Original Research Article

The Applicability of Social Media Platforms for Academic Purposes: A Case of Selected Higher Learning Institutions in Tanzania

ABSTRACT

Aims: To examine social media platforms' applicability for academic purposes.
Study design: The study employed a cross-sectional design and quantitative approach to provide more reliable and generalizable results. Mention the design of the study here.
Place and Duration of Study: The study was conducted across six (6) regions in Tanzania: Dar es Salaam, Dodoma, Mbeya, Kilimanjaro, Mwanza, and Singida between July and December 2023.
Methodology: The study involved 318 students from higher learning institutions. Data were summarized, coded, and analyzed using SPSS 25. Cronbach's Alpha coefficient was used to determine the reliability and internal consistency of the items. The significance of the parameter difference in this study was analyzed using Analysis of Variance. A multiple linear regression model was used to assess the applicability of social media platforms for academic purposes in higher learning institutions.
Results: Results from this study suggest that WhatsApp is the leading social media platform for facilitating communication on academic-related matters. Other commonly used platforms include YouTube, Facebook, X (formerly known as Twitter), and Instagram. The results from a Multiple Linear Regression model indicate that students' academic matters (outcome) were explained by social media usage (predictor) by 57.9%. The predictor variables were found to have a statistically positive significance ($p < 0.005$) on the outcome. Social media platforms are used to share assignments, handouts, and homework among students. Respondents indicated that social media platforms assist in completing tasks and assignments. **Conclusion:** The implication is that social media platforms can be blended with conventional learning approaches to enhance student participation during their learning trajectory

Keywords: Social media; Internet; Academic purposes; Higher learning; Tanzania.

1. INTRODUCTION

Over the last three decades, the Internet has evolved from connecting computer networks and became a means of connecting people across the globe. Similarly, it can be seen that the Internet is more than just a means of searching for information. The Internet can connect individuals for business, making new friends, bringing back old and long-lost relatives, or both. A current example of communication technologies facilitated by the Internet and commonly used by students is social media, also known as social networking sites (Mushtaq & Benraghda, 2018).

Carr & Hayes, (2015) define social media as "*Internet-based channels that allow users to opportunistically interact and selectively self-present, either in real-time or asynchronously, with both broad and narrow audiences who derive value from user-generated content and the perception of interaction with others.*" Over the past few years, the growth of social media has changed how the Internet is experienced by most end users (Raut & Patil, 2016). It is documented that, the influence of social networking is vital in every aspect of our lives including political, economic, and educational (Ahmed et al., 2016).

By June 2023, Tanzania is estimated to have 34 million Internet users (TCRA, 2023). Tanzania was inhabited by 4.9 million social media users, making up 7.4% of the population by January 2023 (Kemp, 2023). A report by the Tanzania Communication Regulatory Authority (TCRA) of 2023 indicated the top 5 Internet services with the most bandwidth usage in gigabytes (GB) as YouTube (50.18 million), Facebook (49.49 million), TikTok (million 33.57), WhatsApp (33.30 million), and Twitter (14.98 million).

Today, social media usage among the youth is growing exponentially and becoming more popular among students (Jamil et al., 2020). Students revealed that social media improves study quality, helps in doing a project with online group discussion, helps to release stress, to meet new friends, improves technological skills, interacts with peers, shares ideas, study material, gets the latest news, gets relief from academic stress, for long-distance communication and to build skills(Siddhartha et al., 2020). Recently, there has been a rapid growth of social media sites and their prevalence in the lives of university students, which changed their communication patterns (Butt, 2020). The growing number of such sites and the increasing demand for social media creates a need to examine the purposes of social media site usage among students (Kolhar et al., 2021).

Alwagait et al., (2015) explored the impact of using social media on students' academic performance. The study surveyed university students in Saudi Arabia and explored the most popular social networking among students. Results from this study indicated no direct relationship between social media usage and students' academic performance. Time management is the leading factor that accounts for the negative performance of students, in addition to social media usage (Alwagait et al., 2015). Abdullahi et al., (2019) evaluated the positive and negative effects of social media on the academic performances of undergraduate students. The study found that using social media can negatively affect students' performance. The study suggests that students must be advised of the dangers of addiction to social networking, and sites that can add value to academic work and research should be introduced.

Sivakumar, (2020) found that students who utilize WhatsApp demonstrate higher academic performance than their counterparts. Furthermore, the study concluded that there is no discernible disparity between the extent of usage of various social media platforms and students' academic performance. However, it is worth noting that the study did not specifically identify which social media platforms are predominantly utilized by students for academic purposes. According to Siddhartha et al., (2020), students utilize social media for various purposes, such as sharing resources and gaining access to information. Furthermore, the study reveals that students believe they can acquire more excellent knowledge and access learning resources through social media. Notably, Siddhartha et al., (2020) find that YouTube is the most commonly used social media platform for obtaining information. YouTube has even established a specialized channel called Teacher Tube, which allows teachers to upload instructional materials and offers valuable resources for students. Although evidence exists in the field of education regarding the benefits of social media for students, there remains a dearth of research specifically investigating students' preferred social media platforms.

Chukwuere, (2021) conducted a study involving 300 undergraduate first-year students and found that about 61.2% (199 students) believe that social media platforms positively impact their academic performance. Participants also suggested that social media platforms improve learning, participation, collaboration, and student engagement. In addition to this, social media platforms also facilitate communication between students and lecturers. Al Sawy & Al-Madani, (2021) assessed social media's impact on university students' academic achievement. Results from the study revealed that a wide range of students at the university are highly interested in using social media for academic achievement and communicating with faculty members. Similarly, the study concluded with a proposal to increase the activation of social media as an essential tool for improving the rate of academic achievement among university students.

Bamba et al., (2022) investigated students' usage of social networks. The study involved 450 students from Abidjan, and more than 64% of the respondents had ages ranging from 10 to 25 years. Results of this study show that half of the students work on social network platforms through mobile phones and devices, and WhatsApp is a leading platform. Furthermore, almost half of the students spend 2-5 hours online, and more than one-third spend more than 5 hours daily searching for reference materials on YouTube.

However, research on the impacts or application of social media platforms on the academic performance of higher-learning students in Sub-Saharan African countries is still limited. Therefore, this study examines the applicability of social media usage for students' academic purposes. The study was conducted among students of selected higher learning institutions in Tanzania. Results can be used as a benchmark for further assessments of the impact of social media usage among developing countries and the globe. More specifically, we sought to answer the following questions:
1. What social media platforms do higher learning students most use for academic-related purposes?
2. What is the male-female statistics contribution when using social media platforms for academic purposes?
3. Are social media platforms applicable to students' academic purposes?

The remainder of this article is organized as follows: The next section clarifies the materials and methods. The results of this research are presented in the subsequent section, followed by a discussion of their implications in the discussion section. Finally, the last conclusion section gives conclusive remarks and recommendations for future works.

2. MATERIAL AND METHODS

2.1 Methodology
This study used a cross-sectional design to provide a snapshot of the subject within resource-limited conditions (Kesmodel, 2018). A quantitative approach provided more objective, reliable, and generalizable results (Yannis & Nikolaos, 2018). Relevant data was collected once between July and December 2023 before being analyzed and reported.

2.2 Study area
The study was conducted across six (6) regions in Tanzania: Dar es Salaam, Dodoma, Mbeya, Kilimanjaro, Mwanza, and Singida. A purposeful sampling technique was used to select the areas since they house the majority of higher learning institutions in Tanzania. Respondents were students from higher learning institutions ranging from National Technical Award (NTA) level 4 to 8. Participants were informed about the objectives of this study before data collection.

2.3 Data collection approach
Physical and online questionnaires were used to collect the data from respondents. All questions were mandatory, and English was used for better understanding. An online questionnaire was distributed electronically among participants using WhatsApp. Participants were urged to respond accurately and honestly and carefully read the questions. The questions assessed respondents' education level, institution, and geographical location, as well as frequently used social media platforms and the use of social media platforms for academic purposes.

2.4 Data analysis
Data were summarized, coded, and analyzed using SPSS 25. Descriptive statistics of the selected variable, such as mean and standard deviation, were evaluated. Cronbach's Alpha coefficient was used to determine the reliability and internal consistency of the items. The significance of the parameter difference in this study was analyzed using Analysis of Variance. A Multiple Linear Regression model was used to assess the applicability of social media platforms for students' academic purposes in higher learning institutions.

2.5 Data analysis
Data were summarized, coded, and analyzed using SPSS 25. Descriptive statistics of the selected variable, such as mean and standard deviation, were evaluated. Cronbach's Alpha coefficient was used to determine the reliability and internal consistency of the items. The significance of the parameter difference in this study was analyzed using Analysis of Variance. A Multiple Linear Regression model was used to assess the applicability of social media platforms for students' academic purposes in higher learning institutions.

3. RESULTS AND DISCUSSION

3.1 Presentation of the findings

3.1.1 Demographics
This study involved a total number of 318 respondents from the selected higher learning institutions in Tanzania. Table 1 presents the demographic characteristics of respondents in terms of sex, age group, and level of education. Results indicate that 180 respondents (56.6%) were male and 138 (43.4%) were female. Most respondents were ranked between the 26 – 35 age group, accounting for 159 respondents (50%). One hundred ten respondents (35%) indicated that they were pursuing their first degree at the time of this research.

Table 1.   Demographic characteristics of respondents

Variable	Frequency	Percentage
Sex of respondents		
Male	180	56.6
Female	138	43.4
Total	318	100
The age group of respondents		
18 – 25	129	41
26 – 35	159	50
36 – 45	28	9
46 – 60	2	1
Total	318	100
Level of education of respondents		
Basic technician certificate (NTA Level 4)	36	11
Technician certificate (NTA Level 5)	99	31
Ordinary diploma (NTA Level 6)	73	23
Undergraduate (NTA Level 7 & 8)	110	35
Total	318	100

Undergraduate students use social media platforms the most, with 34.6%, followed by technician certificates, with 31.1%. The least use basic technician certificate students, with 11.3%. On average, more male students use social media for academic purposes than their female counterparts. The male dominance is also evident from the respondents' statistics. Furthermore, female students dominate Instagram, 87.5%, and Facebook, 53.1%. Conversely, male students dominate in using X (formerly known as Twitter) with 73.9%, YouTube with 59.1%, and WhatsApp with 58.4%.

3.1.2 Frequently used social media platforms for academic purposes
Results from this study indicate that WhatsApp is the most used social media platform for academic-related matters. A total of 149 respondents (47%) indicate they frequently access WhatsApp to obtain information regarding lectures, assignments, discussions, and study materials. Similarly, 88 respondents (28%) primarily use YouTube to access academic information and improve learning outcomes. Table 2 summarizes the commonly used social media platforms.

Table 2.   Commonly used social media platforms for academic purposes

Platform	Frequency	Percentage
Facebook	49	15
Instagram	8	3
X (formerly known as Twitter)	23	7
WhatsApp	149	47
YouTube	88	28
Others	1	0
Total	318	100

Descriptive statistics of the selected variables reveal that average respondents agree to use WhatsApp, YouTube, and Facebook for academic purposes. Similarly, respondents indicate that social media usage, on average, impacts students' academic performance. However, respondents indicate a neutral response on average regarding the use of Instagram and Twitter for educational purposes. Table 3 summarizes the descriptive statistics of the variables in this study.

Table 3.   Descriptive statistics of the variables

Platform	N	Minimum	Maximum	Mean	Std. Deviation
Facebook	318	1	5	4	0.853
Instagram	318	1	5	3	0.873
X (formerly known as Twitter)	318	1	5	3	1.164
WhatsApp	318	1	5	4	1.065
YouTube	318	1	5	4	1.077
Academic performance	318	1	5	4	0.937

The reliability and internal consistency of the items in this research were determined using Cronbach's Alpha coefficient. The results indicate that the scale is reliable and internally consistent (*Cronbach's Alpha coefficient = 0.908*).

3.1.3 The applicability of social media usage for academic purposes of students

The applicability of social media usage for academic purposes was accessed using five platforms: Facebook, Instagram, Twitter, WhatsApp, and YouTube. The results from a Multiple Linear Regression model indicate that students' academic purposes (outcome) were explained by social media usage (predictor) by 57.9%. The predictor variables were found to have a statistically positive significance ($p < 0.005$) on the outcome. Table 4 summarizes the model results that assess the applicability of social media usage on students' academic performance.

The data in Table 4 shows that WhatsApp usage significantly positively affects students' academic use (*beta = 0.369; p = 0.000*). This implies that a unit increase in WhatsApp usage improves students' academic activities by 36.9%. Likewise, using YouTube positively influences academic usage (*beta = 0.266; p = 0.000*). This means academic activities improved by 26.6% following a unit increase in YouTube usage. Facebook usage has a significant positive effect on the academic purposes of students (*beta = 0.175; p = 0.000*) in much the same way.

However, Table 4 results indicate that using Instagram and Twitter has no statistically significant and positive effect on students' academic activities (*beta = 0.055, p = 0.295; beta 0.050, p = 0.191*). These results suggest that using social media for academic purposes may improve students' performance.

Table 4. The applicability of social media usage for academic purposes

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
Facebook	0.175	0.049	0.175	3.535	0.000	0.078	0.272	0.542	1.844
Instagram	0.055	0.052	0.055	1.050	0.295	-0.048	0.157	0.490	2.042
Twitter	0.050	0.038	0.050	1.310	0.191	-0.025	0.125	0.912	1.096
WhatsApp	0.369	0.059	0.369	6.279	0.000	0.253	0.484	0.385	2.596
YouTube	0.266	0.056	0.266	4.743	0.000	0.156	0.376	0.423	2.365
Multiple R	0.765								
R Square	0.586								
Adjusted R	0.579								
F Value	88.2								
P Value	< 0.001								

3.2 Discussions

3.2.1 Social media usage among higher-learning students

This study found that higher learning institutions use social media platforms to access and share academic-related information. WhatsApp is the leading platform for students, indicating that they often communicate with instructors and others. Next to WhatsApp, students frequently use YouTube and Facebook to access academic-related information. This research suggests that the least used social media platforms for academic purposes are Instagram, Twitter, and the rest.

Social media platforms also share assignments, handouts, and homework among students. Respondents indicated that social media platforms assist in completing tasks and assignments. This implies that social media platforms can be blended with conventional learning approaches to enhance student participation during their learning trajectory. Social media platforms are essential for student learning.

Other researchers have identified commonly used social media platforms as WhatsApp, Facebook, and Twitter (Akakandelwa & Walubita, 2018); Instagram, Snapchat, and Facebook (Knight-McCord et al., 2016); WhatsApp, Instagram, and YouTube (Kircaburun et al., 2020). However, results from these studies presented the general usage of social media platforms for networking purposes. This study focused on academic-related purposes.

3.2.2 Social media usage and academic performance

This study identified the usage of social media accounts for students' academic activities. Results indicate that social media platforms may assist students in preparing for subjects they learned. Students utilize social media platforms for group discussion and completing assignments once issued. This transforms academic activities into something easily accessible and enjoyable.

Results from this study indicate that male students are more likely to use social media platforms than their female counterparts. This may have several implications for higher-learning students. First, male students have more internet access and computer-like devices that are being used to reach social media platforms. Second, female students tend to share academic-related information with close friends, eliminating individual access for demand. However, the present study could not include qualitative research to respond to these variations between male and female students.

Other studies have reported that social media poses a dual impact on students' academic achievement (Talaue et al., 2018). Social media platforms can catalyze student-centered and collaborative learning (Mwalimu et al., 2017). Another researcher found that social media usage for academic purposes is not a significant predictor of academic performance (Lau, 2017). Alwagait et al., (2015) outlined no linear relationship between social media usage and academic performance. Others suggested a negative impact of social media usage on academic performance (Giunchiglia et al., 2018).

Results from this study and the existing body of knowledge suggest that social media usage's impact on academic performance can be interpreted in three ways. First, if social media usage is explicitly for academic purposes, it significantly impacts academic performance. Second, general usage of social media platforms may sometimes have no impact or linear relationship with academic performance. Third, social media usage for non-academic purposes significantly negatively impacts academic performance.

4. CONCLUSION

The present study was designed to examine the applicability of social media on student's academic activities in higher learning institutions. This study has identified the social media platforms commonly used by students in Tanzania for academic purposes. The study also identified the male-female statistics contribution when using social media platforms to access academic-related information. Lastly, the study assessed the applicability of social media platforms to students' academic purposes. The results suggest that social media usage has a significant positive impact on academic activities. Other studies have identified a negative relationship between social media usage and academic performance. Other researchers have not established a link between social media usage and academic performance. Overall, this study strengthens the idea that when social media platforms are integrated as components of the learning process, they can significantly improve students' academic performance.

Unfortunately, the study did not include a qualitative study to explore further the relationship between social media usage and academic purposes. Despite its limitations, the study certainly adds to our understanding of the applicability of social media platforms to student-centered and collaborative learning. What is now needed is a cross-national study involving both qualitative and quantitative techniques to study the relationship between social media usage and student academic performance.

Continued efforts are needed to make social media usage more accessible to learners and trainers for academic purposes. Higher learning institutions must strive to excel in utilizing social media platforms to promote collaborative learning. Technology giants and mobile communication companies must collaborate with higher learning institutions to facilitate the application of social media platforms for academic purposes. Students and learners may have limited access to such uses without internet subscriptions. Such effort may act as a catalyst for integrating social media platforms for student-cantered and collaborative learning and, consequently, improve the academic performance of higher-learning students.

Definitions, Acronyms, Abbreviations

NTA: National Technical Award

SPSS: Statistical Package for Social Sciences

TCRA: Tanzania Communication Regulatory Authority

COMPETING INTERESTS DISCLAIMER:

Authors have declared that they have no known competing financial interests OR non-financial interests OR personal relationships that could have appeared to influence the work reported in this paper.

CONSENT

Not applicable.

ETHICAL APPROVAL

Not applicable.

REFERENCES

Abdullahi, Y. Y., Musa, M. M., Abubakar, I. B., & Yusif, N. D. (2019). The Impact of Social Media on Academic Performance among Undergraduate Students of Bayero University, Kano. *International Journal of Education and Evaluation*, *8*(11), 43–52. https://www.iiardjournals.org/get/IJEE/VOL. 6 NO. 1 2020/THE IMPACT OF SOCIAL MEDIA.pdf

Ahmed, A., Yunusa, M., & Lawal, B. (2016). Assessment of Social Networks used by Undergraduate Students in Faculty of. *Samaru Journal of Information Studies*, *16*(1), 1–11.

Akakandelwa, A., & Walubita, G. (2018). Students' Social Media Use and its Perceived Impact on their Social Life: A Case Study of the University of Zambia Socio-emotional development and technology enhanced learning tools in preschool learners in Zambia View project. *The International Journal of Multi-Disciplinary Research*, 1–14. https://www.researchgate.net/publication/328389136

Al Sawy, Y. M., & Al-Madani, F. M. (2021). Role of social media in academic achievement among Northern Border University sudents. *Revista Amazonia Investiga*, *10*(38), 20–32. https://doi.org/10.34069/ai/2021.38.02.2

Alwagait, E., Shahzad, B., & Alim, S. (2015). Impact of social media usage on students academic performance in Saudi Arabia. *Computers in Human Behavior*, *51*, 1092–1097. https://doi.org/10.1016/j.chb.2014.09.028

Bamba, A., Kamagaté, A., Koivogui, M., & Koné, D. (2022). Analysis of Social Networks among Students in Abidjan City. *Open Journal of Applied Sciences*, *12*(08), 1339–1351. https://doi.org/10.4236/ojapps.2022.128092

Butt, A. (2020). University students' preference regarding social media content, internet usage and online friendship patterns. *Asian Association of Open Universities Journal*, *15*(2), 239–249. https://doi.org/10.1108/AAOUJ-01-2020-0002

Carr, C. T., & Hayes, R. A. (2015). Social Media: Defining, Developing, and Divining. *Atlantic Journal of Communication*, *23*(1), 46–65. https://doi.org/10.1080/15456870.2015.972282

Chukwuere, J. E. (2021). The Impact Of Social Media On Students' Social Interaction. *Journal of Management Information and Decision Sciences*, *24*(Special Issue 2), 1–15.

Giunchiglia, F., Zeni, M., Gobbi, E., Bignotti, E., & Bison, I. (2018). Mobile social media usage and academic performance. *Computers in Human Behavior*, *82*, 177–185. https://doi.org/10.1016/j.chb.2017.12.041

Jamil, M., Ain, Q. ul, Batool, S., Saadat, S., Malik, S., Arshad, M., Nagra, R. N., Haider, M., Shameem, R., & Latif, B. (2020). Impact of Social Media on Academic Journals. *European Journal of Medical and Health Sciences*, *2*(5), 1–5. https://doi.org/10.1097/JPN.0000000000000487

Kemp, S. (2023). *Digital 2023: Tanzania*. Datareportal - Global Digital Insights. https://datareportal.com/reports/digital-2023-tanzania

Kesmodel, U. S. (2018). Cross-sectional studies – what are they good for? *Acta Obstetricia et Gynecologica Scandinavica*, *97*(4), 388–393. https://doi.org/10.1111/aogs.13331

Kircaburun, K., Alhabash, S., Tosuntaş, Ş. B., & Griffiths, M. D. (2020). Uses and Gratifications of Problematic Social Media Use Among University Students: a Simultaneous Examination of the Big Five of Personality Traits, Social Media Platforms, and Social Media Use Motives. *International Journal of Mental Health and Addiction*, *18*(3), 525–547. https://doi.org/10.1007/s11469-018-9940-6

Knight-McCord, J., Cleary, D., Grant, N., Herron, A., Jumbo, S., Lacey, T., Livingston, T., Robinson, S., Smith, R., & Emanuel, D. R. (2016). What social media sites do college students use most? *Journal of Undergraduate Ethnic Minority Psychology*, *2*(May 2015), 21–26.

Kolhar, M., Kazi, R. N. A., & Alameen, A. (2021). Effect of social media use on learning, social interactions, and sleep duration among university students. *Saudi Journal of Biological Sciences*, *28*(4), 2216–2222. https://doi.org/10.1016/j.sjbs.2021.01.010

Lau, W. W. F. (2017). Effects of social media usage and social media multitasking on the academic performance of university students. *Computers in Human Behavior*, *68*, 286–291. https://doi.org/10.1016/j.chb.2016.11.043

Mushtaq, A. J., & Benraghda, A. (2018). The effects of social media on the undergraduate students' academic performances. *Library Philosophy and Practice*, *2018*.

Mwalimu, E. C., Mulauzi, F., & Mwiinga, T. M. (2017). Use of Social Media Among University of Zambia Lecturers in Teaching and Learning. *2017 International Multi-Disciplinary Conference (IMDC2017)*.

Raut, V., & Patil, P. (2016). Use of Social Media in Education: Positive and Negative impact on the students. *International Journal on Recent and Innovation Trends in Computing and Communication*, *4*(1), 281–285. http://www.ijritcc.org

Siddhartha, S., Habeeb Adil, A., Mulla, M., Mulla, M., Rahman Sayed, F., Suhrab singh, K., Tripathi, S., & Zabin Eusufzai, S. (2020). Usage of Social Media among Undergraduate University Students. *European Journal of Molecular & Clinical Medicine*, *7*(8), 2515–8250. https://www.researchgate.net/publication/347521021

Talaue, G. M., Alsaad, A., Alrushaidan, N., & Alhugail, A. (2018). The Impact of Social Media on the Academic. *International Journal of Advanced Information Technology*, *8*(4), 27–35. https://doi.org/10.5121/ijait.2018.8503

TCRA. (2023). *Communication Statistics: Quarter ending June 30, 2023* (Issue June). www.tcra.go.tz

Yannis, P., & Nikolaos, B. (2018). Quantitative and Qualitative Research in Business Technology: Justifying a Suitable Research Methodology. *Review of Integrative Business and Economics Research*, *7*(1), 91–105. http://buscompress.com/journal-home.html%0Ahttps://search.proquest.com/docview/1969776018?accountid=10286&rfr_id=info%3Axri%2Fsid%3Aprimo