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The Use of Telegram for Academic Activities among University Physics Education Students in North-Central Nigeria Prospects and Challenges

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Abstract

The use of technology is already becoming inevitable, as it has become another way of approaching academic activities both at secondary school level and tertiary institutions. telegram is one the currently trending social media which has found its way into the hearts of young academicians because of its many exciting features. This informs the researchers interest to study the use of telegram for academic activities among university physics education students in North-Central Nigeria prospects and challenges. Two research questions guided the study. The study adopted descriptive survey method, using questionnaire to obtain responses from 500 randomly sampled respondents from five universities offering physics education in the North-central Nigeria. Questionnaire, titled "Prospects and Challenges of Using Telegram for Academic Activities" (PCUTAA) was used as instrument for data collection from the university lecturers. The instrument was validated and test for reliability was conducted using Cronbach Alpha Coefficient with an index of 0.85. Mean and Standard Deviation was used to analyze the data obtained from the respondents while hypotheses were tested with t-test at 0.05 level of significance. The findings revealed that, the use of Telegram for academic activities is very effective and therefore has a high prospect of being adopted and useful for academic activities. The study also revealed that, power supply, bad network during use, cost of data are the major

challenges confronting its use. Based on the findings, it was recommended that lecturers should adopt the use of Telegram for academic activities and good network facilities should be installed on campuses to facilitate its use.

Keywords: Telegram, Physics, Academic activities, University. Prospects, Challenges.

Introduction

The COVID-19 pandemic has affected the education systems globally, forcing universities and secondary schools alike to adopt online learning. While online learning has been around for a while, it has never been more critical than now, and many universities and secondary schools have been relying on platforms like Telegram to facilitate distance learning (Manca 2020). In this article, we will explore the use of Telegram for academic activities among university physics education students in North-central Nigeria prospects and challenges. Telegram is a free and user-friendly messaging app available for Android and iOS. That makes it an ideal platform for students, who can access course materials, discussions, and lectures from their smartphones, tablets, or computers. They need not be concerned with procuring individual applications for each course or accessing various platforms to obtain the relevant course materials (Johnson 2019). Telegram was founded by brothers Pavel and Nikolai Durov in 2013. Pavel Durov is a Russian entrepreneur, also known as the creator of Russia's first social network, VK. Nikolai Durov is a mathematician and computer scientist specializing in artificial intelligence and cryptography. Together, they co-founded Telegram intending to provide a secure and fast instant messaging app that would protect users' privacy. Telegram can create group chats, which professors can use to discuss course content, provide updates, and answer students' questions. Students can also use group chats to collaborate on projects and exchange ideas. In addition, Telegram has channels, which are broadcast platforms that allow professors to share course materials and lectures with their students. That can be particularly useful for large classes, where it might be challenging to engage with each student individually. Telegram allows users to share large files, including videos, audio recordings, and images. This feature is handy for e-learning, enabling professors to share course materials and lectures in various formats. Additionally, students can share their projects, assignments, and coursework with their professors through Telegram. Telegram integrates with several other tools and apps, including Google Drive and Dropbox, which can store course materials and lectures. This integration makes it easier for professors to share

course materials and for students to access them. Telegram is a versatile and accessible platform that can be used for e-learning at university. Its features, including group chats, channels, file sharing, and integration with other tools, make it an ideal platform for distance learning. As universities continue to embrace online learning, Telegram has the potential to be a critical tool for enhancing the student experience (Molina 2022)

In conventional classrooms, multimedia, electronic, virtual, and internet technologies were the main emphasis of blended learning. As a result, students had access to the content both offline and online when connected to the internet and in-person during class (Akhter, 2020). The major reason the researcher picked this term is because we live in a technological age when individuals don't resist utilizing technology like gadgets and the internet. Lecturers, who are licensed professionals in education and science, their main responsibility is to change, advance, and disseminate science and technology via teaching, research, and service to the community (Akhter & Nordin, 2022). Therefore, in order to assist learning materials, lectures in education must make use of current technology

The development of every nation is pivoted around a strong education system in that nation. In a fast-growing world, a country is considered developed when it has advanced in technology. Advancement in technology has a strong link with science education. Science is taught at every level of the education system because of the keys it has for scientific and the socio-economic development of a country. The science which aims at understanding the physical world we live in is called physics. The Common Core Program for Science in Nigeria has provided justification for the necessity of science instruction at all educational levels Bahago *et al* (2022). It implies that the desire of man to comprehend both his immediate surroundings and the larger universe is the source of science, which is a cooperative and creative human endeavor. Ghana claims that students would be able to build on what they learned in lower Basic school levels and subsequently enhance their knowledge of and interest in science at various stages of science throughout their life by studying the Common Core Science Program from Basic 7 through Basic 10. Additionally, it emphasizes how science's products and technologies are all around us, and how government policy choices that have an impact on every area of people's lives are founded on scientific facts. The incredibly intricate natural world that surrounds us serves as an illustration for countless scientific ideas. In order to grasp problems and lead successful lives, humans must be scientifically literate as they develop in a world that is becoming more technologically and scientifically advanced. It goes on to say that a nation's ability to develop economically, politically, socially, and physically depends on its use of science, technology, and innovation. It is an ongoing creative process that advances knowledge and comprehension. Physics is a branch of science that focuses on the nature and properties of both matter and energy. Among the topics covered by physics include mechanics, heat, light and other radiation, sound, electricity, magnetism, and the

structure of atoms. Physics is a discipline that students learn by experience, giving them the chance to observe and experiment, apply knowledge, solve theoretical and practical problems, discover, and explore their environment, and further develop their talents. Since physics is the foundation of engineering and technology, it is vital that it be studied in schools, colleges, and universities. Fadipe *et al*. (2023) explain that students with a good foundation in physics have a higher degree of precision and accuracy when approaching new problems and are able to reason both deductively and inductively. Since physics heavily relies on mathematical ideas and logic, it aids students in developing critical thinking. Physics students' ability to progress in their education depends on their understanding and application of physics concepts. The measurement of student achievement across various topics in physics will ensure their progress in physics education. Over the years, several researchers have been trying to research ways of improving the academic performance of students in physics. To obtain refined ways of improving academic performance researchers have also researched into factors/causes of poor academic performance in physics. This work is targeted at investigating the suitability and prospects of using telegram for academic activities among Physics education learners and to fish out the challenges that is in the adoption of telegram as a teaching tool.

Statement of the Problem

There are increased needs globally to diversify learning outside the traditional learning system and methods, technology is becoming a center of focus in the education sector and globally, blended learning is becoming popular and several studies has shown that it is effective to blend learning. Agashua *et al* (2025) opined that blended learning is an effective way of lesson delivery. The use of social media is becoming necessary to be inculcated into teaching and learning as, many learners are becoming addicted to social media platforms such as Facebook, WhatsApp, Telegram etc. getting them to get academically addicted is one of the interests of this research. Abosede & Fadipe (2023) discovered that e-learning is not accessible by many students and one way to overcome such set backs is the need to encourage the use of social media platforms in academic activities.

Purpose of the Study

The major purpose of this study is to

1. Find out the prospects of the use of telegram for academic activities among university physics education students in North-central Nigeria
2. To find out the challenges faced by physics education students in the adoption of telegram for carrying out academic activities in north-central Nigeria.

Research Question

The following research questions guided this work

1. What are the prospects of the use of telegram for academic activities among university physics education students in North-central Nigeria?
2. What are the challenges confronting the use of telegram by physics education students for carrying out academic activities in North-central Nigeria?

Methodology

The study adopted descriptive survey method, using questionnaire to elicit responses from 500 Physics education students selected randomly across five public universities purposively selected from Nasarawa State University Keffi, Federal university Lokoja Kogi state, Federal University of Agriculture Makurdi Benue State, Federal University of Technology Minna Niger State and University of Abuja FCT. A sample of 300 male students and 200 female students who have had some level of experience over the use of Telegram for academic activities such as receiving assignments, note delivery, lecture delivery among others; was purposively selected for the study. An instrument titled "Prospects and Challenges of Using Telegram for Academic Activities" (PCUTAA) was used for data collection from both male and female students. The instrument was validated by two experts in tests and measurement. Test re-test reliability was done using Cronbach Alpha Coefficient with an index of 0.85. Mean and standard deviation were used to analyze the research questions.

Results

Answers to Research Questions

The two research questions earlier raised in the study were answered descriptively using mean and standard deviation.

Research Question 1: What are the prospects of the use of telegram for academic activities among university physics education students in North-central Nigeria?

Table 1: Mean and standard deviation analysis showing the prospects of the use of telegram for academic activities among university physics education students in North-central Nigeria

S/N	Item	Level of Agreement				Mean	Std Dev.	Decision
		SA	A	D	SD			
1	Telegram is convenient for getting up-to-date academic information	355	65	38	42	3.22	1.08	Agreed
2	Telegram is suitable for discussing academic work with my colleagues	333	77	36	54	3.02	1.19	Agreed
3	Telegram platform voice note is suitable for meeting in which I am not physically present	405	43	21	31	3.09	1.37	Agreed
4	Myself and fellow students share academic documents on Telegram	379	73	22	26	3.36	0.97	Agreed
5	The use of Telegram is preferrable to onsite	91	33	150	226	2.01	1.22	Disagreed
	Average Mean/Standard Deviation					**2.94**	**1.17**	**Agreed**

Scale Mean 2.50, n=500

Table 1 shows mean analysis of the prospects of the use of telegram for academic activities among university physics education students in North-central Nigeria from the Table, it could be observed that the mean values of 3.22, 3.02, 3.09 and 3.36 were in agreement with items 1, 2, 3 and 4 while the mean value of 2.01 was in disagreement with item 5. The aggregate mean of 2.94 was greater than the scale Mean of 2.50 which indicated that most of the respondents agreed that the use of Telegram has a high prospect as a tool for carrying out academic activities among physics education university students. Telegram can be used for sharing academic ideas among a large range of person, it can also be used for conference calls or meeting conveniently, it also has the facility to be used for sharing academic documents such as assignments and notes as revealed by the research. With theses, it is clear that the prospect of using telegram for academic activities is high among physics education university students in North-central part of Nigeria.

Though a large percentage of the respondents affirm that, onsite academic activities is preferrable to the use of Telegram

Research Question 2: What are the challenges confronting the use of telegram by physics education students for carrying out academic activities in North-central Nigeria?

Table 2: Mean and standard deviation analysis showing the challenges confronting the use of telegram by physics education students for carrying out academic activities in North-central Nigeria

S/N	Item	Level of Agreement				Mean	Std Dev.	Decision
		SA	A	D	SD			
1	Telegram use is usually affected by poor network in connecting.	315	106	27	52	3.07	1.04	Agreed
2	Telegram use is affected with poor power supply	343	111	22	24	3.02	1.49	Agreed
3	Telegram platform use is affected by external distractions during academic activities	299	102	37	62	3.22	1.33	Agreed
4	Technical know-how, affects the use of Telegram for academic activities	101	73	122	204	2.06	1.24	Disagreed
5	Cost of data affects the use of telegram for academic activities	234	170	60	36	3.21	0.99	Agreed
	Average Mean/Standard Deviation					**2.92**	**1.22**	**Agreed**

Scale Mean 2.50, n=500

Table 2 shows mean analysis of **the challenges facing the use of telegram for academic activities among university physics education students in North-central Nigeria** from

the Table, it could be observed that the mean values of 3.07, 3.02, 3.22 and 3.21 were in agreement with items 1, 2, 3 and 4 while the mean value of 2.06 was in disagreement with item 4. The aggregate mean of 2.92 was greater than the scale Mean of 2.50 which indicated that most of the respondents agreed that there are challenges facing the use of Telegram as a tool for carrying out academic activities among physics education university students. Telegram use is faced with the challenges of cost of high cost of purchasing data, poor power supply and the challenges of poor network connectivity. With theses, it is clear that the challenges of using telegram for academic activities is high among physics education university students in North-central part of Nigeria.

Discussion of Findings

In research question one, the study revealed that the aggregate mean of 2.94 was greater than the scale Mean of 2.50 which indicated that the respondents agreed that the use of telegram as tool for academic activities has a high prospect. The research discovered that, Telegram is flexible to use, more so, telegram can be used to give assignment and lecture materials can be transmitted with ease in addition, telegram can accommodate a large number of learners during academic activities This finding was in agreement with Shamim et al (2022) who pointed out that a significant number of individuals agreed that social media Apps are suitable for academic activities due to their capacity to send an unlimited number of messages, instantaneous feedback, ability to facilitate continuous conversations with numerous friends simultaneously, promotion of social cohesion, and provision of enhanced privacy compared to other social media platforms. In the same vein, Uwaechia & Fadipe *(*2023) added that social media can be used to disperse E-library content.

In research question two, the study revealed that the mean ratings of the items were found to be 2.92, which were above the cut-off point of 2.50 which indicates that, Telegram usage for academic activities among Physics education students is faced with the challenges of power supply, poor network connection, distractions during use and high cost of data. Though majority of the respondent disagree with the challenge of technical know- how, this indicates that, Telegram is easy to use and applied for academic activities.

Conclusion

This study has shown that, Telegram is suitable for use in carrying out tangible and successful academic activities among Physics education university students in North-central Nigeria. This is liable indicator that, Telegram can be used for E-learning and cand be adopted in any eventuality of lock-down. The study discovered that the major challenges facing the use of telegram for academic activities include: power supply, poor network connections, distractions and cost of data students.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Power supply should be improved to enable smooth running of e-learnin
2. Cost of data should be subsidies by the government for easy access by university students.
3. Hy pads can also be made available to learners at minimum cost for easy running of e-learning
4. Training of lecturers should be carried on the effective use of telegram for academic activities
5. Lecturers should be encouraged to adopt the use of telegram social media for academic activities
6. Network facilities should be improved on university campuses.

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