



Use of social media among undergraduate students: a cross sectional study of University of Botswana students

Doreen Leube, Thapelo Sediadie and Vijai Kumar Dwivedi*

University of Botswana, Private Bag: UB 00705, Gaborone, Botswana
vijai.dwivedi@mopipi.ub.bw

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Abstract

Social media has very significant positive and negative roles on our society. This study seek to find out the students perceptions and attitudes towards social media in the University of Botswana. Data were collected using a specially designed questionnaire during the academic year 2015/2016. The sample size was 100 male and female students of different study programmes, ages and study year. Research outcome indicates that students are familiar with the use of social media in their academic and social perspective. The findings also indicates that most student's overall academic performance is at average and most students think the abuse of social media can negatively affect their academic performance.

Keywords: Social media, social network sites (SNS), student perception, academic performance, student attitude.

Introduction

Social media is internet-based and gives users quick electronic communication of personal information, documents, videos, and photos.

In the past several decades people have always relied on communication to strengthen their relationships. Interacting with friends, family, business partners, across long distances was a challenge and this was a concern to humans for centuries and they desired to come with ways of better communication when face to face discussion are impossible or inconvenient. Today we see an advanced use of technology in many aspects of our lives that allows us to use social media platforms like Facebook, Twitter, YouTube, WhatsApp, etc. All this are the natural outcome of many centuries of social media development. The earliest methods of communicating across great distances used written correspondence delivery by hand from one person to another (use of letters). In 1792, the telegraph was invented and this allowed messages to be delivered over a long distance far faster.

Two important discoveries happen in the last decade of the 1800s, the telephone in 1890 and radio in 1891, which are still in use today, it enable people to communicate across great distances. In the 20th Century technology began to change rapidly. After the 1st super computers were created in 1940s, scientist and engineers began to develop ways to create networks between those computers which later lead to the internet. By 1980s computers were becoming more sophisticated. The 1st social media site Six Degrees came in 1997. It supported users to upload a profile and make friends with other users. YouTube came in 2005 which allowed people to communicate and share with each other across great distance.

By 2006, Facebook and Twitter both became available to users throughout the world. Today there is a tremendous variety of social networking sites. Social networking sites has been recognized as an important resource for education today. Studies however shows that students use social networking sites such as Facebook for fun, to kill time, to meet existing friends or to make new ones¹.

Table-1: World's* most popular brands online / April 2010².

Brand	% of World's Internet Population visiting brand	Time per person (hh:mm:ss)
Google	82%	1:21:51
MSN/WindowsLive/Bing	62%	2:41:49
Facebook	54%	6:00:00
Yahoo!	53%	1:50:16
Microsoft	48%	0:45:31
YouTube	47%	0:57:33
Wikipedia	35%	0:13:26
AOL Media Network	27%	2:01:02
eBay	26%	1:34:08
Apple	26%	1:00:28

*Global refers to Australia, Brazil, Switzerland, Germany, Spain, France, Italy, UK and USA only.

The reputation of social media is unquestionable. Facebook, YouTube and Wikipedia are the world's most popular brands online social-media. The world now spends over 110 billion minutes on social networks and blog sites. For the first time ever, social network or blog sites are visited by three quarters of global consumers who go online increased by 24% over last year².

Majority of young people in Botswana are spending quality time on social networking sites. International studies revealed that social media is posing challenges to the learners such as safety and security concerns, antisocial behavior, unproductive behavior, misuse of tools during instructional and so on. Therefore, there is need to monitor the trends of the use of sites, benefits students derive from using the sites and the dangers associated with them and ways to avert such dangers. Thus the objective of this study was to analyze the influence of social media in the lives of undergraduate students at University of Botswana.

Literature review: A researcher has indicated that majority of students are using internet for academic and non-academic purposes for 10 hours or more per week. Study also indicated that the highest categories of social media usage are 'YouTube' followed by 'Twitter' and then Facebook³.

The results of a comparative study of Social Networking Sites (SNSs) use among undergraduates of BAISAGO University, Botswana and University of Ilorin, Nigeria suggested that students were familiar to and use social network sites (SNSs); while the most commonly use SNSs revealed include Facebook, MySpace, YouTube and Twitter. Students from both universities indicated that SNSs contribute to their learning process in terms of improving their grade performance and as means of educating one another⁴.

A comparative study to assess how Facebook and Twitter use, perception and attitude showed that the percentage of students using Facebook increased to 95%. Results also establish that the South African students are more dependent on using Facebook, in comparison to using Twitter⁵.

The effects of social media on college students research study indicated that i. most of college students prefer to use social media and spend many hours checking social medial sites, and ii. social network is affecting student' efficiency as well as their grades. The study also highlighted that students use social media tools for many good purposes such as access to inform, group discussion, resources and entertainment⁶.

The findings of a study found that students on average spend 27.93 minutes on the social network site on weekdays and 28.44 minutes per a day on weekends. Students use the social site in the evenings around 9:00 p.m. to 12.00 a.m. Students agreed on the use and advantage of social media on social behavior but were hesitant of the disadvantages⁷.

In a study of undergraduate and graduate students, researchers found that females spent more time on social networking sites viz. Facebook and MySpace than males. Males were also found to spend significantly more time on YouTube than females. However, the results of the study indicate that many college students still utilize traditional media like television and radio⁸. These results were later supported by the findings of Gerlich et al.⁹.

Methodology

Sampling Design: The study on the use of social media aimed University of Botswana on campus students as target population. This is a cross sectional study which utilized a stratified two-stage sampling design. The Undergraduate residence hostels for boys was 24 and for girls was 22 forming 46 first-stage units (fsu). This list was acquired from the Student Welfare Office. Simple Random Sampling without replacement (SRSWOR) was used for selection of 2 boy's and 2 girl's hostels, which constituted as the second-stage units, then a sub-sample of m_1 boys rooms and m_2 rooms for girl's were selected using SRSWOR. Then all students sharing a room were covered by this study. The study included a sample of 100 full-time on campus undergraduate students who were randomly selected from the four hostels however at the end the effective sample size was 92 because some students failed to complete the questionnaire as required.

Questionnaire Design: The information was collected through questionnaires which were administered to randomly selected students. The questionnaire was divided into four parts. In the first part student were required to respond to general and demographic questions about their gender, age and programme of study. In part two students were asked about their level of association with the internet and social media use and more specific questions on the type of social media respondents use and the purpose for which they use social media. The third addressed questions related to student's perspectives on their academics and use of social media. A pre-test was done on a convenience sample of 10 students to check the questionnaire content, sequence, logic, practical implementation of the questionnaires. Pretest helped us to ascertain the suitability of the method of data collection, and even test the adequacy of the questionnaire. Based on the outcome of the pre-test the questionnaire was modified and finalized.

Confidentiality: Before the respondent could provide the information the researcher informed the respondent that all the information that they reveal is for the study purposes only. The consent form was also used to clearly explain research study objectives.

Method of data collection: The data was collected by the researcher from 8th April to the 22nd April, 2016. Questionnaires were given to the students to complete and collected on the following day.

Results and discussion

Descriptive (bar charts, median and mode, range and inter-quartile range); inferential; non-parametric and Chi-square statistics were used in the analysis of data.

A sample size of 100 students was drawn for this study, and out of this sample, only 92 students participated, which translate to a response rate of 92%. Data analysis were performed using SPSS statistical software.

Demographic particulars: Table-2 depicts the percent distribution of respondents by their age and gender. The sample population comprised 51.1% male and 48.9% female students. The largest group of respondents (55.3%) were aged between 21-25 years, while the second largest were aged 18-20 year with 37.6%.

Table-2: Percent distribution of respondents by their gender and age.

Age group (year)	Male	Female	Total
18-20	56.8	17.1	37.6
21-25	43.2	68.3	55.3
26-30	0	14.6	7.1
Total	51.1 (47)	48.9 (45)	100 (92)

Figure-1 shows that first year students constituted the largest group of respondents with 38.5% followed by fourth year with 33% and only 1.1% of fifth year students participated in this survey. The result shows that there were more males (57.4%)

who participated in the study among first year students compared to females who were only 18.2%. There were no males from fifth year students who took part in this study. Amongst the female group, most of the participants were of fourth year students with 56.8%.

Table-3 show the percentage distribution of participating students by Programme of study. Students from the faculty of Business (25%) constituted a larger group of respondent followed by Social sciences (21.7%). This distribution for Humanities, education and science ranged between 12% and 14%. In comparison to female, male participants were more from Business, Science and Social sciences program of study.

Table-3: Percent distribution of respondents by their gender and program of study.

Programme of study	Male	Female	Total
Business	34.0	15.6	25.0
Humanities	12.8	15.6	14.1
Education	4.3	20.0	12.0
Sciences	14.9	11.1	13.0
Social sciences	29.8	13.3	21.7
Engineering and Technology	4.3	8.9	6.5
Health sciences		15.6	7.6
Total	100(47)	100(45)	100(92)

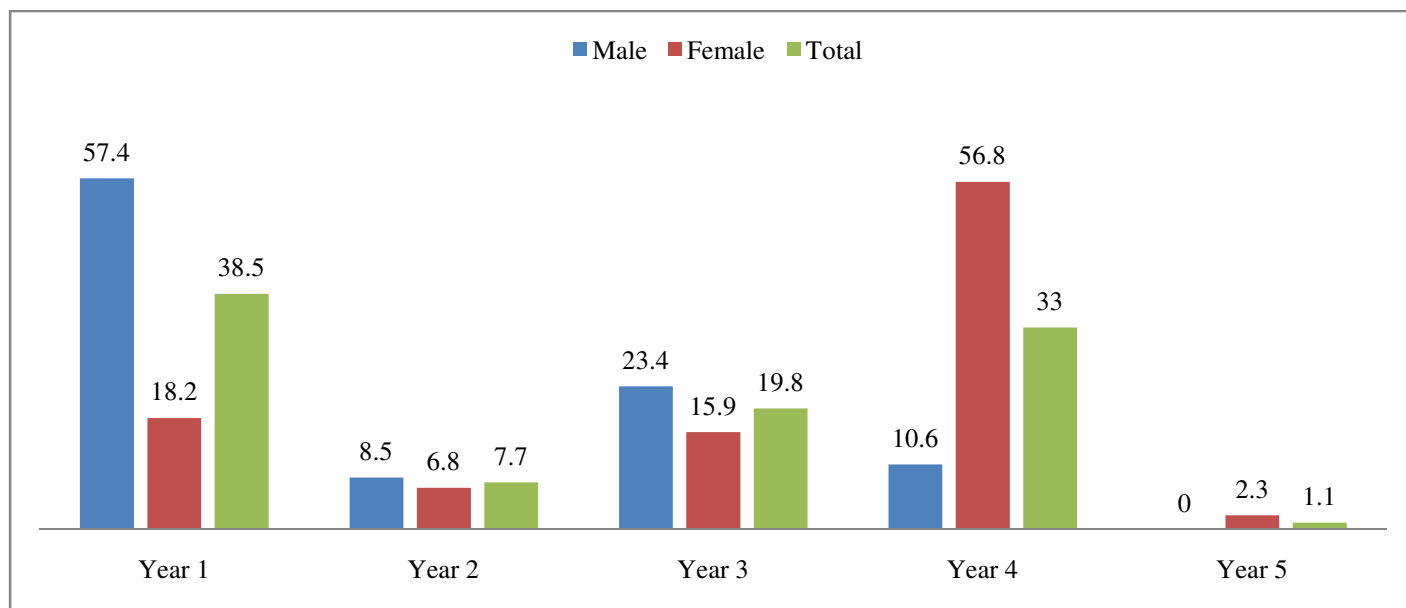


Figure-1: Percent distribution of respondents by their year of study and sex.

Social media access and use: Table-4 and Figure-2 shows that 53.2% of males use WhatsApp most frequently followed by facebook (29.8%) while females use facebook most frequently followed by WhatsApp. It also shows that Youtube and Twitter are the least used social media among both females and males.

Table-4: Percent distribution of respondents who used different social media by gender.

Social media frequently use	Male	Female	Total
Facebook	29.8	48.9	39.1
Twitter	8.5	2.2	5.4
WhatsApp	53.2	46.7	50.0
Youtube	8.5	2.2	5.4
Total	100 (47)	100 (45)	100 (92)

Table-5 indicates the percent distribution of respondents by frequency of logging social media and gender. About 96% students logged on social media every day. All females logged every day while this percentage for males was about 92%.

The Percent distribution of respondents by time spent on social media per day and gender is depicted in Table-6. The maximum present (46%) of students spent more than 2 hours on social media per day followed by 39% who spent 1-2 hours perday on any social media. The figures for male and female shows that in

1-2 hours time spent category females percentage points was 2.5 times more than males, while in more than 2 hours time spent category, male percentage points was about 3 times more than female one. Overall result shows that male were spending more time on social media.

Table-5: Percent distribution of respondents by frequency of logging social media by gender.

Frequency of logging in to social	Male	Female	Total
Everyday	91.5	100	95.7
Twice a week	8.5		4.3
Total	100 (47)	100 (45)	100 (92)

Table-6: Percent distribution of respondents by time spent on social media per day by gender.

Time spent on social media per day	Male	Female	Total
30 minutes	8.9	13.6	11.2
1-2 hours	22.2	56.8	39.3
More than 2 hours	64.4	27.3	46.1
Not sure	4.4	2.3	3.4
Total	100 (45)	100 (44)	100 (89)

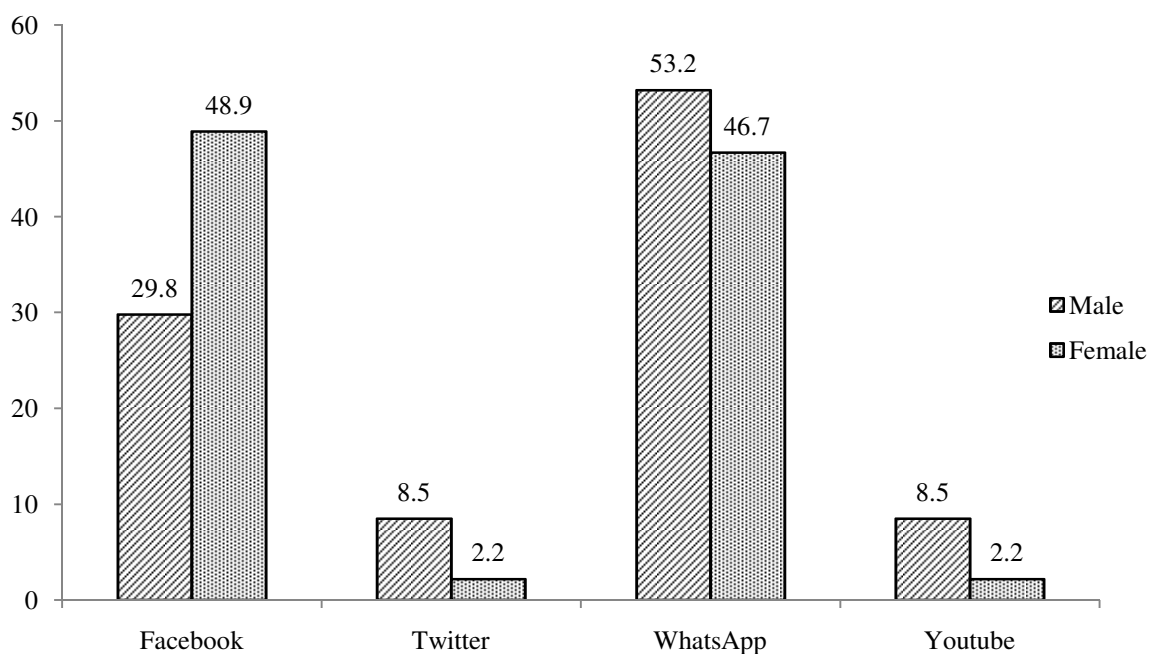


Figure-2: Percent distribution of respondents who used different social media by gender.

To explore and compare the portion of time that's spent on social media per day by type of social media a crosstab was done. The result in Table-7 indicates that fairly 51.9% students who use Twitter spend 1-2 hours per a day, followed by those who use YouTube with 43.9%. The result highlight that 50.7% of students spend more than 2 hours on WhatsApp per day and only 48.6% of students spend more than 2 hours per day on Facebook.

Table-8 shows the percent distribution of respondents by time spent on social media per day by year of study. The result shows that 57.1% of second year students spend more than 2 hours on social media per day followed by third year students (50%).

Table-9 addresses the question, 'do you have internet access at home'. The result shows that 54.3% students have internet access in their homes, while 45.7% of the students indicated that they do not accessed internet at their homes.

The crosstabs analysis in Table-10 explores how students use the smart device to log into social media by gender. The result shows that more females use cellphones (95.2%) and Laptop (95.2%) to log in to social media as compared to boys with 82.2% and 60.0% respectively.

Descriptive statistics of respondents who most used different social media by gender and by research questions: Q.1: I

always feel the need to be connected via internet. Q.2: I spend a lot of time on social networking sites and chatting. Q.3: I regularly view the social media even when I don't contribute. Q.4: I have used social media to check out someone I met socially. Q.5: I use social media to keep in touch with my old friends.

To assess the attitude of students towards social media use above five statements were outlined for students to indicate their response to each case (Table 11 and Figure 3). The result shows that 34.1% of respondents strongly agree that they feel the need to be connected via internet. Also 38.5% of respondents somewhat agree that they spent a lot of time on social networking sites and chatting. The results indicate that 49.4% of respondents somewhat agree that they regularly view social media even when they don't contribute. Only 27.5% of respondents strongly agree that they use social media to keep in touch with their old friends.

There were only 4.4% students who strongly disagree that they do not feel the need to be connected via internet. The result indicate that 8.8% of students disagree they do not spend a lot of time on social networking sites and chatting. Only 6.6% disagree that they do not use social media to keep in touch with their old friends.

Table-7: Percent distribution of respondents by time spent on social media per a day and by type of social media.

Duration	Type of Social Media				Total
	YouTube	Facebook	WhatsApp	Twitter	
30 minutes	10.6	8.1	8.2	7.4	11.2
1-2 hours	43.9	41.9	39.7	51.9	39.3
More than 2 hours	40.9	48.6	50.7	33.3	46.1
Not sure	4.5	1.4	1.4	7.4	3.4
Total	100	100	100	100	100.0

Table-8: Percent distribution of respondents by time spent on social media per a day and by year of study.

Year of study	30 minutes	1-2 hours	More than 2 hours	Not sure	Total
1	14.3	31.4	48.6	5.7	100
2	0	42.9	57.1	0	100
3	16.7	33.3	50.0	0	100
4	7.1	50.0	39.3	3.6	100
5	0	100	0	0	100

Table-9: Percent distribution of respondents who have internet access at home.

Internet access at home	Frequency	Percent
Yes	50	54.3
No	42	45.7
Total	92	100.0

Table-10: Percent distribution of respondents who are using devices to log in to social media by gender.

Smart device	Male		Total	Female		Total
	Yes	No		Yes	No	
Cell Phone	82.2	17.8	100	95.2	4.8	100 (87)
Laptop	60	40	100	95.2	4.8	100 (87)
Computer	40	60	100	41.5	58.5	100 (86)
I-pad/Tablet	4.4	95.6	100	9.5	90.5	100 (87)

Table-11: Percent distribution of students by perceptions of social media presence and use.

Research Questions	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
Q1	4.4	11.0	15.4	35.2	34.1	100 (91)
Q2	8.8	11.0	27.5	38.5	14.3	100 (91)
Q3	4.7	10.6	20.0	49.4	15.3	100 (85)
Q4	4.6	4.6	17.2	51.7	21.8	100 (87)
Q5	6.6	6.6	7.7	51.6	27.5	100 (91)

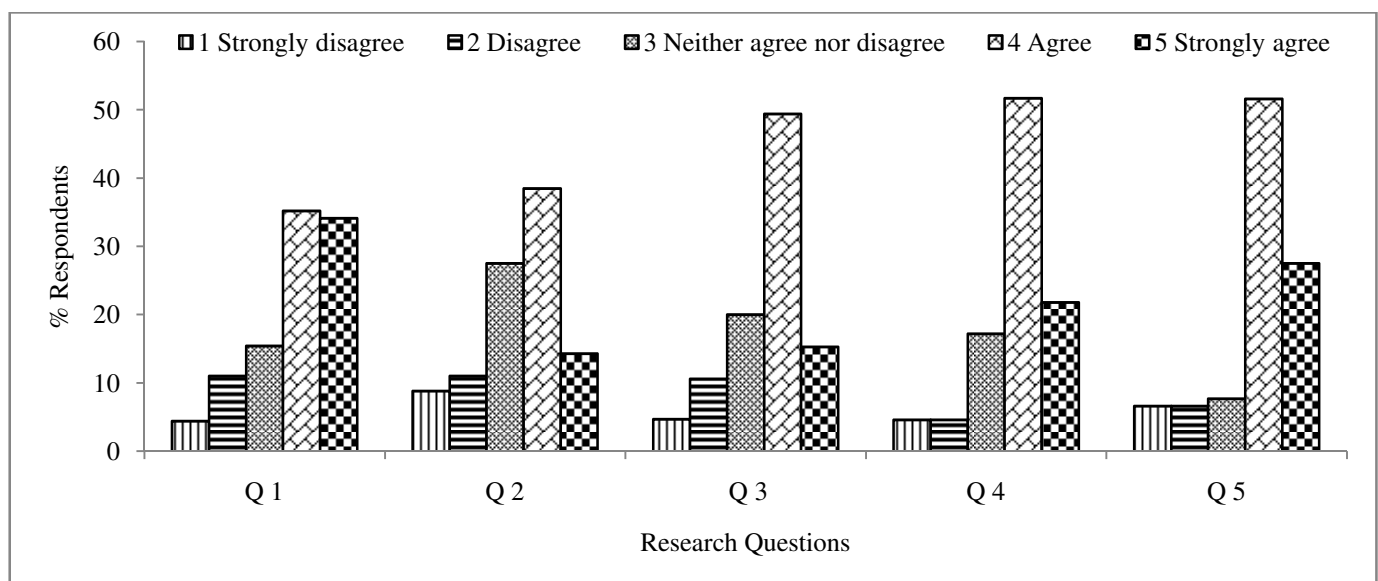


Figure-3: Percent distribution of students by perceptions of social presence and use.

Table-12 shows the median, mode, range and interquartile range by perceptions of social presence and use. The median value for all the research questions 1-5 is 4. Which indicate that about half of the respondents are in agree and disagree categories and also mode value of 4 for questions 1-5 indicates that maximum frequency of students were of agree perception for these 5 questions. Because of the limitation (based on two extreme observations) of range as a measure of variation, the interquartile range has been considered which includes middle 50% of observations. The small value of IQR indicate the high uniformity of the 50% central observations.

Table-12: Descriptive statistics by perceptions of social presence and use.

Statistics	Q1	Q2	Q3	Q4	Q5
Median	4	4	4	4	4
Mode	4	4	4	4	4
Range	4	4	4	4	4
Inter Quartile Range [IQR]	2	1	1	1	1
N	91	91	85	87	91

To explore and make comparison of social media use, a crosstabs analysis and chi-square of these use by gender was done as shown in Table-13. Male, however are significantly more likely than female always feel the need to be connected via internet (Chi sq=14.105,p=0.007) and to use social media to keep in touch with my old friends (Chi sq=0.024,p=0.024).

Findings related to social media indicate that there is an association between the use of Facebook and gender. More male however are significantly more likely to use YouTube than female (Chi sq=8.001,p=0.005). The finding also indicated that there is no association between the use of Facebook, WhatsApp and Twitter by gender as they have p. value that is greater than 0.05 level of significant. There is association between time spent on social media per day and gender. More female are more significantly than male to spend more than 2 hours on social media per a day (chi sq=14.201,p=0.03).

Table-13: Percent distribution and Chi-square comparison of students by gender on social media use.

Research Questions	Male	Female	Total	Chi square
Q1	44.7	22.7	34.1	14.105(p=0.007)
Q2	21.3	6.8	14.3	4.873(p=0.301)
Q3	17.1	13.6	15.3	0.237(p=0.994)
Q4	30.2	13.6	21.8	3.724(p=0.445)
Q5	29.8	25.0	27.5	11.268(p=0.024)

The analysis result was done to explore the purpose of use of social media among student by gender. The results depicted in Table-14 indicates that the category 'keep in touch with friends' represent the highest category among students (27.2%). The second highest category 'During study' by 21.7%, while 'social issues' was the least represented category with only 1.1%. The results shows that more boys 38.3% use social media to keep in touch with friends whereas only 15.6% of girls use social media to keep in touch with friends.

Table-14: Percent distribution of students by reasons for usefulness of social media.

Reasons	Male		Female		Total	
	frequency	Percent	frequency	Percent	frequency	Percent
Own Research	10	21.3	8	17.8	18	19.6
During study	3	6.4	17	37.8	20	21.7
Literature	1	2.1	5	11.1	6	6.5
Subject discussion	4	8.5	6	13.3	10	10.9
keep in touch with friends	18	38.3	7	15.6	25	27.2
entertainment	11	23.4	1	2.2	12	13.0
social issues	0	0	1	2.2	1	1.1
Total	47	100	45	100	92	100

Mann-Whitney U testfor respondents groups (male and female) who most used different social media by research questions: Mann-Whitney *U* is a nonparametric test of the null hypothesis that two samples (male and female) come from the same population against an alternative hypothesis. Table-15 shows Mann-Whitney *U* test statistics for respondents groups (male and female) who most used different social media by research questions. It is evident from the *Z* and *p* values that there was a significant difference between male and female corresponding to research question 1 (I always feel the need to be connected via internet).

Students' perception about social media and their academic performance: Q.1: Overall performance in an academic year, Q2: Your GPA before using any of the social media, Q3: Your GPA after starting to use any of the social media.

Descriptive statistics by perception about social media and their use in academic performance is given in Table-16. The median

value for research question 1 is 3 which indicate that 50% of repondents were of the opinion that overall performance in the academic year was average. While for questions 2 and 3 the meidan value is 2. Which indicate that about half of the respondents were of the opinion that their GPA before and after using any social media was good. The model value of 3 for questions 1-3 indicates that maximum frequency of students were of the opinion that their GPA before and after using any social media was average. The small value of IQR indicate the high uniformity of the 50% central observations.

The amount of time spent on social media and ratings on their academic performance result is shown in Table-17. The result shows that 62.9% of students who spent 1-2 hours on social media per a day have an average performance when ranked followed by those who spend 30 minutes with 62.5%. Only 15.0% of students who spend more than 2 hours on social media obtain an excellent performance when ranked followed by those who spend 1-2 hours with 5.7%.

Table-15: Mann-Whitney *U* test respondents groups (male and female) who most used different social media by research questions.

Research questions	Sex of respondent	N	Mean Rank	Sum of Ranks	Mann-Whitney <i>U</i>	<i>Z</i> values	<i>p</i> -value
I always feel the need to be connected via internet	Male	47	52.87	2485.00	711**	-2.686	0.007
	Female	44	38.66	1701.00			
I spend a lot of time on sicial networking sites and chatting	Male	47	48.78	2292.50	903.5	-1.082	0.279
	Female	44	43.03	1893.50			
I regularly view the social media even when i don't contribute.	Male	41	43.90	1800.00	865	-0.35	0.727
	Female	44	42.16	1855.00			
I have used social media to check out someone I met socially	Male	43	47.63	2048.00	790	-1.44	0.15
	Female	44	40.45	1780.00			
I use socialmedia to keep in touch with my old friends	Male	47	44.10	2072.50	944.5	-0.775	0.438
	Female	44	48.03	2113.50			

**Significant at 5% level of significance.

Table-16: Descriptive statistics by perception about social media and their academic performance.

Descriptive Statistics	Q1	Q2	Q3
Median	3	2	2
Mode	3	3	3
Range	3	3	3
Inter Quartile Range [IQR]	1	1	1
N	88	86	88

Table-17: Percent distribution of respondents who used different social media by time spent on social media per a day and by their ratings on their academic performance.

Overall performance in an academic year	Time spent on social media per a day.				Total
	30 minutes	1-2 hours	more than 2 hours	not sure	
Excellent	0	5.7	15.0	0	9.3
Good	37.5	17.1	35.0	100	40.7
Average	62.5	62.9	50	0	46.5
Poor	0	14.3	0	0	3.5
Total	100	100	100	100	100

To find how students perceive the use of social media on their performance as that ranking was done based on their level of GPA before using social media, the result is shown in Table-18. The result shows that there were 39.5% of respondents with an average level of GPA followed by those who were having a good level of GPA with 31.4% of respondents. Only 9.3% of respondents have a GPA that was poor before using social media.

Table-18: Percent and frequency distribution of respondents showing their level of GPA using social media.

Level of GPA	Q1	Q2	Q3
Excellent	9.1	19.8	20.5
Good	31.8	31.4	31.8
Average	53.4	39.5	37.5
Poor	5.7	9.3	10.2
Total	100 (88)	100 (86)	100 (88)

The results in Table-19 indicate that most students (95.5%) think that the abuse of social media is there and can somehow negatively affect their academic performance.

Table-19: Percent distribution of students who think the abuse of social media by students can negatively affect their academic performance

Abuse of social media by students can negatively affect their academic performance	Frequency	Percent
Yes	85	95.5
No	4	4.5
Total	89	100.0

Table-20 addresses the question, 'can social media help lectures to reach students in their studies'. The result shows that 73% of students agree that social media can be a tool to be utilized by the lectures to reach students in their studies.

Table-20: Percent distribution of students who think that social media help lectures to reach in their studies.

Can social media you are using help lectures to reach students in their studies?	Frequency	Percent
Yes	65	73
No	24	27
Total	89	100.0

Table-21 shows that 42% student responded that they have ever attended political meeting or rally. This proportions in male and female were almost same (18-19%).

Table-21: Percent distribution of respondents in respond to ever attended a political party meeting/rally by Gender?

Gender	Have you ever attended political meeting or rally?		Total
	Yes	No	
Male	18	27	100 (45)
Female	19	25	100 (44)
Total	42(37)	(58) 52	100(89)

Table-22 shows the percent distribution of respondents in respond to whether social media encourage them to participate in politics by gender. The result shows that 48.9% of boys and 52.3% of girls indicate that social media they are using encourage them to participate in politics.

Table-22: Percent distribution of respondents in respond to whether the social media they are using encourage them to participate in politics by Gender?

Gender	Does social media encourage you to participate in politics		Total
	Yes	No	
Male	48.9	51.1	100 (45)
Female	52.3	47.7	100 (44)
Total	45	44	100(89)

Conclusion

This study has examined the use of social media in the lives of University of Botswana students. The most frequently used social media were Facebook, Twitter, WhatsApp and YouTube. The results shows that majority of the students (95.7%) use social media everyday and spend more than 2 hours on social media in a day on WhatsApp followed by Facebook Users. The study also indicated that (57.1%)of Year 2 students spend more than 2 hours on social media per day followed by the Year 3 students with fairly (50%). The smart device used by students to log into social media included Cellphone, laptops, Computers and Ipad. Majority of students agree that they spend a lot of time on social media chatting with others and keeping in touch to their old friends as well as some people they met socially. The duration time on social media has no effect on the student's academic performance that is someone's pass or failure is independent of the social media use. The results also revealed that there was no gender difference for using social media. The most prominent uses of social media is to keep in touch with friends. A negative correlation between students overall performance and use of social media was found, which implies that use of social media has a negative impact on the student's academic life. Ministry of Transport and Communication in Botswana, Universities, other institutions and organizations must identify the ways in which to divert the attention of young people including students from the entertainment side to other positive benefits of social networking.

The researcher recommends that in future: i. the study maybe done covering a large sample size to increase accuracy. ii. The study could be replicated at different institutions. iii. analyse the role of various demographics (class rank, age, gender).

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