Undergraduates' Perceptions on the Use of Online Learning Platforms in a selected University in Nigeria

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Abstract
Online learning platforms have become integral to modern education, particularly since the COVID-19 pandemic, offering students and educators innovative ways to engage with learning materials. This study investigates undergraduate students' perceptions of online learning platforms at the University of Ilorin, focusing on their effectiveness, usability, and impact on academic performance. Specifically, it examines the most commonly used platforms, students' motivations, and demographic influences, aiming to identify challenges and opportunities for improving the teaching-learning process through these technologies. The study employed a descriptive survey research design. A total of 120 students from the Department of Educational Technology, randomly selected across four academic levels, participated in the study. Data were collected using a validated and reliable questionnaire divided into five sections: demographic details, commonly used platforms, usage patterns, academic performance impact, and motivational levels. Descriptive and inferential statistics, including frequency counts, means, percentages, and t-tests, were utilized to analyze the data, with hypotheses tested at a 0.05 significance level. Findings reveal that students most commonly use platforms like Telegram, Zoom, and Google Meet. Perceptions toward the usability and impact of online learning platforms are largely positive, with significant benefits noted for academic performance and time management. However, the study identifies low levels of student motivation for online learning, attributed to technical difficulties, cost, and other barriers. Gender-based differences in perceptions were also evident, with female students showing a more favorable attitude toward platform utilization. The study concludes by recommending enhanced access to ICT infrastructure, training programs for students and lecturers, and strategies to boost motivation for online learning. Addressing these areas will facilitate the effective integration of online platforms into the university's educational framework, promoting a more engaging and equitable learning environment.
Keywords: Education, Learning, Online learning platforms,

Introduction

Education is a dynamic force shaping an individual's physical, mental, social, emotional, ethical, creative, and spiritual development. It facilitates the acquisition of knowledge, skills, moral values, beliefs, habits, and personal growth. As Adams (2020) highlights, the essence of education is to draw out, rather than impose, by nurturing the inherent potential and capacities of learners. Through this process, students' abilities are developed and brought to light, making education the art of cultivating and enhancing various physical, mental, and moral faculties. Education, therefore, is a lifelong journey, extending from the womb to the tomb.

Learning, as a core component of education, refers to the process through which individuals acquire new knowledge, skills, attitudes, or behaviors, resulting in changes to their understanding or actions. It is a fundamental aspect of human development that transcends formal educational settings, occurring throughout life in schools, workplaces, homes, and communities. According to Ormrod (2014), learning involves cognitive, emotional, and social dimensions, enabling individuals to adapt to evolving situations and challenges by refining their responses and strategies. Effective learning entails encoding information into memory for long-term retention and future application. As Hattie (2018) notes, this process is vital for adapting to changing environments and ensuring meaningful, lasting growth. Learning, therefore, is not merely about acquiring information but also about developing the capacity to apply it effectively in varied contexts, supporting continuous personal and intellectual development.

Education embodies the fundamental pursuit of knowledge and enlightenment, a timeless concept that spans generations (Saurabh, 2021). It catalyzes curiosity, enabling individuals to reach their fullest potential. Beyond the mere transmission of knowledge, education weaves together experiences, ideas, and values that form the bedrock of society. It is a transformative force that equips learners with the perspectives and skills needed to navigate life's challenges, whether within the hallowed halls of academia or in everyday environments (Ashikuzzaman, 2017). Aristotle viewed education as an investment in human development, fostering physical and mental well-being and cultivating virtues such as goodness, truth, and beauty essential for an ideal life. Philosophers Rousseau and Plato (circa 18th century and 4th century BCE, respectively) emphasized that education begins at birth, shaping individuals even before they can comprehend or articulate their experiences. They underscored the role of learning through experience,

suggesting that the ability to discern and respond to pleasure and pain appropriately is central to personal growth.

Education fosters the development of physical, intellectual, and moral capacities, combining formal schooling, independent exploration, and invaluable lessons derived from social interactions. By promoting critical thinking, empathy, and practical skills, education becomes a tool for both individual and societal progress. It stands as a beacon of hope and a testament to the boundless potential of the human mind, paving the way for meaningful change and advancement (Kolangi, 2014). Through its multifaceted nature, education serves not only as a means of personal enrichment but also as a cornerstone of collective improvement, driving humanity forward across generations.

Learning is a multifaceted concept encompassing formal, informal, and non-formal forms, as described by Bransford and Brown (2017). It is an ongoing, dynamic process that enriches human knowledge, abilities, and skills, occurring in diverse contexts such as classrooms, workplaces, and daily life. Learning involves acquiring information, attitudes, and behaviors through study, experiences, interactions, and observation. It transforms raw data into applicable knowledge, fostering skills relevant across various settings. Gardner and Dweck (2016) identify key components of learning, including knowledge acquisition, skill development, behavioral adaptation, memory retention, feedback, motivation, social interaction, and metacognition, all contributing to human cognition and development.

Effective learning is inherently tied to transformation, as students evolve in knowledge, attitudes, and behaviors under the guidance of educators (Ambrose et al., 2016). Integrating information and communication technology (ICT) into education further enhances the delivery of relevant learning experiences. ICT encompasses technical resources such as hardware, software, and telecommunications that facilitate teaching, learning, and research (Matthew, 2015). ICT tools, including mobile phones, networks, and computers, provide essential support for processing and sharing information. Hattie (2018) emphasizes that education and ICT are interconnected, offering mass education through digital resources while addressing challenges such as data privacy, online safety, and the digital divide. By fostering balanced integration, ICT can empower teachers and students (World Bank, 2021; UNESCO, 2020).

Online learning platforms represent a critical application of ICT in education. These platforms, designed to deliver educational services, provide access to resources like lecture notes and opportunities for interaction and collaboration (Meza, 2020). They facilitate monitoring and supervising student progress, enhancing learning outcomes. Gebara (2019) highlights the role of platforms such as LMS, MOODLE, Google Classroom, Telegram, Zoom, and others in offering flexible learning strategies like blended learning, supported by data analytics to inform teaching practices.

According to Fry (2016), online learning platforms integrate multimedia and internet technologies to optimize educational delivery. They feature key components like digital communication, interactivity, and accessibility. The adoption of these platforms aligns with the Technology Acceptance Model (TAM), which examines how perceptions of usability and utility influence their uptake (Tanner, 2018). This framework underscores the importance of favorable attitudes for successful integration, ensuring that online learning platforms enhance educational experiences effectively.
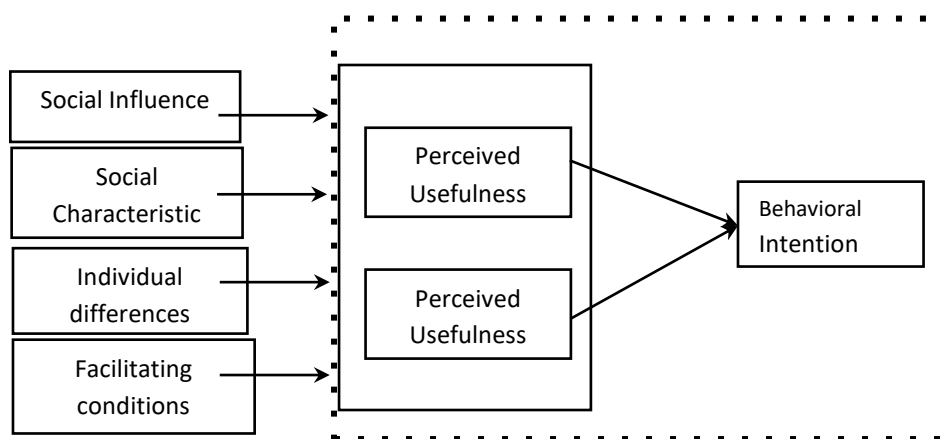
Students' Attributes as Factors to the Utilization of Online Learning Platforms

Michele Eaton (2020) posited that online learning has the potential to serve as a viable alternative to in-person instruction, particularly in the 21st century when it emerged as one of the most effective learning tools. Effective online instruction, however, is distinct from traditional face-to-face teaching. Eaton noted that duplicating in-person teaching methods in an online setting risks reducing the experience to a superficial imitation of classroom instruction. The rise of widely recognized online learning platforms during the COVID-19 pandemic further underscored the

importance of adapting instructional strategies to the unique characteristics of digital environments. Student perceptions of these platforms are shaped by their experiences with various e-learning tools, software, and facilities, highlighting the importance of functionality and user experience.

The effectiveness of online learning platforms is significantly influenced by perceptions held by both teachers and students, particularly when examined through the lens of the Technology Acceptance Model (TAM) and individual learning styles. E-learning platforms employ either synchronous or asynchronous methods of delivery, offering flexibility through publicly accessible systems (Extranet) or membership-restricted environments (Intranet). Gunawardhana et al. (2020) emphasized that the absence of well-structured e-learning strategies can lead to low acceptance rates and hinder the long-term sustainability of such platforms.

Several factors contribute to the successful implementation of online learning systems, including technological readiness, attitudes and perceptions of educators and learners, access to appropriate hardware such as computers and smartphones, levels of computer literacy, and internet connectivity. Addressing these variables is crucial to ensuring that online learning platforms are effectively integrated into educational systems and meet the diverse needs of users.

Statement of the Problem

Since the advent of technology, online education has gained significant popularity, especially during the COVID-19 pandemic (Almahasees, 2021). However, little is known about undergraduates' perceptions of online learning environments, highlighting a need for further exploration in this area. Therefore, research into undergraduate students' attitudes, beliefs, awareness, and perceptions regarding online learning platforms is crucial. The study will look at things including online learning platforms' effectiveness, satisfaction, accessibility, and engagement. Furthermore, Sason (2022) noted that the proliferation of online learning platforms, together with elements like device compatibility, internet connectivity, and student motivation, may influence undergraduates' perceptions of these platforms.

Furthermore, Kline (2015) has identified a number of structural factors and constituent elements that can influence students' perceptions of their interest in integrating online learning platforms, including gender, the type of settlement, economic background, digital divide, self-reported technology receptiveness, age, and educational institution. Therefore, the goal of the

study is to investigate ways to increase students' attention by determining the obstacles to an efficient teaching-learning framework in digital education. Even though there have been numerous studies on the beneficial effects of online learning platforms on students' academic performance, there are still more areas of interest, such as examining the potential causes of students' disinterest in using this platform. Further research is necessary to comprehend undergraduate students' opinions of online learning platforms and pinpoint possible areas for improvement.

Research Questions

This study provided answers to the following questions:

1. What is the most commonly used Online Learning Platform among University of Ilorin Undergraduate students?

2. How do University of Ilorin undergraduates perceive utilization of Online Learning Platforms?

3. How does utilization of Online Learning Platforms influence University of Ilorin undergraduate students' academic performances?

4. What is the potential level of undergraduate students' motivation in the use of Online Learning Platforms?

5. What is the influence of gender on the undergraduates' utilization of Online learning platforms?

Research Hypothesis

The following null hypothesis was tested at 0.05 level of significant.

H_{O1}: there is no significant difference in the perception of University of Ilorin undergraduate Students on Online Learning Platforms based on gender

Methodology

The study adopted a descriptive survey research design, which is well-suited for exploring the perceptions and experiences of a specific population. The study focused on undergraduates at the University of Ilorin, with a target population comprising students from the Department of Educational Technology. A total of 120 undergraduates were randomly selected across four academic levels to ensure a representative sample. This method was chosen because it allows for

the systematic collection and analysis of data, providing insights into patterns, attitudes, and opinions within the population under study.

The questionnaire, titled *Undergraduates' Perceptions of Online Learning Platforms at the University of Ilorin*, was divided into five sections: **Section A**: Demographic and personal information of respondents. **Section B**: The most commonly used online learning platforms. **Section C**: Usage patterns of online learning platforms among undergraduates. **Section D**: The influence of online learning platforms on undergraduates' academic performance. **Section E**: The level of motivation among undergraduates in using online learning platforms. The research instrument was subjected to validation by experts to ensure content validity, and reliability testing was conducted to confirm internal consistency at 0.78. Data were analyzed using descriptive statistics such as frequency counts, means, and percentages to address the research questions, while inferential statistics, including independent t-tests, were employed to test hypotheses. All hypotheses were evaluated at a significance level of 0.05. Data coding and analysis were performed using the Statistical Package for Social Sciences (SPSS).

Results

This section presents the analysis of the gathered data on undergraduate perceptions on the use of Online Learning Platforms.

Table 1: Distribution of the respondents based on Gender

Area of Specialization	Frequency	Percent
Male	57	47.5
Female	63	52.5
Total	**120**	**100 %**

Table 1 indicates that 120 respondents completed the administered questionnaire. Among them, 57 (47.1%) were male, and 63 (52.9%) were female. This demonstrates that females participated in the study in greater numbers than males.

Table 2: Distribution of the Respondents Based on Area of Specialization

Cumulative Percent	Area of Specialisation	Frequency
21.7	Sciences	26
43.3	Humanitarian Arts	26
	Total	**120**

Table 2 shows the total number of the respondents based on their disciplinary area of specializations the frequency number of 65 (54.2%) constitutes of the respondents who are science oriented, while 55 (45.8 %) constitutes the respondents from humanitarian arts. Thus, respondents who are science oriented participated in the study more than those from humanitarian arts.

Table 3: Distribution of the Respondents Based on Educational Levels

Educational Level	Frequency	Percent	Cumulative Percent
100L	26	21.7 %	21.7
200L	26	21.7%	43.3
300L	20	16.7%	60.0
400L	48	40.0%	100.0
Total	**120**	**100 %**	

Table 3 outlines the demographic distribution of respondents based on their educational levels. The data reveals that 26 respondents (21.7%) were from the 100 level, 26 respondents (21.7%) were from the 200 level, 20 respondents (16.7%) were from the 300 level, and 48 respondents (40.0%) were from the 400 level. These findings indicate that the majority of participants were 400-level students.

Answers of Research Questions

Research Question 1: Which is the most commonly used Online Learning Platform among University of Ilorin Undergraduate students?

Table 4: Commonly used Online Learning Platform among University of Ilorin Undergraduate students

S/N	Items	Daily	Often	Weekly	Not at all	Mean	Std. Dev.
1.	Coursera	7	30	28	55	1.91	.970
2.	Udemy	8	28	20	64	1.83	1.007
3.	Moodle	19	50	28	23	2.54	.978
4.	Canvas	19	44	24	33	2.41	1.057
5.	Blackboard	20	31	20	49	2.18	1.145
6.	Google Classroom	15	58	37	10	2.65	.806
7.	Teachable	19	26	20	55	2.07	1.146
8.	Zoom	18	63	33	6	2.78	.761
9.	ram Messenger	30	51	28	11	2.83	.911
10.	Google Meet	19	62	28	11	2.74	.835
	Grand Mean:					2.39	

Table 4 presents the distribution of commonly used online learning platforms among undergraduate students at the University of Ilorin. The results show that Telegram is the most frequently used platform, with the highest mean value of 2.83. The overall grand mean value of 2.39, which exceeds the set average of 1.5, indicates that most of the listed online learning platforms are commonly utilized by students, while only a few are used less frequently.

Research Question 2: How undergraduates perceived utilization of Online Learning Platforms?

Table 5: Undergraduates' Perception on the Utilization of Online learning Platforms

S/N	Items	SA	A	N	D	SD	Mean
1.	Use of Online Learning Platforms enhances students' computational skills	45	43	9	10	13	3.74
2.	Online Learning Platforms gives room for accurate assessment to justifiably evaluate students' academic performances	31	48	17	17	7	3.61
3.	Utilization of Online Learning Platforms enhances flexibility	36	51	17	7	9	3.73
4.	Online Learning Platforms are more preferable as the primary mode of delivering instruction	26	43	14	20	17	3.31
5.	Cost effectiveness of online learning resources do hinder students' regularity	25	50	16	15	14	3.46
6.	Online Learning Platforms allowed balancing of academic responsibilities with other commitments	28	63	9	11	9	1.18
7.	Online Learning platforms do exhibit some technical difficulties while accessing the platforms	29	57	11	12	10	1.30
8.	Use of Online Learning Platforms enhances students' logical reasoning	31	51	19	11	8	3.68
9	Utilization of Online Learning Platforms facilitates time management	32	57	13	7	11	3.74
10	Use of Online Learning Platforms aids effective maintenance of learning resources	36	49	15	11	9	3.74
	Grand Mean:						**3.15**

Table 5 highlights undergraduate students' perceptions of the utilization of online learning platforms at the University of Ilorin. The findings reveal that all item values exceed the average benchmark of 1.5, indicating a generally positive perception among respondents. Furthermore, the

grand mean value of 3.15, which falls within the range of positive decision values, reinforces the conclusion that undergraduates hold a favorable view of online learning platform usage.

Research Question3: How does utilization of Online Learning Platforms influence undergraduates' academic performances?

Table 6: Influence of Online Learning Platforms on University of Ilorin undergraduate students' academic performances

S/No	Items	SA	A	N	D	SD	Mean
1	As an undergraduate, using Online Learning Platforms improvingly impacts my academic performances	33	41	29	9	8	3.68
2	Using of Online Learning Platforms helped me stay focused during the learning process	23	49	21	18	9	3.49
3	Online Learning Platforms do facilitate and improve my understanding of the course materials	27	49	23	11	10	3.60
4	Using of Online Learning Platforms do encourage me to academically collaborate with my course mates	30	47	14	13	16	3.51
5	Using Online Learning Platforms made it easier for me to access course materials, lecture notes and additional resources	35	45	16	14	10	3.67
6	Online learning platforms fascinate my learning interest which makes me learn independently	36	43	20	10	11	3.69
7	Most of all academic networking sites do make learning more pleasurably interactive	33	35	25	14	13	3.50
8	Use of Online Learning Platforms makes me learn independently	31	54	16	11	8	3.74
9	Use of Online Learning Platforms facilitates collaborative communication among the students	37	46	10	16	11	3.68
10	Use of Online Learning Platforms influences my readiness to learn	33	41	22	15	9	3.61

Table 6 examines the impact of online learning platform utilization on the academic performance of undergraduate students at the University of Ilorin. The influence on academic performance is assessed using the decision value of the grand mean. With a grand mean of 3.61, which is greater than the benchmark value of 2.50, the findings suggest that the use of online learning platforms positively affects students' academic performance.

Research Question 4: What is the potential level of undergraduates' motivation on the use of Online Learning Platforms?

Table 7: potential level of undergraduate students' motivation on the use of Online Learning Platforms

S/No	Items	High	Medium	Low	Mean
1	I feel motivated to attend classes using any of the Online Learning Platforms	52	60	8	2.37
2	I feel more lively while receiving lectures using any of the Online Learning Platforms	55	54	11	2.36
3	I feel encouraged to read educational materials online	58	50	12	2.38
4	using Online Learning Platforms motivates my willingness to attend online classes	54	48	18	2.30
5	I watch online educational videos using academic networking sites	54	53	13	2.34
6	Using Online Learning Platforms impact my readiness to learn	49	55	16	2.28
7	Use of Online Learning Platforms makes it easy to learn	67	44	9	2.48
8	I prefer to learn via Online Learning	56	53	11	2.38
9	Learning with any of the Online learning resources impacts my potentiality to learn	53	55	12	2.34
10	Use of Online Learning Platforms judiciously maintain my time	59	52	9	2.42

Table 7 highlights the potential level of undergraduate students' motivation for using online learning platforms. An item is considered valid only if it achieves a weighted mean value of 2.5 or higher; otherwise, it is excluded. The obtained grand mean value of 2.3, which is below the benchmark of 2.5, indicates that the students' level of motivation to use online learning platforms is low.

Hypothesis 1: There is no significant difference in the perception of University of Ilorin undergraduate Students on Online Learning Platforms based on gender

Table 8: Summary of t-test statistics on different between male and female perception

Gender	N	X	SD	df	t	Mean Difference	P-value (2-tailed)	Remark
Male	57	2.85						
			.501	119	3.22	1.47	0.001	Rejected
Female	63	3.15						
Total	120							

The results from the tested hypotheses, with df = 119, t = 3.22, and a p-value of 0.001, indicate a significant difference in how male and female students perceive the utilization of online learning platforms. As a result, the null hypothesis was rejected. This difference is further supported by the obtained mean values of 3.15, which is higher than 2.85 (i.e., 2.85 < 3.15), and the significant interval, as reflected by the p-value of 0.001.

Summary of findings

From the obtained result on the analysis of the research questions and hypotheses, the following research findings are summarily presented:

1. The finding as revealed that among the itemized Online Learning Platforms, Telegram, Zoom, Google meet and Google class room are the most commonly;

2. Utilization of online learning platforms is positively perceived among University of Ilorin Undergraduate students;

3. The result of the research also reflected that using Online Learning platforms can positively and effectively influence students' academic performances;

4. The study result also revealed that the students' potential levels of motivation for the use of online learning platforms is low; and

5. The assumed hypothesis that there's no significant difference on how students perceived utilization of Online Learning Platforms based on gender was rejected

Discussion of Findings

The study concentrated on how University of Ilorin undergraduates felt about using online learning platforms. Based on the results, it was concluded that University of Ilorin undergraduates frequently use online learning platforms. The study was supported by a survey of related literature, including: Education in the 21st Century: Integration of Information and Communication Technology, Online Learning Platforms: Effect on Learning, the model and theoretical underpinnings of technology acceptance in education, the characteristics of students that influence their use of online learning environments, and, finally, research on technology integration in classrooms. This result may be explained by the way University of Ilorin undergraduate students use the internet to access online learning resources. It is also primarily related to the perceptions

of undergraduate students at the University of Ilorin regarding the use of online learning platforms. This discovery, however, might be the consequence of the University of Ilorin's management's choice to incorporate and support online learning platforms within the teaching-learning process. This finding is consistent with a study by David John Lemay et al. (2021) that looked at undergraduate students' perceptions of online learning platforms. According to the study, most respondents were satisfied with the online platform's usability, accessibility, and clarity, indicating that students had a favorable opinion of online learning platforms.

The second finding showed that the academic performance of University of Ilorin undergraduate students is significantly impacted by online learning platforms. The use of online learning platforms by undergraduates may improve their overall academic performance, increase the productivity of the learning process, make the teaching and learning process more autonomous and learner-centered, and improve time management, given the many potentials of these platforms in the teaching-learning process. This result confirms the findings of Gideon (2014), who observed that students' attitudes regarding using online learning tools were favorable. This outcome also supported Thompson's (2021) argument that the incorporation of online learning platforms into the classroom will improve the flexibility of the teaching and learning process, enabling students to access the curriculum regardless of time or location constraints.

One hundred and twenty (120) respondents, representing the three departments of the Educational Technology Department—Computer Science Education, Technology Education, and Educational Technology—are included in the study. In order to validate the study tool, three professors reviewed the produced questionnaire and made necessary improvements before it was distributed. Frequency counts and percentages were used to assess the demographic data collected from the respondents. As a result, there were more female respondents than male respondents. The four (4) research questions were addressed using the statistical instrument of mean and standard deviation, and the two hypotheses were tested using the T-test with a Sig. value of 0.05.

The first hypothesis, which was evaluated, revealed that students' perceptions of using online learning platforms differed significantly depending on their gender. According to the second hypothesis, students' perceptions of online learning platforms varied significantly depending on their field of expertise. The submission was consistent with the findings of Rapanta et al. (2020), who discovered that, depending on their specialized fields, students' use of online learning

platforms can be greatly influenced by their past experiences with online learning. The online learning environment, tools, and protocols may be more familiar to those who have already used learning management systems or online courses.

Implications of the Findings

The result of this research finding has several practical implications on University of Ilorin Undergraduate students. First, there is a need for undergraduates and lecturers in the University of Ilorin to be kept abreast of the various ways by which Online Learning Platforms could be harnessed to facilitate teaching-leaning process. Likewise, the management of the University of Ilorin can be encouraged and mandated to provide the required ICT facilities and necessary training for students and lecturers for the effective use of Online Learning Platforms for the improvement of teaching-learning activities in the University of Ilorin.

Conclusion

Based on the findings of the study, the following it can be conclusively drawn that University of Ilorin Undergraduate students have positive perceptions towards utilization of Online Learning Platforms based on its usefulness and ease of use. The finding has also revealed that integration of Online Learning Platforms in teaching and learning activities has positive influence on the students' academic performances. It is also reflected in the study that undergraduate students are highly motivated to use Online Learning Platforms. To cap it up, there are differences on how university of Ilorin Undergraduate students perceived online Learning Platforms based on Gender and their area of specializations.

Limitations of the Study

This study has several limitations, though; the study basically covered Undergraduate Students in University of Ilorin whereas Education Technology is the main targeted samples. Therefore the study cannot be generalized to cover undergraduate students of all other universities. The moderating variables of gender and academic level of study were covered by the study, which limits the variable scope of the study.

Recommendations

The study recommends that the high perceived usefulness of Online Learning Platforms and positive influence on their academics however motivation was low. Therefore, the adoption

of Online Learning Platforms for learning activities should be encouraged within the Nigerian University system.

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