Twitter and E-Leadership in a Postsecondary Setting

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Abstract

The purpose of this article is to describe student experiences when incorporating Twitter into a Bachelor of Education (BEd) course. Participants were 8 first year BEd students who provided written answers to open-ended questions and participated in two focus group interviews. Findings showed that, after participants completed a Twitter assignment, their view of Twitter and its usage changed. Analyzed through the emerging concept of e-leadership, the learning experienced by students enhanced collaboration and communication between them and their instructor. An implication is that if BEd students are to effectively incorporate technology into future Kindergarten to Grade 12 classrooms, they need to experience digital literacy during undergraduate courses.

Introduction

Around the world, digital literacy is being incorporated into educational curricula and learning outcomes (e.g., Hague & Payton, 2010; International Society for Technology in Education, 2007). Even though teachers face intense pressure to promote digital literacy, many Kindergarten to Grade 12 educators do not have formal training or background experience with regard to technology and student learning. Otherwise said, without proper training, many teachers are expected to infuse e-learning, e-pedagogy, and technological tools into their daily lesson plans. Leonard and Leonard (2006) found that "technology integration remains problematic in that many teachers seem unwilling or unable to incorporate technology into teaching and learning process" (p. 212). Furthermore, when teachers do incorporate technology into classroom environments, the e-learning activities or technological practices are quite basic. For example, Creighton (2003) and Preston et al. (in press) found that, in promoting digital literacy in students, teachers predominantly used Internet searches, YouTube videos, multimedia presentations (e.g., PowerPoint), and class websites to disseminate information. In general, the research shows that despite the need for teachers to integrate innovative technologies into Kindergarten to postsecondary education, growth in this area is slow, challenging, and somewhat superficial (Abbitt, 2011; Bauer & Kenton, 2005).

This study was based on the belief that teachers need to be provided with ongoing professional development related to digital literacy and technological tools. We also believe that the incorporation of digital practices and assignments within BEd programs is of particular importance, because it provides neophyte teachers with first-hand experience, enabling them to better support the digital literacy in their future students. Additionally, this study was based on the belief that there are many forms of leadership, and it is not the administrator's (aka schoo principal's) sole responsibility to assume the role of technological leader for the school. Specifically, strong and sustainable leadership in the area of e-learning, e-pedagogy, and technological tools ideally reflects a combined, concerted effort emanating largely from teachers and students. In such a manner, we believe e-leadership is a type of vertical leadership that is the responsibility of all educators; it is not a hierarchical traditional form of leadership.

In stating these biases, the purpose of this article is to describe undergraduate student experiences when incorporating Twitter into a Bachelor of Education course. Participants involved in this study were eight first year Bachelor of Education students, who helped analyze the data and are co-authors of this paper. Data were collected via written responses to 16 open-ended questions and two focus group interview involving all participants. Findings showed that, after participants completed a Twitter assignment, their view of Twitter and its usage changed. The new and emergent concept of e-leadership was the philosophical framework used to analyze the findings. An implication of the study is that in order for Bachelor of Education students to incorporate technology into future classrooms settings, they need to be provided with technological experiences and insight during their undergraduate courses.

Literature Review: Twitter and E-Leadership

The International Society for Technology in Education (2008) stated that teachers should "model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments" (para. 2). In response to this point, many authors contend that social media, such as Twitter, is a powerful environment to promote collaborative knowledge construction and socially enriched pedagogies (DeCosta, Clifton, & Roen, 2010; Denton, 2012; Seo, 2013). Even though there is potential to promote high levels of learning, Greenhow (2009) stated that one reason why Twitter and other social networking platforms are not widely integrated in Kindergarten to postsecondary settings is due to the lack of social media experience of educators. That is, the teachers' readiness and willingness to learn about technology and social media directly affected their use or lack thereof of technology (Inan & Lowther, 2010; Rinaldo, Tapp, & Laverie, 2011). O'Hanlon (2007) investigated the challenges of educators who were digital immigrants and not comfortable with social media platforms. O'Hanlon found that teacher anxiety around using social media in classroom settings quickly dissipated once they actually used it.

Specifically within the realms of higher education, Twitter has been slow to gain popularity (Kassens-Noor, 2010; Welsh & Bonnan-White, 2012). However, the research concerning Twitter and higher education that is available is, for the most part, favorable. Junco, Heiberger, and Loken (2011) found that Twitter engaged university students with course content, improved grades, provided students with prompt feedback with regard to personal ideas, and increased student-to-student interaction. An additional benefit of Twitter in higher education is that it increases communication between students and the instructor. Twitter allowed students to post questions and comments during and after class, thereby increasing student engagement with content (Junco et al., 2011; Tyma, 2011). Other studies have found that Twitter was an ideal medium for creating a sense of classroom community and increasing student engagement with course content (Dunlap & Lowenthal, 2009; Evans, 2013; Junco, Elavsky, & Heiberger, 2012). Young (2009) found that Twitter alleviated potential power dynamics between instructor and students, enabling the student to be in more control of their learning. Students expressed their ideas through their personal tweets and were better able to understand and respond to other students' tweets. Miners (2009) indicated that some college professors display Twitter feeds on a screen as a way to embellish interaction with students in large or lecture-style classrooms.

With these benefits articulated, there also exists research that contradicts the above findings. Welch and Bonnan-White (2012) concluded that Twitter did not have a statistically significant effect on student engagement in a higher education setting. As well, a number of studies have shown that postsecondary students do not like using Twitter, because students want to keep their predominantly personal social media activities separate from academic realms of communication (Dahlstrom, Walker, & Dziuban, 2013; Haytko & Parker, 2012). In sum, it appears that the advantage of using Twitter in higher education may depend on the course content, the assignment task, and the instructor and students' expectations for Twitter.

In order to promote the use of technological devices, e-pedagogy, and e-learning in classroom settings, educational stakeholders must redefine the traditional concept of leadership. In the past, teachers were the dominant leaders within any classroom setting, while students were passive learners and followers. However, within a technologically vibrant classroom, teachers and students need to share leadership during the learning, a process we refer to as e-leadership. For us and other authors (e.g., DasGupta, 2011; Gurr, 2004; Preston et al., in press), e-leadership happens when a person assists a friend, colleague, or another person/people with the use of technology and/or technological devices in an effort to enhance digital knowledge, skillsets, and literacy. E-leadership is a leadership style that is attached to a learning process that is decentralized, non-hierarchical, hyper-linked, collaborative, and symbiotic. With regard to this nascent topic of e-leadership, we agree with Jameson (2013) who stated, "The term 'eleadership,' although still not yet much in evidence in research contexts, is useful to distinguish the leadership of educational technology form any other kind of leadership" (p. 886). Although

within the literature, the concept of e-leadership is not well established, we build on the aforementioned information that is available and use this emergent concept to analyze the findings of our research.

Research Background and Design

At the time of the study, all participants possessed an undergraduate degree, predominantly a Bachelor of Arts with various specializations. With this degree, participants of this study enrolled into the University of Prince Edward Island's Bachelor of Education program. As a part of the BEd program, all students, including the eight BEd participants of this study, were mandated to take a course entitled *Communications*. The content for the Communications course involved the introduction of basic educational topics like understanding provincial curricula, creating lesson plans and unit plans, learning about student assessment and classroom management techniques, and improving teacher-parent collaboration in school. The same course was offered during two timeframes (or two sections), which each enrollments of 25 and 26 students. For this pass-fail course, the instructor asked the students to complete five assignments, one of which was based on Twitter, which was an assignment where every student was asked to tweet at least three times per week throughout the nine-week course. The content of the tweets was to reflect the student's learning, ideas, and/or questions relating to each week's course content.

After the course was completed, the instructor invited all students to articulate their personal views and co-write an article based on their Twitter experiences. Eight students volunteered to participate in this qualitative study. Data reflected written answers to a set of 16 open-ended questions, an activity that was completed six weeks after completing the course. Data also included two focus group interviews (Krueger & Casey, 2009; Puchta & Potter, 2004) conducted two months and one year after completing the course. The focus group interviews were transcribed, and participants were provided with a written copy of focus group interview transcripts. In analyzing all data, we reviewed the written question responses and the focus group transcripts to create a preliminary list of key ideas, commonalities, and differences, which converged into larger thematic patterns in response to the study's purpose (Creswell, 2012).

Lincoln and Guba (1985) stated that in order to strengthen the trustworthiness of qualitative research, the study needs to be credible, transferable, and dependable—characteristics we emulated in our research. To improve credibility, each participant read the focus group transcripts, concentrated on his/her particular voice, and performed a member check to ensure the meaning he/she intended to convey during the focus group interview was accurately documented in the transcript (Imman, Howard, & Hill, 2012; Lincoln & Guba, 1985). In addition, to influence the credibility of the research, data were collected shortly after the course was completed and a year later. In articulating our findings, we included verbatim excerpts from

both the written responses and transcripts as a means to credibly represent the data and its thematic findings (Langenbach, Vaughn, & Aagaard, 1994). For our particular research, transferability, the extent to which the results of one study is applied to similar settings (Ary, Chester-Jacobs, Razavieh, & Sorensen, 2006; Lincoln & Guba, 1985), was promoted via the aforementioned description of the Communications course, the Twitter assignment, and the volunteer participants. The dependability of the research was encompassed through method triangulation Lincoln & Guba, 1999) where both individualized written data and focus group oral data were collected. Also, triangulation of results was promoted through all authors meeting to analyze the thematic results of the study. For this meeting, the first author did a preliminary analysis, and the first author and co-authors co-created the themes for the findings.

Data Findings

When first introduced to the assignment, most participants were hesitant. However, not only did their attitude toward the assignment change, they articulated many benefits associated with the activity. These benefit included feeling engaged with course content, developing a digital identity, and increasing their digital literacy. In turn, the participants also articulated several challenges with regard to the Twitter assignment and the applicability of this social media tool in a Kindergarten to Grade 12 setting. These challenges include the 140-character limit and questions pertaining to the most appropriate age for using Twitter. Descriptions of these thematic findings are provided below.

Initial Attitude: Doubtful and Hesitant

Upon being introduced to the course syllabus and the Twitter assignment, the majority of participants were either hesitant or skeptical about the merits of the Twitter, specifically in an educational setting. For example, Robyn explained, "I thought the [Twitter] assignment was a complete waste of time." Other comments included "My initial reaction to the Twitter assignment was curiosity, and, I will admit, a bit of skepticism" (Brittany). "As I read the criteria for the assignment, I felt more and more nervous about having to tweet, having to set up tweet deck, and having to tweet 3 to 4 times a week. I was dreading it. (Angela). "I was sceptical about its potential for pedagogical use" (Joseph). "Although I felt quite confident in my abilities due to my prior experience with Twitter, I was unsure of how any assignment could be adequately completed in 140 character limits" (Rachel). "I was concerned that I would have problems setting up my account and to begin the process of tweeting. I was also concerned about things such as privacy while using a Twitter account" (Shannon). Robyn also explained that most of her classmates were at least somewhat resistant to the idea of the Twitter assignment: "Almost everyone I talked to did not think that such an assignment fit into what they believed we should be learning in the Education program." In opposition to this predominant

view, Julie and Kaitlyn provided contrasting comments with regard to their initial views about the Twitter assignment. "I felt somewhat excited because I would be able to use my [pre-established] Twitter account for something educational" (Julie). "I saw it as an easy way to boost our grades" (Kaitlyn). Upon hearing that one of their assignments was based on Twitter, most participants were doubtful of its value in a BEd program.

Benefits: Engagement, Rapport, Communication, Assessment, and Digital Comfort

After completing the Twitter assignment, participants articulated several thematic benefits they accrued from tweeting. One of these benefits was student engagement. Kaitlyn explained, "Often times I would not really feel like doing the assigned readings for the week, but some of the interesting tweets about the content would spark my curiosity and make me more inclined to actually do the readings." Robyn said:

> The [Twitter] assignment helped to keep me engaged with the course material . . . Reading other people's tweets also helped me to pick out the key points from the week or helped draw my attention to something in the book that I hadn't paid much attention to.

Robyn also pointed out, "The assignment became so engaging and interesting that some of the tweets even became topics of discussion between classmates outside of class." Rachel explained how tweeting made her more engaged with course content when she said:

> When I would think of a topic to tweet about, whether it was concerning an assigned reading or an activity, which we had completed in the classroom, I had to think very deeply about what it is that I had taken away from that experience.

Brittany's comments summed up student engagement when she said, "Using Twitter . . . provides students with the opportunity to be active in their learning as they are creating and expressing the content [of their learning.]"

Another thematic benefit that surfaced due to the Twitter assignment was an increased feeling of classroom community. In particular, this enriched sense of classroom rapport was due to the fact that Twitter enhanced the communication and sharing of ideas between students. Julie explained that tweeting was an easy and convenient way to collaborate with other students, without having physically to meet outside of class time. Kaitlyn believed that the content of her classmates' tweets revealed the personalities of individual students and the class, as a whole. In turn, she indicated, "It was a useful way to get to know our classmates." Robyn's comment relayed a similar meaning: "It's a great way to know someone's personality, interests, and values." Rachel, Angela, and Brittany explained how student voice and ideas were communicated via Twitter. "It is such a simple and effective way to share ideas with others" (Rachel). "I absolutely loved how Twitter allowed me to view my peers' thoughts, ideas, and opinions" (Angela) "[Twitter enabled] students to work collaboratively with their classmates, building a community that supports a great learning environment" (Brittany). Angela and Rachel

also highlighted that, in particular, Twitter was an effective outlet for students who were naturally shy or introverted during class time to articulate their thoughts and ideas to peers in a comfortable fashion. Robyn's comments summed up the theme of community when she said, "The interactive nature of Twitter has great potential for improving feelings of inclusiveness and community in the classroom . . . It also helped improve classroom rapport as there was a constant discussion occurring between all students in the class."

According to the participants, another benefit of the Twitter experience was that it improved communication between the instructor of the course and students in the course. Shannon found that tweeting was "a simple process that I could use to communicate quickly and efficiently with my peers and instructors." Shannon said, "It allows the professor to see what each student is learning and thinking about the class … it's also a very advantageous form of communication between professor and student." Julie believed that Twitter was a way "our professor could tell if we were doing our weekly readings or not." On the topic of assessment, Robyn articulated her belief that "It is a great form of formative assessment for the teacher, as they are able to see what the students are having difficulties with, what they understand, and what they like or dislike about the subject material, or lessons."

Another thematic benefit of the Twitter assignment was that the experiential learning of tweeting was a catalyst to creating digital confidence and comfort within participants. Prior to the course, Shannon had no contact with Twitter, and, for her, the main advantage of the Twitter assignment was the actual experience of tweeting and experiencing Twitter. In turn, she said, "I think that's one really important aspect of this Twitter assignment is to alleviate the anxiety of working with new technology … I gained a lot more confidence in my ability to use these tools and programs." Rachel believed that tweeting in an undergraduate course, "explained ways of thinking about Twitter in an educational context." Kaitlyn had never used Twitter before and she was thankful that she now had an experientially comprehensive idea of what Twitter encompassed. Brittany confessed that, before the assignment, she had heard about hashtags, but was not clear on their meaning. She continued by explaining, "Prior to the assignment, I had no idea of how to really use or talk about Twitter." Likewise, Robyn said, "I feel the same. I had never used it before the class, and I had no clue what it meant to follow someone, choose to follow someone, or what hashtags could do. No clue." Angela provided a short narrative about how the Twitter experience helped her during her teaching practicum. She said,

> I had a kid in Grade 1 in my practicum who asked me if he was allowed to go on this Twitter account. He's 6 years old, and he is asking me about that. I could have a conversation with him about Twitter, because I now understand what Twitter is about.

For many participants, the hands-on experience of tweeting was like an epiphany because, through coming to understand Twitter, student began recognizing a need to become more technologically literate, in general.

Challenges: Characters and Age Appropriateness

There were several challenges attached to completing the Twitter assignment. One frustration that some participants experiences throughout the course pertained to Twitter's 140-character limit. Kaitlyn and Joseph found that the most difficult aspect of the assignment was compressing their thoughts into 140 characters. Shannon also found that the limited in characters prevented her from providing details or being descriptive about a special topic. On the other hand, Angela and Rachel found the 140 character limit to be advantageous, because it forced them to be succinct and to the point. Robyn found the 140-character to be inspirational, because "I started trying to think creatively about what I could tweet in 140 characters or less, and, all of the sudden, the assignment became quite enjoyable."

Issues of privacy and the potential content of tweets were two additional concerns expressed by participants. Participants believed that these concerns were especially pertinent for younger students who might not fully understand how Twitter works. Rachel explained, "My major concern with introducing Twitter to a classroom would be the age range of the students involved. Younger students may not have the emotional maturity required to responsibly run a social media platform." Brittany agreed that it would be difficult to monitor the online behavior of all students. Robyn worried about the teacher not having the ability to delete or regulate the students' tweets, and she questioned, "What if they tweet inappropriate things? What would happen to the feelings of the students in the rest of the class?" Julie viewed Twitter, in a university setting to be beneficial for learning, but, within a public school setting, Julie believed that before using Twitter, issues around privacy must be taught to the students. Additional participants had concerns about privacy. Shannon confessed that she did not fully understand Twitter's privacy issues. Rachel discussed the dilemma of teaching curriculum content and digital literacy with limited class time available. On this topic she said, "How do you weigh the importance of giving students technological tools versus 'I only have so much time to teach them actual course content?'" An interesting aspect of this finding was that the participants' Twitter exchanges provided them with hands-on social media experience, which was fundamental to being fully engaged in discussions about Twitter and its benefits and challenges.

Discussion

Some authors refer to e-leadership as promoting relationships among members through a virtual or online presence (Avolio & Kahai, 2003; Zaccaro & Bader, 2003); however, we do not refer to e-leadership in such a manner. Also, as mentioned previously, some researchers state that educational leadership is embodied through the school principal, and e-leadership is associated with the actions of the school principals. In such a case for example, the principal would financially support a new set of school laptops or promoting vie for school policies related to e-learning (Anderson & Dexter, 2000; Blau & Presser, 2013; Dickerson & Coleman,

2012). While we do not argue that school principals can be recognized as e-leaders, we believe that an equally, if not more, important aspect of e-leadership is leadership that is represented in the actions of teachers and students. More specifically, we define e-leadership as the effective promotion and integration of technological learning and literacy into and within education environments, regardless of any formal leadership position (DasGupta, 2011; Gurr, 2004; Preston et al., in press). For us, this nascent concept of e-leadership is a new way of examining effective leadership, where an individual's influence and assistance produces a change in attitude, feeling, thinking, behaviour, and/or performance with individuals, groups, or across organizations (Avolio, Kahai, & Dodge, 2001). This point was highlighted in this research, where communication through Twitter spawned learning and leadership that was led by the students skills, personalities, personal knowledge, and interests, rather than on titles or functional roles. Through these actions, students embody e-leadership as they as facilitating friends, colleagues, or other people with the knowledge and learning through tweeting.

The above paragraph induces a somewhat loose or all-encompassing view of what constitutes leadership; however, we find no fault in viewing leadership in such an inclusive fashion. For us, e-leadership is, in fact, any person who helps another person learn with and from technology. This comprehensive perception is aligned with other modern views of leadership, such as "leadership as living systems" (Mitchell & Sackney, 2013, p. 1) and "fractal leadership" (Harle, 2011, p. 33). All three concepts of leadership (i.e., e-leadership, living systems leadership, and factual leadership) challenge the notion that effective leadership is about directing, controlling, and managing a type of contained learning process. Instead, effective leadership is about recognizing that each person is a capable and competent learner and leader simultaneously, which is what the Twitter finding analytically supported.

E-leadership was embodied in the Twitter assignment as students used their own and each other's tweets to influence student engagement, increased classroom rapport, and improved student-student and student-instructor communication. In this research, e-leadership was a way to welcoming diverse kinds of learners to share their thoughts. For example, through the Twitter platform, students who were by nature extroverts or introverts became more equal in this online communicative platform. E-leadership was embodied in the collective tweets, which deepened individual and collective learning student. Avolio and Kahai (2003) believed that a core purpose of e-leadership is to use technology to enhance relationships, whether they are face-to-face or online. As reflected within the findings, the experience of Twitter appeared to strengthen the rapport that students had with each other.

Through this research, we suggest that incorporating technology and its diverse mediums into classroom experiences is changing the traditional features of leadership and simultaneously requiring people to learn a new way of leading. E-leadership is altering traditional patterns of how information is acquired, stored, interpreted, and disseminated. E-leadership is transforming

how educators and students are influenced by each other. For example, the collection of tweets that emanated from the Twitter assignment reflected the group's social construction of knowledge, where students and teachers co-created knowledge and where hierarchical levels of influence where often alleviated. In such a manner, via e-leadership, teacher and student move between being leaders and followers, a term sometimes referred to as reciprocal mentors (Gabriel, & Kaufield, 2008).

E-leadership is also related to the idea of reverse mentorship. Because most current educators represent digital immigrants (i.e., people who did not grow up with technology), it is imperative that these educators call upon the leadership and knowledge from the Net Generation (i.e., student approximately 1- to 20-year-olds who grew up with the genesis and/or proliferation of the Internet). Levinson (2010) explained that adults tend to view technology as a source of information, while students view technology as a way of life and as an entertainment and socializing tool. As such, the Net Generation, in general, is not intimated by technology, and for that reason have much knowledge of it. Teachers need to be open to gaining knowledge from their students, where students openly mentor teachers on how to use social media and information technology (November, 2010). This idea of reverse mentorship is aligned with concepts of e-leadership, where leadership and learning is non-hierarchical and a shared process and product.

Conclusion

New and innovative technological gadgets, social media tools, and educational applications are being developed faster than an individual's ability to learn about each one. Because of the volume and the speed of this change, no one person can maintain the level of learning required to comprehend every new facet of technology. Thus, in educational settings, digital learning and literacy cannot merely focus on mastery of one specific programs or social media tool. Rather, digital learning and literacy needs to encompass a more holistic, cooperative, sharing aspect of education, a process we refer to as e-leadership, where a collective understanding of technologies is fluidly shared among all stakeholders in the school community.

It is important to point out that this collective understanding of technology is made from individual people possessing digital experience and knowledge. To effectively promote digital learning, educators need to provide opportunities for students to become comfortable with specific forms of technology, because such experiences launch the student's digital identity. However, to solidify such an identity, students need to share their knowledge and experience of that tool with anyone who is interested. When teachers and students promote e-leadership, where they openly share their digital skills and knowledge with one another, there is great potential for rich learning. Moreover, through such e-leadership, as everyone freely gives their

technological experience to others, classroom environments and entire school systems are empowered with a collaborative digital culture that is ever-developing and as current as possible.

Leonard and Leonard (2006) revealed that many school principals consider themselves ill-prepared to shoulder the responsibility of being the technological leaders of the school. Not only do we believe that it is improbable (if not impossible) for principals to successfully assume the sole role of technology leader of the school, teachers, students, and members within the school community need to assume the collaborative, reciprocal role e-leadership. In such a manner, the power of e-leadership is akin to sustainable, on-going digital learning.

Finally, the Twitter assignment experience was a form of learning that embellished the student's digital identity. At the start of the course, participants were skeptical about the merits of the Twitter assignment, but after experiencing this digital learning platform, they possessed increased confidence and comfort with the tool. Possessing this digital comfort enabled students to articulate the benefits and challenges not only with regard to the Twitter assignment, but it allowed them to envision the benefits and challenges for their future students. A final implication of this finding is that if higher education is to successfully prepare students for the future, hands-on learning is needed. Instructors need to plan and promote content and assignments that are applicable and practical to what graduating students will face outside of higher education. Doing so will provide them with a head-start advantage for their future. Applying this point to BEd programs, pre-service teachers to need to gain experience, confidence, and skills with technology during their undergraduate courses in order to effectively incorporate technology into future Kindergarten to Grade 12 classrooms.

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