

Rethinking the Usefulness of Twitter in Higher Education

Zahra Bulbulia¹ and Johan Wassermann²

¹*Westville Campus, M Block*

²*Edgewood Campus, University of KwaZulu-Natal, Durban, South Africa*

Telephone: ¹<+27 31 260 8338>, ²<+27 31 260 3484>

E-mail: ¹<Bulbulia@ukzn.ac.za>, ²<wassermannj@ukzn.ac.za>

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ABSTRACT Research has been abundant in generating studies on pedagogical revolution and innovation via technology in higher education institutions, specifically the incorporation of social media in pedagogical practice. The potential for using social media has been proven in studies around the world. The objective of this study was to examine the usefulness of Twitter as a communication tool in Information Technology courses taken by students at the University of KwaZulu-Natal (UKZN) in the Durban region of South Africa. The methodology for this qualitative study is a design-based research. Findings overall showed that students preferred more traditional ways of academic support such as face-to-face conversations, telephone calls and emails rather than using Twitter to communicate with their Academic Development Officer or their peers. Conclusions drawn from the study indicate that the way social media is used in higher education should be reconsidered and used only to complement traditional practices.

INTRODUCTION

“Digital natives” are young people who have grown up using information technology to process information and to communicate. Consequently, it is argued that they think differently, when compared to the older generations (Berchavaise 2015; Prensky 2001). As a result, the digital natives entering higher education have resulted in these institutions implementing, for example, more online courses and to include and promote social media usage in academia (Cowling and Back 2015; Helvie-Mason 2011). Furthermore, some scholars in higher education institutions encourage the incorporation of social media technologies in courses in order to meet the perceived learning styles and needs of the digital natives (Helvie-Mason 2011; Levine 2010; Selwyn 2009; Tay and Allen 2011). This is done because a perceived cornerstone in the lives of digital natives is social media. Social media technologies in themselves have grown, both in public and academic use, into a phenomenon with wide-ranging conceptualizations. The term social media commonly means media used to support and facilitate social communication and collaboration and can include blogs/vlogs, wikis, podcasting and game modding (Collin et al. 2011). Social media technology, in turn, refers to the actual web-based technology and mobile applications that enable organizations and individuals to create and share new or existing user-generated content.

With regards to usage, social media access via computer and mobile devices, such as cell phones and iPads, has become fairly widespread. Presently, the two most popular social media websites are Facebook and Twitter (Ebizmba 2015; Roblyer et al. 2010).

In the South African context, statistics have shown that Twitter is the third most popular social media website and is used by 6.6 million people (Meier 2013; Webafrica 2015). The attraction towards Twitter as a social media website is that it allows users to employ only 140 characters of text, and in some cases, pictures, to share a message, in a fast and simple manner, with numerous other users. This makes Twitter, as a micro blogging platform, which allows users to publish brief text updates online in the form of tweets, open to uncluttered public dialogue (Ebner et al. 2010). The latter is possible because each individual user has a set of users that follows him/her, known as followers, who can receive tweets and messages from the people they are following. This is achieved by the follower clicking on the follow button of the user they intend to trail. However, if a user has opted to make their account private or protected, authorization is required by the followed. Although primarily a social media technology, Twitter has been successfully implemented and used in learning spaces in higher education institutions in numerous countries in the developed world (Ebner et al. 2010; Junco et al. 2011; Rankin 2009).

Objectives

In light of the above information, the primary objective of this study was to understand how students used Twitter to communicate with their Academic Development Officer (ADO), and each other, about academic content covered in Information Technology courses. The role of the ADO is to provide academic monitoring and support to students who are deemed at risk of not completing their degrees in the stipulated university time frames, or being at risk of academic exclusion. However, the role of the ADO has expanded over time to assisting all students in the discipline in their areas of difficulties.

The focus of this study was to examine the usefulness of Twitter as a communication tool in Information Technology courses by students at the University of KwaZulu-Natal (UKZN) in the Durban region of South Africa. In the course of 2013, the ADO created a Twitter page as a blogging platform to facilitate easier communication with all students, including those identified as being at risk. The rationale behind using Twitter to help students engage in discussions about course content with the ADO and amongst themselves, was based on the reasoning that since Twitter is the third largest social media website in South Africa, the student population, in all probability, would have access to it on their mobile devices and would use it for communication in their personal social spaces. It was therefore argued that they could extend this use to their academic work. Furthermore, the literature has revealed that Twitter has been successfully used elsewhere to communicate with students resulting in space, place and time becoming less significant (Ebner et al. 2010; Junco et al. 2011; Rankin 2009).

Against this background this paper explores and aims to understand the usefulness of Twitter as a means of communication with and amongst higher education students in a South African higher education setting. Ethical clearance for this study was granted (Ethical Clearance number: HSS/0726/014) by UKZN on the condition that the anonymity of the students was preserved. Anonymity was consequently ensured by blocking out the Twitter usernames and pictures of the students on the tweets they made.

Literature Review

A substantial body of research shows that higher education institutions still predominant-

ly rely on traditional platforms, such as course and learning management systems, to engage with their students (McGloughlin and Lee 2010; Mohamad and Mohamad Shariff 2011; Selwyn 2009). These systems do not exploit the pedagogical affordances of social media which, it is argued, has the potential to allow students to manage and maintain a learning space that enables their own learning while fostering connections to peers, academics and social networks across time and space (McGloughlin and Lee 2010; Selwyn 2009). In recent years, the movement towards online courses has successfully challenged views of the non-adoption of the online technologies lobby. Consequently, large numbers of higher education institutions now offer some online courses (Allen and Seamen 2008) and have also incorporated a variety of technologies, including learning management systems and social media in order to enhance the academic performance of their students (Ivala and Gachago 2012; Junco et al. 2011)

Social media technologies such as Facebook and Twitter have been quite widely adopted in the higher education context. A reason for this is that social networking websites such as Facebook and Twitter are the fastest growing and most widespread of the Internet-based technologies used by digital natives (Ebizmba 2015). The adoption trend of using social media in higher education therefore mirrors the growth of this phenomenon in general (Davis III et al. 2012).

Higher rates of acceptance and adoption of social networking sites often depend on the type of networking sites being considered. One of the main features of social networking sites is that they function predominantly as communication tools. Hence, higher education institutions sometimes view social networking sites as similar to, for example, emails. Much communication, regarding courses, logistical concerns and queries regarding academic content, between students and staff takes place via email. Therefore, it is argued that higher education institutions may be more inclined to adopt a technology if they observe it as a means to simplify mass communication with students (Roblyer et al. 2010). However, there is also a social aspect involved that is based on the notion that higher education institutions see teaching and learning as forming a relationship with students. Social media websites are therefore treated as efficient ways to achieve such a relationship (Robly-

er et al. 2010). As a result, a growing number of higher education institutions view communicating with students by means of social media in a positive light (Flynn 2009). The bottom-line is that social media has been adopted by some higher education institutions as a means to communicate with students as individuals or *en masse*.

Some research does exist that reveals the successes in using social media websites like Facebook and Twitter in the higher education context to aid communication with students (Ivala and Gachago, 2012; Junco et al. 2011; Mohamad and Mohamad Shariff 2011). However, there has been limited research conducted on the applications of social networking websites (Boyd and Ellison 2007; Greenhow 2011) in higher education contexts and the emerging literature in this field mostly focuses on examining the potential of social networking website usage in education (Hew 2011).

One such study, conducted by Churchill (2009) with higher education students revealed that a blog-based environment can help in nurturing a learning community, which makes students feel that they are significant parts thereof and that their opinions matter. Additional findings showed that blogs are most effective when they are designed to enable students to access course material, post reflections on artifacts created through the learning tasks, and comment on peer contributions. A study conducted by Harrison (2011) examined whether higher education student participation in a blog assisted lecture room learning by extending communication to beyond the allocated academic time. The results of this study revealed that students used the blog as an outlet, in collaboration with their peers, to think about classroom topics, outside official academic time. What was also learnt was that blogging assisted students in directing their own learning, increased their engagement in the course material and endorsed the expansion of informal learning communities.

These positive studies showed that blog-based environments could be successful amongst students in a higher education context. In the South African context there has been some research conducted that investigated using social media, specifically Facebook, for teaching and learning (Bosch 2009; Ivala and Gachago 2012). The results of these studies showed that using Facebook did enhance the students'

engagement with courses both on and off campus. In these studies it was concluded that the social media technologies that students used in their daily lives, like Facebook, should be utilized by higher education institutions. The reason presented for this conclusion was that an increased engagement with students could result in better academic performances.

Some research on the use of Twitter as a social media platform in higher education has been conducted. Results of a study disclosed that using Twitter in an educational context increased the students' academic engagement and even led to an improvement in their marks (Junco et al 2010). The mentioned study used Chickering and Gamson's (1987) seven principles for good practice in undergraduate education as a framework, and showed how Twitter could be used to support the students' academic engagement and psychosocial development by means of student and higher education contact, cooperation amongst students, active learning, prompt feedback, time on "task", communication of high expectations, and respect for diversity. Other studies revealed that Twitter has been used as a discussion medium between academic staff and students in online courses (Dunlap and Lowenthal 2009) to create live notices for events and live chat sessions and for campus emergency alerts (Swartzfager 2007).

Further evidential support of the mass appeal of Twitter as a communication tool in higher education was revealed by a large-scale quantitative study undertaken in 2014. An analysis of university Twitter accounts showed that the United Kingdom's top ten universities had more than 400,000 followers, of which the vast majority were, in all probability, students. Results of this study also indicated that these Twitter accounts were, on average, sending out four tweets per day. The predominant use of these accounts was for broadcasting university-specific as well as industry news (Parr 2014). Therefore, what emerges from the literature is that Twitter has, for the most part, been successfully implemented and used in higher education in developed countries (Ebner et al. 2009; Junco et al. 2011; Rankin 2009) as a useful manner of engaging and communicating with students in higher education. Collectively the reviewed research revealed that Twitter has proven useful and successful, not only as a communication medium, but also as a tool to enhance the students' academic engagement and performance.

Much of the research reviewed above paints a very positive picture of the use of social media in general, and Twitter specifically, in communicating with students in higher education institutions. However, not all is positive when it comes to the use of Twitter and other social media by higher education institutions. Students primarily use social networking sites for social interactions. For example, certain Twitter users have multiple accounts to differentiate professional and personal interactions and comments (Siemans and Weller 2011). The idea of multiple accounts points to many students being strongly opposed to higher education institutions making use of social networking sites as part of formal instruction as this is seen as an invasion of their private social spaces (Madge et al. 2009). Although being viewed as having enormous potential for communication, many students do not want social media to become the next “Learning Management System” which is organizationally controlled, bland and singularly focused on teaching and learning (Siemans and Weller 2011). Additionally, another research study showed that students did not think social media websites like Facebook, YouTube and Twitter should be used in an academic space (Liu 2011). What this points to is that the adoption of social media in higher education spaces could possibly be limited because students could be reluctant, despite the positive studies to the contrary, to mix their social and academic spaces by means of social media. They could therefore resist the intentions and usages of higher education in this regard and perceive it as an intrusion into their personal spaces. Additionally, a recent study showed that despite this being a digital era, many students still preferred phone calls, face-to-face conversations or letters when communicating with their higher education institutions (Lee 2014).

This study by the primary researcher was conducted against the backdrop of the literature reviewed and investigated the usefulness of Twitter, as a contemporary communication phenomenon, as a means of communication with and amongst students in a higher education setting. The need for this study is based on the paucity of research on Twitter use in higher education contexts in South Africa, which in many ways is different to the developed world contexts of studies referred to earlier.

METHODOLOGY

This qualitative study took place in the Information Systems and Technology Department at the Westville Campus of the University of KwaZulu-Natal. A Twitter page was created by the ADO. The Twitter handle was “IST_ADO Support” and the name was given to the students in tutorials, practical sessions and advertised on Moodle, the University’s official learning management system. The potential participants in the study were 1586 Information Systems and Technology first-year students. The study focused on first-year students because these students were not necessarily majoring in Information Systems and Technology but did have to use technology to obtain course data via Moodle. Students were informed about the existence of the Twitter page by means of various forums, as explained earlier in the paper, as well as the thinking behind the creation of the page, namely, that they could follow the page, see the tweets and interact with each other and the ADO on academic matters. Students additionally could remain “anonymous” at a level by creating another account (other than their personal Twitter account) and follow the page and ask questions.

When the Twitter page was launched, 21 students (fewer than 2%) volunteered to follow it. All students who followed the page used their own personal Twitter accounts. Of the 1586 students, 1565 (or 98%) did not join the platform. This was despite the extensive promotion of the Twitter handle. Ultimately, the researchers would describe their sampling method as convenient in nature since the selection was based on the availability of the tweets of the students who had volunteered to join the page (Latham 2007).

The development, as outlined above, left the researchers feeling disappointed as they were relying on rich thick data emerging from the tweets posted by the digital natives whose lives were seemingly intertwined with Twitter (Meier 2013). This was clearly not going to transpire. Despite this setback, the researchers decided to continue with the project primarily based on two reasons: the existing data was deemed sufficient for a qualitative study (Hancock 1998), and limited data, in this case, a limited number of tweets, were rich thick data as they reveal much about mindsets (Neill 2009). The researchers were also confident in their data generation approach,

which was based in nature, as it aimed to concurrently conduct research, develop learning environments and use these environments as natural laboratories for the purpose of studying teaching and learning (Sandoval and Bell 2004).

In the end, the data comprised all the tweets on the page. The tweets (see Table 1) were re-read several times in an open-coding manner and then organized thematically into three themes (Zhang and Wildemuth 2009). By reading these tweets against the grain (Shapiro 2014), much was garnered from them. Much was also gleaned from the silences emanating from the vast majority of students who had decided not to join the Twitter handle. The latter development had turned into a major strength of the study as the silences in themselves revealed much (Neill 2009). The tweets found in the three themes, as depicted in Table 1, were further analyzed by means of Ebner et al.'s (2009) list of basic functions in communicating by means of social media, which are, asking questions, giving opinions, exchanging ideas, sharing resources, and reflection. What emerged from these first and second levels of analyses were then used to describe and theorize the findings.

ANALYSIS AND DISCUSSION

Of the 26 tweets found at IST_ADO Support, 19 were sent out by the ADO who had initiated the tweeting, while seven tweets were initiated by four different students (See Table 1). In analyzing these tweets, three themes clearly emerged, namely "logistical tweets", "academic tweets" and "social tweets". What became apparent from the analysis of the data as depicted in Table 1 was that all the tweets that were sent out by the ADO were logistical in nature and dealt with issues such as when revision classes were scheduled and when tutorials and practical sessions were due to start. This formed the bulk of the tweets that is 19 in total. The majority of the tweets coming from the students were in response to those posted by the ADO.

Applying Ebner et al.'s model (2009), namely asking questions, giving opinions, exchanging ideas, sharing resources and reflection, allowed the researchers to determine the types of interactions that were taking place on the page. As such the tweets the students sent revealed insights into what they used the page for and what they felt comfortable tweeting about. But it also provided clues as to why the page had failed.

What is clear is that the students used the Twitter page merely to ask questions about logistical issues such as when practical and tutorials would begin, the length of the examination paper, when examination results would be released, and the opportunistic "*any 'tips' for tomorrow's 102 test??*" Some of these tweets were clearly in response to what was absent from the ADO's tweets. For example, Student A enquired about information that was missing from the tweet related to starting time and Student D tweeted about examinations, an enquiry about which no tweets went out from the ADO. Most of the information enquired about was available elsewhere.

The exception was the academic questions from Student C who asked about how to work out optionality and how to count the number of information sinks. This resulted in a conversational exchange of tweets between the ADO and the student until the latter felt her/his questions were answered. Thus, student C was the only student to engage in a conversation with the ADO and this interaction was the exception to the rule. In this conversation, the student enquired about academic content and obtained answers from the ADO in real time. Student C also made two of the tweets from the ADO public on her/his Twitter profile so that her/his followers could see it. This could be linked to the sharing resources factor in the Ebner et al. (2009) model. Interactions like this spoke to the original thinking behind the Twitter page, which was to allow students to interact and create discussions around topics they found difficult to grasp.

What the students did not use Twitter for, as per the framework of Ebner et al. (2009), was to give opinions, change ideas, share resources and reflect on the module. Even the use of the Twitter page to ask questions was the exception rather than the rule as most of this information was available elsewhere on noticeboards, in course packs and on Moodle. Those students who did use Twitter did so to communicate with the ADO and not each other and they were the minority, that is four out of a possible 1586.

From the above it is clear that Twitter failed to attract students with the promises of obtaining module information and communicating about related matters with the ADO and each other regardless of space and time. Why then did this happen?

Firstly, the manner in which the ADO communicated on Twitter was problematic. Tweets from the ADO were sporadic and related primari-

ly to logistical matters (see Table 1). This did not serve to enhance the Twitter page to do what Ebner et al (2009) suggested. The manner of communication by the ADO was coupled with a naivety that the digital natives (Berchavaise 2015; Prensky 2001) would join Twitter for the course because the evidence (Roblyer et al. 2010) showed that they did use it in large numbers globally and in South Africa (Meier 2013). What was also not factored in by the ADO was the nature of who gets followed and why by the large numbers of people using Twitter. Celebrities with millions of followers attract them for

vastly different reasons than why the ADO would. While following a celebrity provides a status symbol and a sense of community, following the ADO, be it under a real name or an alias, might only serve to bring academic weaknesses, that students want to keep private and personal and away from the public domain.

Another issue was the total underestimation of what digital natives use social media for. It was assumed that students would communicate via Twitter with the ADO and their peers on academic matters by means of discussion and engagement, as pointed out by the literature (Dun-

Table 1: Types of Tweets sent to the Twitter page by students in order of reception

<i>Student</i>	<i>Original Tweet from @IstAdo</i>	<i>Tweets that student sent</i>	<i>Reply from ADO</i>	<i>Type of Tweet</i>
Student A	Tutorials for ISTN100 start Friday 2nd August 2013 in L23	@IstAdo When do Practical's And Tuts for ISTN102 start? :)	Hi there! Tutorials for Istn102 will start from Friday and pracs will start from the 12th August	Logistical
Student B		@IstAdo when will ISTN103 practical's start?	Optionality defined is	Logistical
Student C	Hi there guys, there will be a revision workshop for istn103 and istn102 on Sept 13th, 3rd - 4th period, venue: L16	@IstAdo hi, how do you work out optionality?	"whether you must have something"e.g How many orders can a customer place? 0, 1 or many	Academic
Student C		Ok, so then does it mean if its 'mandatory' you have to have it.?	Exactly :) It has to exist when you form the relationship	Academic
Student C		"@IstAdo: @ShweetShuga Exactly :) It has to exist when you form the relationship" awesome. Thank you	Your welcome :)	Academic
Student C		"@IstAdo: @Shweet Shuga Your welcome, all the best for your test tomorrow! :)" it's all thanks to you guys!	Your welcome, all the best for your test tomorrow! :)	Social
Student C		One last question, how do you count the number of information sinks?	its info goin from the system to ext entities, so how many entities information is goin to from the system is the no of sinks	Academic
Student C		thank you once again	your welcome :)	Social
Student A		@IstAdo any 'tips ' for tomorrow's 102 test?? :)		Academic
Student D		Hi @IstAdo ... Is our exam 2hrs (as per the scope on moodle) or 3hrs (as per the timetable)?	hi there, the exam is 2 hours	Logistical
Student D		Thank you :)		
Student A		@IstAdo hi there, any idea when the results will be released??		

lap and Lowenthal 2009; Junco et al. 2010; Willburn 2008), but this did not occur. In instances where Twitter does work at higher education institutions, it is invariably when it is used as a means of mass communication in real time about events that are unfolding (Baker 2015; Swartzfager 2007). The literature reviewed revealed that the top universities in England sent out at least four tweets per day and had huge followings (Parr 2014). Many of these tweets comprise one-way communication from higher education institutions that use Twitter in a digital notice-board manner. In such cases, students are happy to join the Twitter page to stay informed.

The students could also have been reluctant to use Twitter in the manner envisaged by the ADO as they were concerned about potential privacy risks and did not want their personal information accessible in an academic space. Such a positioning speaks directly to the literature where interventions by universities to use social media in formal instruction were at times seen as an invasion of the social spaces of students and even a potential invasion of their privacy (Madge et al. 2009; Siemans and Weller 2011). To combat an invasion of their privacy and social spaces, students, as Twitter users, have in other contexts, created multiple accounts to differentiate professional and personal interactions and comments (Siemans and Weller 2011). However, none of the small number of students who did join the Twitter page in this study was concerned about asking questions under their own personal profiles. This ran contrary to the literature in the sense that the two percent who joined the page did not mind mixing their social and academic spaces and did not feel the need for anonymity. But since a very low percentage of the overall class followed the Twitter page, it may be assumed that to the rest of the class, keeping academic and social spaces separate was an issue.

Coupled with the above is the large body of literature showing that digital natives want to separate their real lives on social media from their academic lives. This appears to be true since attempts by higher education institutions to use social media for purposes for which they were not originally conceived, are treated as invasions of personal and private spaces, and from which digital natives want to bar adults and higher education institutions (Madge et al. 2009). The majority of students in this study who did

not join the Twitter page served to provide credence to this. Their apathy towards using Twitter confirms research done in a different context, which indicates that students use social networking sites primarily for social interactions and therefore do not want to use it for activities related to formal instruction or communication (Siemans and Weller 2011; Squillace and Cavanagh 2015).

Space and place did not disappear, as students did not ask questions via Twitter from their mobile phones so as to receive feedback in real time. The students preferred to continue using email and face-to-face communication with the ADO. In fact, the students preferred an old-fashioned face-to-face conversation or email in which they could, at length, in a very personalized space, do what Ebner et al. (2009) identifies, namely, ask questions, give opinions, change ideas, share resources and reflect. It must be pointed out that such communication always centered on the ADO and her office space and hardly involved other students. Hence, asking questions, exchanging ideas and opinions, and reflecting and sharing resources are not what happened among students but between the ADO and individual students in the private safe sanctum of her office, via email or by telephone.

While this kind of support was still offered alongside Twitter, students had no real incentive to join the Twitter page, which was viewed as being unable to deal with complex academic ideas and problems. The primary way students communicated with the ADO was via email which speaks to the known body of knowledge, which states that most communication between academics and students takes place in this manner (Roblyer et al. 2010). Underpinning the above is the notion that students prefer communicating with their higher education institutions in a more traditional manner, such as by telephone or even letters, as found in recent studies by Lee (2014) and Drago (2015). Although the preconceptions are that digital natives prefer social media to communicate in all areas of their lives, including academic spaces, this was contradicted by what transpired in this study and by the literature, which indicates that traditional personal ways of communication are preferred.

The Twitter page was further compromised by the fact that much of the logistical data, which attracted the bulk of Tweets (see Table 1), was available elsewhere on a range of other platforms.

Since the page offered very little that was new, one of the primary uses of the Twitter page, namely to dispense information that was otherwise unavailable by means of, for example updates, was negated and did not serve to lure students in.

Furthermore, the actual nature of Twitter, in all probability, also proved to be a reason it was not deemed useful by students as a means of communication. While the 140 characters allows for logistical and organizational information to be communicated, large conceptual issues are more complex and students might have felt that the 140 characters allowed per interaction were insufficient for sharing the multifaceted ideas that many students wanted to communicate to the ADO.

Tied in with the above is the fact that Twitter has developed its own communication culture and language, which is not necessarily suited to academic communication in a formal setting. The students who did join the Twitter page seemed unsure about how to communicate with the ADO in an academic manner. The exception proved to be the single student who engaged in an academic conversation, which also included “smileys” as part of her/his tweeting. The language used by the rest of the students, when they posted on Twitter, was more formal and structured than shortened English or “SMS” language. This shows that students who posted felt the need to be formal because it was an academic space. This formal manner of communicating occurred despite language use not being specified.

Much of the researchers’ argument on why Twitter failed thus far has centered on the role of the ADO and the positioning of the students. However, some researchers believe that staff within higher education institutions should acquaint themselves with social media technologies so as to aid and educate students to use social media in ways that are useful to their overall academic experience (Junco et al. 2010). The key to such an institutional positioning would be that all staff should know how to use social media (Shapiro 2014). Placing the onus on higher education staff as a whole is premised on the fact that they have to communicate with the students consistently and continuously. In a nutshell, the argument is that the onus of getting students to embrace or be socialized into using social media in academia, Twitter in the case of this study, rests on the higher education institution and its employees and not the students per se.

CONCLUSION

As higher education staff, the researchers would have preferred reporting on success stories. However, this paper reports on a failure and specifically on why Twitter, as a means of communication with and amongst higher education students in a South African higher education context, proved less than useful. This happened despite Twitter being a recognized means of communicating amongst the digital natives who were the focus of this study. The vast majority voted with their “thumbs” not to join the Twitter handle developed by the ADO and to remain unconnected to the IST_ADO Support page. As such, this study contradicts similar studies in different contexts that found Twitter useful in communicating with higher education students.

Proof of this was the fact that despite the well-publicized existence of Twitter for the course in question, the ADO, who is also the primary researcher of this paper, was inundated by traditional means of communication for both mundane and intricate academic issues. As such, it can be concluded that digital natives do not necessarily think that differently when compared to older generations when it comes to communicating about academic matters. This trend speaks to previous studies which foregrounded the preference of old-fashioned personal support by digital natives.

RECOMMENDATIONS

The use of Twitter as a contemporary mass communication phenomenon should at best be used alongside other more traditional approaches. Higher education institutions should rethink abandoning communication methods that have stood the test of time in favor of social media. More specifically, Twitter should be used, in a blended manner, as part of a multipronged academic support approach, to strengthen those means of communication that have stood the test of time.

REFERENCES

- Allen IE, Seaman J 2008. *Staying the Course: Online Education in the United States*. Needham: MA Sloan Consortium.
- Berchavaise C 2015. Digital Natives – The Next Generation of the Workforce. From <<http://takeitpersonally.com/2015/08/31/digital-natives-the-next>

- generation-of-the-workforce/> (Retrieved on 2 September 2015).
- Bosch TE 2009. Using online social networking for teaching and learning; Facebook use at the university of Cape Town. *Communication: South African Journal for Communication Theory and Research*, 35(2): 185–200.
- Boyd D, Ellison N 2007. Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13: 210–230.
- Chickering AW, Gamson AF 1987. *Seven Principles for Good Practice in Undergraduate Education*. Racine, WI: The Johnson Foundation, Inc.
- Collin P, Richardson I, Third A 2011. The Benefits of Social Networking Services. Cooperative Research Centre for Young People, Technology and Well-being. From <http://www.uws.edu.au/_data/assets/pdf_file/0003/476337/The-Benefits-of-Social-Networking-Services.pdf> (Retrieved on 11 September 2014).
- Cowling M, Brack C 2015. How ‘Digital Natives’ Are Killing The ‘Sage On The Stage’. From <<http://techfinancials.co.za/2015/05/07/how-digital-natives-are-killing-the-sage-on-the-stage/>> (Retrieved on 1 September 2015).
- Churchill D 2009. Educational applications of Web 2.0: Using blogs to support teaching and learning. *British Journal of Educational Technology*, 40(1): 179–183.
- Cullen R 2003. The digital divide: A global and national call to action. *Electronic Library*, 21(3): 247–257.
- Davis III CH, Deil-Amen R, Rios-Aguilar C, Gonzalez Canche MS 2012. Social Media in Higher Education: A Literature Review and Research Directions. From <http://www.academia.edu/1220569/Social_Media_in_Higher_Education_A_Literature_Review_and_Research_Directions> (Retrieved on 9 February 2014).
- DoE 1997. *Education White Paper 3: A Programme for the Transformation of Higher Education*. Pretoria: Department of Education.
- Drago E 2015. The effect of technology on face-to-face communication. *The Elon Journal of Undergraduate Research in Communications*, 6(1): 13–19.
- Dunlap JC, Lowenthal PR 2009. Tweeting the night away: Using Twitter to enhance a social presence. *Journal of Information Systems Education*, 20(2): 129–136.
- Ebizma 2015. Top 15 Most Popular Social Networking Sites | September 2015. From <<http://www.ebizmba.com/papers/social-networking-websites>> (Retrieved on 9 September 2015).
- Ebner M, Lienhardt C, Rohs M, Meyer I 2010. Micro blogs in higher education-A change to facilitate informal and process-oriented learning? *Computers in Education*, 55(1): 92–100.
- Flynn N 2009 Facebook, Take 2: Cyber Bullying Education Week. From <http://blogs.edweek.org/edweek/LeaderTalk/2009/05/facebook_take_2_cyberbullying.html?qs=facebook> (Retrieved on 14 April 2014).
- Haytko DL, Parker SR 2011. Social networking tools in a university setting: A student perspective. *Journal of Instructional Pedagogies*, 9: 1–9.
- Greenhow C 2011. Online social networking and learning. *International Journal of Cyber Behavior, Psychology and Learning*, 1: 36–50.
- Grossecck G, Holotescu C 2008. Can We Use Twitter For Educational Activities? In Proceedings of the 4th International Scientific Conference: E-Learning and Software for Education, Bucharest. From <<http://www.adl.unap.ro/else/papers/015.697.1.Grossecck%20Gabriela-Can%20we%20use.pdf>> (Retrieved on 9 February 2014).
- Hancock B 1998. Trent Focus Group for Research and Development in Primary Health Care: An Introduction to Qualitative Research. Trent Focus. From <<http://www.trentdsu.org.uk/cms/uploads/Qualitative%20Research.pdf>> (Retrieved on 22 October 2014).
- Harrison D 2011. Can Blogging Make A Difference? Campus Technology. From <<http://campustechnology.com/papers/2011/01/12/can-blogging-make-a-difference.aspx>> (Retrieved on 28 March 2014).
- Helvie-Mason L 2011. Facebook, “friending,” and faculty-student communication. In: C Wankel (Ed.): *Teaching Arts and Science with the New Social Media*. UK: Emerald Group Publishing, pp. 61–87.
- Hew KF 2011. Students’ and teachers’ use of Facebook. *Computers in Human Behavior*, 27: 662–676.
- Hughes A 2009. Higher Education in a Web 2.0 World. JISC Report. From <<http://www.jisc.ac.uk/media/documents/publications/heweb20rptv1.pdf>> (Retrieved on 10 February 2014).
- Ivala E, Gachago D 2012. Social media for enhancing student engagement: The use of Facebook and blogs at a University of Technology. *South African Journal for Higher Education (SAJHE)*, 26(1): 152–167.
- 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.
- Latham B 2007. Sampling: What Is It? From <[http://webpages.acs.ttu.edu/rlatham/Coursework/5377\(Quant\)/Sampling_Methodology_Paper.pdf](http://webpages.acs.ttu.edu/rlatham/Coursework/5377(Quant)/Sampling_Methodology_Paper.pdf)> (Retrieved on 31 August 2014).
- Lee P 2014. Trends in Students Online – Not Such Digital Natives? University World News. From <<http://www.universityworldnews.com/paper.php?story=20140811093736768>> (Retrieved on 31 August 2014).
- Levine A 2010. Digital Students, Industrial-Era Universities. Inside Higher Ed. From <www.insidehighered.com/views/2010/06/14/levine> (Retrieved on 15 June 2010).
- Liu Y 2010. Social media tools as a learning resource. *Journal of Educational Technology Development and Exchange*, 3(1): 101–114.
- Madge C, Meek J, Wellens J, Hooley T 2009. “Facebook, social integration and informal learning at university: ‘It is more for socialising and talking to friends about work than for actually doing work’”. *Learning, Media and Technology*, 34(2): 141–155.
- McGloughlin C, Lee MJW 2010. Personalised and self-regulated learning in the Web 2.0 era: International exemplars of innovative pedagogy using social software. *Australian Journal of Educational Technology*, 26(1): 28–43.

- McLoughlin C, Lee MJW 2007. Listen and learn: A systematic review of the evidence that podcasting supports learning in higher education. In: C Montgomerie, J Seale (Eds.): *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications*. Chesapeake, VA: AAC, pp. 1669–1677.
- Roblyer MD, McDaniel M, Webb M, Herman J, Witty J V 2010. Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites. *The Internet and Higher Education*, 13(3): 134-140.
- Meier 2013. The State of Social Media South Africa 2013. From <<http://www.bluemagnet.co.za/resources/The%20State%20of%20Social%20Media%20in%20South%20Africa%202013.pdf>> (Retrieved on 7 April 2014).
- Mohamad R, Mohamad Shariff S 2011. Kesan penggunaan laman sosial ke atas kaedah perbincangan didalam pengajaran dan pembelajaran mata pelajaran Sejarah. [Effect of Social media usage on discussion approach in teaching and learning of History subject]. *Journal Teknologi Pendidikan Malaysia*, 1(1): 75-80.
- Neill SA 2009. The Alternate Channel: How Social Media is Challenging the Spiral of Silence Theory in GLBT Communities of Color. American University, Washington, D.C. From <<http://omicsgroup.org/journals/theorizing-spiral-of-violence-death-of-spiral-of-silence-theory-2165-7912.1000175.pdf>> (Retrieved on 22 October 2014).
- Ossage KS 2014. How South Africa Uses Social Media. From <<http://inbound.co.za/how-south-africa-uses-social-media/>> (Retrieved on 15 June 2014).
- Parr C 2014. How the Top 10 UK Universities Use Twitter. From <<http://www.timeshighereducation.co.uk/how-the-top-10-uk-universities-use-twitter/2012701.paper>> (Retrieved on 12 May 2014).
- Prensky M 2001. *Digital Natives, Digital Immigrants: On the Horizon*. 9(5): 1-6.
- Rankin M 2009. Some General Comments on the "Twitter Experiment". From <<http://www.utdallas.edu/~mar046000/usweb/twitterconclusions.htm>> (Retrieved on 21 February 2014).
- Sandoval WA, Bell P 2004. Design-based research methods for studying learning in context: Introduction. *Educational Psychologist*, 39(4): 199–201.
- Selwyn N 2009. The digital native – myth and reality. *Aslib Proceedings: New Information Perspectives*, 61(4): 364-369.
- Shapiro J 2014. The Digital Natives Are Restless. Inside Higher Ed. From <<https://www.insidehighered.com/views/2014/08/21/essay-technology-issues-facing-students-and-faculty-members>> (Retrieved on 4 September 2014).
- Siemens G, Weller M 2011. The impact of social networks on teaching and learning [online monograph]. Introduction: "Higher education and the promises and perils of social networks". *RUSC Universities and Knowledge Society Journal*, 8(1): 156-326.
- Smith SD, Salaway G, Caruso JB 2009. The ECAR Study of Undergraduate Students and Information Technology, 2009. EDUCAUSE Center for Applied Research (ECAR). From <<http://www.educause.edu/ecar>> (Retrieved on 21 February 2014).
- Squillace J, Cavanagh B 2015. Digital practitioners? Analyzing technology use among social work students. *International Journal of Education and Social Science*, 2(7): 17-28
- Swartzfager B 2007. Twitter as Alert System? From <<http://www.swartzfager.org/blog/index.cfm/2007/4/17/Twitter-as-AlertSystem>> (Retrieved on 4 July 2014).
- Tay E, Allen M 2011. Designing social media into university learning: Technology of collaboration or collaboration for technology? *Educational Media International*, 48(3): 151-163.
- Webafrica 2015. South Africa's Most Popular Social Media Networks 2014. From <<http://blog.webafrica.co.za/social-media-2/south-africas-popular-social-media-networks-2014/>> (Retrieved on 8 September 2015).
- Wilburn J 2008. Using Twitter for Higher Ed. From <<http://jeremywilburn.wordpress.com/2008/03/04/usingtwitter-for-higher-ed/>> (Retrieved on 12 July 2008).
- Zhang Y, Wildemuth BM 2009. Qualitative analysis of content. In: B Wildemuth (Ed.): *Applications of Social Research Methods to Questions in Information and Library Science*. Westport, CT: Libraries Unlimited, pp. 308-319.