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It's time to connect: Twitter for Educational purposes

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IT'S TIME TO CONNECT: TWITTER FOR EDUCATIONAL PURPOSES

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Abstract

The expansion of the internet has enabled a free flow of information allowing a connection between educators and students where knowledge can be shared both ways. This growth in technology has led to an explosion in the use of social media. Data indicates that Twitter is one of the most common social media tools used by the 25-54 age-group. Learning how this tool is used for educational purposes is useful in the area of higher education as most university students fit within this cohort. In this paper we look at the history and exponential growth of Twitter as a microblogging tool and illustrate how it is used in classrooms around the world from early childhood to tertiary. Further, we weigh up the challenges faced by advocates of change within education and explore the voices of dissent. We conclude that the use of Twitter has a huge potential when used for educational purposes.

Introduction

Twitter (<http://twitter.com/>) is an interactive form of social media currently used for various purposes. Social media captures the headlines every day for many reasons. The immediacy and brief nature of Twitter, availability on mobile technology as well as within multiple platforms makes Twitter appealing to users of all ages. In Australia, Twitter has been used more as a social media tool than for educational purposes. Yet, educators at all levels across Australia are mandated through curriculum requirements to use Information Communication Technologies (ICT), of which social media is an example.

This paper examines Twitter as one example of an educational micro-blogging tool. A brief history of this social media tool is provided. We demonstrate examples of how this form of pedagogy may be used from early childhood through to tertiary including vocational education. We also comment on research into contentious issues in education that underlies any of the numerous emerging forms of the use of technology in education. Twitter has been received with varying results within educational settings and this paper shows some illustrations of the different levels of uptake. The literature specifically looks at research emerging from the United States of America (USA) and Australia.

Whenever it arrives, technology has always been resisted by the very people it is meant to benefit. For instance the scribes feared that the printing press would lead to job losses and the invention of the pencil was feared by many that it would take jobs from the chalk miners. Little wonder then that some teachers resist the introduction of all forms of technology in education, including the use of social media and Web 2.0 tools. One such tool is Twitter. But what is social media and what do we know about Twitter? How was it started?

Social media in context

There is prolific usage of social media, both for social and professional purposes. Two platforms dominate the social media scene, Facebook and Twitter. Facebook is the leading social media tool followed by Twitter. However, the use of such tools is not without its own setbacks. There are instances of bullying via Facebook and Twitter. TV programs promote their hashtags and display the resulting tweets. It is not unusual to hear a television program ending with the catch-phrase, "You can follow us on Twitter and Facebook". Following is an investigation of social media, the history of Twitter and its importance to education.

Moran, Seaman and Tinti-Kane (2011, p. 4) describe the task of defining social media as “hazy” and then go on to state;

—for the first time, the world faces a medium that is by its very nature non-centralized, meaning that in both form and content, it is user created, user controlled, flexible, democratic, and both very transparent and very not so.

Social media offers users unfettered ability to create meaningful text and broadcast content to anyone willing and with the necessary device to access it all over the whole world. In Wikipedia, social media has been defined by Andreas Kaplan and Michael Haenlein as a group of internet –based applications that build on the ideological and technological foundations of Web 2.0 and allow the creation and exchange of user generated content. Social media is ubiquitous, accessible and enabled by scalable communication techniques.

Social media allows for the invitation of conversation, discussion and exchange of ideas and information. Social media allows messages to be relayed to mobile devices in a process called pushing; the subscriber need not log on to be kept up to date. One of the reasons for the increasing popularity of social media tools is that they can be accessed on a wide range of devices including; desktop computers, laptops and other mobile devices such as smart-phones. The explosion of mobile devices onto the market runs parallel to the uptake of users of social media. Presented in Table 1 is data from the USA showing minutes spent on social networking per day accessed by mobile (Wi-Fi) and personal computer (Ethernet). Market trends show that accessing social media via a mobile platform is increasing in popularity. This could be associated with the ease of use, convenience, lowering cost of data plans and portability of mobile devices. In Australia alone there are more than 6 million more registered mobile handsets than people (Budde, 2011).

Table 1: Minutes spent on social networking per day by mobile device or desktop (mobiThinking, 2010)

Minutes spent on social networking per day accessed by mobile device or desktop		
Social Network	Mobile Internet	PC Internet
Facebook	45.2	32.4
Bebo (AOL)	39.6	22
MySpace	8.2	7.5
Twitter	19.6	7.2
Source: GSMA/ComScore, January 2010		via: mobiThinking

Staggering statistics: a brief history of Twitter

The growth in the use of Twitter since inception has been phenomenal. Twitter was started on March 21, 2006, 9.50 p.m. when Jack Dorsey published the first Twitter message “*Just setting up my twttr*”. Since these seemingly humble beginnings, the growth of this microblogging tool has been meteoric (Rhoades, 2010).

In April 2007, Twitter became its own separate and distinct company. Between the 14th and the 18th of March 2007, Twitter usage jumped from 20,000 tweets per day to 60,000 at the *South by South West Film Festival* in Austin, USA. In 2008, Twitter had 100 million tweets for the year compared to June 2011 where the average was 200 million tweets per day (Marketing Gum, 2011). In Australia, Twitter has approximately 1 million Unique Australian Visitors (UAVs) per month (Cowling, 2011). In October 2011 Twitter attracted in excess of 37 million unique visitors (UV) as in Figure 1 below. (A unique visitor counts each person’s logon as one regardless of the number of times that they visit the site.)

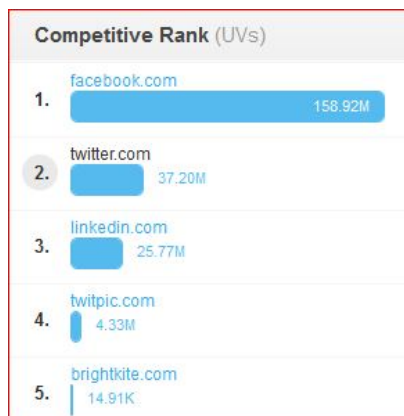


Figure 1: Unique visitors to Twitter October, 2011 (Site Analytics, 2011)

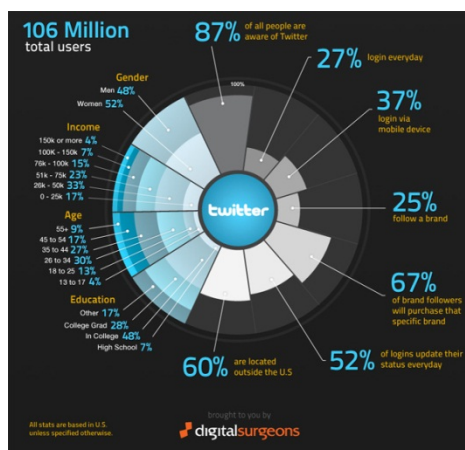


Figure 2: USA Twitter Stats 2010 including gender, age, income and activity (Digital Surgeons, 2010)

The sheer number of Twitter users is what poses both an opportunity and a challenge for educators and students alike (Courous & Jarrett, 2011). As can be seen in Figure 2, 87% of Twitter users are aged between eighteen and fifty-four. Therefore this is a demographic that requires educators to tap into as it includes tertiary students, parents and educators.

Theoretical framework

Proponents of technology assisted learning argue that “Whatever their technical design or sophistication, every piece of software or computer application used in education should be regarded as a tool to support student learning. Nowhere is this more evident than in the classroom where these digital tools can either support or straightjacket teaching” (Ingvarson & Gaffney, 2008a, p. 152).

Further, Ingvarson and Gaffney (2008a) suggest that an interplay exists between how much a teacher controls content and how much is left to the student. The interplay is also shown as a continuum where prescribed content lies on one end and the student experience of content sits at the other end. This paper is framed within that continuum. In this paper, we have selected Twitter as one of the microblogging tools that has been used for educational purposes.

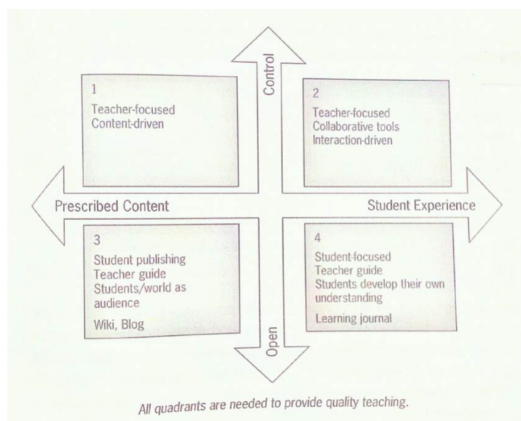


Figure 3: Relationships between 'open versus closed' teaching practice and 'predetermined versus experience-based' content, and the use of digital tools (Ingvarson & Gaffney, 2008b)

Microblogging – a brief review

Social media can be placed into four broad categories; blogs, microblogs, communities and media as can be seen in Figure 4.

Blog	Micro-blogging	Communities	Media
posterous®	twitter	Linked in®	slideshare Present Yourself
tumblr.	PLURK	yammer®	flickr®
WordPress.org	flipter	Quora	viddler
Blogger	Pownce Send stuff to your friends.	facebook	You Tube

Figure 4: Categories of social media tools

Each example of social media listed in Figure 4 is used for different purposes. They all have their strengths and limitations. We chose to investigate Twitter as it is the most popular micro-blogging tool currently available to educators, however we have included a summary of the other currently available microblogging tools.

A blog user may post large amounts of text including a discussion or an expository text. Blogs are useful in that they allow users to express themselves and share large amounts of text, whilst inviting comments. A blogger may choose to make their content either private or public and may share the blog with selected users. Blogs include “Posterous”, “Tumblr”, “WordPress”, and “Blogger”.

Communities include “LinkedIn”, “Yammer”, “Quora” and “Facebook” and are increasingly used by professionals to connect to one another. User profiles are uploaded on each individual public site.

Media includes “SlideShare”, “Flickr”, “Viddler” and “YouTube”. Users may choose to make an entry public or private. Media is increasingly used as an educational tool to share instructional resources, and may invite comments on their entries.

By contrast, microblogging has a limitation as to the amount of characters allowed per post. Educause Learning Initiative (2009, p. 1) defines microblogging as “the practice of posting small pieces of digital content - which could be text, pictures, links short videos or other media - on the Internet”. Twitter uses the icon of a bird, implying when communicating a bird makes a tweet sound.

Defining Twitter

Twitter is defined by Mollett, Moran and Dunleavy (2011, p. 1), as: “A form of free micro-blogging which allows users to send and receive short public messages called tweets. Tweets are limited to no more than 140 characters, and can include links to blogs, web pages, images, videos and all other material online”. As more than 200 million Tweets are sent per day worldwide (Marketing Gum, 2011) keeping track of these is impossible without some type of organisational tool. Therefore # hashtags and @ symbols are used. Tweets sent with the @ symbol are directed usually at a person whereas the # hashtag is used to denote a topic of interest, e.g., #TwitterEdTalk, #teaching. Other ways of keeping track of topics and people that interest the user are software programs and/or apps on mobile devices, e.g., *HootSuite* Figure 5 and *Tweetdeck*.

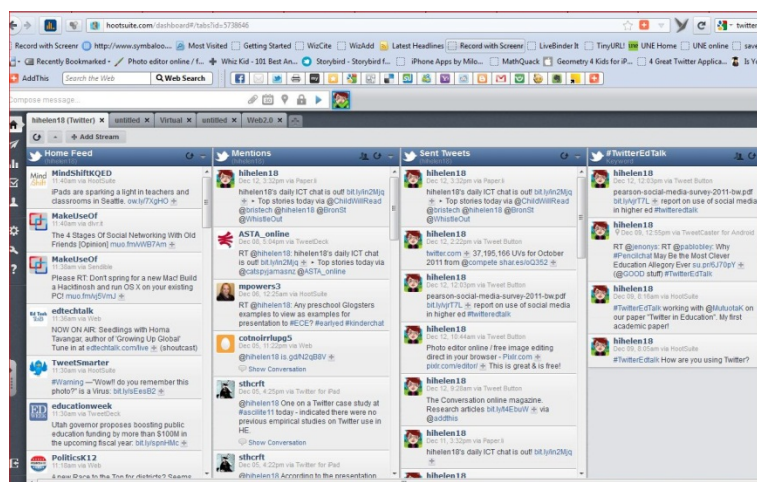


Figure 5: HootSuite Dashboard - Helen Doyle 13 December 2011

Following other people and sources, allows users to build up an instant, personalised Twitter feed that meets their full range of interests, both academic and personal (Mollett et al., 2011). (Twitter performed a major face lift and upgraded early December 2011 and replaced the “hashtag” on users home page with “discover”.)

Twitter in the literature

The merits of using Twitter as an educational tool

Twitter can be used for professional development, sharing of information and resources and as a means for synchronous or asynchronous communication as well as a social tool. Prior to 2006, Twitter as a tool for communication did not exist, however, today, Twitter has over 4 billion users of which

approximately 100 million of these are reported as being active users (Ogg, 2011). (An active user is classified as one who logs on at least once per month).

Twitter is a useful tool with which users can share links across all levels of education. Twitter is also intuitive as it suggests other users that have similar or related areas of interest for the user to follow if they so wish. Twitter is also a fast source of information. At times, Twitter is more productive in providing information than any other type of communication.

Recently, I needed a reference I have used before. Couldn't get (it) anywhere. Sent out a tweet, and in no time at all, received five responses. I found this faster than doing a Google search" (Conole, 2011).

The speed in which information is sought and delivered is an example of the usefulness of Twitter for educational purposes.

However, critics of Twitter argue that the social media "detracts teachers from doing their core business- teaching" although, that argument has been countered by those on the opposite side of the spectrum who posit that Twitter presents itself as offering useful information in the fast lane. Take Alsagoff (2010), for instance who writes:

True, using Twitter could be a waste of time, but it could also be used to connect and interact with educators and learners from all over the world. Imagine filtering 90 million daily tweets from 145 + million registered users down to who is talking about 'e-learning' or your specific research area. What a wonderful learning stream that would be. And did you know that 25% of the 90 m daily tweets contain links. Meaning people are not only talking crap, but also sharing juicy links, including articles and papers that sometimes even Google can't spot for you.

Twitter allows students to go beyond the limits of the syllabus encouraging them to create their own content. Once armed with a tool, the potential of what they may create will be limited only by their imagination. When students learn how to use Twitter in one subject, they may then duplicate such knowledge to other subjects. The teacher plays a key role in guiding the students to work within the prescriptions of the syllabus. Such frames mean that on one hand knowledge is both prescribed and controlled. However, once students have perfected the skill, they may explore the affordances available to them.

Over time, teachers have documented their use of Twitter as a tool in their teaching. An example of an informative blog posted by a teacher who has used Twitter may illustrate this application (Barrett, 2008):

In my experience, and in the short time that I have used it, Twitter has grown (in) quickly to play a major part in the way that I interact with fellow colleagues and professionals from around the world. In my classroom, and with the children I teach, it has been an exciting tool to utilize and support learning. However, it is one of many tools that we have at our disposal. I do not see it replacing any of the others we use nor do I see the positive impact upon learning being exclusive to Twitter.

Twitter may also be viewed as a form of unique communication: Twitter is primarily a communication tool. Barrett (2008) considers one of the functions of Twitter as a tool filling the gap between email and instant messaging (IM). It is interesting that it occupies this middle ground. It is our view that it is important to understand how this communication functions in order to make the most of it in your classroom. Instant messaging is all about synchronous communication, relying upon people being online at the same moment. Asynchronous communication characterised by email (and by blog commenting) is slightly more time consuming but does not rely upon people being online at the same time. We delineate micro-learning as a —pragmatic innovation to lifelong learning due to its capability to support flexible learning that can be easily integrated into everyday activities, supporting individual learning aims and needs. (Buchem & Hamelmann, 2010).

When used effectively, new technologies have the potential to allow students to “speak” to a world far beyond their local community. In doing so, they empower students to write and publish for a global audience, encouraging them to be more than just the audience (Wells, 2007). The notion of reaching out to the open world further fits within the guidelines used to frame this paper. (Casey & Evans, 2011).

Twitter in Schools

The use of Twitter in early childhood

The best evidence of the use of Twitter within an early childhood setting is in a class experience published by Ana Dominguez (2009) in an article “Why use Twitter in the classroom?”

In the article, Dominguez argues that a child’s life experiences are fossilized early. When an early childhood teacher models the use of technology for communication to children, the experience that the kids receive is likely to remain with them as that experience is fossilized. The teacher is therefore able to build valuable skills for children to learn to use and to retain. When children interact meaningfully with their teachers, they feel loved and stimulated. The learning helps build their self-esteem. This way, the learning experience gives them a sense of adventure so that they learn to explore their environment. Because of the brief nature of communication in Twitter (with a word limit of 140 characters), Twitter becomes appropriate for use in early childhood.

In response to the question “How and why do I use this service in class?” Ana writes:

Because I find it to be an interesting and feasible way to develop literacy. The possibility of interacting with other people, other educators, other schools makes it more exciting, we are always expecting other people to share their experiences with us, which at the same time leads to students looking forward to these short periods of time in which we speak, tell, invite, greet, etc.

The teacher sets some ground rules of usage and ensures that she responds to all requests made by the children. Ana finds Twitter to be an interesting and exciting tool to use in early childhood.

The use of Twitter in the primary school

There are teachers in Australia actively using Twitter in their teaching. For instance, Leah Belson (2012) and Mrs M, (M., 2012), both teachers from Queensland, are just two examples of what Australian schools are doing. It was great on Year 7 camp.” Leah uses Twitter alongside a class blog where she makes entries covering many other out of class learning activities. Most of the activities are carried out by the use of a mobile phone. The mobile phone was used extensively in the Year 7 camp taking photos, and uploading them in the blog. Parents’ consent has been sought before photos using school children are uploaded. Belson (2012) said that support from the school administration was vital for success in any ICT programs in schools and it also helped to get more than one teacher involved so that they can support one another.

For her part Mrs M uses Twitter in the following ways. Firstly, her pupils can engage with classes from all over the world. Secondly, they tell stories from information that they have gleaned by asking questions on Twitter. Thirdly they carry out conversations about the weather, so that they gain an understanding of different temperatures. For example one class they engage with has the same temperature in summer as they do in winter. This means at a very early age the pupils can engage in authentic learning by immersing themselves in whole conversations and understandings around

matters that are important to them as well as meeting curriculum objectives.

Both these teachers incorporate the use of Twitter with class blogs. The blogs are visually appealing as well as being a pictorial record of class events. Both teachers also use TwitPics, where they tweet pictures to their followers.

The use of Twitter in secondary schools

There are multiple ways in which teachers may use Twitter in secondary schools. For instance, teachers use Twitter to get students to research information about a topic, create and publish classroom stories and engage in debate. Twitter allows more than one student to participate in the class discussions as well as allowing them to participate regardless of their literacy levels as Twitter affords these students the opportunities within the 140 character limit to not be daunted by more articulate students. An example in the successful use of Twitter in an Australian secondary school follows.

Michael Stuchbey, a Civics teacher at a school in the western suburbs of Melbourne Victoria, wrote an opinion piece for the *Sydney Morning Herald* (Stuchbery, 2010), about how he used Twitter to address the challenges of teaching a Year 8 class. This class occurred during a period where the Australian government was preparing to be managed by a hung parliament. Michael wrote that he “interviewed politicians, journalists and other media figures using Twitter and other social media technologies to bridge the gap between the school and the corridors of power”. The use of Twitter in the class received publicity from *The Age* newspaper and Channel Ten's *The 7pm Project* (television program) who also interviewed the students. However, Michael reported in his article:

That wasn't what got me excited, however. It was the sudden leap in my students' understanding in the six weeks of the project. They went from a group that could not name the electorate they lived in, nor understand the three levels of government, to prognosticating on the likely result of the hung parliament in the days following the election.

It was a transformative experience for me. It didn't matter that the class varied wildly in language ability and learning styles. Every student in the class played a role - crafting questions, posting Twitter updates, or asking questions to camera in videos that we uploaded.

The above example demonstrates that this level of authentic learning and understanding by the students in the civics class was unlikely to have occurred without the use of Twitter and other social media.

The use of Twitter in tertiary and vocational education

Twitter within the tertiary and vocational education sector has been shown to be very useful in multiple ways. For instance, it helps develop a student's personal learning network (PLN) by providing resources that can be used by the students to develop learning portfolios that they can use after training. Further, Twitter helps continue discussions in and out of the classroom. Twitter assists to reinforce and connect between the material world and the “real” world. Some lecturers use two white boards in class: one where PowerPoint slides are projected while the other white board is used as a “Backchannel”. A Backchannel is where users are able to post comments and these are viewed either by the audience and or the public, e.g., Australian Broadcasting Commission *Question and Answer Program* where those watching the program are able to stream live commentary using the #qanda hashtag provided. Some lecturers in the tertiary and vocational education sector have found the Backchannel useful in their teaching.

Twitter is useful as an avenue for networking with colleagues. Twitter is useful in that links can be posted using the medium instantly informing users about anything educational. Within the sector, there are many lecturers that remain skeptical in the use of Twitter arguing that it inhibits writing

skills. It is within these two sectors – higher education and vocational education- where most resistance to the use of Twitter may be found. The three groups that use Twitter most within this sector include marketing, admissions and the alumni.

As noted earlier in this paper, Twitter is mainly used within the tertiary sector for networking with colleagues all over the world however there is increasing uses of Twitter within some units in the School of Education at the University of New England. In these units it has been used to develop pre-service teachers PLNs, share resources, engage in dialogue and collaborate on assessment tasks. The experience of the authors within this institution has found a steady but increasing uptake of pre-services teachers engaging regularly with Twitter.

Conclusion

Twitter is a micro-blogging tool whose use in the educational arena represents a huge potential for educational development. Due to its popularity across a range of age-groups, it can be enhanced for use within educational circles. Twitter is interactive and immediate. Its popularity continues to swell. Rather than turning their back on Twitter as suggested by critics, educators should embrace technology particularly given that the tool is easily accessed through multiple platforms including hand-held devices. Educators should seize the opportunity offered by Twitter and begin tweeting away. Like all other new forms of technology, Twitter will continue to have its own share of supporters and detractors however, with increasing use of technology in education, we suggest that it is time to connect with Twitter as it has the potential to have significant effects on students' learning and we predict that more people will use this microblogging tool for educational purposes.

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