

Information Seeking Behavior among Undergraduates Students Engaged in Twitter

by

Musa Dauda Hassan
mhdauda@uwm.edu
School of Information Studies
University of Wisconsin, Milwaukee

Abstract

Social Networking sites have become an essential part of how people communicate today. Twitter is considered among the social networking applications that contribute greatly to the academic circle. Hence, this paper presents and discusses available literature on how undergraduate students engage in information seeking and sharing behavior on Twitter as the means of communication in the academy, and through social activism.

Keywords: information seeking behavior, Twitter, social networking, undergraduate students, academics

Introduction

The advent of information communication technology has created an avenue wherein web platforms have become an important repository of sharing of information among people. According to Morris et al (2010), the term used “*social search*” often refers to a process or a mechanism to which people used to find information online. This type of search comprises the used of search engines automatically index public information as may be found in Facebook or Twitter etc. Furthermore Cross et al (2001) reported that the evolution of knowledge has created social forums that support the creation and sharing of information across groups and organizations. And most important, online social networking services (SNS) which allow people to build social networks or social relationships with others who share similar interests. Hence, we have the rise of Facebook, Friendster, CyWorld, Twitter, MySpace etc. that establish and connect people together to enable them to present themselves in an online profile, and there are some SNS which are more work-related in context like LinkedIn.com (Nicolia, Manzo, Veronesi, & Rosellini, 2014). In this paper, the online news and social networking service Twitter will be reviewed in how it engages the information seeking and sharing behavior of students and their contribution to social activism through the service.

Overview of Twitter

Twitter is considered a digital social networking site, it was created in 2006 and it has a record of 316 million active users monthly, with 23 percent of the adults in United States. It was reported that the original intent of the site was to be a form for professionals to follow and update their professional knowledge through an immediate generated alert. Also, it is consider as multiplatform of the web 2.0 micro blog tool that are freely accessibly on the web (Dunlap, Dobrovolny, & Young, 2008); another report of the study indicate that there are more than 41 million users of Twitter within the year 2009. Also, it had said Twitter to posses 4.17 million users profile of which 1.47 billion are social related site (Kwak, Lee, Park, & Moon, 2010).

The Twitter short message contains the maximum of 140 characters and sharing resources/URL, news, announcement etc. (Java et al 2007). It is also confirmed the community of Twitter members post their contribution via the Twitter website which make it a power tool that is a convenient of micro sharing of information (Drapeau, 2009), and also it is regarded as an avenue of social and professional forums at which information is shared depending of the person or organization followed. It is also revealed that the application of online communication is regarded as one of the best practices between undergraduate and graduate students (Chickering & Gamson, 1987). It is also revealed in the Twitter website that its roles are target toward effective immediate communication among family friend, co-worker so they can stay connected during their daily activities (Drapeau, 2009).

In reference to higher education, the communication between students and faculty outside the class environment is considered as vital issue that will encourage student involvement in academic learning, and thus, providing an opportunity for students to contribute greatly toward achieving academic values (Chickering & Gamson, 1987). Hence, an interaction technique and means guiding the principle that influenced instructor immediate behavior with student in a positive learning environment, via social networking (J. D. Baker, 2004; Swan, 2002).

Theoretical Perspective: Twitter Information Seeking Behavior

A theory is an explanation of an observed systematic inter- relationship among concept for the purpose of describing, explaining, predicting and controlling phenomena (L. M. Baker & Pettigrew, 1999; Case, 2012; Odi, 1982). The most suitable theory that has connection to the study discussion “Student Information Seeking behavior of Twitter” is more related to the Berry-Picking model introduced by Marcia J. Bates. Hence, the idea of “berry-picking” refers to how individuals pick berries: they pick a berry here and there, then move on to another bush and pick berries from that bush. Over time, they have a basket of berries, but they came from a variety of places; so, too, do people pick information from a variety of sources and gather them together into a unified whole of some kind. The model suggests that information needs can be satisfied by the series of information that users acquire during the information search process.

The model had four layers: (1) the infrastructure layer, comprising of the network, hardware software and database; (2) the information, or content combined with metadata structure; (3) the information retrieval system itself; and (4) the human part of the system, which comprises of the searching activities and user understanding and motivation (Bates, 1989; Chowdhury, 2010).

Twittering platform social network could also have an element of Ellis grounded theory approach developed in 1989 which found that the interaction between any two features of his model depended on the situation in which a person with information need found him or herself, and no matter what the circumstance was, the process would begin with “Starting” features and “Ending” features (Kahlal, 2011). Ellis’ model appeared to be between the micro and the macro-analysis of information, which means that this model can be applied to different levels of the information seeking processes (Wilson, 1999). Ellis employed Glaser and Strauss’s grounded theory approach and generated seven steps in the information seeking patterns of social scientists that include: (1) Starting, which refers to the initial process of information searching and potentially the source identified; (2) Chaining, a backward or forward connection of materials sought; (3) Browsing, or searching, the process of the user exploring the area including the content and subject headings; (4) Differentiating, or determining the relevance and quality of the sources located; (5) Extracting, or actually selecting materials as a result of the differentiating step; (6) Verifying, a process of authenticating the data and ensuring that they are correct; and (7) Ending, the final step of searching process. He further added that the processes did not necessarily have to follow all the stages in a strict order, but that most processes generally contain some or all of the steps (Case, 2012; Chowdhury, 2010; Ellis & Haugan, 1997; Xie, 2010).

Undergraduate Involvement in Social Networks and Twitter

Significant literature discusses information seeking and behavior, and identifies the level of experience and educational status as a part of the factor of contributing user group to seek information or engage in information seeking behavior using social media. For example, Sheppard (1983) carried out a study on information-seeking behavior of student teachers engaged in technical and further education. The questionnaire was designed to reveal the source of information used to satisfy the information needs for recent lessons, current assignments, and the usefulness of sources used. The study shows that most sources used by the group was the library via their academic work. Another study in Botswana conducted by Zondi (1992) who explores library use skill and information seeking patterns of the first year students at the University of Zululand in KwaZulu-Natal, South Africa. The study confirmed the lack of effective user education programs that restricted the maximum use of the resources to address student information needs. Also, another study carried out by Osiobe (1988) at the University of Port Harcourt in Nigeria on information seeking behavior of undergraduate students at the University, observed the poor use of abstract/indexes that influence the demand and that efforts be made to integrate instruction on the use of information access and library resources in some compulsory undergraduate courses.

Anwar's (1981) study of the use of subject literature by in-service teachers at the University of Punjab, India concluded that user education programs offered students did not succeed in achieving the basic goal of developing the ability to use the source of information independently. And the effect of content representation and reader prior knowledge on the comprehension of hypertext included in a study conducted by Harve and Jean to investigate the role of various type of content representation on the comprehension of expository hypertext. Thus, 47 students with low or high prior knowledge in social psychology were asked to read a hypertext using content representation, and then the participant performed a multiple choice compression task. The results indicated a hierarchical map improved comprehension for the low knowledge participant, and there was no effect content mis representation with student prior knowledge (Potelle & Rouet, 2003).

Wildemuth's study of the effect of domain knowledge search tactics formulation examine the tactic of medical student search of a factual database of microbiology which revealed common patterns and found student search tactics and process of strategies improved by an addition of one or more concept, and gradually narrowing the retrieved set before it displayed the search result, on the whole, the result reveled that tactic search change over time as the student domain knowledge changes indicating the level of experience are major factors that influence information seeking (Wildemuth, 2004). Bilal and Kirby et al, (2002) in the studies of difference and similarities in information seeking between children and adult, identified three factors that influence user ability to recover from breakdowns, navigational style, and focus on task and showed that the experience level of consumer greatly contribute to information searching style. And another study confirmed that underrepresented students often use the Internet for their personal, academic or professional information; and an OCLC study also found that 70% undergraduate student used their library website for some assignment related to information, only at 20%.

Another study of help seeking attitude among African American college students indicated that they were seeking mental health treatment as the study examined 134 student of at historically Black colleges and universities. The report further confirmed that the higher performance of African American students, the more confidence mental health profession had (Jones, 2003). Also, Watson compared the attitude toward help seeking behavior and expectation of 135 college student athletes, and the findings indicate a significant difference was found of student athletes and nonathletic forms of information seeking, including the counseling service was important information for training etc. (Watson, 2005). Another study showed that college student uses social networking sites for health and wellness information which explored social networking and their perception even though social networking sites seemed not to be a well perceives platform for health and wellness information (Zhang, 2012). Another important finding indicated that the social outcome of electronic media use among university students show that the majority used electronic media to multitask. The result further confirmed that students who are on instant massaging showed more distractibility during academic tasks (Jacobsen & Forste, 2011).

Similarly another study showed that college students and adolescents used electronic media simultaneously with other media, for example, checking Facebook while instant messaging during class activities (Jacobsen & Forste, 2011; Kubey, 1986). Another study further suggested the application of Twitter to be integrated into a classroom to augment the teaching process which was used by students and faculty (Jacquemin, Smelser, & Bernot, 2014). Also, a study of Junco et al (2011) with 125 students on the effect of Twitter on college student engagement showed that both student and faculty are highly engaged in using Twitter in the learning process. Hence, the study provided experimental evidence of how Twitter can be use as an educational tool to help engage student in academic activities. And additionally, another study explored student athletics which indicated that Twitter is a beneficial communicative tool for student athletes (Browning & Sanderson, 2012), a study similar to so many studies that conform the closed relationship and application of Twitter in the academic circle among undergraduates as a form of social learning or a teaching practice that enhance an active academic process (Kassens-Noor, 2012; Lowe & Laffey, 2011; McArthur & Bostedo-Conway, 2012; Rinaldo, Tapp, & Laverie, 2011).

Notwithstanding, the utilization of social media involves democratic media activism, and indeed, digital communications technologies, and social media in particular, have been lauded for their potential to promote activism and social change through ‘raising awareness’ of injustices, their ability to motivate people into political action and the facility to organize and coordinate that action for maximum effect (Miller 2015). Hence, Twitter is reported to be among various forums for African American community social media communication, especially in the advent of the Black Lives Matter movement, particularly in the 2012 case of Trayvon Martin, a 17-year-old African American high school student from Miami Gardens, Florida, who was fatally shot in Sanford, Florida by George Zimmerman, a neighborhood watch volunteer. And in documenting the role of Twitter, numerous twitting sites were engaged by undergraduate students which included students at: Indiana University, North Carolina University, Florida International University, the University of Minnesota, and others. Also, a host of social media sites showed used for academic and social activism information seeking and sharing among collage undergraduate Black students as many sites of Twitter including: #SayHerName, #HandsUpDontShoot, #BlackOnCampus, #IfTheyGunnedMeDown/, etc. references.

Furthermore, many studies have also reported that undergraduate students also apply the use of Twitter in their constructive social activism related to voicing their mind in the aspect of social injustice regarding their current situation as a student. Hence, this implies a structural forum of protesting against educational injustice, climate issues, freedom of expression, etc. (Theocharis, 2011, Rhoads, 1998; Segerberg & Bennett, 2011).

On the whole, having highlighted and discussed the above literature, there is still more empirical studies which revealed the involvement of undergraduate students in the aspect of social media networks and more particularly of Twitter not discuss here, however, this review has uncover and addressed some of the literatures students are involve in the use and application of social networking service or social networking sites or websites with multiple users where one user can publish content, underlining the basic idea representing what could be students social media relationships, specifically with Twitter.

Conclusion

The literatures discussed have confirmed the used and the application of **Twitter** as a social communication platform among students most, especially in their academic activities. These finding compliment the various studies confirming the use and application of social networking services in academic environments among teacher and student in various aspect of life (Al-Rahmi & Othman, 2013; Elias, 2003; Schmitt, Sims-Giddens, & Booth, 2012). Furthermore, the findings reveal that there is a strong link of student teacher relationships of using **Twitter** in their communication processes. Similarly, undergraduate student were found to effectively use the **Twitter** as the forum of social communication and activism, in a sort of voicing their opinion on an issue related to daily life, hence, the use of **Twitter** is found to be a creative culture emerging around the academic community to reveal the acceptability of student use of Twitter compared to other social networking services, in part due to its simplicity of use.

References

- Al-Rahmi, W., & Othman, M. (2013). The impact of social media use on academic performance among university students: A pilot study. *Journal of Information Systems Research and Innovation*, 4(12), 1–10.
- Anwar, M. A. (1981). Education of the user of information. *International Library Review*, 13(4), 365–383.
- Baker, J. D. (2004). An investigation of relationships among instructor immediacy and affective and cognitive learning in the online classroom. *The Internet and Higher Education*, 7(1), 1–13.
- Baker, L. M., & Pettigrew, K. E. (1999). Theories for practitioners: two frameworks for studying consumer health information-seeking behavior. *Bulletin of the Medical Library Association*, 87(4), 444.

- Bates, M. J. (1989). The design of browsing and berrypicking techniques for the online search interface. *Online Review*, 13(5), 407–424.
- Bilal, D., & Kirby, J. (2002). Differences and similarities in information seeking: children and adults as Web users. *Information Processing & Management*, 38(5), 649–670.
- Browning, B., & Sanderson, J. (2012). The positives and negatives of Twitter: Exploring how student-athletes use Twitter and respond to critical tweets. *International Journal of Sport Communication*, 5(4), 503–521.
- Case, D. O. (2012). *Looking for information: A survey of research on information seeking, needs and behavior*. Emerald Group Publishing.
- Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin*, 3, 7.
- Chowdhury, G. (2010). *Introduction to modern information retrieval*. Facet publishing.
- Cross, R., Rice, R. E., & Parker, A. (2001). Information seeking in social context: Structural influences and receipt of information benefits. *IEEE Transactions on Systems, Man, and Cybernetics, Part C (Applications and Reviews)*, 31(4), 438–448.
- Drapeau, M. (2009). What is Twitter's vision. Retrieved February, 2, 2008.
- Dunlap, J., Dobrovolny, J., & Young, D. (2008). Preparing e-learning designers using Kolb's model of experiential learning. *Innovate: Journal of Online Education*, 4(4), 3.
- Elias, M. J. (2003). Academic and Social-Emotional Learning. Educational Practices Series.
- Ellis, D., & Haugan, M. (1997). Modelling the information seeking patterns of engineers and research scientists in an industrial environment. *Journal of Documentation*, 53(4), 384–403.
- Jacobsen, W. C., & Forste, R. (2011). The wired generation: Academic and social outcomes of electronic media use among university students. *Cyberpsychology, Behavior, and Social Networking*, 14(5), 275–280.
- Jacquemin, S. J., Smelser, L. K., & Bernot, M. J. (2014). Twitter in the higher education classroom: a student and faculty assessment of use and perception. *Journal of College Science Teaching*, 43(6), 22–27.

- Jones, S. (2003). The Internet Goes to College: How Students are Living in the Future with Today's Technology (Washington, DC: Pew Internet and American Life Project, September 15, 2002). Online At < [Http://Www. Pewinternet. Org/Reports/Pdfs/PIP_College_Report. Pdf](http://www.pewinternet.org/Reports/Pdfs/PIP_College_Report.Pdf)>. Last Accessed, 1, 28.
- Junco, R., Heiberger, G., & Loken, E. (2011). The effect of Twitter on college student engagement and grades. *Journal of Computer Assisted Learning*, 27(2), 119–132.
- Kahlal, H. (2011). Information Seeking Behaviour: A Comparison between Business and Engineering Undergraduate Students in Tertiary Environments. Retrieved from https://bp140-portfolio.wikispaces.com/file/view/Final_Research.docx
- Kassens-Noor, E. (2012). Twitter as a teaching practice to enhance active and informal learning in higher education: The case of sustainable tweets. *Active Learning in Higher Education*, 13(1), 9–21.
- Kubey, R. W. (1986). Television use in everyday life: Coping with unstructured time. *Journal of Communication*, 36(3), 108–123.
- Kwak, H., Lee, C., Park, H., & Moon, S. (2010). What is Twitter, a social network or a news media? (pp. 591–600). Presented at the Proceedings of the 19th international conference on World wide web, ACM.
- Lowe, B., & Laffey, D. (2011). Is Twitter for the birds? Using Twitter to enhance student learning in a marketing course. *Journal of Marketing Education*, 33(2), 183–192.
- McArthur, J. A., & Bostedo-Conway, K. (2012). Exploring the relationship between student-instructor interaction on Twitter and student perceptions of teacher behaviors. *International Journal of Teaching and Learning in Higher Education*, 24(3), 286–292.
- Morris, M. R., Teevan, J., & Panovich, K. (2010). A Comparison of Information Seeking Using Search Engines and Social Networks. *ICWSM*, 10, 23–26.
- Nicolia, A., Manzo, A., Veronesi, F., & Rosellini, D. (2014). An overview of the last 10 years of genetically engineered crop safety research. *Critical Reviews in Biotechnology*, 34(1), 77–88.
- Miller, V. (2015). Phatic Culture and the status quo: Reconsidering the purpose of social media activism. *Convergence: The International Journal of Research into New Media Technologies*, 23(3), 251-269.

- Odi, A. (1982). Creative Research and Theory Building in Library and Information Sciences. *College and Research Libraries*, 43(4), 312–19.
- Osiobe, S. A. (1988). Information seeking behaviour. *International Library Review*, 20(3), 337–346.
- Potelle, H., & Rouet, J.-F. (2003). Effects of content representation and readers' prior knowledge on the comprehension of hypertext. *International Journal of Human-Computer Studies*, 58(3), 327–345.
- Rhoads, R. A. (1998). *Freedom's web: Student activism in an age of cultural diversity*. ERIC.
- Rinaldo, S. B., Tapp, S., & Laverie, D. A. (2011). Learning by tweeting: Using Twitter as a pedagogical tool. *Journal of Marketing Education*, 33(2), 193–203.
- Schmitt, T. L., Sims-Giddens, S. S., & Booth, R. G. (2012). Social media use in nursing education. *OJIN: The Online Journal of Issues in Nursing*, 17(3).
- School of Media and Public Affairs. (n.d.). Twitter's Role in Political Communication and Social Activism. *Washington*. Retrieved from <https://smpa.gwu.edu/Twitter%E2%80%99s-role-political-communication-and-social-activism>
- Seegerberg, A., & Bennett, W. L. (2011). Social media and the organization of collective action: Using Twitter to explore the ecologies of two climate change protests. *The Communication Review*, 14(3), 197–215.
- Swan, K. (2002). Building learning communities in online courses: The importance of interaction. *Education, Communication & Information*, 2(1), 23–49.
- Theocharis, Y. (2011). Cuts, tweets, solidarity and mobilisation: How the internet shaped the student occupations. *Parliamentary Affairs*, 65(1), 162–194.
- Watson, J. C. (2005). College student-athletes' attitudes toward help-seeking behavior and expectations of counseling services. *Journal of College Student Development*, 46(4), 442–449.
- Wildemuth, B. M. (2004). The effects of domain knowledge on search tactic formulation. *Journal of the American Society for Information Science and Technology*, 55(3), 246–258.
- Wilson, T. D. (1999). Models in information behaviour research. *Journal of Documentation*, 55(3), 249–270.

Xie, I. (2010). Information searching and search models.

Zhang, Y. (2012). College students' uses and perceptions of social networking sites for health and wellness information. *Information Research: An International Electronic Journal*, 17(3), n3.

Zondi, L. E. (1992). Library-use skills and information-seeking patterns of first-year students at the University of Zululand. *South African Journal of Library and Information Science*, 60, 204–204.