



## **Use of Social Media for Academic Activities among Students in Institutions of Higher Learning in Lagos State: A Retrospective Perspective of the Pandemic Era**

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### **Abstract**

*This study examines the use of social media for academic activities among students of higher institutions of learning in Lagos state during the pandemic era. The objectives of the study include to determine level of access to ICT devices, identify the platform used by students for interaction during the pandemic era, determine frequency of usage of such platform, and ascertain the purpose of usage of such platform among others. This empirical study was based on the survey of 238 students of formerly Lagos State Polytechnic (LASPOTECH) now Lagos State University of Science and Technology (LASUSTECH) and Lagos State University (LASU). Descriptive statistics was used for the analysis of the data collected. The study revealed that Smartphones, Internet connectivity were adequately accessible to the students. Social media and social networking site like Facebook, YouTube, WhatsApp and Instagram were regularly used for deliberations, socialization, information on academic activities, and collaborative learning. There were more positive effects of social media use for leisure entertainment, socialization, academic, collaboration and deliberation. Challenges experienced include instability of the internet, some of the smart phone are expensive, high cost of data subscription among others. Therefore, the paper recommends that government should ensure provision of internet facility has been done in developed countries, stable electricity supply and higher institutions should provide functional counseling unit to continuously sensitize the students on devoid of negative use of social media. This study concluded that, the use of social media and networking sites facilitate creative, dynamic and research-oriented students through collaboration during the pandemic era.*

**Keywords:** Social media, pandemic era, collaboration, socialization, learning

### **Introduction**

Social media significantly contribute to public's access, to a wide range of available information from different sites across the internet. Individuals can share and transfer knowledge and information across geographical boundaries through social media. Social media is quickly changing how people of many races, cultures, backgrounds, and religious beliefs use it as a means of communication. Social media offer quick connection and networking among users all over the world.



Because social media has numerous applications that enable quick connections regardless of geographic location, its use is rapidly growing among a variety of people in the society, including students of higher institutions. As a result, the importance of social media as a tool for social change by facilitating access to knowledge and information in society cannot be overstated. It is a form of media that is intended to be shared, which could be seen as a procedure that makes it simple to comment on, send, and is generally always accessible. This demonstrates that users can converse freely with one another even when a pandemic is present. Pandemic is a disease epidemic that crosses continents or nations. Compared to an epidemic, it impacts more people and claims more lives (Robinson, 2022).

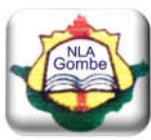
In order to reduce the level of the contagious disease and lower the mortality rate, experienced all over world including Nigeria in the year 2020, when COVID-19 pandemic became a scourge ravaging the people, there was complete closure of the entire Nation. Human movement was restricted, schools were closed, and the students had no choice but to leave the academic environment for their various homes. But despite that, students in higher institutions especially, continue to interact. Social networking sites allow users build online communities and share user-generated content. According to Mirela-Mabić (2014), an "online community" is a group that communicates solely through electronic means and discusses ideas or works on projects together. Access to a certain social website may be available to anyone or restricted to members of a specific organization for the goal of fostering an online community.

According to Phillips and Young (2009), networked organisations are particularly adapted in disseminating ideas that sometimes spread more quickly than anticipated. This is due to the widespread strong opinions that internet users have about their virtual communities. It enables students to continue their education outside of the classroom and to study things for which the interactive session in the classroom did not offer enough time. Social media could be considered Web 2.0 resources that place an emphasis on user sharing of knowledge and ideas, connectedness, and active engagement. It offers additional channels for knowledge exchange online in an open social setting as part of Web 2.0.

Social media tools and services come in many varieties and are employed for numerous purposes. Facebook, Wiki, YouTube, Bulletin Boards, LinkedIn, Blogs, Twitter, Podcasts, Virtual Worlds, RSS, StumbleUpon, Netlog, Delicious, Digg, Plurk, and Jaiku are just a few of the social media websites (Liu, 2010). Yusuf (2012) observed that while some social networking sites, like Instagram, Facebook, LinkedIn, and Twitter, are primarily used for friendship and socializing, they also enable the exchange of professional and academic information between users who share same interest.

Wiki is used for collaborative content creation. Blogs are used to share, organize, store, manage, and search online pages for personal information as well as for bookmarking. Social media is quickly changing how people of many races, cultures, backgrounds, and religious beliefs use it. Due to the fact that most of them have extremely simple applications and don't need much training to use, they allow for quick networking and connection among people all over the world. Individual can now access, exchange, and convey information and knowledge to a big number of individuals at once, in various locations all over the world, thanks to social media and social networking services.

The ability of social media tools to allow users to not only access and read content but also create and share content among users since it encourages the exchange of educational knowledge across many users is one of their key benefits. Social media platforms promote learning that is focused on the ideas of collective creativity rather than customized instruction.



In their study, VanDoorn and Eklund (2013) discovered that respondents genuinely used online social media for collaborative learning, which helped students become more innovative, dynamic, and research-focused. Furthermore, Facebook's design encourages social interaction among participants, enhancing collaboration between students working on activities. This creates a familiar environment for both students and lecturers (VanDoorn and Eklund, 2013).

Also, social media gives students the ability to communicate and work together outside of institutional walls while also gaining real-world work experience. With the development of technology, it will be difficult if not impossible to ignore social media in our lives. Almost every time, we use it to communicate among ourselves. Education is an agent of development and learning according to Thomas (2011) is based around principles of collective exploration, innovation rather than individualized instruction. McLoughlin (2010) claimed that social media is already used for the sharing of materials and information exchanges among students of the Economics faculty at the University of Mortar in Bosnia and Herzegovina. This supports Mirela-Mabić (2014) assertion that students are prepared for active use of social networking sites (slide share, etc.) for educational objectives, particularly for communication and e-learning. According to academic theory, social media platforms could be utilized to help members of the community who are looking for specific information share queries and answers. Facebook allows users to submit photographs, links to related sites, and questions and answers that allow timely responses to the topic at hand, allowing people to stay on the same page. According to Matteson (2011), due to the nature of the Facebook connection, there are few interruptions and everyone stays on the same page.

While there are benefits to using social media for higher education, there are also drawbacks, such as the potential for academic performance problems, loss of focus, and negative peer group influence, among others. If students spend too much time on other sites like watching movies or playing games rather than studying there is tendency that the academic performance of such individual can be affected. Dunn (2011), who claimed that students who try to multi-task by visiting social networking sites while studying, perform less well academically, equally supports this. The distractions caused by YouTube, Stumble upon, Facebook, or Twitter considerably diminish their capacity to focus on the task at hand. However, a recent study of 456 accredited American schools found that 100% of them use social media in some capacity, with Facebook accounting for 98% of all usage and Twitter for 84.0% (Barnes and Lescault, 2011).

**Problem of the study:** The use of social media in academic activities provides learners especially in higher institution the opportunity to get more involved in academic activities and also improved learning outcome. Based on this notion of using social media as a learning tool it was expected that during the locked down period students especially those in higher institutions will continue to develop themselves academically through collaboration with others to minimize the negative effect which the locked down might have on their learning process. Despite the peculiarity of social media for communication and multiple opportunities it offered to improve continuous learning especially during the pandemic period, some students have diverted to the use of it towards non educational and inappropriate activities. While some students occasionally use the internet for malicious purposes that have nothing to do with their academic progress, others are using social media for positive changes in their personalities, including those that are educational, social among others. It was against this background that this study examined the use of social media by students of higher institutions for learning and collaboration during the pandemic era in selected higher institutions in Lagos State, Nigeria.

### **Objectives of the study**

The main objective of the study was to investigate the use of social media on students’ learning and collaboration during the Pandemic era in selected institution of higher learning in Lagos State, Nigeria. However, the specific objectives include to:

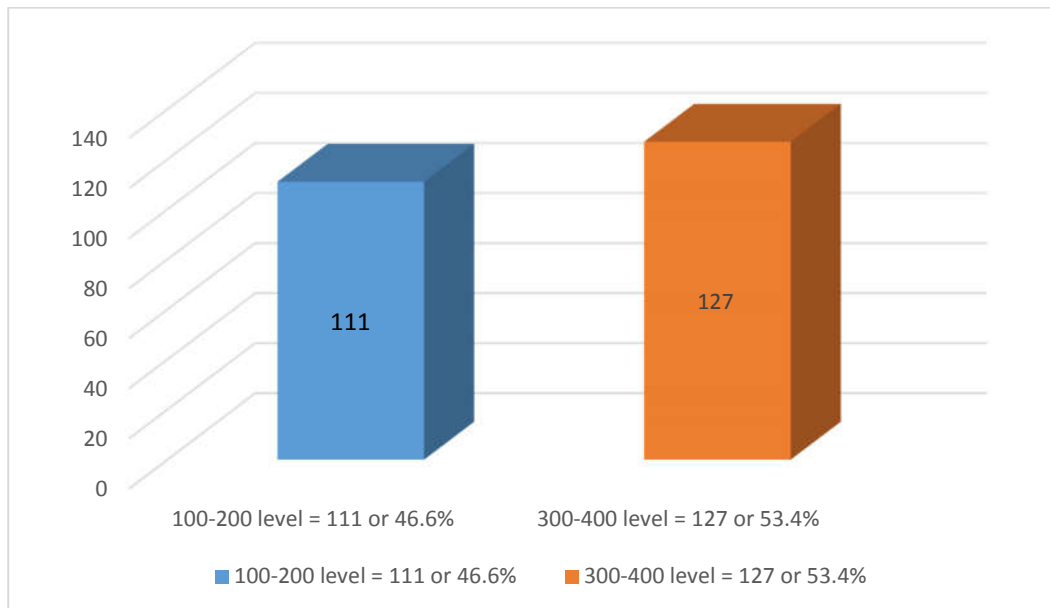
- i. find out level of access to ICT devices,
- ii. identify the platform used by students for interaction during the pandemic era,
- iii. determine frequency of usage of such platform, and
- iv. ascertain the purpose of usage of such platform.
- v. effectiveness of the platform for the purpose of usage.

### **Methodology**

The study was a descriptive survey research design .The population for the study comprises of undergraduate from Lagos State university of Science and Technology formerly Lagos State Polytechnic, Ikorodu and Lagos State University Ojo Lagos, who were randomly selected using random and convenience sampling techniques. Quantitative methodology was employed. A self-designed questionnaire was used for data collection. Data were collected from a total of two hundred and thirty eight (238) students and were analyzed using, frequency counts and percentages distribution in charts and tables as appropriate. In the same vein, discussion of findings was made to ascertain the outcome of the study.

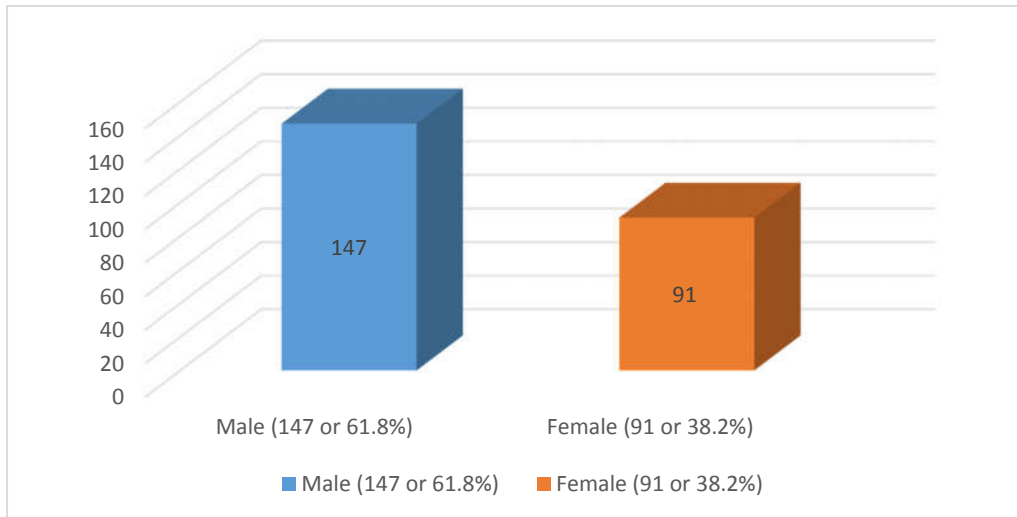
### **Findings of the study**

Demographic characteristics of the respondents of the study



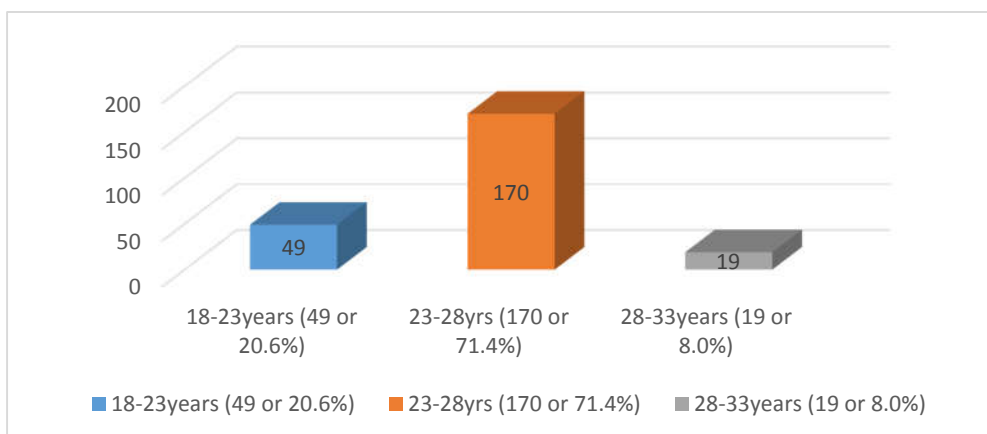
**Figure 1: Level of study**

Figure 1 shows that many of the respondents (127 or 53.4%) were 100 – 200 level students, while 111 (46.6%) were 300 – 400 level students. Perhaps, there were more 100-200 level students in the higher institutions as at the time of this study.



**Figure 2: Gender of respondents**

Information reveals that most of the respondents (147 or 61.8%) were male, while 91 (38.2%) were female (Fig. 2). This confirms the findings of a survey conducted on customer satisfaction by Ijiekhuam, Aghojare, and Ferinand (2015) which revealed that (89.0%) of the respondents were men. Perhaps there were more male students at the Institutions at the time this survey was done.



**Figure 3: Age bracket**

Figure 3 shows that most of the respondents (170 or 71.4%) were ages 23-28 years. This implies that majority of the respondents were still in their youthful and active years of education at the tertiary level in Nigeria having been under 30 years. It presumes that they are technological conscious and as such they can contribute to the findings of the study.

**Table 1: Programme of study**

Programme of study	Frequency (F)	Percentage (%)
Engineering	52	21.9
Technology	37	15.6
Agriculture	39	16.4
Management Studies/Social Sciences	41	17.2
Arts/Communication and Liberal Studies	34	14.3
Pure, Applied and Basic Sciences	35	14.7
<b>n = 238</b>		

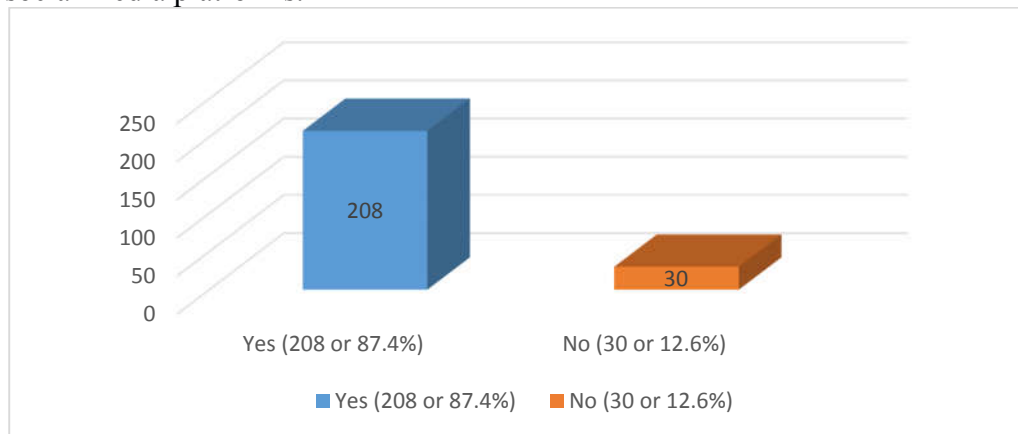
Table 1 reveals that respondents for the study covered different programmes, for example, 52 (21.9%) were from Engineering, 41 (17.2%) were from Management studies and Social Sciences, 35 (14.7%) were from Pure, Applied and Basic Sciences, while 37 (15.6%) were from Technology.

**Table 2: Accessibility to Information Communication Technology Devices**

S/N	Information communication technology devices	Yes		No	
		F	%	F	%
1.	Do you have access to smart phone	204	85.7	34	14.3
2.	Do you have access to Laptop	178	74.8	60	25.2
3.	Do you have access to Desktop computer system	182	76.5	56	23.5
4.	Can you access the Internet	200	84.0	38	16.0
5.	Do you have access to social media platform?	208	87.39	30	12.60

**n = 238**

Information as displayed on Table 2 shows that majority of the respondents had access to ICT devices. For example, (205 or 85.7%) smart phone, 200 (84.0%) Internet, and 208 (87.4%) social media platforms.



**Figure 4: Accessibility to social media**

Majority of the respondents for the study (208 or 87.4%) affirmed that social media platforms are easily accessible (Fig. 4).

**Table 3: Social media networking sites used**

S/N	Social media use	Yes		No	
		F	%	F	%
1.	Blog	155	65.1	83	34.9
2.	Twitter	137	57.6	101	42.4
3.	Facebook	196	82.4	42	17.6
4.	You tube	187	78.6	51	21.4
5.	Instagram	190	79.8	48	20.2
6.	WhatsApp	198	83.2	40	16.8
7.	TickTok	132	55.5	106	44.5
8.	Zoom	105	44.1	133	55.9
9.	Goggle plus	47	19.7	191	80.3

Table 3 shows that many of the respondents used social media platform such as 198 (83.2%) WhatsApp, 196 (82.4%) Facebook, 190 (79.8%) Instagram, and 187 (78.6%) YouTube. However, only few respondents indicated that they used (47 or 19.7%) Google plus, and 105





(44.1%) Zoom. This shows that all the respondents engaged in the use of different social networking sites.

**Table 4: Purpose of social media use**

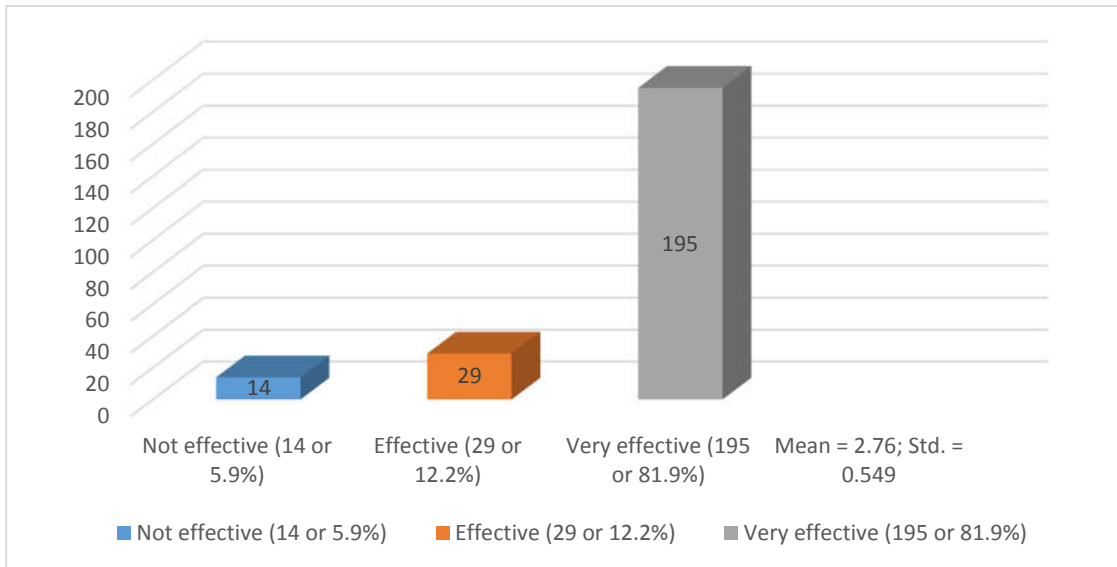
S/N	Purpose of social media use	Yes		No	
		F	%	F	%
1.	General information	164	68.9	74	31.1
2.	Information for academic activities	209	87.8	29	12.2
3.	Socialisation	212	89.1	26	10.9
4.	Entertainment	145	60.9	93	39.1
5.	Collaboration (END SARS, other protests)	158	66.4	80	33.6
6.	Collaborative Learning (Group discussion, Tutorial, Extra moral activities etc)	208	87.4	30	12.6
7.	Deliberations (chat/meeting)	220	92.4	18	7.6

From the observation of results in Table 4, it could be found that many of the respondents used social media platforms for different purposes such as 220 (92.4%) deliberations (chat/meeting), 212 (89.1%) socialization, 209 (87.8%) information for academic activities, 208 (87.4%) collaborative learning (group discussion, tutorial, extra moral activities etc.), among others.

**Table 5: Frequency of social media use**

S/N	Frequency of social media use	Daily		Weekly		Quarterly		Yearly		Not Used	
		F	%	F	%	F	%	F	%	F	%
1.	Blog	2	.8	6	2.5	4	1.7	214	89.9	12	5.0
2.	Twitter	8	3.4	10	4.2	199	83.6	16	6.7	5	2.1
3.	Facebook	200	84.0	10	4.2	7	2.9	8	3.4	13	5.5
4.	You tube	196	82.4	17	7.1	10	4.2	9	3.8	6	2.5
5.	Instagram	185	77.7	24	10.1	5	2.1	14	5.9	10	4.2
6.	WhatsApp	193	81.1	19	8.0	3	1.3	10	4.2	13	5.5
7.	Tick Tok	30	12.6	188	79.0	7	2.9	6	2.5	7	2.9
8.	Zoom	11	4.6	6	2.5	191	80.3	9	3.8	21	8.8
9.	Goggle plus	11	4.6	8	3.4	10	4.2	8	3.4	201	84.5

Table 5 shows that many of the respondents affirmed that they used Facebook (200 or 84.0%), 196 (82.4%) YouTube, 193 (81.1%) WhatsApp, and 185 (77.7%) Instagram on daily basis . Meanwhile, 199 (83.6%) Twitter, and 191 (80.3%) Zoom were reported being used occasionally since many of the respondents used them quarterly. This could be said to be technological advantage which the respondents exploited to interact with each other for learning and collaboration.



**Figure 5: Effectiveness of social media platforms**

From all indications, it is quite clear as 195 (81.9%) of the respondents consented that social media platforms are very effective for the purposes they were being used.

**Table 6: Effectiveness of social media used**

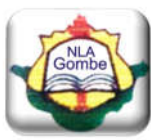
S/N	Social media effectiveness	Positive		Negative	
		F	%	F	%
1.	General information	51	21.4	187	78.6
2.	Information for academic activities	197	82.8	41	17.2
3.	Socialization	178	74.8	60	25.2
-4.	Entertainment	191	80.3	47	19.7
5.	Collaboration (END SARS, other protests)	55	23.1	183	76.9
6.	Collaborative Learning (Group discussion, Tutorial, Extra moral activities etc)	191	80.3	47	19.7
7.	Deliberations (chat/meeting)	216	90.8	22	9.2

Results in Table 6 shows that most of the respondents concurred that social media use has negative effect on information for general purpose (187 or 78.6%), 183 (76.9%) collaboration (END SARS, other protests). However, social media use has positive effect on deliberations (chat/meeting) as affirmed by (216 or 90.8%). Similarly, 197 (82.8%) ascertained positive effect on information for academic activities, 191 (80.3%) each on collaborative learning and entertainment respectively.

**Table 7: Challenges faced in use of social media**

S/NO	Challenges	Yes		No	
		F	%	F	%
1	Instability of the internet service	210	88.24	28	11.76
2	Cost of devices	198	83.19	40	16.81
3	Cost of data subscription	223	93.70	15	6.30
4	Inadequate electricity supply	215	90.34	23	9.66
5	Lack of trust in peer feedback	162	68.07	76	31.93





From all indications, it is quite clear as 223 (93.70%) of the respondents consented that cost of data subscription was one of the major problem experienced in the cause of using social media which was followed by inadequate electricity supply for charging the devices and instability of the internet provided 210 (88.24%) among others.

### **Findings and discussion**

Findings of the study revealed that most of the respondents had access to information and communication tools such as smart phones; with this they were able to access the means of communication for the intended purpose(s). This is in consonant with Dziuban and Walker (2012) who surveyed students in higher education reported that students are pouring the acceptance of mobile computing devices (cellphones, smartphones, and tablet) in Higher Education Institutions (HEIs).

On frequency of use of social medial platform: Majority of the respondents indicated that, they used Facebook more than any other social media platform. This suggests that the respondents view social media as a form of interpersonal contact. This buttresses the finding of Cain (2008) who submitted that Facebook reported not less than 1,000,000 new members joining the platform per day. Thus, Facebook is the most preferred social networking sites among the students of the United States. In addition, the findings of Pew Research Center, reported that 55% American teenage age bracket of 15–17 years using online social networking sites, Myspace and Facebook (Reuben, 2008). This finding collaborate the finding of Kaya and Bicen (2016) who stated that, Facebook and Whatsapp were mostly used by students. Hashem and El-Badawy (2015) include Instagram, Twitter and You tube. On frequency of usage the finding revealed that, respondents used Facebook, You tube, WhatSapp mostly on daily basis. This is in line with the findings of Yermolayeva and Calvet (2009), Rideout (2012) which revealed that most students spend valuable hours daily and more than twice the average amount of time spent in school each year on social media. All these are indication that Facebook and other communication tools are mostly used by students in higher institutions Lagos State just like their counterpart elsewhere.

For the purpose for which social media was being used, all the respondents indicated that they used social media for different purposes, ranges from collaborative learning, deliberation including chatting and meetings, socializing, information on academic activities, entertainment among others. This finding is in line with Selwyn (2021) which stated that in reality, many of the students spent 1-5 hours per week on social networking sites for collaborative study and worldwide instructor engagement. Furthermore Lenhart, Purcell, Smith and Zickuhr (2010) stated that not all students interact for the purpose of student's academic, most of them used social media sites to chatt, socialized with family and friends rather than for academic purposes. Talaue, Alsaad AlRushaide and Alhagail (2018) findings also revealed that the purposes of social media platforms usage by students' include entertainment as well as educational purposes. This finding is an indication of the priority the respondents placed on the social media platforms which are been explored by respondents for different reasons.

The findings on effectiveness of social media on collective learning, collaboration, socialization among others indicated that, social media is effective as a tool for all variables mentioned. This is in line with Zhu (2012) whose findings on studies in western countries have affirmed the use of online social media for collaborative learning. Similarly, Maridiana (2016) asserted that Facebook's design encourages social interaction among participants, promoting collaboration among students working on activities. Also Pimmer, Linxen, and Gröhbic (2012), stated that social media, such as Facebook or the internet, can be used as a catalyst for changing communication habits, and social networking as a learning tool to engage in a



learning process inside or outside of the classroom. To buttress this finding, Gikas and Grant (2013) stated that despite physical boundaries, mobile devices and social media provide excellent educational e-learning options to students for academic collaboration, access to course information, and tutors. Wikis, for example, encourage collaborative learning and the sharing of information.

### **Conclusion and recommendations**

Based on the findings of this study it can be concluded that, the respondents actually made use of social media platforms for collective learning, collaboration and socialization among others and was effective during the pandemic period. Using online social networks as educational platforms can help learners to be more enthusiastic and active, build social relationships with others while working together to exchange ideas, create products, construct identities, and receive timely feedback. Also the findings demonstrate that, despite the limits created during covid19 pandemic era, social media allows learners to interact and work outside of institutional bounds, govern their own learning environments, and therefore become more independent life-long learners. It demonstrates that technological advancements have actually given birth to new learning cultures founded on the concepts of collective exploration and interaction for continuity of the human race. Social media is a tool that should be used, not ignored. Because, as time passes and technology advances, more robust ideas will emerge, and social media will continue to contribute significantly to learning and collaboration among users. Based on the challenges experienced the study therefore, recommends that government should ensure provision of internet facility has been done in developed countries, stable electricity supply and if possible the devices should be classified under education thereby reducing the taxes to be paid on them, this when done hopefully will reduce the cost and make it affordable.

### **Reference**

- Barnes, N. G., & Lescault, A. M. (2011). *Social media adoption soars as higher-ed experiments and reevaluates its use of new communications tools*. North Dartmouth: Center for Marketing Research. University of Massachusetts Dartmouth.
- Cain, J. (2008). Online social networking issues within academia and pharmacy education. *American Journal of Pharmaceutical Education*. Retrieved Aug. 15, 2022 from <https://doi.org/10.5688/aj720110>.
- Dziuban, C., & Walker, J. D. (2012). *ECAR study of undergraduate students and information technology, 2012 (Research Report)*. Louisville: EDUCAUSE Centre for Applied Research.
- Dunn, J. (2011). *The 10 Best and Worst Ways Social Media Impacts Education*. Retrieved from Edudemic Connecting Education and Technology: <http://www.edudemic.com/social-media-education/s>
- Gikas, J., & Grant, M. M. (2013). Mobile computing devices in higher education: Student perspectives on learning with cellphones, smartphones & social media. *Internet and Higher Education Mobile*, 19, 18–26. Retrieved Aug. 15, 2022 from <https://doi.org/10.1016/j.iheduc.2013.06.002>
- Hahem, Y. & El-Badawy, T. H. (2015). The impact of social media on the academic development of school. *International Journal of Business Administration*, 6, 1, 46-52



- Ijiekhuamhen, O. P, Aghojare, B. & Ferdinand, O. A. (2015). Assess users' satisfaction library performance: a study. *International Journal of Academic Research and Reflection*, 3(5), 67-77
- Kaya, T. & Bicen, H.(2016). The effect of social media on students' behaviors; facebook as a case study. *Computers in Human Behavior*,59,374-379
- Lenhart,A.,Purcell, K.,Smith,A., & Zickuhrk (2010). Social media and mobile internet use among teens and young adults. *Pew internet and American life project*.1-37
- Liccardi, I., Ounnas, A., Pau, R., Massey, E., Kinnunen, P., Lewthwaite, S. & Sarkar, C. (2007). The role of social networks in students' learning experiences. *ACM Sigcse Bulletin* 39(4), 224–237.
- Mardiana, H. (2016). Social Media and Implication for Education: Case study in Faculty of Technology and Science UniversitasBuddhi Dharma, Tangerang, Indonesia. *Sains Terapan dan Teknologi FST Buddhi Dharma 1*, (1), 1-12
- Matteson, A. (2011). *Do You Tumble? Tumblr Could Change the Way You Blog*.  
<https://tumblrforlibraries.wikispaces.com/file/view/Do+You+Tumble> Retrieved [Aug. 15, 2022]
- McLoughlin, C. & Lee, M. J. W. (2010). Personalised and self-regulated learning in the Web 2.0 era: International exemplars of innovative pedagogy using social software, *Australasian Journal of Educational Technology*, 26, 1, pp. 28-43.
- Mirela-Mabić, D. G. (2014). Facebook as a learning tool. *Igarss*, 2014(1), 1-5. <https://doi.org/10.1007/s13398-014-0173-7.2>.
- Pempek,T.A., Yermolayeva,Y.A. & Calvert, S. L. (2009). College students social networking experiences on facebook.*Journal of applied development Psychology*, 30, 3, 227-238
- Philips, D. and Young, P. (2009). *Online Public Relations: A Practical Guide to Developing an Online Strategy in the World of Social Media (PR in Practice)*. New York: Kogan Page, Pp. 288
- Pimmer, C., Linxen, S., & Gröhbie, U. (2012). Facebook as a learning tool? A case study on the appropriation of social network sites from mobile phones in developing countries. *British Journal of Educational Technology*. Retrieved Aug. 15, 2022 from <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8535.2012.01351.x/abstract>
- Reuben, B. R. (2008). *The use of social Media in Higher Education for marketing and communications: A guide for professionals in higher education* (Vol. 5) Retrieved from <http://doteduguru.com/wp-content/uploads/2008/08/socialmediainhighereducation.pdf>. [Retrieved Aug. 15, 2022]
- Rideout, V.J. (2021). *Children, teens and entertainment media: The view from the classroom*. San Fransisco: Common Sense Media.



- Robinson, J. (2022). Pandemics Medically Reviewed. Retrieved Aug. 15, 2022 from [athttps://www.webmd.com/](https://www.webmd.com/)
- Selwyn, N. (2011). Social Media in Higher Education. *Sample Essay - Selwyn*, 3.
- Talaue, G.M., Alsaad, A., AlRushiadan, N. & Alhagali, A. (2018). The impact of social media on academic performance of selected college students. *International Journal of Advanced Information Technology*, 14, 27-35.
- VanDoorn, G., & Eklund, A. A. (2013). Face to Facebook: Social media and the learning potential of Symmetrical and Synchronous communication. *Journal of University Teaching & Learning Practice Volume 10 Issue 1 Article 6*, 9. Retrieved Sept. 4, 2016, from Online College.org: <http://www.onlinecollege.org>
- Zhu, C. (2012). Student satisfaction, performance, and knowledge construction in online collaborative learning. *Journal of Educational Technology & Society*, 15(1), 127–136.