



The use of social networking sites for knowledge and information exchange by postgraduates in Tanzania

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Background: The use of social networking sites (SNS) has increased knowledge sharing among students leading to improved academic performance. Despite the benefits that SNSs provide in education, their use for knowledge sharing and exchange among postgraduate students in some Tanzanian tertiary institutions (TIs) faces challenges.

Objectives: To examine the benefits of using SNSs for sharing knowledge and information among postgraduate students and propose possible solutions to the identified challenges.

Method: This study was conducted using mixed-methods research, employing a convergent research design. Parallel mixed-methods sampling was used in the study to collect quantitative data from 171 postgraduates and 30 members of academic staff responsible for teaching and supervising postgraduates. Qualitative data were gathered from eight heads of academic departments who were purposively selected.

Results: The findings established that the use of SNSs for knowledge and information sharing in the TIs selected for the study had expanded postgraduate students' knowledge bases and enhanced academic performance. The study indicated that postgraduate students lack reliable Internet connectivity and a stand-alone policy.

Conclusion: The study recommends that TIs in Tanzania ensure the availability of funds to make knowledge sharing practices sustainable.

Contribution: The contribution is to the literature for a better understanding of the use of SNSs in particular and to help decision-makers appreciate how they can prepare provisions for the use of SNSs.

Keywords: information sharing; knowledge sharing; mixed-methods research; postgraduate students; social networking sites; social networks; Tanzania; tertiary institutions.

Introduction

Access to knowledge and information enables individuals to make informed decisions. Therefore, knowledge and information are required in all aspects of human life (Iwata & Hoskins 2018). Masele (2021) argues that access to knowledge and information enables human beings to avoid making obvious mistakes. Masele (2021) further avers that knowledge and information are useful because they enable individuals to control their destinies, careers and money. Knowledge and information enable employees to use their understanding to innovate and help organisations achieve competitiveness. Therefore, the management of organisational assets has become very important, and knowledge and information sharing are the most important aspect (Xu & Li 2022). Ishrat and Rahman (2020) advance the view that to attain effective knowledge and information sharing, organisations need to put in place effective knowledge management (KM) systems for better functioning. Knowledge management is an organisational strategy that enables the creation and sharing of knowledge, innovations and the management of intellectual capital (Hemalatha, Lavanya & Kathik 2021; Kimile et al. 2020). Knowledge sharing is one of the major components of KM (Santos, Oliveira & Chaves 2021).

Kimile et al. (2020) affirm that the purpose of knowledge and information sharing is to ensure the flow of knowledge and information from the owners of such knowledge and information to those in need, which can be done through face-to-face conversation or using technology such as social networking sites (SNSs). A SNS is a web application that allows the user to create and share content (Singh & Aggarwal 2020). The SNSs are based on interpersonal communication and interaction (Özcan & Yeter 2022). Thus, knowledge and information sharing are regarded as forms of human communication (Savolainen 2017). Knowledge and information sharing through social

networks are diverse because a vast amount of knowledge and information is shared for various reasons, including professional development, education and enjoyment (Mutambik et al. 2022). On the other hand, Mosha (2019) affirms that the advent of SNSs has changed the way knowledge and information sharing are practised in tertiary institutions (TIs) in Tanzania. The use of SNSs has enabled students in higher education institutions to get connected in many ways (Rathika & Thanuskodi 2020). On the other hand, Kutu, Olajide and Kutu (2022) opine that with the advancement in technology, TIs are now using SNSs to directly reach out to their students. Amadu et al. (2018) affirm that the majority of TI students have created SNS accounts, which qualifies them as 21st century students. Singh and Aggarwal (2020) argue that youth and adults nowadays use SNSs to communicate for various purposes, such as education and entertainment. Chutia and Devi (2020) argue that the development of SNSs such as Facebook, Twitter, blogs and YouTube has enabled the sharing of knowledge and information in a user-friendly way. Chutia and Devi (2020) further affirm that most of these sites are used in the creation and sharing of knowledge and information by facilitating collaboration around the globe. Therefore, TIs are expected to use SNSs to ensure their competitiveness by offering programmes that are in line with customers' expectations (Masele & Rwehikiza 2021).

Statement of the problem

Unlike traditional ways of communication, social networks have facilitated the interaction and quick flow of knowledge and information among postgraduates. The use of such platforms has enabled instant messaging and quick responses from various postgraduates sharing similar networks. Various scholars have pointed out benefits associated with the use of SNSs among postgraduates, such as quick access to knowledge and information, interaction among students, enhanced research skills, help in academia, expansion of their knowledge base, an avenue for self-learning, entertainment and improved classroom collaboration (Baquee, Hossain & Sevukan 2021; Borgohain 2018; Gora & Sisodia 2021; Hussain, Loan & Yaseen 2017; Kipruto, Kitetu & Oongus 2021; Lun 2021; Masele & Rwehikiza 2021). However, the use of such networks in Tanzania for sharing knowledge and information has not been effective, as indicated by Muneja and Abungu (2012), Shembilu (2013), Maiga (2017), Mchome (2017), Lubua, Semlambo and Pretorius (2017). Thus, if such a situation continues to persist, postgraduates will not be able to make full use of SNSs for their academic purposes, which may in turn affect their academic performance, thereby producing unknowledgeable and incompetent graduates. Therefore, this study investigates the challenges and opportunities of using SNSs for knowledge and information sharing among postgraduates in selected TIs of Tanzania. The study will contribute to the literature on a better understanding of the use of SNSs in particular, as well as assist decision-makers in understanding how they can prepare and formulate provisions on the use of SNSs. Additionally, if more case studies on the use of SNSs in

Tanzania are conducted, the case study can lead to theory building.

Research objectives

The general objective of the study was to examine the benefits of using SNSs for sharing knowledge and information among postgraduate students in Tanzania.

Specifically, the study intends to:

- assess benefits of using SNSs in sharing of knowledge and information among postgraduate students in selected TIs of Tanzania
- investigate the challenges faced by postgraduate students in using SNSs in the sharing of knowledge and information
- propose possible solutions to the identified challenges.

Literature review

The use of SNSs among postgraduates in TIs has been increasing in different parts of the world. This has been pointed out by different scholars such as Baquee et al. (2021), who affirm that the use of such platforms by postgraduates has been accelerating in India because of their usefulness in academia. In the same vein, Alagbela (2022) advances that such networks are valuable in facilitating the sharing of knowledge and information around the world. According to Bocar and Jocson (2022), the quickest way to access knowledge and information is through SNSs. Noor et al. (2021) argue that the use of SNS platforms has proven to be an effective way of attaining effective communications. It also enables people to get connected and share knowledge, information and experiences for the betterment of their lives (Gora & Sisodia 2021).

Baquee et al. (2021) affirm that SNSs are popular among the youth because of their features, which enable them to access academic materials required for their learning as well as keep in touch with their friends and families. According to Borgohain (2018), students prefer to use SNSs for research, but it also helps them stay current in their field of specialisation. Therefore, the use of social networks has become part of the daily lives of postgraduates at TIs, as they enable them to interact and share knowledge and information in a more user-friendly way. It also enables them to share knowledge and information to facilitate their learning (Akubugwo & Burke 2013). In a study that was conducted in India by Hussain, Loan and Yaseen (2017), it was found that the majority of postgraduates in TIs had started to use SNSs in academia, except for a few who were not ready to use such networks because of various reasons, including fear of their security and privacy. Another study conducted in Kenya by Kipruto, Kitetu and Oongus (2021) established that the use of SNSs enabled postgraduates to share experiences and research ideas and that such platforms also served as a collaborating space. Another study that was done in India by Lun (2021) showed that research scholars used SNSs

frequently for accessing educational materials and for entertainment.

The use of SNSs has remarkably increased in Tanzania; for example, by March 2012, there were about 437 040 Facebook users, and this was facilitated by the advancements in technology, including the use of smartphones, tablets and iPad (Novelli 2012; Shembilu 2013). By October 2020, Tanzania had 19 million users with Facebook accounts, 12.2 million users on Twitter and 7.5 million users on YouTube (The United Republic of Tanzania 2020). A study conducted in Tanzania by Shembilu (2013) indicated that 63% of students used SNSs for academic purposes. The use of social networks in education in Tanzania is also pointed out by Mweroro (2018), who argues that the use of such networks enhances innovations and collaborations among students in Tanzania. Mbura (2020) avers that social networks have increasingly become popular among the youth and adults in Tanzania and have changed the way people interact. Masele and Rwehikiza (2021) opine that SNSs are mostly used by young people in Tanzania, especially those enrolled in universities and higher education institutions.

However, several scholars have pointed out challenges associated with the use of SNSs; for example, Alagbela (2022) identifies some of the challenges faced by postgraduates in their use of social networks, including unreliable Internet connectivity or network. Cyberbullying is another challenge faced by SNS users, as some of them sometimes send unpleasant messages to their colleagues (Bocar & Jocson 2022). They are also faced with virus attacks and breaches of their privacy (Masele 2021). A study conducted by Maiga (2017) found that universities in Tanzania lack the financial muscle to ensure that effective knowledge sharing is attained. Another study conducted in Tanzania by Masele (2021) revealed that some of the challenges encountered in the use of social networking platforms were issues related to the security and privacy of the users, inadequate information and communication technology (ICT) facilities to facilitate the sharing of knowledge and information and a lack of supportive national policies and regulations. In a study carried out by Mchome (2017), it was established that some of the challenges faced by students in Tanzania in the use of social networks included a lack of skills and addiction.

Research methods and design

This study used mixed-methods research (MMR) and adopted a convergent research design. The design allows the collection of both quantitative and qualitative data in the same phase of research, and their integration during the communication of the findings ensures transparency and rigour of the entire methodological process (Creswell & Plano Clark 2017; Ngulube & Ukwoma 2021). Using MMR allowed the researcher to examine the problem from multiple perspectives, resulting in more robust research findings. The population of the study constituted 633 postgraduates from the four selected TIs situated in Northern Tanzania, namely the Institute of Accountancy Arusha (IAA), Mwenge Catholic

University (MWECAU), Moshi Co-operative University (MoCU) and Nelson Mandela Institution of Science and Technology (NM-AIST). A sample of 239 out of 633 postgraduate students was chosen using the table of calculating sample of known population sizes proposed by Krejcie and Morgan (1970). Parallel mixed methods sampling was used in the study to collect quantitative data from 171 postgraduates from the expected 239 and 30 members of academic staff responsible for teaching and supervising postgraduates (Ngulube 2022). Because this study was conducted during the outbreak of coronavirus disease 2019 (COVID-19) in Tanzania, the researcher had to design an online survey to avoid direct contact with the respondents as a measure of avoiding the spread of such a pandemic. The online survey was designed based on the objective of the study to make sure all research questions were addressed. Qualitative data were gathered from eight heads of academic departments through the use of telephone interview. Findings obtained from the qualitative data helped the researcher complement the findings obtained from the quantitative data, which helped to enhance the validity, reliability, transferability, dependability and credibility of the study. Qualitative data were analysed thematically using Atlas.ti version 7, while quantitative data were analysed using SPSS version 24.

Ethical considerations

An application for full ethical approval was made to the Department of Information Science, University of South Africa (UNISA) and ethics consent was received on 31 August 2020. The ethics approval number is 2020-DIS-0025.

Results

Postgraduates were asked, through questionnaires, to explain the benefits of using SNSs for knowledge and information sharing. Their responses are shown in Table 1.

A total of 136 (79.5%) postgraduates stated that it enabled them to increase their knowledge, 127 (74.3%) indicated that

TABLE 1: Benefits of using social networking sites in academic activities ($N = 171$).

Responses of postgraduate students	<i>n</i>	%
Enable to increase their knowledge	136	79.5
Enhance academic performance	127	74.3
Help in the generation of new knowledge	121	70.8
Enhance timely communication	120	70.2
Provide an avenue to meet other research scholars online	109	63.7
Enhance relationship with other research scholars	104	60.8
Reduce the cost of accessing academic information	103	60.2
Enhance collaboration and peer-to-peer learning	97	56.7
Improve the quality of academic works	97	56.7
Students feel comfortable to express their views through SNSs	86	50.3
Strengthen individual wellbeing and self-esteem	78	45.6
Access and quick response and spread of knowledge and information	2	1.2
Simplify the study	1	0.6
Time management in searching for information	1	0.6

SNSs, social networking sites.

it enhanced their academic performance, 121 (70.8%) revealed that it helped in the generation of new knowledge, 120 (70.2%) mentioned that it enhanced timely communication; 109 (63.7%) stated that it provided an avenue to meet other research scholars online; 104 (60.8%) established that it enhanced relationships with other research scholars, 103 (60.2%) indicated that it reduces the cost of accessing academic information, 97 (56.7%) mentioned that it enhanced collaboration and peer-to-peer learning, 97 (56.7%) said it improved the quality of academic papers. Eighty-six students (50.3%) said they felt at ease expressing themselves on SNSs, 78 (45.6%) were of the view that it strengthened individual well-being and self-esteem and 2 (1.28%) highlighted that it provided access, quick response and the spread of knowledge and information. One participant (0.6%) stated that it simplified the study and 1 (0.6%) established that it helped in time management when searching for information.

The findings of the study obtained from members of academic staff indicated that 26 (86.7%) established that the use of SNSs enables postgraduates to increase their knowledge, 25 (83.3%) indicated that it helps postgraduates in the generation of new knowledge, 24 (80.0%) revealed that it provided an avenue for students to meet other research scholars online, 24 (80.0%) mentioned that it reduces the cost of accessing academic information, 23 (76.7%) stated that it enhances the relationship with other research scholars, 23 (76.7%) highlighted that it enhances collaboration and peer-to-peer learning, 22 (73.3%) said it enhanced academic performance, 22 (73.3%) indicated that it enhances timely communication, 22 (73.3%) said it improves the quality of academic papers. Eighteen participants (60%) established that it strengthens individual well-being and self-esteem, and 15 (50%) revealed that students feel comfortable expressing their views through SNSs. The following benefits of using SNSs among postgraduates were mentioned by the majority of department heads (6, 75%): improved academic performance, lower cost of accessing knowledge and information, timely communication, increased interaction, improved quality of research works, enhanced collaboration and classroom participation, quick access to knowledge and information, elimination of the distance gap, entertainment and self-learning (Table 2).

TABLE 2: Benefits of social networking sites in academic activities ($N = 30$).

Responses of academic staff	<i>n</i>	%
Enable to increase their knowledge	26	86.7
Help in the generation of new knowledge	25	83.3
Provide an avenue to meet other research scholars online	24	80.0
Reduce the cost of accessing academic information	24	80.0
Enhance relationship with other research scholars	23	76.7
Enhance collaboration and peer-to-peer learning	23	76.7
Enhance academic performance	22	73.3
Enhance timely communication	22	73.3
Improve the quality of academic works	22	73.3
Strengthen individual wellbeing and self-esteem	18	60.0
Students feel comfortable to express their views through SNSs	15	50.0

SNSs, social networking sites.

The second objective of the study was to identify challenges faced by postgraduates in their use of SNSs. The findings of the study obtained from postgraduates show that 116 (67.8%) mentioned unreliable Internet, 82 (48.0%) indicated a lack of training on the use of SNSs, 80 (46.8%) established the absence of the required facilities and 79 (46.2%) revealed a lack of skills in the use of SNSs. Seventy-eight (45.6%) stated insecurity, 75 (43.9%) mentioned unreliable power sources, 66 (38.6%) indicated an absence of a knowledge-sharing culture, 65 (38.8%) mentioned a lack of trust, 61 (35.7%) stated a lack of awareness and 60 (35.1%) indicated the absence of policies. A lack of management support was mentioned by 59 (34.5%) people, and a tendency to hoard knowledge was mentioned by 47 (27.5%) people. Their responses are presented in Table 3.

Findings of the study obtained from members of academic staff show that 23 (76.7%) indicated unreliable Internet as the challenge faced by postgraduate students in their use of SNSs, 20 (66.7%) indicated a lack of training on the use of SNSs, 19 (66.7%) mentioned a lack of awareness on the use of SNSs, 19 (66.7%) stated unreliable power sources, 18 (60.0%) revealed a lack of skills in the use of social networks, 17 (56.7%) pointed out the absence of knowledge sharing culture, 16 (53.3%) mentioned absence of technology or facilities, 14 (46.7%) indicated the absence of policy, 13 (43.3%) stated a lack of trust, 12 (40.0%) mentioned insecurity, 12 (40.0%) indicated the tendency of hoarding knowledge and 11 (36.7%) revealed a lack of management support. Their responses are presented in Table 4.

Because this study used mixed methods research, interviewees were also asked to indicate challenges facing postgraduates in the use of social networks to share knowledge and information. The findings obtained from the heads of academic departments (8, 100%) revealed the following challenges facing postgraduates in the use of SNSs: a lack of reliable Internet, absence of policies guiding the use of SNSs, a lack of training, on the proper use of SNSs, insecurity and a lack of privacy, a lack of trust, a lack of management support, power problem, some students failing to balance between the SNSs and academia and a lack of a

TABLE 3: Challenges facing postgraduates in the use of social networking sites ($N = 171$).

Responses of postgraduate students	<i>n</i>	%
Unreliable Internet	116	67.8
Lack of training on the use of SNSs for knowledge sharing	82	48.0
Absence of the required technology or facilities	80	46.8
Lack of skills in the use of SNSs for knowledge sharing	79	46.2
Insecurity	78	45.6
Unreliable power sources	75	43.9
Absence of knowledge sharing culture	66	38.6
Lack of trust	65	38.0
Lack of awareness on the use of SNSs for knowledge sharing	61	35.7
Absence of policy regarding knowledge sharing	60	35.1
Lack of management support	59	34.5
Tendency of hoarding knowledge	47	27.5

SNSs, social networking sites.

knowledge sharing culture. Responses from some of the interview participants are presented as follows:

'The available facilities do not support the use of social networking sites in sharing knowledge and information.' (Participant Number 3, male, 17 June 2022)

'Cyber-bulling or Social networking sites bullying, if student is bullied by someone in Social networking sites that person will be discouraged to access or share knowledge through social networking sites. But, also security issues such as hacking.' (Participant Number 4, male, 18 May 2022)

'Lack of exposure and lack of networking among postgraduate students is amongst the factors affecting their ability to use social networking sites for sharing.' (Participant Number 5, female, 22 June 2022)

'Some postgraduate students are scared to use social networking sites with a fear that their information may be misused by other people for none intended purposes.' (Participant Number 6, male, 30 June 2022)

The last objective of the study was to probe respondents and interview participants to propose possible solutions to overcome the identified challenges. The findings of the study from postgraduate students show that 125 (73.1%) proposed that TIs should put in place ICT facilities to facilitate the use of SNSs for knowledge and information sharing purposes, 116 (67.8%) indicated that TIs should offer training on the use of social networks, 115 (67.3%) mentioned that TIs should formulate policies to guide the use of SNSs and 113 (66.1%) pointed out that there should be reliable Internet around TIs. A total of 102 respondents (59.6%) stated that awareness campaigns are needed to market the use of SNSs, 88 (51.5%) proposed that the top management of TIs should provide support towards the integration of SNSs, 86 (50.3%) established that security issues should be considered to protect the users of such networks, 83 respondents (48.5%) revealed that stable power generators should be in place. Postgraduates should be instilled with a culture of knowledge sharing, according to 79 (46.2%) respondents. Seventy-seven (45.0%) opine that trust has to be ensured among SNS users, 65 (38.0%) mention that the tendency of hoarding knowledge should be abandoned and 60 (35.1%) indicate that incentives and rewards should be in place to promote the use of SNSs (Table 5).

TABLE 4: Challenges facing postgraduates in the use of social networking sites ($N = 30$).

Responses of academic staff	<i>n</i>	%
Unreliable Internet	23	76.7
Lack of training on the use of SNSs for knowledge sharing	20	66.7
Lack of awareness on the use of SNSs for knowledge sharing	19	63.3
Unreliable power sources	19	63.3
Lack of skills in the use of SNSs for knowledge sharing	18	60.0
Absence of knowledge sharing culture	17	56.7
Absence of the required technology or facilities	16	53.3
Absence of policy regarding knowledge sharing	14	46.7
Lack of trust	13	43.3
Insecurity	12	40.0
Tendency of hoarding knowledge	12	40.0
Lack of management support	11	36.7

SNSs, social networking sites.

According to the findings obtained from academic staff members who completed questionnaires, 27 (90%) proposed the availability of Internet around TIs. Twenty-four (80.0%) suggested TIs should formulate policies to guide the use of SNSs, 23 (76.7%) indicated that TIs should offer training on the use of SNSs, 22 (73.3%) mentioned that awareness campaigns are needed to market the use of SNSs, 21 (70.0%) established that TIs should put in place ICT facilities to facilitate the use of social networks. Postgraduates should be instilled with a culture of knowledge sharing, according to 21 (70.0%) respondents. Twenty (66.7%) stated that stable power or generators should be in place, 19 (63.3%) opine that trust has to be ensured among the users of SNSs, 18 (60.0%) proposed that security issues should be considered to protect the users of social networks, 17 (56.7%) were of the view that TIs' management should provide support towards the integration of SNSs, 15 (50%) said knowledge hoarding should be discouraged and 14 (46.7%) said incentives and rewards should be implemented to encourage the use of SNSs (Table 6).

TABLE 5: Solutions to overcome challenges on the use of social networking sites at tertiary institutions ($N = 171$).

Responses of postgraduate students	<i>n</i>	%
Tertiary institutions should put in place ICT facilities to facilitate the use of SNSs for knowledge sharing	125	73.1
Tertiary institutions should offer training on the use of SNSs	116	67.8
Tertiary institutions should formulate policies to guide SNS usage	115	67.3
There should be a reliable Internet around the tertiary institutions	113	66.1
Awareness campaigns are needed to market the usage of SNSs for knowledge sharing	102	59.6
Tertiary institutions' top management should provide support towards integration of the SNS	88	51.5
Security issues should be considered to protect users of the SNSs	86	50.3
Stable power or generators should be in place	83	48.5
Knowledge sharing culture should be inculcated among postgraduate students	79	46.2
Ensure trust among the SNS users	77	45.0
Tendency of hoarding knowledge should be abandoned	65	38.0
Incentives and rewards should be in place to promote SNS usage	60	35.1

SNSs, social networking sites; ICT, information and communication technology.

TABLE 6: Solutions to overcome challenges on the use of social networking sites at tertiary institutions ($N = 30$).

Responses of academic staff	<i>n</i>	%
There should be a reliable Internet around the tertiary institutions	27	90.0
Tertiary institutions should formulate policies to guide SNSs usage	24	80.0
Tertiary institutions should offer training on the use of SNSs	23	76.7
Awareness campaigns are needed to market the use of SNSs	22	73.3
Tertiary institutions should put in place ICT facilities to facilitate the use of SNS for knowledge sharing	21	70.0
Knowledge sharing culture should be inculcated among postgraduate students	21	70.0
Stable power or generators should be in place	20	66.7
Ensure trust among the SNSs users	19	63.3
Security issues should be considered to protect users of the SNSs	18	60.0
Tertiary institutions' management should provide support towards integration of the SNS	17	56.7
Tendency of hoarding knowledge should be abandoned	15	50.0
Incentives and rewards should be in place to promote SNSs usage	14	46.7

SNSs, social networking sites; ICT, information and communication technology.



FIGURE 1: Solutions proposed by participating HoDs during the interview.

The results of interviews with academic department heads show that the majority (7, 87%) mentioned the following solutions several times: the need to ensure the availability of reliable Internet around TIs; the need to put policies in place to guide the use of SNSs; the need to have ICT facilities in place to support the use of social networks; the need to consider user security and privacy and the need for top management at TIs. Word cloud generated from ATLAS.ti was used to display solutions that were proposed by the interview participants as presented in Figure 1.

During interview, participant number 1 had this to say:

‘Various measures can be taken by the university management to ensure the use of Social networking sites in knowledge and information sharing among postgraduate students is attained at the university including providing training on the use of Social networking sites, ensuring the availability of the reliable internet connectivity around the university, provision of support on the use of Social networking sites and putting in place monitoring mechanism.’ (Participant Number 1, male, 25 May 2022)

Participant Number 3 remarked that:

‘I think as the university we need to transform from the normal or traditional lecturing methods to technologically driven methods including using social networking sites in facilitating learning among postgraduate students. We also, need to have social networking sites policy in place that will guide the proper use of social networking sites in knowledge and information sharing.’ (Participant Number 3, male, 17 June 2022)

Participant Number 5 articulated that:

‘The university should invest buying of ICT resources to facilitate the utilisation of social networking sites in knowledge and information sharing among postgraduate students. Secondly, awareness should be created among postgraduate students to

promote the utilisation of social networking sites in academic related issues. Finally, postgraduate students should be ready to attend training sessions that will be organised by the university to equip themselves with the skills of using social networking sites for their academic issues.’ (Participant Number 5, female, 22 June 2022)

Participant Number 7 had this to say:

‘One I would say that there should be the policy which requires every postgraduate student to participate in social networking sites. Secondly, all lecturers should make use of social networking platforms.’ (Participant Number 7, male, 30 June 2022)

Discussion

The study examined the benefits of using SNSs among postgraduates at the institutions selected for the study. The findings obtained from postgraduates, members of academic staff, and heads of academic departments from the respective TIs revealed that the use of social networks offers several benefits to postgraduates associated with their academia. Benefits that were spelled out included postgraduates being able to expand their knowledge base; it has also enhanced their academic performance, facilitated the creation of new knowledge and timely communication, reduced the cost of accessing knowledge and information, helped them improve the quality of research and facilitated the learning process. Although social networks have benefited postgraduates in their academia, the study has also revealed that not all of them were using these platforms for academic purposes; others were using them for non-academic purposes, which has also impacted their academic performance. A study conducted in Ghana by Alagbela (2022) found that there are many benefits that social networks offer to students, such as the ability to search for and access information

relevant to their needs, and they also use SNSs for research purposes. Another study conducted in Kenya by Maweu and Yudah (2020) revealed that the use of SNSs provided several benefits in education, and therefore they proposed the use of such platforms in teaching and learning at universities. According to Mosha (2019), a study conducted in Tanzania, the use of SNSs provides the following benefits: they provide platforms for discussions, access to institutional resources and improve teaching, research and consultancy. In this regard, if postgraduates in TIs in Tanzania are properly guided on how best they can use those SNSs for their academic activities, they are likely to benefit more, including expanding their knowledge base and attaining better academic performance.

The study also examined various challenges faced by postgraduate students in the use of SNSs for knowledge and information sharing. The findings of the study obtained from postgraduates, members of academic staff, and heads of academic departments revealed several challenges faced by the selected TIs, including a lack of reliable Internet, an absence of policies guiding the use of SNSs, a lack of management support, a lack of ICT facilities, a lack of training, unreliable power sources, a lack of skills, an absence of a knowledge sharing culture, insecurity, a lack of trust, the tendency to hoard knowledge and a lack of awareness on the use of SNSs for knowledge and information sharing.

This study revealed that postgraduates at the selected TIs in Tanzania encountered several challenges that affected their use of SNSs for knowledge and information purposes. These include a lack of reliable Internet connectivity at some TIs, which has necessitated postgraduates to use their Internet bundles; but some of them could not afford the cost of buying the bundles, hence they remained unconnected. Also, it was found that the absence of policies guiding the use of social networks was another challenge because postgraduates were not guided on the proper use of SNSs, and some were not using such networks for their educational purposes instead, spending much of their time on non-academic matters. Insecurity was another major issue of concern because some postgraduates did not accept sharing their knowledge and information through SNSs, fearing for the security of their privacy. Lack of management support was supported by the majority of respondents and participants, because some top management at some TIs considered SNSs as platforms for wasting students' time; hence, they did not accept them as formal platforms for sharing knowledge and information.

A study conducted in Tanzania by Masele and Rwehikiza (2021) noted various challenges facing higher education institutions in Tanzania, including a lack of management support, infrastructure, security and language. Another study conducted in Tanzania by Maiga (2017) revealed that a lack of clear policies on the use of SNSs affected knowledge and information sharing in universities. Another study conducted in Tanzania by Masele (2021) identified the

following challenges of using SNSs: a lack of knowledge and skills among users; a lack of resources such as financial, time and human resources and a lack of clear national policies to guide the use of social networks. This confirms the presence of inefficient use of SNSs for sharing knowledge and information in Tanzanian TIs because of a lack of proper strategies.

The study also sought to propose solutions to the identified challenges in order to ensure effective knowledge and information sharing through SNSs, which it accomplished in the countries chosen for the study, including Tanzania. The respondents and participants of the study proposed the following solutions for attaining effective use of SNSs: TIs should ensure the availability of reliable Internet connectivity; policies should be formulated to guide the use of SNSs; training should be offered; a culture of knowledge and information sharing should be inculcated among students; an awareness campaign should be in place to market the use of social networks; power generators should be in place; the security and privacy of users should be ensured; top management support should be provided; postgraduates should abandon the culture of hoarding knowledge and incentives and rewards should be in place to motivate students to engage in using SNSs for sharing knowledge and information. A study conducted in South Africa by Kutu et al. (2022) proposed that for TIs to attain effective use of SNSs, training should be offered to the students to create awareness so that they can make the best use of them in their academia. Another study conducted in Palestine by Abdalla and Qadhou (2020) suggested that TIs should provide training and sensitise students to balance the use of SNSs in academic and non-academic matters by concentrating more on their academia.

Conclusion

Social networking sites have created forums that have changed the way people communicate today. It has enabled postgraduates to get connected and interact to share knowledge and experience in various subject areas as well as in their social lives. Such platforms have proven to be useful because they provide postgraduates with numerous benefits, such as quick access to knowledge and information, knowledge expansion, staying current in their fields of specialisation, excelling in academia, improving the quality of their research and so on. Once postgraduates are well guided on how best they can make good use of such networks in academia, such platforms promise to be more productive in the future. However, postgraduates encountered several challenges in their use of SNSs for knowledge and information sharing in Tanzania. These challenges include a lack of reliable Internet connectivity, the absence of policies to guide the proper use of SNSs, a lack of training, the insecurity of the users, a lack of trust, a lack of top management support and a lack of ICT facilities or infrastructure. This study recommends that Tanzanian TIs make efforts to ensure the availability of funds to make knowledge sharing practices sustainable;

awareness campaign should be conducted to promote the use of SNSs for education purposes and top management of the TIs should embrace the use of SNSs as the collaborative platform on academic matters.

Suggestions for further studies

This study was carried out at four TIs situated in the northern zone of Tanzania. There is a need for further studies to be conducted at all TIs in Tanzania. Also, there is a need to study the impact of SNSs usage on students' academic performance across all TIs in Tanzania.

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The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

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Data availability

The data used in this study are not applicable for sharing as no new data were created.

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References

- Abdalla, R. & Qashou, A., 2020, 'The influence of social network use on students' academic performance', *Palestine Technical University Research Journal* 8(2), 112–130. <https://doi.org/10.53671/pturj.v8i2.120>
- Akubugwo, I.G. & Burke, M., 2013, 'Effects of social media on postgraduate students during academic lecturers and library session: A case study of Salford University Manchester, United Kingdom', *IOSR Journal of Research & Method in Education (IOSR-JRME)* 3(6), 44–50. <https://doi.org/10.9790/7388-0364450>
- Alagbela, A.A., 2022, 'Benefits and challenges associated with the use of social media applications in education at the basic education level in the Bolga-East District of Ghana', *European Journal of Education and Pedagogy* 3(1), 111–114. <https://doi.org/10.24018/ejedu.2022.3.1.192>
- Amadu, L., Muhammad, S.S., Mohammed, A.S., Owusu, G. & Lukman, S., 2018, 'Using technology acceptance model to measure the use of social media for collaborative learning in Ghana', *Journal of Technology and Science Education* 8(4), 321–336. <https://doi.org/10.3926/jotse.383>
- Baquee, A., Hossain, A. & Sevukana, R., 2021, 'Use of social media in collaborative learning among the postgraduate students of selected universities in India', *Library Philosophy and Practice* (e-journal), viewed 15 September 2022, from <https://digitalcommons.unl.edu>.
- Bocar, A.C. & Jocson, G.G., 2022, 'Understanding the challenges of social media users: Management students' perspectives in two Asian countries', *Journal of Business, Communication and Technology* 1(1), viewed 11 November 2022, from <https://bctjournal.com>.
- Borghain, T., 2018, 'Use of social networking sites by research scholars of Dibrugarh University: A case study', in *11th Convention Planner*, Tripura University, Agartala, November 15–17, viewed 20 September 2022, from <https://ir.inflibnet.ac.in>.
- Creswell, J.W. & Plano Clark, V.I., 2017, *Designing and conducting mixed methods research*, 3rd edn., Sage, Thousand Oaks, CA.
- Chutia, R. & Devi, R.M., 2020, 'Strategies of knowledge sharing among the postgraduate students of University of Science and Technology, Meghalaya: A study', *Library Philosophy and Practice* (e-journal), viewed 10 October 2022, from <https://digitalcommons.unl.edu>.
- Gora, A.D. & Sisodia, S.S., 2021, 'Utilization pattern of social media among the postgraduate students', *Indian Research Journal of Extension Education* 21(2&3), viewed 14 October 2022, from <https://www.seea.org.in>.
- Hemalatha, R., Lavanya, V. & Kathik, B., 2021, 'Factors enabling social media: Exploring knowledge sharing amid students community for better academic performance', *Research Square*, viewed 09 October 2022, from <https://www.researchsquare.com>.
- Hussain, M., Loan, F.A. & Yaseen, G., 2017, 'The use of social networking sites (SNS) by the post graduate students', *International Journal of Digital Library Services* 7(1), 72–84.
- Kimile, N.M., Bii, H., Kurgat, K. & Wasike, J., 2020, 'Knowledge sharing among community of practice in public universities in Kenya', *Journal of Information Technology* 4(2), 1–12.
- Kipruto, M., Kitetu, C. & Ongus, R., 2021, 'Adapting social networking sites for scholars communication among postgraduate students in Kenyan universities', *SRELS Journal of Information Management* 58(5), 309–317. <https://doi.org/10.17821/srels/2021/v58i5/165231>
- Krejcie, R.V. & Morgan, D.W., 1970, 'Determining sample size for research activities', *Educational and Psychological Measurement* 30, 607–610.
- Kutu, F.I., Olajide, O. & Kutu, J.O., 2022, 'Awareness, accessibility and challenges of social media as experienced by postgraduate information studies students, University of KwaZulu-Natal during the COVID-19 pandemics lockdown', *Library Philosophy and Practice* (e-journal), viewed 08 October 2022, from <https://digitalcommons.unl.edu>.
- Ishrat, R. & Rahman, W., 2020, 'Knowledge of the situation, social network and knowledge sharing in Peshawar University: An empirical study', *Economic Research-Ekonomska Istraživanja* 33(1), 752–768. <https://doi.org/10.1080/1331677X.2020.1718521>
- Iwata, J.J. & Hoskins, R., 2018, 'Behavioural patterns and aspects of sharing indigenous human health knowledge among traditional healers in Tanzania', in *Standing Conference of Eastern, Central and Southern Africa Library and Information Associations Entebbe Uganda: 23–27 April 2018*, pp. 693–706, viewed 18 June 2019, from <https://www.scecsal.org>.
- Lubua, E.W., Semlambo, A. & Pretorius, P.D., 2017, 'Factors affecting the use of social media in the learning', *South African Journal of Information Management* 19(1), a764. <https://doi.org/10.4102/sajim.v19i1.764>
- Lun, H., 2021, 'Impact of social networking sites among postgraduate students' of Manipur University: A study', *Library Philosophy and Practice* (e-journal), viewed 25 September 2022, from <https://digitalcommons.unl.edu>.
- Maiga, Z.B., 2017, 'Knowledge sharing among academia in the selected universities in Tanzania', PhD thesis, University of KwaZulu-Natal, Pietermaritzburg.
- Masele, J.J., 2021, 'Information sharing in the social media era: A user in African perspective', *University of Dar es Salaam Library Journal* 16(2), 202–222.
- Masele, J.J. & Rwehikiza, D.P., 2021, 'Applications of social media for promoting higher learning institutions activities in Tanzania', *International Journal of Education and Development Using Information and Communication Technology* 17(2), 37–54. <https://doi.org/10.4314/udslj.v16i2.14>
- Maweu, G. & Yudah, O.A., 2020, 'Utilization of social media platforms among information science students at University of Kabianga', *Open Access Journal* 7(3), e6090. <https://doi.org/10.4236/oalib.1106090>
- Mbura, O.K., 2020, 'Social media marketing platforms use and effectiveness of marketing communication in the Tanzania's telecommunication industry: Evidence from Vodacom Company', *University of Dar es Salaam Library Journal* 15(2), 39–56.
- Mchome, W.D., 2017, 'Effects of social media on academic performance in secondary schools in Meru District', MA thesis, St. Augustine University.
- Mosha, N.F., 2019, 'Utilisation of social media tools to enhance knowledge sharing among knowledge workers at the Nelson Mandela African Institution of Science and Technology (NM-AIST)', *Library Philosophy and Practice* (e-journal), viewed 09 October 2022, from <https://digitalcommons.unl.edu>.
- Muneja, P.S. & Abungu, A.K., 2012, 'Applications of Web 2.0 tools in delivering library services: A case of selected libraries in Tanzania', Paper presented at the SCECSAL XXth Conference, Nairobi, Kenya, June 04–08, 2012, viewed 15 July 2022, from <https://www.scecsal.org>.

- Mutambik, I., Lee, J., Almuqrin, A., Halboob, W., Omar, T. & Floos, A., 2022, 'User concerns regarding information sharing on social networking sites: The user's perspectives in the context of national culture', *PLoS One* 17(1), e0263157. <https://doi.org/10.1371/journal.pone.0263157>
- Mweroro, M., 2018, 'An assessment of social networking sites on student's academic performance in higher learning institutions, the case of College of Business Education, Tanzania', MA thesis, College of Business Education, Dodoma.
- Ngulube, P., 2022, 'Using simple and complex mixed methods research designs to understand research in information science', in P. Ngulube (ed.), *Handbook of research on mixed methods research in information science*, pp. 20–44, IGI Global, Hershey, PA.
- Ngulube, P. & Ukwoma, S.C., 2021, 'Prevalance of methodological transparency in the use of mixed methods research in library and information science research in South Africa and Nigeria, 2009–2015', *Library and Information Science Research* 43(4), 101124. <https://doi.org/10.1016/j.lisr.2021.101124>
- Noor, S.N.A.M., Jaafar, N.S.S.M.S. & Ramly, M.K.A., 2021, 'The benefits and challenges of social media in construction industry: A perspective from construction professionals', *Malaysian Journal of Sustainable Environment* 8(2), 35–53. <https://doi.org/10.24191/myse.v8i3.15887>
- Novelli, P., 2012, *The use of social media in business, the case of Tanzania*, viewed 19 January 2022, from <https://atfrontline.blogspot.com>.
- Özcan, K. & Yeter, S.C., 2022, 'The relationship between young adults interpersonal competence and purposes for using social media', *International Journal of Curriculum and Instruction* 14(1), 597–624.
- Rathika, N. & Thanuskodi, S., 2020, 'Social networking sites acts as a platform for sharing knowledge and creative ideas: A study of university students in Tamil Nadu, India', *Library Philosophy and Practice* (e-journal), viewed 29 September 2022, from <https://digitalcommons.unl.edu>.
- Santos, R.F., Oliveira, M. & Chaves, M.S., 2021, 'Are young getting full benefits from the use of social media? A review of combining the concepts of social media, social capital and knowledge sharing', *Revista de Administração da UFSM Maria* 14(2), 349–368. <https://doi.org/10.5902/1983465939226>
- Savolainen, R., 2017, 'Information sharing and knowledge sharing as communicative activities', *Information and Research* 22(3), viewed 18 October 2022, from <https://files.eric.ed.gov>.
- Shembiu, A., 2013, 'Importance of social networking for student participation in education in Tanzania', MA thesis, Blekinge Institute of Technology.
- Singh, I. & Aggarwal, T., 2020, 'A study of social media utilization in higher education', *Journal of Xi'an University of Architecture & Technology* 3(3), viewed 17 August 2022, from <https://www.xajzkjdx.cn>.
- United Republic of Tanzania [URT], 2020, 'Social media passion'. *Dar es salaam. Ministry of Information, Communication and Information Technology*.
- Xu, L. & Li, Z., 2022, 'Factors affecting the knowledge sharing behaviors of university teachers: An empirical study in China', *International Journal of Information and Education Technology* 12(1), 36–42. <https://doi.org/10.18178/ijiet.2022.12.1.1584>