

*Full Length Research Paper*

# Social networking habits among students

**Richard Shambare\*, Robert Rugimbana and Nkosinathi Sithole**

Management and Entrepreneurship Department, Faculty of Management Sciences, Tshwane University of Technology, Pretoria West Campus, P. O. Box x680, Pretoria 0001, South Africa.

Accepted 2 November, 2011

**The Internet and, in particular, social network sites (SNS) have revolutionised communication patterns in the 21<sup>st</sup> century. Globally, adoption of these technologies is most common among young consumers, who increasingly integrate social networking into their daily lives. This study examines SNS usage habits of students. Data were collected using a self-administered questionnaire from a sample of 256 South African students. Findings confirm the popularity of Facebook, and suggest potential for social networking in many aspects of students' lives including education. Faster Internet access and cheaper 3G technology, as well as Smartphone telephony, are enablers that influence adoption of social networking positively. The paper concludes by proposing implications and suggesting areas for future research.**

**Key words:** Facebook, social network sites, Internet, social network sites (SNS), students, young consumers, South Africa.

## INTRODUCTION

As the popularity of social network sites (SNS) increases, usage of networks such as Facebook, YouTube, Twitter, and MySpace are growing rapidly. This exponential growth, according to Boyd and Ellison (2008) has "helped tip SNSs into mainstream culture." Latest statistics indicate Facebook as the leading SNS – hosting more than 600 million subscribers (Facebook.com, 2011; WIUS, 2011). Even more interesting, is the fact that, SNS membership doubles every 6 months (Owyang, 2008). Faster and reliable Internet access, as well as cheaper 3G mobile telephony continually fuel adoption of social networking which currently is the fastest growing and most popular Internet-based technology (Roblyer et al., 2010). Therefore, by the end of 2011, Facebook is likely to have a staggering 2 billion users. Bicen and Cavus (2010) explain that social networking is most popular among young consumers, who integrate SNS activities into their daily routines. For that reason, the SNS trend deserves to be investigated. This paper therefore seeks to determine South African students' SNS adoption

patterns as well as to establish their preferred network. The following research questions that were proposed form the basis for the data collection, data analysis and interpretation of results:

- RQ1: What are the Internet usage habits of students?
- RQ2: What are the SNS usage habits of students, and how do these vary according to demographic profiles?

First, the literature pertaining to SNSs is reviewed under literature review section. Secondly, the methodology employed to answer the research questions is presented. Thirdly, the findings and a discussion on results are presented. The paper concludes by citing managerial and policy implications, as well as suggesting topic for future research.

## LITERATURE REVIEW

Modern Internet-based social networking grew out of experiments conducted by SixDegrees.com in 1997 (Bicen and Cavus, 2010). Since then, the number of SNSs has multiplied; the resulting numbers of subscribers growing exponentially. With a membership

---

\*Corresponding author. E-mail: [ShambaraR@tut.ac.za](mailto:ShambaraR@tut.ac.za). Tel: +27 12 382 5551/ +27 74 459 9902.

that doubles every 6 months, Boyd and Ellison (2008) conclude that Facebook as the most popular and fastest growing social network has literally “tipped SNSs into mainstream culture.” Confirming this, Roblyer et al. (2010) point out that 93% of teenage Internet users between 12 and 17 years are active social network members. Lenhart et al. (2007) also found that, as teenagers move into social networking, their use of other Internet technologies such as email and instant messaging (IM) rapidly declines. SNS popularity among the young consumers is driven by the fact that social networks provide users with more flexibility and freedom to express themselves in ways that they could not possibly achieve in person (Roblyer et al., 2010).

### What are social network sites?

Boyd and Ellison (2008) define a social network sites as:

*Web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site.*

Thus, it can be deduced that SNSs facilitate interactive and real-time communication through the Internet (Bicen and Cavus, 2010). More specifically, they permit subscribers to access personalised and interactive services such as chatting, uploading and sharing pictures, videos and music. SNSs have a wide variety of features, which are limited only by users’ creativity and imagination (Boyd and Ellison, 2008). Bicen and Cavus (2010) maintain that while SNSs share the common purpose of interactive communication, their functionality differs in terms of the target population. For instance, LinkedIn targets professionals; therefore, its features are suited towards the sharing of career-related information. On the other hand, Facebook and Hi5 are socially oriented; hence, they support the sharing of pictures, IM, and posting of messages.

Users register to join SNSs by creating profiles containing details of names, gender, interests, pictures, videos, schools or colleges attended, and any other information that subscribers might want to make known (Bicen and Cavus, 2010). Subscribers form closer links with other members, friends, contacts, or followers by extending or accepting invitations.

### METHODOLOGY

A cross-sectional design utilising a survey was used to collect data (Calder et al., 1981). A sample of volunteer participants was drawn from a metropolitan university in Pretoria, South Africa. The data were collected using a self-administered instrument in November

2010 and February 2011 at the university campus. The instrument used was developed from the literature, mostly modification of questions used in previous SNS studies. The questionnaire was pre-tested on a group of 10 undergraduate students to ensure that questions would be correctly interpreted by the target sample. Refer to the Appendix for a copy of the questionnaire. Data was analysed using PASW (SPSS) v.18; the main statistical tests being descriptive statistics and nonparametric tests including Mann-Whitney U tests and Pearson’s Chi-square tests of association.

### Participants

Participants were solicited during social functions (for example, sporting fixtures) hosted at the university. Students from local high schools who attended were included in the sampling. In total 350 questionnaires were distributed, about 278 were returned with 256 fully-completed questionnaires usable for the analysis. The average age of participants was 21.9 years with a standard deviation of 4.9 years. The youngest participant in the sample was 15 years old and the oldest 45 years old, with 46% being male and 54% female. As expected with the university students’ cohort, 76 per cent were registered as full-time students and the remaining 24 per cent were part time students. Table 1 also shows that more than three-quarters of the sample had Internet experience of more than three years, suggesting that they are quite savvy with the technology. Table 1 illustrates that majority (56%) of the participants have Internet experience exceeding 5 years compared to about 5% who had less than 1 year’s Internet experience. The significant proportion of the student participants with vast amount of Internet experience is consistent with the findings by Nicholas et al. (2011). The latter authors argue that today’s teenagers and young adults were “born digital,” in that they were born in the peak of the information age – the Internet, SNS culture, and the ubiquitous search engines such as Google; and are rightfully called the “Google Generation” (Nicholas et al., 2011).

### The google generation

The “Google Generation” (GG) refers to a generation of young people, born after 1993 (approximately 18 years old or younger), growing up in a world dominated by the Internet, microcomputers, and mobile devices (Nicholas, et al 2011:29). This generation of techno-savvy individuals is by far younger than most of these technologies, and subsequently have little or no recollection of a life before broadband, mobile technologies and ubiquitous search. As such, they are more comfortable with ‘QWERTY’ keyboards than with paper and pen, and are happier reading from a computer screen or cell phone screen than from a book.

Naturally, the GG ‘depends on Google to explore and understand the world.’ This is in sharp contrast to earlier generations (for example, Generation X or Generation Y) who gained their knowledge through books and libraries (Carr, 2010). The Google Generation literally live their lives on their cell phones (Hooper and Zhou, 2007; Shambare and Mvula, 2011), SNSs (Bicen and Cavus, 2010), the Internet (Carr, 2010), and ‘virtual worlds’ such as Second Life (Cullen and Calitz, 2011; Mesko, 2007). Undoubtedly, the most differentiating characteristic of the GG is their desire for constant connectivity, being in touch with friends and family at any time and from any place, is of utmost importance.

### FINDINGS AND DISCUSSION

The findings are discussed according to the order of the research questions.

**Table 1.** Participants' demographic profile.

Demographic characteristics		Percentage
Gender	Male	46
	Female	54
Educational level	Undergraduate	84
	Postgraduate	16
Internet experience	< 1 year	5
	1 – < 3 years	13
	3 - < 5 years	25
	5 - < 7 years	16
	7+ years	40

**Table 2.** Comparison of Internet experience and demographic profile using Chi-square tests.

Internet experience vs.	$\chi^2$	Cramer's V	p-value
Level of study	28.904	0.336	0.000
Gender	20.105	0.280	0.000
Type of Internet access	14.765	0.240	0.000
Study status (part-time or full-time)	13.032	0.230	0.000
Perceptions of Internet safety/ security	2.641	0.104	0.102

\*Significant at 0.05 level.

#### RQ1: What are the Internet usage habits of students?

Social network sites use the Internet as a connectivity platform. In effect, social networking activity is influenced by: (1) hardware or device used to access the Internet, (2) type of Internet connection, and (3) features supported by an SNS. These three factors determine available features such as downloading/uploading pictures or IM accessible to subscribers. Hence there is a need to identify participants' Internet habits, which include Internet experience, daily Internet usage and the mode of connection used. Frequencies, percentages and nonparametric tests were employed to answer this research question.

#### Internet experience

In this context, Internet experience refers to the total number of years participants have been using the Internet. Table 1 illustrates that, less than 5% of the respondents have used the Internet for less than a year. Those users between one and three years' constitute 13% of the respondents. The remaining 82% of the respondents had at least three years Internet experience, which confirms the importance and significance of the Internet among students.

Further analysis shows that the median Internet

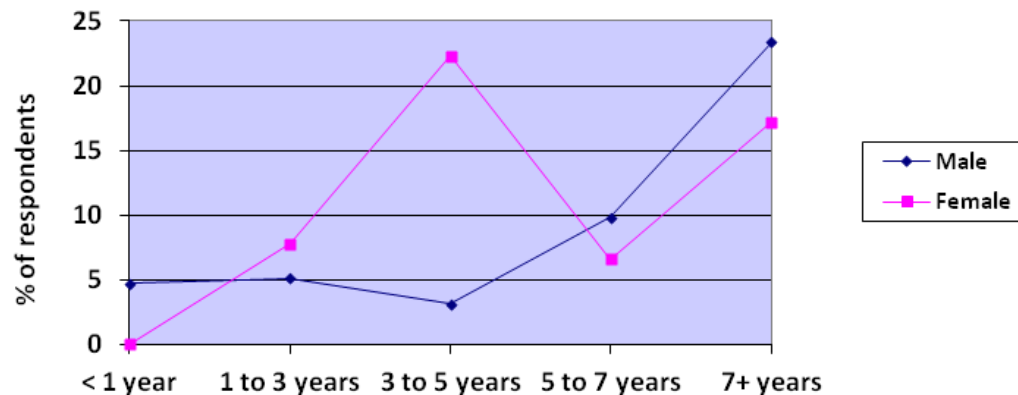
experience is 6 years, indicating that a significant number of respondents started using the Internet while they were teenagers. This corroborates findings by Bicen and Cavus (2010) and later by the World Internet Usage Statistics (WIUS) (2011) that the Internet is playing an increasingly important role among young consumers.

To determine whether the level of study as an undergraduate or postgraduate is statistically related or influenced by Internet experience, the Chi-square test of association was performed. Internet experience was transformed into a dichotomous variables – low experience (up to 5 years Internet experience and high Internet experience (over 5 years Internet experience). The Chi-square test yielded significant results ( $\chi^2 = 28.904$ ;  $p = .000$ ) at the 0.05 level of significance, as illustrated in Table 2. This indicates that Internet experience and level of study are statistically related. Cramer's V test also yielded significant results ( $V = .336$ ;  $p = .000$ ), suggesting that students' exposure to the Internet increases with progression of studies. Since the frequency of using the Internet and conducting online searches increases as students progress with their studies, Table 3 shows that postgraduate students use almost 7 h on the Internet compared to about 3 h for undergraduate students.

Figure 1 compares Internet experience according to gender. It indicates higher Internet experience among female respondents. A Chi-square test of association at

**Table 3.** Mann-Whitney U tests to determine daily Internet usage hours and demographics.

Variable	Daily Internet hours mean (SD)	z	P-value
Male	4.5 (3.6)	-3.015	0.003
Female	2.9 (2.1)		
Fixed line	3.6 (2.8)	-0.503	0.615
Wireless	3.7 (3.1)		
Low experience	2.5 (1.5)	5.054	0.000
High experience	4.6 (3.5)		
Undergraduate	3.2 (2.8)	3.379	0.000
Postgraduate	6.7 (2.8)		

**Figure 1.** Internet experience rated according to gender.

the 0.05 level of significance between experience and gender ( $\chi^2 = 20.105$ ;  $p = 0.000$ ) confirms that women have higher Internet experience.

### Daily Internet usage

In terms of daily Internet usage, results indicate that on average, respondents spend 3.7 h surfing the Internet with a standard deviation of 2.9 h. Across gender, female respondents spend on average 2.9 h on the Internet in day with a standard deviation of 2.1 h. On the other hand, male respondents spend 4.5 h a day with a standard deviation of 3.6 h. Subsequently, daily Internet users of male and female respondents were compared using the Mann-Whitney U test. Results ( $z = -3.015$ ;  $p = 0.003$ ) show that, there is a significant difference in daily Internet usage across gender.

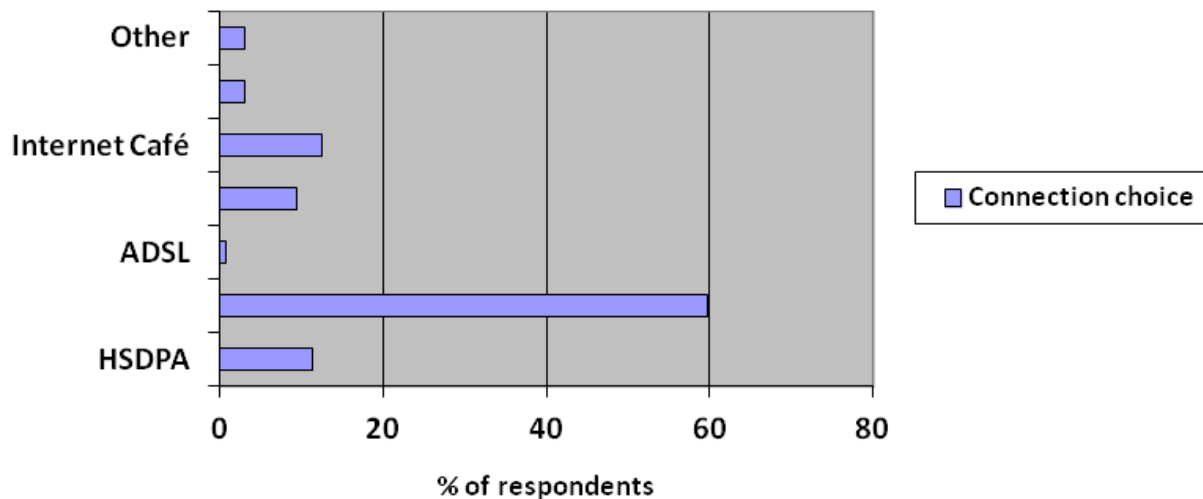
These results seem to agree with Figure 1, which shows difference in Internet experience rating. Overall, this seems to suggest that, the greater the Internet experience an individual has, the more the time that the

individual spends on the Internet (Table 3).

The Mann-Whitney U test was also used to investigate differences in amount of time spent on the Internet between those that considered exchanging information on the Internet to be safe and secure with those that felt it was potentially unsafe and risky. As expected, there was a difference in the daily Internet usage ( $z = -2.056$ ;  $p < 0.05$ ). Respondents who considered the Internet to be safe spent an average of 4.6 h a day compared to 3.2 h a day for those that perceived it as risky. Also, the notion of Internet security across gender was tested using Pearson's Chi-square test. This produced significant results ( $\chi^2 = 28.265$ ;  $p = 0.000$ ). Although, a significant proportion (69%) expressed security concerns, more female respondents perceive sharing information on the Internet as risky.

### Internet connection type

Having Internet connection is a prerequisite for SNS usage. South African Internet users can select Internet



**Figure 2.** Internet connection types used to access SNSs.

connection from numerous connection gateways such as mobile devices and cell phones, Internet café, personal computers via fixed-telephone lines including asymmetric digital subscriber line (ADSL). Type of connection determines not only the speed but also the nature of the content accessible on the web. Subscribers therefore select connection types most suited to their needs, lifestyle, and budget.

While ADSL generally provides faster broadband connection, it is more expensive in that it requires a fixed-telephone (ADSL) line, a modem and a personal computer. On the other hand, subscribers can equally access the Internet using mobile devices albeit certain limitations such as small cell phone screens. Figure 2 illustrates different connections used by the respondents. Mobile wireless devices including cell phones were most popular with almost 60% indicating use of wireless connection, while 13% showed a preference for Internet cafés, which represented the second preferred type of connection. Those that accessed the Internet at work and at the school library made up 9 and 3%, respectively. Some 11% used HSDPA and other unspecified devices accounted for 3%. ADSL was the least popular, with only less than 1% of respondents having access.

**RQ2:** What are the SNS usage habits of students, and how do these vary according to demographic profiles?

To investigate this question, respondents' most preferable SNS and the activities carried out on SNSs were considered. Frequency tables were used to compile this information, as illustrated in Table 4. For ease of interpretation, data were split according to respondents' gender. Results suggest that respondents subscribe to a variety of SNS accounts. For both male and female respondents, Facebook was the most popular network with 93% of the respondents reported having a Facebook

account. MySpace came second followed by Twitter and YouTube. Table 4 also shows that Live Sport is less popular among female students, which is a predictable finding since men are usually keener on sporting activities than women (Boyd and Ellison, 2008). YouTube is also most popular among men. SNS preference when considered in light with the network activities engaged on SNSs, suggest that women engage in more chat and conversation activities than men do, as shown in Table 5. There is no doubt that chat and messaging remain the principal function of social networking. Table 5 shows that the Chat/ messaging function is most popular. More females chat and message more male respondents. Also, some 101 female respondents use SNSs to keep up with friends and family compared with 98 male respondents. On the other hand, male respondents more frequently engage in playing games, downloading files, and meeting new people and friends on the Internet. The latter functions are generally perceived by some subscribers as risky, and this appears reasonable as to why female respondents do not necessarily engage in these activities, since they perceived them as risky and dangerous.

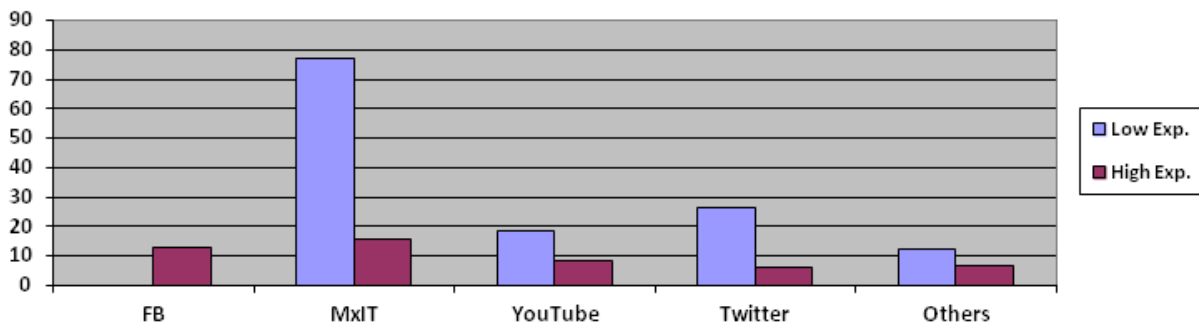
To get a more informed view of SNS usage across other demographic characteristics, various social network sites were compared across education level and Internet experience variables. Of the top-five SNSs, results show that SNS activity is used mostly by individuals with less Internet experience. Given that widespread SNS culture is relatively younger than most other Internet activities, this finding is rather reasonable and it can be assumed that the more experienced subscribers use other Internet activities such as searches and downloading articles. So, for the low experienced users, in which the majority is undergraduate students, SNS activity, as mentioned by Bicen and Cavus (2010), is the single-most driving force for adopting the Internet.

**Table 4.** Social network sites used.

SNS used	Number of respondents (percentage within gender group)			% of respondents
	Male	Female	Total	
Facebook	110	128	238	93
MXiT	51	87	138	54
Twitter	30	54	84	33
You Tube	56	12	68	27
Other	30	19	49	19
Windows Live	24	13	37	14
Hi 5	27	6	33	13
My Space	18	11	29	11
LinkedIn	0	13	13	5
Live Sport	11	0	11	4

**Table 5.** Social networking activity.

SNS Activity	Male	Female	Total
Chat/ messaging	105	123	228
Family/ friends	98	101	199
Meet new friends	81	60	141
Downloading/sharing music	73	67	140
Other	55	69	124
Pictures/videos	46	64	110
Homework	43	36	79
Play games	34	24	58
Viewing or lurking	25	23	48
Fan clubs	9	17	26



**Figure 3.** Social networking site choice across Internet experience.

Overall, Figure 3 indicates that MXiT is the most popular amount individuals with low Internet experience. Given that MXiT is most accessed using cell phones, this finding is sensible since wireless Internet connection through cell phones is also very popular among individuals with low experience and undergraduate students. This also confirms the findings in past studies that the

biggest motivator for Internet use is keeping in touch with friends and family through SNSs. Furthermore, the fact that it is relatively cheaper at ZAR0.02 (US\$0.0025) per message, MXiT is cost efficient for students. Therefore, investing in expensive equipment such as laptops or desktops, when the only function is sending text messages, can be considered to an inefficient allocation

of resources.

## Conclusion

Given the ever-expanding SNS culture among young consumers and students, globally, very little is known about how students and young consumers in the developing world and specifically those in South Africa react to these technologies. Most of what is known about SNSs and the 'SNS-culture' in developing countries is learnt from experiences from the West and other developed countries. As such, studies as this one are not only useful in addressing the paucity of research from the point of view of developing countries, but also attempt to explain various consumer behaviours and reactions surrounding these information and communication technologies within the context of developing countries such as South Africa. Consequently, the purpose of this study was two-fold: to (1) investigate young consumers' adoption patterns of SNSs and (2) establish the social networks sites most preferred by South African students. In many regards, results confirm findings from past studies, and suggest that, overall, the SNS culture is growing and possibly will continue to grow into the foreseeable future (Bicen and Cavus, 2010; Boyd and Ellison, 2008). Also as indicated by authors such as Carr (2010) and Nicholas et al. (2011), who reported on the Western experience, the Google Generation also in countries such as South Africa are also increasingly depending on the Internet and SNSs such as Facebook, Twitter, and MXiT to stay in touch with friends and family. The desire for constant connectivity on the part of students is undoubtedly the major driving force for adopting and using the Internet. With the average amount of hours spent on the Internet exceeding 6 h, it can be concluded the Internet plays quite a significant role in young consumers' lives, so much that, SNSs in particular have revolutionised communication in the 21<sup>st</sup> century, even in developing countries. Another important finding was that Internet and SNS usage invariably increases with progression of studies (from undergraduate to postgraduate).

The advent of cheaper and faster WAP-enabled Smart-phones, capable of accessing the Internet, adoption of social networking among young adults is poised to accelerate even more in the foreseeable future. Given that the Google Generation increasingly use these technologies and less of paper-based communication, there is considerable evidence to suggest an even greater expansion in both SNS and Internet usage among young consumers' in many spheres of their lives including in education. The dominance of Facebook was also confirmed. A vast majority, some 93% of respondents indicated they owned an active Facebook profile, which they use to chat, send pictures, and download music. Given the widespread adoption of SNSs by students, educators may need to investigate the SNS trend as it is

strongly associated with education – students' interaction, socialisation, and learning. It might be fruitful for lecturers to discover strategies to tap into this trend, which is extremely popular among young adults. Finding a common ground between education and SNSs could go a long way to address meaningful interaction between learners and their teachers.

## Limitations

As usual with all research endeavours, the current study was also not free from limitations. Firstly, the study consisted of a sample from a single South African university, albeit it being reported as to be representative of the country's population, considering students from other institutions and geographic locations might have provided different insights. Secondly, the study looked at quantitative data and tended to ignore other qualitative information obtainable from in-depth interviews. Lastly, researchers focussed only on SNS usage patterns, and could have also sought to explain why the current usage patterns are prevailing.

## Future research

Future research could, therefore, expand on from where the present study left. Future researchers could consider widening the scope of the study to other parts of South Africa and also to other developing countries. In addition, investigation into SNS adoption and usage patterns specifically on cell phones may provide interesting results since cell phones are by far the most preferred communication device of the 21<sup>st</sup> century. Since cell phones have already found their way 'unofficially' in classrooms, where they sometimes cause much nuisance and noise during lectures, it might be worthwhile to investigate how these devices together with SNSs can be channelled to contribute to teaching and learning. Particular emphasis should be placed on investigating how teaching and learning could be enhanced through the use of social network sites such as Facebook, MxiT, and Second Life, since these are already 'virtual worlds' where students already reside and are very much confident with.

## REFERENCES

- Bicen H, Cavus N (2010). The most preferred network sites by students. *Procedia Soc. Behav. Sci.*, 2: 5864-5869.
- Boyd DM, Ellison NB (2008). Social network sites: Definition, history, and scholarship. *J. Comput. Mediated Commun.*, 13(1): 210-230.
- Calder BJ, Phillips LW, Tybout AM (1981). Designing Research for Application. *J. Consum. Res.*, 8(8): 197-207
- Carr N (2010). Is the internet making you stupid? *Times Saturday Rev.*, 14: 1-2.
- Cullen M, Callitz A (2011) Second Life as a teaching aid for entrepreneurship in Business Schools. *Int. Bus. Conference*

- Proceedings, Mauritius, 26 – 30 September 2011.
- Facebook.com (2011). Press room [Online]. Available at: <http://www.Facebook.com/press/info.php?statistics> [Accessed 15 January 2011].
- Lenhart A, Madden M, Smith A, Macgill A (2007). Teens and social media. Pew Internet and American Life Project. [Online] Available at: <http://pewinternet.org/Reports/2007/Teens-and-Social-Media.aspx> [Accessed 25 December 2010].
- Mesko D (2007). How and why to use Second Life? [Online]. Available at: <http://sciencerooll.com/2007/09/19/how-and-why-to-use-second-life-for-education/> [Accessed 15 October 2011].
- Nicholas D, Rowlands I, Clark D, Williams P (2011) Google Generation II: web behaviour experiments with the BBC. *Aslib Proceedings: New Inform. Perspectives*, 63(1): 28-45.
- Owyang J (2008). Social network stats: Facebook, MySpace, Reunion [Online]. Available at: <http://www.webstrategist.com/blog/2008/01/09/social-network-stats-facebook-myspace-reunion-jan-20>.
- Roblyer MD, McDaniel M, Webb M, Herman J, Witty JV (2010). Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites. *Internet Higher Educ.*, 13 (2010): 134-140.
- WIUS (2011). Internet Usage Statistics: The Internet Big Picture World Internet Users and Population Stats [Online] Available at: <http://www.internetworldstats.com/stats.htm> [Accessed 17 January 2011].



## APPENDIX

## Questionnaire

Section 1: Demographics

1. What is your age in years?

2. What is your gender?

Male	1
Female	2

3. What is your study status?

Full-time student	1
Part-time student	2

4. What is your current level of study?

High School/ Matric	1
Undergraduate Diploma or Degree	2
Postgraduate	3

Section 2: Internet

5. How long have you been using the Internet?

Up to 1 Year	1
1 - 3 Years	2
3 - 5 Years	3
5 - 7 Years	4
7 Years or more	5

6. What is the total number of hours do you spend on the Internet per day?

7. How do you access the Internet?

3G/ HSDPA	1
Wireless connection (e.g. Mobile phone or 3G card)	2
ADSL	3
At work	4
Internet Café	5
School library	6
Public library	7
Other, specify	8

Section 3: Social Networking Services

8. Which Social Networking Services do you use? (mark all that apply)

Hi 5	1
Facebook	2
MYIT	3
My Space	4
Live Sport	5
You Tube	6
WAYN	7
Twitter	8
Linked In	9
Windows Live Spaces	10
Other, please specify	11

9. Do you use a "personality" or profile name different from your real name?

Yes	1
No	2

10. What activities do you do on these Social Network Sites (mark all that apply)

Chatting/ Messaging	1
Sending or receiving pictures & videos	2
Sending or receiving music	3
Group networking	4
Download music	5
Homework	6
Fan Clubs	7
Games	8
Meeting new friends	9
Keeping in touch with friends and family	10
Viewing or lurking only	11
Other, please specify	12

11. Do you feel that sharing your personal details online is safe?

Yes	1
No	2