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Implications of policies on the use of social networking sites for knowledge sharing: Experiences from postgraduate students in higher education institutions in Tanzania

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ABSTRACT

Like elsewhere in the world, students' use of social networking sites (SNSs) in higher education institutions in Tanzania has dramatically increased in recent years – something which has called for policies and guidelines to guide its proper usage. This study examined the effects of policies on the use of SNSs on postgraduate knowledge sharing in the four northern Tanzanian higher education institutions that were chosen for the study. The purpose was to examine the effect of such policies on students' usage of SNSs, to assess students' awareness of such policies, and to determine whether they adhered to it. This study is important in addressing the role of policies on the use of SNSs in knowledge and information sharing among postgraduates at higher education institutions in Tanzania. In order to collect quantitative and qualitative data simultaneously, the study employed a convergent mixed-methods approach. Thirty members of the academic staff who oversaw the instruction and supervision of postgraduate students as well as a total of 171 postgraduate students participated in the study as survey respondents, and eight heads of academic departments participated in interviews. According to the research, the selected Tanzanian higher education institutions did not have any specific regulations on the usage of SNSs. The use of SNSs had been included into other institutional guidelines and procedures. The study found that students had a general awareness of the use of SNSs as stipulated in other national ICT and related policies but little knowledge of the contents of those policies. Despite lacking in-depth knowledge of these policies, however, students almost unknowingly adhered to them because they intuitively understood the repercussions of violating the cyber laws as stated by the national authorities. Policies and guidelines may provide proper guidelines on the use of SNSs on academic-related matters, which may in turn improve students' academic performance. The recommendation is that the government of Tanzania should revise its policies and direct higher education institutions in the country to comply by formulating stand-alone policies to guide the use of SNSs for knowledge and information sharing among postgraduate students. This may safeguard users from any form of harm, protect the image of the institutions, and help to ensure institutional competitiveness. A further recommendation is to provide training for the purpose of raising awareness among postgraduates on the proper use of social networking sites for knowledge and information sharing.

1. Introduction

In recent years students in higher education institutions have increasingly used social networking sites (SNSs) to exchange both academic and non-academic knowledge and information (Abdallah & Qashou, 2020:113). Knowledge sharing has also facilitated collaborative learning, innovation, creativity, and improved performance among staff in organisations. It entails the creation, exchange, and dissemination of knowledge between the givers and the recipients (Chutia & Devi,

2020). People are the key components in the creation of knowledge in an organisation, and the knowledge they own must be transferred to other staff for the organisation to be effective (Nonaka & Takeuchi, 1995). Knowledge created within organisations should be properly managed to promote its sharing (Ahmed & Noor, 2021). Both tacit and explicit knowledge can be shared in an organisation to improve work output. Explicit knowledge is the kind that can be recorded in the form of documents, databases, websites, and other forms of knowledge resources, while tacit knowledge is the knowledge that people carry in

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their heads and is difficult to capture (Ahmed & Noor, 2021). In knowledge-economy societies, knowledge plays a key role in production (Kimile & Bulitia, 2020). Ipe (2003:341) asserts that knowledge sharing involves the act of making knowledge available to others within the organisation. The process involves converting the knowledge that staff has into a more understandable form so that it can be used by others. It also involves exchanging knowledge, experiences, and skills at the individual, group, family, or organisation level (Omotayo & Salami, 2018). There are three factors that distinguish knowledge from information. Firstly, unlike information knowledge is a function of a specific perspective, intention, or stance taken by individuals. Secondly, information is always directed towards some goal, while knowledge is directed towards doing action. Lastly, because it is relational and context-specific, knowledge is about meaning (Nonaka & Takeuchi, 1995). To provide organisations a competitive advantage, tacit and explicit knowledge interact with one another through the four phases of socialization, externalization, combination, and internalization (Nonaka & Takeuchi, 1995).

Organisations intending to be competitive and sustainable should put in place knowledge management practices by recognising, managing, and using their knowledge resources (Yang, 2013). Four elements of knowledge management are: (i) knowledge acquisition, (ii) knowledge storage, (iii) knowledge creation, and (iv) knowledge sharing (Gonzalez & Martins, 2017). Knowledge management practices ensure knowledge is retained, shared, and re-used even after the death, resignation, or retirement of employees (Dhamdhare, 2015). At higher education institutions knowledge is created and shared through teaching, learning, and research activities (Corcoran & Duane, 2017). Knowledge management plays a significant role in ensuring the attainment of higher education institutions' objectives and competitiveness (Nassiuma et al., 2021). Hence, these institutions should control the activities of knowledge creation, storage, sharing, and dissemination (Madbouly et al., 2021). The practices being controlled may in turn enhance higher education institutions' productivity (Wale, 2021).

The management of higher education institutions is expected to develop skills in controlling, monitoring, and promoting the sharing of knowledge to increase staff and organisational productivity (Wijaya & Suasih, 2020). To encourage the generation of new knowledge, the knowledge that is created in institutions of higher learning through teaching, research, and community engagement must be disseminated both inside and outside of these institutions (Dhamdhare, 2015). Therefore, the management of higher education institutions should inform academics and students about the importance and benefits of sharing knowledge (Yigzaw et al., 2021). In this digital era, individuals use computers, mobile phones, and the internet to interact and share knowledge and information. ICT has enabled people to interact, collaborate, and share knowledge (Manzo & Kannan, 2020). The use of mobile phones presents advantages and disadvantages to the users; its usefulness can be measured by its ability to make timely knowledge accessible (Ansari & Khan, 2020). The use of SNSs enables university lecturers to engage with students in groups, to facilitate class interactivity, and to share knowledge and/or information (Chang et al., 2022:2). In Kenya, university students prefer to use SNSs for sharing knowledge and information because of the features of these networks, which enable them to access the materials required for their modules, or other important missives (Maweu & Yudah, 2020:1). Higher education institutions consider students' achievement and performance by looking at the knowledge they have acquired over time (Feroz et al., 2022).

A higher education report issued in the United States indicated that members of the teaching staff in universities use different types of SNSs to engage students in teaching and to share knowledge and information at both national and international level (Ansari & Khan, 2020:7). Noori et al. (2022:2), for example, affirm that, in Afghanistan, students and academic staff use available and familiar platforms or sites such as Facebook, WhatsApp, Telegram, Twitter, Viber, YouTube, and Wiki, to share knowledge and information aimed at facilitating learning.

Tanzania, like other countries, has witnessed an increase in the number of SNSs' users, for example, by December 2020, Tanzania had 17.6 million users of Facebook Messenger, 25.5 million users of WhatsApp, 1.9 million users of Skype, 3.5 million users of Snap chat, 0.6 million users of WeChat, 3.8 million users of Telegram, 19.4 million users of Instagram, 12.2 million users of YouTube, 7.5 million users of Twitter, 3.9 million users of Google+, 0.2 million users of LinkedIn and 1.5 million users of Viber (United Republic of Tanzania [URT], 2020).

Students in higher education institutions in Tanzania use sites like these for both formal and informal learning, as well as to communicate (Shao & Seif, 2014:13). Tanzania's National Information and Communication Technology Policy (United Republic of Tanzania [URT], 2016) emphasises the use of new technologies in facilitating the sharing of knowledge and information in higher education institutions, which encompasses the use of SNSs (Mwantimwa, 2019). Tanzania's Communication Regulatory Authority Act No. 12 of 2003 under section 48(1), insists on the proper use of SNSs for learning, and highlights the penalties for those who violate the usage of such networks. It states that "any person who contravenes or fails to comply with the provisions of the Act commits an offence and shall be liable for conviction, to a fine or imprisonment or both" (United Republic of Tanzania [URT], 2003: 38).

1.1. Problem statement

The use of social networking sites has provided opportunities for both postgraduate students and academic staff in Tanzania's higher education institutions to disseminate knowledge and information with a view to facilitating the teaching and learning process. To fully realise the potential of SNSs in facilitating the exchange of knowledge and information among postgraduates at higher education institutions in Tanzania, the use of these platforms should be governed by clearly defined policies. Policies may prevent any form of violation and noncompliance. Little is known about how policies influence the use of SNSs in knowledge and information sharing in higher education institutions in Tanzania. This article addresses the role which policies on the usage of SNSs play in the implementation of knowledge and information sharing in higher education institutions in Northern Tanzania, focusing on four such institutions located in the Kilimanjaro and Arusha regions. The study will be of benefit to postgraduate students at the selected higher education institutions in Tanzania because it will enhance their understanding of using social networking sites for academic purposes whilst complying with the applicable policies. The study will also benefit the top management of higher education institutions because it will help them in attaining and maintaining a competitive edge.

1.1.1. Purpose and objectives

This article sought to assess the influence of policies on the usage of social networking sites on knowledge and information sharing among postgraduates in selected higher education institutions in Tanzania.

Specifically, the article intends to:

- (i) determine if there are policies in place on the usage of SNSs in higher education institutions in Tanzania;
- (ii) assess postgraduate students' level of awareness any policies guiding the usage of SNSs; and
- (iii) examine students' adherence to policies on the usage of SNSs.

1.2. Conceptual framework of the study

The conceptual underpinning for this study was derived from the theory of reasoned action (TRA) formulated by Fishbein and Ajzen (1975). As Ngulube (2020) argues, various theories, models and the available literature can be used to form a conceptual framework for a study. The current study used perceived behavioural control constructs from the theory of reasoned action which integrate internal and external

environmental factors to predict the intentions of individuals to perform a particular behaviour. External environmental variables including social factors, information sources, and resources for environmental management, as well as internal factors like attitudes, personal responsibility, and beliefs, may predict an individual's behaviour (Rahman, 2016). When the performance of expected behaviour depends on factors which are beyond an individual's control, it may result in low perceived control (Nisson & Earl, 2016). Internal factors such as the attitudes of higher education institutions' top management towards the usage of SNSs may influence their decision to formulate (or not to formulate) policies in this regard. Top management should consider whether these SNSs are important in facilitating the sharing of knowledge and information among postgraduates, or whether these sites do not serve any academic purposes at all. Students tend to develop positive attitudes toward technology once a platform is deemed useful to them, and that aspect can determine their use of the technology and their compliance with policy. For that reason, both internal and external environmental factors may have implications for the formulation and application of SNS policies in higher education institutions in Tanzania. External environmental factors are associated with compliance with government policies, especially since every higher education institution in Tanzania is required to formulate stand-alone guidelines on the use of SNSs in the sharing of knowledge and information among postgraduates. Constructs derived from the theory of reasoned action (Fishbein & Ajzen, 1975) were deemed relevant for this study, as these enabled the researchers to establish the presence of SNS policies in Tanzania's higher education institutions, along with postgraduates' levels of awareness of, and adherence to, such policies. The constructs have shown the implications of internal and environmental factors for the formulation and use of related policies in the chosen institutions.

2. Literature review

The Merriam-Webster (Dictionary) (2021) defines "policy" as "a definite course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions". Policies on the use of SNSs provide important information pertaining to users' privacy, and the security of their data (Johani, 2016:3). "Policies made by the organisation include at minimum, the definition of social media, the classification of information, what is permissible and the prohibition on using social media, the explanation of intellectual property rights, and the consequences if the restriction in the regulation are violated" (Lovita & Prabantoro, 2020:188). Therefore, any policy on the use of SNSs should be written in such a manner as to ensure its proper utilisation (Adzharuddin & Kander, 2018:676). Organisational values, legal or policy frameworks, power dynamics, motivation, and identity difficulties are some of the elements that have an impact on how social networking platforms are used in organisations (Ellison et al., 2015:9).

Organisations, management, researchers, and policymakers are concerned about the use of social networking sites because such platforms have both positive and negative effects for clients, organisations, and society as a whole (Bolton et al., 2013). In some organisations, knowledge sharing is limited because legal and policy restrictions greatly control its storage, usage, and dissemination (Mergel, 2011). The vast amount of knowledge shared through SNSs has necessitated some higher education institutions to restrict students from accessing less valuable sites because their policies are primarily meant to ensure that the use of such knowledge will promote learning (Luke & Billy, 2017:2). The formulation of university policies on the use of social media is meant to guide staff and students in how they use these platforms, thereby ensuring their effective use in teaching and learning (Curro & Ainsworth, 2018). To formulate policies on the use of social media in universities, it's critical to analyse and understand how students and lecturers behave online as well as the aspects that influence their choice of social networking sites (Gichuhi et al., 2020).

According to Ajie (2019), notably, some higher education institutions have no policies on knowledge and information sharing in place. In other universities, policies on the use of SNSs are included in the official guidelines and procedures, for instance in students' guidebooks (Willem et al., 2018:14). As Chen and DiVall (2018:60) argue, for higher education institutions to assist with effective knowledge and information sharing among students and their lecturers, it is imperative to formulate guidelines that articulate how to best use SNSs. According to Hoih (2017:13), many users of these social networking sites are unaware that what they disclose online could be used against them. Akakandelwa and Walubita (2018) insist that, to ensure the proper use of SNSs among students, and avoid any violations, higher education institutions should formulate and institute clear guidelines and procedures. Research carried out in Pakistan by Abbas et al. (2019) found that the absence of policies and guidelines affected the privacy of SNSs' users. Another study conducted in Malaysia by Chewae et al. (2015) revealed that there were risks associated with the use of SNSs, thus strengthening calls to put in place policies to protect users from any form of harm. According to a Swaziland study by Ngakane and Madlela (2022), despite social networking sites like WhatsApp being used to monitor student research, the Ministry of Education and Training and higher education institutions in the nation do not officially recognise these platforms. A study carried out in Nigeria by Zubairu (2021) on the use of social media sites, concluded that higher education institutions should formulate counselling policies on students' exposure to using such platforms.

In a study conducted in Pakistan, Noori et al. (2022) recommended that the top management of higher education institutions formulate social media policies to promote its use in teaching and learning and enhance students' academic performance. The Tanzania National Information and Communication Technology Policy (United Republic of Tanzania [URT], 2016) acknowledges that there has been an increase in the use of SNSs in the country and emphasises that institutions have to formulate policies to protect the security and privacy of users. Similarly, the Tanzania Education and Training Policy (United Republic of Tanzania [URT], 2014), section 3.2.9, insists on adherence to national legal frameworks, to ensure that educational policy is implemented without any difficulties. As Maiga (2017) indicates, however, there is a lack of policies guiding the use of SNSs in higher education institutions in Tanzania. The absence of clear policies affects the use of these sites for knowledge and information sharing among postgraduates, and if top management takes no action because they believe students spend much of their time using these sites for non-academic matters, this is a concern. Clearly, policies on SNSs should provide guidance to postgraduate students on how to use them properly. A study on the use of social networking sites conducted in Tanzania by Sing'ambi et al. (2020) revealed that the lack of an effective social media policy affected their usage in higher education institutions across the country. Another study conducted in Tanzania by Gervas (2020) found that the existing national legal framework, including Acts, policies, and guidelines from the various responsible authorities, did not regulate the use of social media. A study carried out in Tanzania by Masele and Rwehikiza (2021) recommended that for higher education institutions to reach the mass market to promote their services using social networking, policies and competitive strategies should be formulated.

3. Methods

This study used mixed methods research and adopted a convergent research design which enabled the researchers to collect both quantitative and qualitative data, thereby enhancing the rigour of the findings, as suggested by Ngulube and Ngulube (2022:3). The population of the study comprised 633 postgraduate students from four selected higher education institutions located in the Northern Zone of Tanzania, namely Moshi Co-operative University, Mwenge Catholic University, Nelson Mandela African Institution of Science and Technology and the Institute of Accountancy Arusha. Using Krejcie and Morgan's (1970) table for

calculating sample size, a final sample of 239 individuals was chosen. In order to do this, the table was entered with the specified population size, and the adjacent sample size was noted. Because the data for this study was gathered during the COVID-19 outbreak in Tanzania, the researchers had to create an online survey for the data collection, thus adhering to the ethical requirements of protecting survey respondents from the spread of the pandemic. The online survey was completed by 171 postgraduate students, out of the projected 239 respondents. According to the discussions of response rate in Anseel et al. (2010) and Groves (2006), the completion rate of 171 online surveys (71%) can be assessed as extremely good for drawing conclusions from the findings. Questionnaires were distributed physically, with the help of research assistants, to 40 members of academic staff responsible for supervising and teaching postgraduate students. Of these only 30 questionnaires were returned. Various policies and guidelines were reviewed to gather data on the identified topic, including Tanzania’s ICT Policy of 2016 (United Republic of Tanzania [URT], 2016), the Education and Training Policy of 2014 (United Republic of Tanzania [URT], 2014), and institutional policies. Three interview sessions were expected to be conducted with the heads of academic departments at each higher education institution (i.e., a total of 12), but only eight heads of academic departments honoured the invitation to participate. Due to the crisis brought on by COVID-19, telephone interviews were conducted with the heads of academic departments. Quantitative and qualitative data were analysed differently using different techniques. The qualitative data obtained through interviews were thematically analysed using Atlas.ti version 7, while the quantitative data were descriptively analysed using SPSS version 24 and the findings were presented in tables, frequencies and percentages. For comparison purposes, the collected quantitative and qualitative strands were combined, and possible explanations for their convergence and divergence were provided.

4. Results

The first objective of the study was to assess the availability of SNS usage policies in HEIs in Tanzania. To that end, the respondents were asked to indicate whether policies guiding such use were in place at their respective institutions. The responses are presented in Table 1.

The findings obtained from 99(57.9%) of postgraduates indicated that policies for using SNSs were in place; 52(30.4%) mentioned they did not know whether such policies were in place; and 20(11.7%) said that no such policies existed at their institutions. The findings obtained from the members of academic staff indicated that 12(40%) agreed that policies guiding the use of SNSs were in place; 8(26.7%) did not know whether such policies were in place; and 10(33.3%) indicated that no such policies were in place at their institutions. The findings obtained through interviews with all eight (100%) heads of academic departments indicated there were no stand-alone policies guiding the use of SNSs for knowledge and information sharing, but they pointed out that aspects of using social networking sites were included in existing institutional guidelines and procedures, such as ICT policies, internet use policies, and students’ guidebooks, amongst others.

The second objective of the study was to assess the students’ level of awareness of their various institutions’ policies guiding the use of SNSs. Their responses are presented in Table 2.

A total of 31(18.1%) respondents reported having a very great extent

Table 1
Existence of policies on the usage of SNSs at the selected universities.

Postgraduates’ responses (n = 171)		
Response	Frequency	Percentage
Yes	99	57.9%
No	20	11.7%
I do not know	52	30.4%
Total	171	100

Table 2
Students’ awareness of policies guiding the use of SNSs.

Postgraduates’ responses (n = 171)		
Response	Frequency	Percentage
Very great extent	31	18.1%
A great extent	66	38.6%
A moderate extent	64	37.4%
A small extent	8	4.7%
Not aware	2	1.2%
Total	171	100

of awareness of the policies guiding the use of SNSs; 66(38.6%) had a great extent of awareness; 64(37.4%) had a moderate extent of awareness; 8(4.7%) had a small extent of awareness; and 2(1.2%) were not aware of such policies at all.

The findings obtained from 29(96.7%) members of academic staff indicated that they believed postgraduate students had an awareness of the policies guiding the usage of SNSs, while 1(3.3%) indicated that they believed the students had no awareness of such policies. The findings obtained through the telephone interviews showed that 5 (62.5%) heads of academic departments believed that postgraduate students had a general awareness of the policies guiding the use of SNSs, while 3 (37.5%) indicated that they believed the students had no such awareness.

The third objective of the study examined the postgraduate students’ adherence to the SNS policies. Those findings are presented in Fig. 1.

Data obtained from the postgraduate survey respondents showed that 94 (55%) agreed that they adhered to the policies on the use of SNSs; 56 (32.7%) indicated that they didn’t and 21 (12.3%) indicated that they didn’t know as depicted in (Fig. 1).

5. Discussion of the findings

The study’s first objective was to find out whether policies guiding the usage of SNSs for knowledge and information dissemination among postgraduate students were in place at the selected higher education institutions participating in the study. The findings obtained from 99 (57.9%) postgraduate students indicated that they believed such policies were in place. A total of 12 (40%) members of the academic staff backed up this finding. The findings obtained from all 8 (100%) heads of academic departments showed that no stand-alone policies were in place to guide the use of SNSs, but that related guidelines were included in other institutional policy and procedures documents such as policies on the use of the internet, ICT policies, and students’ guidebooks. The findings obtained from the institutional and national policies consulted, revealed that a gap existed, as most referred to the general use of SNSs, with only a few specifically referring to the use of SNSs for knowledge and information sharing purposes. According to Ghazali et al. (2016) there was an absence of policies aimed at maximising the use of SNSs in exchanging knowledge and information among the members of academic staff in Malaysian universities. As Stoessel (2016) indicates, some universities in America prefer to formulate specific guidelines on the use of SNSs, while others include such guidance in their respective universities’ policies and procedures. A study by Maiga (2017) established that there was a shortage of policies guiding the use of SNSs in universities in Tanzania. Thus, the situation prevailing in that country was also observed in other countries, confirming the absence or shortage of stand-alone policies in this respect. This affected the proper use of SNSs for knowledge and information sharing among postgraduate students.

The study’s second goal was to determine how well postgraduate students understood the policies governing the sharing of knowledge and information on SNSs. The findings, as presented in Table 2, show that few (31 or 18.1%) postgraduate students had very great awareness of such policies; 66(38.6%) had great awareness; and 64(37.4%) moderate awareness. The findings obtained from 7 heads of academic

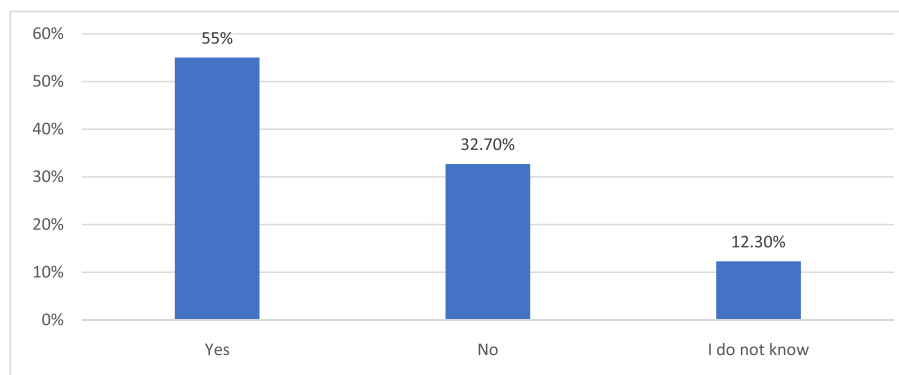


Fig. 1. Adherence to SNS policy.

departments, in other words most of them (87.5%) who participated in the interviews, indicated that they believed postgraduate students adhered to the institutional code of conduct, rather than having specific knowledge and understanding of the contents and requirements of related policies. Das et al. (2018) warn that users should be informed of the risks of the platforms they are about to use through privacy policies. Although the majority of users might not read the privacy policy, they should be able to do so if they have privacy questions when using an app so that they can understand how their information is being collected or used. Studies such as that of Maiga (2017) indicate that training is a prerequisite for enhancing awareness among users if knowledge and information sharing is to be effective. Chen and DiVall (2018) assert that policy on the use of SNSs serves to guide users and prevent any misuse, while setting standards for everyone. This study established that some postgraduate students were unaware on the contents of the policies guiding the use of SNSs, as they had never consulted those documents. The findings also indicated that the majority of postgraduate students only had a general awareness of the use of SNSs, as stipulated by the government, and the penalties for violating them. Thus, they used that knowledge when sharing information via SNSs on both academic and non-academic matters with colleagues and friends.

The last objective was to examine adherence to the policies on the use of SNSs among postgraduate students. The findings indicated that 94 (55%) adhered to the policies on SNSs while sharing knowledge and information; 56(32.7%) stated that they did not adhere to it; 8(26.7%) academic staff members believed postgraduate students did not adhere to it; and 7(23.3%) believed that postgraduate students did adhere to it. The findings obtained from the majority of the interview participants (5 or 62.5%) indicated that they believed postgraduate students adhered to these policies when using SNSs for sharing knowledge and information. The findings of this study indicated that the participating postgraduate students followed the directives of general SNSs policies when exchanging knowledge and information, as they understood the legal implications of violating cyber laws as stipulated by the government of Tanzania. This result underscores what Sugimoto et al. (2017) said, namely that higher education institutions generally formulate policies based on three important factors, namely the relevance of the message, the institutional image and compliance with the law.

6. Conclusion

Like elsewhere, postgraduate students in higher education institutions in Tanzania have increasingly been using SNSs for both learning and non-learning purposes, since these networks facilitate easy access to knowledge and information when needed. However, the use of SNSs has associated risks related to the security and privacy of the users, which call for policies to guide their usage. The study established that higher education institutions in Tanzania lacked stand-alone policies to guide the use of SNSs when postgraduates share knowledge and

information. The study further showed that some participating students were not cognisant of the contents of the policies stipulating the use of SNSs, making them vulnerable in terms of their security and privacy, and highlighting the importance of adhering to such policies.

6.1. Recommendations

It is imperative that the government of Tanzania revises its policies, including the Education and Training Policy of 2014 (United Republic of Tanzania [URT], 2014), the National ICT Policy of 2016 (United Republic of Tanzania [URT], 2016) and the Science and Technology Policy of 1996 (United Republic of Tanzania [URT], 1996), and make it mandatory for every higher education institution in the country to formulate a stand-alone policy on the use of SNSs for disseminating knowledge and information. The proposal on the revisions of the mentioned policies should be presented to the Minister responsible for Education, Science, and Technology through the Tanzanian Vice-Chancellors' committees for action. This would enable these institutions' top management to develop more trust in SNSs and start using them as official communication channels. There is also a need for these institutions to provide training to postgraduate students, thus raising awareness of the policies guiding the use of SNSs. Information literacy sessions, academic forums, workshops, and seminars can be organised by librarians or other university staff to create awareness among students and staff of the importance of complying with the institution's policies when using SNSs. This will help to ensure students' security and privacy and safeguard the image of their institutions. Lastly, training will enhance adherence to social networking usage policies among postgraduates, meaning such sites could potentially be used officially across tertiary institutions in Tanzania.

6.2. Implication of this study for theory, policy and practice

There are implications for theory, policy, and practise from this study, in line with the theory of reasoned action (Fishbein & Ajzen, 1975). Components that are internal (attitudes, beliefs about one's own responsibility, and environmental circumstances) (social factors, information sources, and resources for environmental management) may predict the behaviour of individuals (Rahman, 2016). Internal factors were deemed to include the attitudes of top management at higher education institutions, as some view SNSs to only be informal networks facilitating the sharing of knowledge and information, rather than valuable tools to use for educational purposes. People with negative attitudes towards SNSs will not be inclined to formulate policies to guide their use for the purposes envisaged here. Thus, official directives from the government on the formulation of policies on the usage of SNSs will build trust amongst most postgraduates who are not yet ready to make their knowledge and information available to others. Government statements would also prompt institutional top management to accept

and formulate policies on the use of SNSs at their institutions, to facilitate knowledge and information sharing as a means of boosting academic performance. The presence of internal training at institutional level may equip students with skills in using SNSs, which may, in turn, foster positive attitudes towards the use of these sites in sharing knowledge and information for educational purposes. External environmental factors are associated with directives from government that every higher education institution in Tanzania should formulate a stand-alone policy to guide the adoption and use of SNSs, which is something that these institutions will then have to comply with. This study may greatly influence the formulation of stand-alone policies in higher education institutions in Tanzania, to guide the use of SNSs in knowledge and information sharing for academic purposes.

7. Limitation of the study

This study investigated the implications of policies on the usage of SNSs on knowledge sharing among postgraduate students in four selected higher education institutions in Tanzania. Only higher education institutions in Tanzania's northern region that offered postgraduate programmes were examined. The results cannot be applied to other Tanzanian higher education institutions where the circumstances may be different.

Ethical considerations

The first author complied with all ethical criteria, including acquiring an Ethical Clearance Form with Registration Number 2020-DIS-0025 from the University of South Africa (UNISA) Ethics Review Committee before conducting any research. To protect their anonymity, privacy, and confidentiality during the study, participants from the chosen tertiary institutions signed informed consent forms. Participants in the study had the option to stop at any moment without having to give a rationale for their decision. The data used for this study formed a component of a larger PhD project that was submitted to the University of South Africa (UNISA).

CRedit authorship contribution statement

Msafiri J. Ponera: Conceptualization, Methodology, Software, Data curation, Writing – original draft, preparation. **Patrick Ngulube:** Supervision, of the work including sharpening of the manuscript.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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