading thinkers in one's field; connecting with a professional community of practice; searching for jobs; sharing what one is learning in a course/ conference; and reflecting on one's learning. Many of these activities focus on getting ready for life after graduation.

Twitter's use as a pedagogical tool appears to be here to stay. However, the extent, variety and effectiveness of the many possible uses presented in this section are still unclear. Using Twitter requires extensive preparation, time commitment and engagement by the faculty – and an effective assignment design. Dunlap and Lowenthal (2009) identify three overall positive results that can result from using Twitter in instructional activities: enhanced social presence; student engagement; and professional preparation. They caution, however, that like all social-networking tools, the "value of the experience hinges on three things: who you are connected with; how frequently you participate; and how conscientious you are about contributing value to the community."

The next section describes a student project used during AY2009/2010 to introduce Twitter as a professional tool and explore its use in business.

Sample Twitter Project

During the Fall 2009, a one month virtual team class module was conducted between a senior level Management Information Systems class required for Operation Management majors at the University of Massachusetts Dartmouth in the United States, and a senior level honors Information Technology class at the University of KwaZulu Natal in South Africa. The goals of the module related to Twitter were for students to use Twitter as an example of a microblogging tool, by carefully exploring its impact in five areas: business, politics, education, media, and knowledge management – and give students a chance to work in a virtual team setting with fellow students from a different culture and part of the world. The students used: the Social Learning Network (SLN, http://specialtopics.grou.ps/) and Twitter (www.twitter.com) for all communication; http://bit.ly/, http://tweetstats.com, http://whatthetrend.com, and http://trendistic.com to help track each student's Twitter activity and trends; and http://backupmytweets.com to facilitate backing up all student Tweets on a regular basis.

The students working within this module used a scaffold learning approach where each activity contributed to the final assessment. In activity 1, students were asked to set up their own Twitter account, set up a http://bit.ly account to help track activity, find two quality articles related to microblogging use, tweet a comment and link to the article through their Twitter account, and become a follower to the instructors so that instructors could follow the students and directly message them if needed.

In activity 2, students continued to gain experience using Twitter, got to know their colleagues better, and continued to explore the 5 key areas where Twitter was having an impact. Students created personal web pages on the SLN to help students get to know one another a little better. Students were required to: leave a note on the wall of a number of the personal web pages; post their own Twitter ID on their wall; follow all the students in the class;

tweet regularly (there could be some social Tweets but students had to include Tweets related to the course material) in a way to attract followers.

In activity 3, students learned to: use http://backupmytweets.com for backing up Tweets; explore and share two, available Twitter add-ons; learn and share about Twitter etiquette; continue exploring Twitter use in the 5 key areas by exploring classmate Tweets and ReTweet the ones each student found interesting; and for each student to continue growing his/her followers.

In the final activity, students continued exploring key areas by finding a relevant article and posting it to the Blog within the SLN. Students also explored trends within their Twitter history using http://tweetstats.com, http://whatthetrend.com, and http://trendistic.com in order to assess the effectiveness of the tweets based on quality, link to trends and time of post.

In all, the module took just under one month to complete. It was not the only coursework the class was working on during that period but there was time taken in every class meeting to review progress and answer questions. Instructors from each class, and from different countries, communicated regularly through email and Skype phone calls. The next section describe student reactions to the module.

Student Feedback

Student feedback came anecdotally, through regular discussions in class concerning progress and next steps. The students were also asked to formally answer three questions at the end of the module. Feedback for each question follows.

- Question 1: What do you think of Twitter / microblogging?
  Over 60 percent of the SA students were positive about Twitter / microblogging as compared to some 80 percent of the US students who were negative. The US students were negative on Twitter from their first exposure to it – and their opinion, for the most part, never changed. They thought Facebook would be a far better tool for both the classroom and business. The SA students, while often skeptical at the beginning, typically became fans of Twitter after using it for a week or two. Students mentioned "how addictive reading simple 140 character messages can be", "how much information can actually be conveyed in such a small space". One interesting comment about the nature of Twitter was "Twitter is a very one-sided platform geared toward content distribution and delivery rather than interaction."

- Question 2: Is it a good tool for business?
  Almost 70 percent of the SA students were positive about Twitter as a business tool. A similar 70 percent of the US students were negative on Twitter as a business tool. The US students just couldn't see any value. In contrast, some of the SA students mentioned how Twitter "can boost networking potential and knowledge sharing", can be a "good source for the latest information in the industry", "can be used to spread word quickly", and how it "allows for collaboration in a stress free environment."

- Question 3: What will be the future of Twitter / microblogging? In five years? In ten years?
  The US students generally thought Twitter did not have future but were fans of Facebook as an alternative. The SA students were positive on Twitter in the future and fully expected many new applications to be built in the near future to make Twitter even more useful. The only caution brought forward by the SA students was the high cost of Internet service in South Africa which limits many students to using tools like Twitter only at school, on school machines.

The next section is a discussion section which summarizes our experiences and lessons learned.

Discussion

Overall, there was a distinct difference between the reaction of the South African (SA) class and the class from the United States (US). The SA class members were somewhat reluctant and skeptical but, for the most part, became fans of Twitter after experience showed them the benefits. The US class, overall, initially had a negative reaction to Twitter and it never changed. Classroom discussion of the project was frequently filled with "Twitter sucks" throughout the project. It should be noted that the SA class was an elective IT Honors class filled with the best IT students in the program. The US class was mostly Operations Management majors who were required to take the class. It is not surprising that the IT group was more willing to dig into Twitter (even though their first impression was negative) as opposed to the US students who weren't as invested in either the class or the topic.

Further, the connection between students of the two countries was minimally successful. There were comments on both sides about how additional time and activities would have been helpful at the front end of the

module. Students indicated this would have helped the students in the two countries get to know each other a little better.

There are two productive approaches to evaluating the module. One focuses on the module's use of Twitter as an educational or pedagogical tool and the other focuses on the use of Twitter as a business tool. In order to evaluate the use of Twitter as a pedagogical tool, we suggest using the guidelines suggested by Dunlap and Lowenthal (2009b):

- Establish relevance for students: The students read about current use of Twitter in general and within 5 key areas – including business and education
- Define clear expectations for participation: Activities were specific, focused and well defined
- Model effective twitter use: Instructors twittered the students as part of the project
- Build Twitter-derived results into the assessment: A number of add-on applications were used so both the students and the instructor could evaluate Twitter activity and analyze trends
- Continue to actively participate in Twitter: Follow-up activities using Twitter were not established. Any further Twitter activity was initiated by the students.

While there is room for improvement, the module covered their guidelines fairly well.

As for Twitter as a business tool, the project can be evaluated based upon a report by Gartner (2009) which categorized four different ways that companies are using Twitter: direct, indirect, internal and signaling.

- *Direct* refers to when a company uses Twitter as a marketing or public relations channel. Many companies have established Twitter identities as part of their corporate communications strategies, much like corporate blogs. They Tweet about corporate accomplishments, distributing links to press releases or promotional Web sites, and respond to other Twitterers' comments about the brand.
- *Indirect* refers to when a Company's employees use Twitter to enhance and extend their personal reputations, thereby enhancing the company's reputation. Good Twitterers enhance their personal reputation by saying clever, interesting things, attracting many followers who go on to read their blogs.
- *Internal* refers to when employees use the platform to communicate about what they are doing, project they are working on and ideas that occur to them.
- *Inbound Signaling* refers to Twitter streams that provide a rich source of information about what customers, competitor and other are saying about a company.

Using these criteria, the class module described in this paper only scratched the surface. The project did include *Indirect* activities where students were regularly encouraged to create tweets that would entice more followers. *Internal* activities included using Twitter to share their findings and ideas.

As we contemplate how we might incorporate Twitter into business school curricula, we believe one alternative would be to embed Twitter within two classes which are standard core, required business classes – the core MIS class and the capstone strategy class. First, the core MIS class, typically taught in either the sophomore or junior year, would focus on using Twitter as a classroom tool. A streamlined version of the project described in this paper could serve as the foundation for this assignment. Secondly, the capstone strategy class could be used to explore how Twitter can be used as a business tool. Overall goals should arguable incorporate activities based on Gartner (2009)'s four categories. In addition, there are other opportunities for taking advantage of Twitter in order to provide students opportunities for enhanced social presence, student engagement, professional preparation and student learning (Dunlap and Rosenthal, 2009b). Some specific examples include: communication (announcement, connect with classmates, faculty, professions, polling, etc.); class projects and discovering content (connect with professionals, other interested folks); and finding people in business or academia to follow; getting ready for life after graduation (establish a web presence, following your occupation, start looking for a job, etc.).

Conclusion

While it can be argued that Twitter is not yet a mainstream application, it does seem like Twitter is here to stay. Hundreds of companies use Twitter in a variety of ways every day. Close to 100 million people have, at least, signed up for a Twitter account. Business schools would be remiss if they did not prepare their students to use Twitter as both a personal productivity tool and as a way to support the company goals of their future employers. Incorporating Twitter into course learning activities requires time and creativity on the faculty's part. However, the potential for student's to be connected with current, online information along with people, organizations and associations is rapidly becoming a necessary skill and will be expected in future business environments. The issues we have raised contribute to the ongoing conversation related to the challenges and opportunities available through the recent explosion of Web 2.0 tools, specifically Twitter.

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