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Use Pattern of Social Networks among Undergraduate Students and its Implications on Library Use and Usefulness in Higher Learning Institutions.

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Abstract

This study used a mixed method approach design which included quantitative and qualitative study to explore use pattern of social by undergraduate students SUA. The target population of this study was 3000 undergraduate students in their first, second and third year at SUA stationed at Solomon Mahlangu Campus (SMC) available during the year 2021. Stratified random sampling was used to get three strata: first, second and third year undergraduates. From each stratum, 30 students were selected systematically by picking their names from the student registers of classes available from admissions office. Thus, a total of 90 students were given a questionnaire to fill in. The results have indicated that, undergraduate students are using social networks in their everyday life and it is having a positive impact on them by providing them with reliable information on the day-to-day activities. The common social networks have been found to be WhatsApp, Facebook, Google docs. None of the respondents were found to be using LinkedIn; a social network very important especially for the students since it helps them in creating good connections and an easier job seeking option once the schooling days are done. The students have reported their preference of social networks over the traditional library, something that results in declining trend in the use of traditional library in the institutions.

It can therefore be concluded that social media have become inevitable technologies that help students in accessing information, let alone other services like entertainment and so on. The students have an understanding on social networks but there is a need for libraries to utilize these networks to promote information access. Social Network Entrepreneurship skills should also be taught to students so as to put into good use the

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social networks students are already using beneficially. When students are encouraged to use social media available or linked to library websites, the use of traditional library will continue as it used to be in the past.

Keywords: Social media; Undergraduate students; WhatsApp; Facebook; Twitter; Library use

Introduction, problem statement and study objectives:

The technological changes that have been experienced across the world have an influence on various fields including educational environments since the tools used in educational environments as well as those used by students are diversified depending on the changes in technology. Based on the characteristics of learners in the twenty-first century, it is observed that current technology takes part in students' daily lives of learning (Mese and Aydin, 2019).

It has become a norm in the present days to see that students engage in active role in creating content on web content, commenting, chatting, uploading, sharing, recommending and linking due to emergent of Web 2.0 as opposed to the period of Web 1.0, where users were reviewing static content in passive position (Musser, 2006). Therefore, it can be said that the content has started to be created by users in the web environment and the situation has enabled users to reflect their ego, likes, opinions, thoughts and feelings to web environments. In terms of academic environment, students have become active learners as opposed to passive learners.

Social networks are defined as the systems that allow individuals to create a public or semi-publicly accessible profile within a limited system, clearly showing the list of links that other users share, and which can display their own contact lists and what is done by others in the system (Boyd and Ellison, 2008). Therefore, according to Boyd and Ellison (opcit), social networks are web-based services that allow individuals to do the following: to construct a public or semi-public profile within bounded systems; articulate a list of other users with whom they share a connection; view and traverse their list of connections and those made by others within the system.

According to Greenhow *et al.*, (2009), there is a variety of applications such as micro-blogs, blogs and social networks which have emerged. Social networks, which are among these applications, are an environment created to meet the people's need for interaction. This environment has allowed individuals to interact with other individuals without time and space limits. Social networks such as Facebook and Twitter have been widely used by people (Alwagait *et al.*, 2015). For example, a social network, such as Facebook, has approximately 2.27 billion active users worldwide as of September, 2018,

according to reports by Facebook (Facebook, 2018) and it was introduced to support distinct college networks only in early 2004 as a Harvard-only Social Network By October 2022, the Facebook had 2.93 billion monthly active users, being the 3rd most visited website in the world second only behind only Google and YouTube (Facebook, 2022).

There is no reliable data regarding how many people use Social Networks although, marketing research indicates that Social Network are growing in plurality world-wide (ComScore, 2007). Florunso *et al.*, (2010) reviewed that; in Africa, social media networking sites are becoming widely spread than it has been before and it appears that people's perception of this technology is diverse.

Therefore, individuals tend to use social networks for various reasons. In addition, students' use social media for research activities such as retrieving research articles and publications, online learning and group discussions relating to politics, education and religious matters (Al-Yafi et al., 2018). Moreover, considering the educational environment including student-student interaction, student-teacher interaction and student-content interaction can be provided through social networks. In other words, it can be used to provide the different types of interaction (Moore, 1989).

Considering an increase in the use of social networks in the world, there are a growing number of studies being undertaken to find out the role of these social media in academic learning (Siegler, 2013, Gorman, 2015). However, there is scant in studies examining how the use of social networks may impact the use of libraries in higher learning institutions. Moreover, there is scant information on the way users especially students and faculty members in the universities perceive the usefulness of libraries in the light of a growing use of social media. This study tries to address these gaps. The objectives of the study were meant to identify various social networks commonly used by students, explore different ways in which undergraduate students use social networks and examine the way students perceive the usefulness of libraries in the light of growing use of social network in learning in higher learning institutions in Tanzania.

Literature review:

The advent of ICTs has rendered access to information in a variety of ways and sources at disposal The Internet and the World Wide Web, email, search engines, e-Commerce, and social networks, to name a few have made tremendous developments in ways and sources through which information can be obtained (Pradhan, et al., 2018). Social networks, in particular, have made it possible for students to walk wherever they are with online information resources at their hands and they can thus access them 24/7 days for all year round.

Social networks used by the undergraduate students:

Body and Ellison (2008) defined social networks as web-based services that allow individuals to construct public or semi-public profiles within a bounded system, articulate a list of other users with whom they share a connection and traverse their list of connections and those made by others within the system. Facebook and YouTube are examples of social networks that have become popular among students in many higher learning institutions. Social networks have enabled student-student, student-teacher and student-content interaction to be provided through the education environment. In other words, it can be used to provide the types of interaction specified by Moore and McElroy (2012).

Despite that social networks are beneficial; they also affect the lives of students in various ways depending on how they are used. For instance, the use of social networks such as Facebook, resulted in an impact on the psychological well-being (autonomy, purpose in life) of individuals (Verduyn *et al.*, 2015). The discovery of negative effects of social networks in learning environment can be categorize in terms of the distraction of the learner (Hettiarachchi, 2014) or the display of cyber loafing behaviors (Hassan *et al.*, 2015). This is due to a decrease of academic success as a result that learners using online learning environments cannot devote enough time to learning in such situations. Therefore, learners may postpone the academic work and spend more time on social networks for various purposes such as entertainment and communication (Hettiarachchi, 2014).

Effect of social networks on library use:

The tremendous pace under which social media growth is growing and used has played a significance role in the many ways and settings. They are the media that are "highly interactive platforms through which individuals and communities share, cocreate, discuss, and modify user-generated content" (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). It is reported that the number of active social media accounts exceeds two billion worldwide (Statista, 2016). People of different age groups increasingly turn to social media not only for social connection, but also to obtain and exchange news and information (Perrin, 2015). Hernon and Schwartz (2015) therefore put it that it is a pressing question how this trend affects the use and relevancy of other information sources, particularly tax-funded institutions such as public libraries. It is not uncommon to see public expressions which question the value of public libraries, citing that sociotechnological developments have, or will soon, render libraries obsolete (Siegler, 2013, Gorman, 2015).

Research on potential media displacement can be traced back to Lazarsfeld's (1940) research regarding the effect of the radio on printed media. Media displacement

theory suggests a negative relationship between the use of new media and that of older media. Research suggests two potential mechanisms: time displacement and functional equivalence. The premise of the time displacement hypothesis is that each person has only a limited amount of time to spend on media use. In a study by Boateng and Liu (2014) to explore Web 2.0 technologies usage and trends in the top 100 US academic libraries as exemplified through the academic library websites, it was found that all 100 academic libraries had a social media presence on Facebook and Twitter, making SNS the most widely applied Web 2.0 tool. The wiki was the least applied Web 2.0 technology, with a 34 percent participation rate. Blog was the second most popular tool with a 99 percent participation rate, followed by RSS and IM/Chat with 97 percent and 91 percent respectively. The vodcast and podcast had 47 percent and 46 percent participation rates respectively, while social bookmarking/tagging was also used by 39 percent of the academic libraries.

However, other studies have questioned the effects of these social media on the continued presence and usefulness of libraries, with some saying that library services have been or will be displaced by, among other things, new media such as social media. A study conducted in three countries (US, South Korea and Singapore) to test this displacement hypothesis with survey data collected from these nations (the U.S.: N = 879; South Korea: N = 700; and Singapore: N = 987), ordinal regressions were used to investigate the relationship between the use of social media and nine public library services, taking into account individual demographic differences. The results showed that for all three nations, social media use has significant complementary relationships with all nine library services examined. Computer and information literacy training showed the largest effect size. However, signs of displacement effects were observed in the odds ratio statistics, particularly among daily social media users and in reference services, library visits, and time spent in the library, suggesting that where displacement is concerned, these areas warrant extra attention (Collins and Quan-Haase, 2010).

Social Networks used by the undergraduate students:

It is widely reported that YouTube, Facebook, Instagram, and Twitter are the main social networks used by university students. For instance, a study conducted by Body and Ellison (2017), listed Facebook and YouTube as the main social networks used by students in the university. In addition, Miller and Melton (2015) mentioned Facebook and Twitter as the major social networks used by students in the university.

Different ways through which undergraduate students use Social networks:

In a study conducted by Alkan and Bardakci (2017), it was reported that the students' uses of online social networks for learning purposes are grouped under the categories of social interaction between themselves and with their teachers, interacting with materials

and sharing of the learning materials, collaboration, doing homework, and getting support. Moreover, Pempek *et al.*, (2009) conducted a study with 92 undergraduate students and reported that, social interaction is reported as one of leading reasons that prompts students to use social networks. Therefore, social media were seen as a powerful driver for learning activities in terms of frankness, interactivity, and friendliness (Al-Rahmi, Alias, Othman, Marin, and Tur, 2018). In another study conducted by Stathopoulou *et al.*, (2019), it was revealed that social media is a supporting tool for students during the learning process, and it is helpful for educators as well. Use of social networks for collaborating learning has a significant positive association with online knowledge sharing behavior. Most university students nowadays adopt the use of social network communication to interact with colleagues, teachers and also making the group be in touch with old friends and even a convenient source of transferring the resources, transferring the resource materials, collaborative learning and interaction with the colleagues as well as teachers (Ansari and Khan, 2020).

Social networks can be used to provide the learner-learning and teaching-learning communication and interaction (Moore, 1989). Similarly, in a study conducted by Alkan and Bardakci (2017), it was stated "that students contributed to social learning through social interaction with other students and teachers in social networks." Therefore, it is argued that Instagram and WhatsApp environments for instance can be preferred for this interaction in educational environments. The Instagram for instance has been reported to attract many users because of its interactive and visual features it has compared to other social media. For example, a study conducted by Hu *et al.*, (2014), saw that individuals share their visions about their friends, food and drinks, small technology tools, written visuals, pets, activities, their selfies and fashion on Instagram. This implies that it is possible to share content that has more visual density on Instagram than other platforms.

Contribution of social networks in learning among undergraduate students:

Social networks can contribute immensely to the learning and teaching in educational settings if used prudently. For instance, the findings of a study on "massive open online courses" (MOOCs) demonstrated the improved performance of students when they participate in the learning process through social media platforms (Abba *et al.*, 2019). Based on findings of Moore, (1989), social networks can be used to provide the learner-learning and teaching-learning communication and interaction. For example, teachers send YouTube links to their students where students can search and find videos explaining different concepts such as concepts of excretion, the use of computers and gaseous exchange.

The contribution of social networks in learning by undergraduate students has been reported in terms of use during assignments and other homework exercises. For example,

a study conducted by Alkan and Bardakci (2017), found that students' use of online social networks for learning purposes are grouped under the categories of interacting with materials and doing homework. For example, students may share materials including articles, assignment questions and lecture notes to each other through WhatsApp.

It is these contributions that may foster continued use of physical libraries or declined use of them if students feel and believe that they can optimize their learning throughout their stay at the college using solely social networks.

Methodology:

The study was carried out at Sokoine University of Agriculture (SUA) located in Morogoro municipality. This study used the pragmatic paradigm which identifies "the research problem" as central and applies all approaches to understanding the problem (Creswell 2003). It provides underlying philosophical framework that are fit for mixed-methods researches (Tashakkori and Teddlie 2003). It also allows solving research problems in a way that suits the condition that presently exists and not in a way which obeys fixed theories, ideas and rules. The present study adopted pragmatic paradigm in order to guide the researchers to obtain information. The researcher opted to use pragmatic paradigm because it gives freedom for a researcher to use any of the research methods, techniques as well as research procedures which are associated with qualitative or quantitative researches. Thus, the research approaches that were used in this study were mixed method approach designs which included quantitative and qualitative studies in order to conceal the bias of a single method. The study used a cross-sectional research design which allowed the collection of information simultaneously from a sample of undergraduate students at a single time during the study.

The target population of this study was 3000 undergraduate students in their first, second and third year at SUA stationed at Solomon Mahlangu Campus (SMC) available during the year 2021. The study excluded postgraduate students because this group does not reside at SMC campus. Stratified random sampling was used to get three strata: first, second and third year undergraduates. From each stratum, 30 students were selected systematically by picking their names from the student registers of classes available from admissions office. Systematic random sampling was used because there was complete list of respondents in the class registers in the university and it was preferred in order to get evenly distributed (spread) sample from the sampling frame which was developed for each class from the university. These were given a self-administered questionnaire containing both closed ended and open ended questions. Thus, a total of 90 students were given a questionnaire to fill in. According to Bailey (1994), a minimum sample size of 30 is normally sufficient for studies in which statistical data analysis is to be done in social sciences (regardless of the population size). Similarly, according to Boyd *et al.*, (1981),

it is recommended that a sample size of 5 percent of the total population should be used to form a sample for the study. Further, 5 percent of the total population should not be less than $30 \ (X \ge 30)$. Studies from other researchers have also suggested the same sample size to be used such as that by Saunders *et al.*, (2007) who states that a sample size of 30 or more will usually result in a sampling distribution that is very close to the normal distribution, and the larger the absolute size of a sample, the closer its distribution will be to the normal distribution.

From these recommendations, the sample size selected in the study area was 90 respondents in each year of the study. This sample size was also predetermined depending on the homogeneity of the population and the available time and financial resources. 60 questionnaires were returned and were found useful, making a return rate of 67%. Quantitative data were analyzed using SPSS program V.16 where descriptive statistics (frequencies and percentages) were generated. Content analysis was done for responses from open ended questions in the questionnaire. The results were presented in form of Tables and Figures. According to Kumar (2005) tables and graphs are the most common methods of presenting analyzed data.

Results and discussion of findings Demographic characteristics of respondents: 6.1 Demographic information of respondents:

The demographic data has to do with basic information about the respondents; this included their age, year of entry and gender. The results show that out of 60 students 22 (36.7%) respondents were 1st year students, 18 (30.3%) respondents were 2nd year students and 20 (33.3%) of the respondents were 3rd year students. In terms of gender, 42 (70.0%) were males and 18 (30.0%) were females. Among the respondents, 35 (58.3%) were between the ages of 18-22; 15 (25.0%) were between the ages of 23-27; and 10 (16.7%) were in the age range of 28-32. These results are presented in Table 1.

Table 1: Demographic Information of Respondents N=60

Demographic characteristics	Frequency	Percentage (%)
Age		
18-22	35	58.3
23-27	15	25.0
28-32	10	16.7
Total	60	100

Demographic characteristics	Frequency	Percentage (%)
Gender		
Male	42	70.0
Female	18	30.0
Total	60	100
Year		
1st year student	22	36.7
2 nd year student	18	30.3
3 rd year student	20	33.3
Total	60	100

Demographic information was important in the study to determine the suitability of the respondents for the study.

Social Networks commonly used by students:

Of the population interviewed, the most common social networks used by the undergraduate students are indicated in Figure 1. with a huge percentage (37%) of the respondents using WhatsApp followed by Facebook (23%). Google+ has also a good share of 20%). Others used to a lesser extent are You Tube, Twitter, Yahoo Messenger and Flickr. Other researchers have also reported low usage of social media like Flickr and Twitter and have called upon further research to find out the reasons for this static nature of usage (Collins and Quan-Haase, 2010).

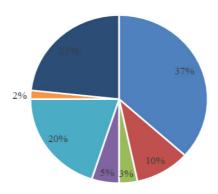


Figure 1: Common social networks used by the undergraduate students

This study found that WhatsApp is becoming most popular among undergraduate

students than other social networks. However, this study finding is contrary to what other researchers have found among undergraduate students. For instance, a study conducted by Body and Ellison (2017), listed Facebook and YouTube as the main social networks used by students in the university. In addition, Miller and Melton (2015) mentioned Facebook and Twitter as the major social networks used by students in the university.

When asked to name the means of accessing social networks, a majority 42 (70%) mentioned the use of smart phones, followed by laptops 12 (20%). Few used desktop computers in the computer lab 6(10%). Library computer labs were not reported in this study, meaning that students relied other university computer labs (Table 2).

Response	Frequency	Percent
Laptop	12	20
Desktop Computer in lab	6	10
Smartphone	42	70
Total	60	100

Table 2: Means of access to social networks used by students N=60

Different ways in which undergraduate use social networks:

Of the 60 students interviewed, the different ways through which undergraduate students use their social networks is highlighted in Table 3. Most of them indicated to use social media especially the WhatsApp for chatting, communicating with teachers and class fellows, watching/listening online music, video and podcasts. Yet others used social media for reading blogs and documents and a sizeable of them downloaded and sent/received class works through social media.

Table 3: Different ways in which undergraduate students use social networks N=60

Response	Frequency	Percent
Watching/listening to online music, video, podcasts	12	20
Downloading music, video, photos, document	10	17
Uploading music, video, photos, podcasts and document	7	12
Reading blogs and documents	6	10
Downloading and sending/receiving class works	9	15
Chat, communicate with teachers and class fellows	16	27

In a study by Al-Yafi, *et al.*, (2018), it was revealed that the purpose of students to use social media is for research activities such as retrieving research articles and publications, to conduct online learning and group discussions relating to politics, education and religious matters. They also use social media for communicating and interacting with friends and to check for the latest updates on current research in their field. Students use the social media for collaborative learning by online sharing of knowledge and behavior (Ansari and Khan, 2020). On the other hand, Alkan and Bardakci (2017) generalized that students' use of online social networks for learning purposes are gathered under the categories of social interaction, following the shares, interacting with materials, collaboration, doing homework, and getting support from colleagues and lecturers. These uses are however mainly applied to postgraduate students who are doing researches for their thesis and dissertations. For undergraduates as seen from the results, their use is concentrated much on communication side and entertainment.

The impacts of social networks in learning among the undergraduate students:

The different impacts that social media have had on learning among the undergraduate students are highlighted in Table 4. Those mentioned to be positive in learning were mainly in order of magnitude to be useful in performing assignments, sharing ideas with fellow students and teachers, easy accessing of information, increased knowledge and skills and quick provision of information.

Table 4: Positive impacts of social networks on learning among the undergraduate students*

Positive impact	Frequency	Percent
Easy access of learning materials	32	20
Increase knowledge, skills and capabilities	24	15
Introduction of new ideas to students	18	11
Share ideas with fellow students	34	22
Useful in performing assignments, homework and researches	36	23
Quick provision of information to the users	14	9
Total	158	100

^{*}Multiple response question

There were some negative impacts reported as well. The negative impacts associated with the use of social networks were highlighted by a segment of students interviewed using a checklist of open ended questions. A majority of them reported using

a lot of bandwidth thus incurring a lot of expenses to buy airtime for bundles. Some of them reported reduction in concentration of academic matters and used fairy a large amount of time to watch games and other related entertainments offered in the social networks. Some others reported viral spread of bad morals/behaviors like sexual related behavior (cohabitation before marriage), moral decay, sexual violence and harassments. Above all, some of them reported that with the advent of social networks, they no longer visit the library to access print information like books from library shelves. This implies that they no longer see the positive gains from visiting the library except when they have to do self-reading in preparations for tests and other university examinations.

There are other studies that have also reported positive impacts of social media on academics. For instance, the work of Stathopoulou *et al.*, (2019) revealed that incorporating social media in education has a positive impact on students' deep learning experience because social media is acting as a supporting tool for student's learning process, and it is helpful for educators such as teachers as well. Moreover, in the findings of Abba *et al.*, (2019) study on "massive open online courses" (MOOCs), it was demonstrated that improved performance of students increases when they participate in the learning process through social media platforms. These authors have also noted a concern on negative consequences brought by social networks to students. The use of these social networks to a great extent have also negatively influenced the students, being among the chief contributors in the deteriorating performances of some students due to the students using most of their time chatting and neglecting their primary activity of academics and they have also contributed greatly in the moral deteriorations on the students, contributing to the increase in bad behavior trends with students copying almost everything they see on the social networks and pasting as if it's their own work (plagiarism).

Perceived usefulness of social media over the library:

Respondents (students) were asked to indicate their attendance and use of library in advent of social media to access the information resources. 40 (66.7%) of them reported to sometimes go to the library. 18 (30%) stated that they do not visit the library at all (Table 5). Although many of them visit the library, they do so only for private reading to take the advantage of quiet environment in the library.

Table 5: If	uses the	library to	access	academic	materials
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Response	Frequency	Percent
Sometimes I go the library	40	66.7
I do not visit the library	18	30.0
I visit it very often	2	3.3
Total	60	100.0

Those who reported to visit the library did so over the last one year, followed by those who visited last five months (Figure 2). This implies that there is a declining trend in the use of the library as a result of existence of social media.



Figure 2: Trend of library visit and use for the past one year

Other researchers have also reported a similar declining trend in library use and have raised a concern on the relevancy of public libraries in the light of emerging social media, with some saying that library services have been or will be displaced by, among other things, new media such as social media. For instance, their study to test this displacement hypothesis with survey data, by Sin et al., (2017) collected from three nations (the U.S.: N = 879; South Korea: N = 700; and Singapore: N = 987). Ordinal regressions were used to investigate the relationship between the use of social media and nine public library services, taking into account individual demographic differences. The results show that for all three nations, social media use has significant complementary relationships with all nine library services examined. Computer and information literacy training showed the largest effect size. However, signs of displacement effects were observed in the odds ratio statistics, particularly among daily social media users and in reference services, library visits, and time spent in the library, suggesting that where displacement is concerned, these areas warrant extra attention.

Table 6: Perceived usefulness of social networks compared to the library

Statement	Frequency	Percent
Social networks are very useful than the library	39	65.0
Social networks are superior to library due to interactive features	14	23.3
Library is becoming less needed due to social networks in academic settings	7	11.7
Total	60	100.0

When asked to state whether social networks are superior to traditional library, most respondents (65%) indicated that social networks are superior over traditional library (Table 6). They rated this to be due to the former having interactive features that enhance performance of information search compared to the latter. This finding is contrary to what some other researchers have found. For instance, in a study conducted to examine how often university academic staff members use and create various forms of social media for their work and how that use influences their use of traditional scholarly information sources, Most UK academics use one or more forms of social media for work-related purposes, but creation is less common. Frequency of use and creation is not as high as might be expected, with academics using or creating social media occasionally rather than regularly. There are some differences in use or creation based on demographic factors, including discipline and age. The use and creation of social media does not adversely affect the use of traditional scholarly material, and high frequency users or creators of social media read more scholarly material than others (Tenopir *et al.*, (2013).

CONCLUSION:

The results have indicated that, the undergraduate students are using social networks in their everyday life and it is having a positive impact on them by providing them with reliable information on the day to day activities. The common social networks have been found to be WhatsApp, Facebook, Google docs. None of the respondents were found to be using LinkedIn; a social network very important especially for the students since it helps them in creating good connections and an easier job seeking option once the schooling days are done. The students have reported their preference of social networks over the traditional library, something that results in declining trend in the use of traditional library in the institutions. It can therefore be concluded that social media have become inevitable technologies that help students in accessing information, let alone other services like entertainment and so on.

RECOMMENDATIONS:

The students have an understanding of social networks but there is a need for libraries to utilize these networks to promote information access. Social Network Entrepreneurship skills should also be taught to students so as to put into good use the social networks students are already using beneficially. When students are encouraged to use social media available or linked to library websites, the use of traditional library will continue as it used to be in the past.

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