Perception of Undergraduates towards the Utilization of Online Technological Tools for Learning in Universities in Kwara State, Nigeria

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ABSTRACT: This study explored the perception of undergraduates in universities within Kwara State, Nigeria, regarding the utilization of online technological tools for learning. The rapid integration of technology into education has transformed the traditional learning landscape. With the global shift towards online education, understanding how students perceive and adapt to this new mode of learning is of paramount importance. Information was gathered from 300 Undergraduate students in University of Ilorin, Kwara State University Malete, and Landmark University, focusing on their perceptions of online tools used in their academic journey. The data reflected a diverse range of opinions and experiences. The results revealed that the majority of respondents hold positive perceptions regarding the effectiveness of online technological tools in enhancing their learning experiences and making educational resources more accessible. Furthermore, the data underscored the importance of addressing technical challenges, as a notable proportion of students reported facing technical difficulties while using these tools. Additionally, the study highlighted concerns relating to motivation and engagement in the online learning environment. The findings in this study serve as valuable insights for universities and educational policymakers in Kwara State, Nigeria, as they work towards optimizing the integration of online technological tools in education. Recommendations include improving infrastructure, providing technical support, and enhancing training to ensure a more seamless and engaging online learning experience for undergraduates. Ultimately, this research contributes to the ongoing dialogue on technology-enhanced education and offers guidance on how to bridge the digital divide and make online learning a more effective and accessible tool for students in Kwara State, Nigeria.

KEYWORDS: Learning,Online Technological Tools, Perception, Undergraduates, Utilization.

1. INTRODUCTION

In recent years, the global education landscape has seen a profound transformation due to the rapid integration of technology into teaching and learning processes. In Nigeria, particularly in Kwara State, universities have begun adopting and utilizing online technological tools to enhance the quality and accessibility of education. Kwara State, situated in the North-Central region of Nigeria, hosts several higher education institutions that cater to a diverse student population with various educational needs. The shift towards incorporating online tools and digital platforms to complement traditional classroom teaching has been accelerating, especially due to the global COVID-19 pandemic, which necessitated a swift transition to remote and online learning. However, the trend of integrating technology into education had already been emerging, and the pandemic only hastened this progression.

The growing use of online technological tools in education has prompted questions about their effectiveness and acceptance among undergraduate students in Kwara State. It is therefore essential to investigate and understand students' perceptions regarding the use of these tools in their academic endeavors. Reimagining technology's role as a dynamic learning facilitator empowers educators, administrators, and instructional designers to craft personalized learning experiences tailored to students' individual needs, interests, and aspirations. This paradigm shift fosters seamless transitions between formal and informal learning settings, as well as between academic and career pathways.

Yet, this transformation necessitates a reassessment of technology's educational potential and an exploration of how both faculty and students engage with these tools. Historically, traditional technologies like film, television, and presentation software served as channels for one-way content delivery, mainly utilized by instructors to support teacher-centric pedagogical approaches. However, with the emergence of Information Communication Technology (ICT) and the internet, technology has evolved into interactive, participatory mediums. This progression allows for learning experiences to unfold asynchronously, fostering various forms of interaction among learners, groups, content, and instructors (Dabbagh et al., 2016). In summary, while the integration of online technological tools in education, particularly in Kwara State, offers opportunities for more engaging and flexible learning experiences, it also requires a deeper understanding of students' perceptions and experiences. Addressing these considerations will enable educational institutions to better leverage technology to improve learning outcomes and meet the diverse needs of their students.

2. RATIONALE FOR THE STUDY

The integration of online technological tools in education offers numerous benefits, such as greater access to educational resources, flexibility in learning schedules, and improved student engagement. These tools include a variety of platforms, such as Learning Management Systems (LMS), video conferencing software, online libraries, and educational applications. However, the successful incorporation of these tools into traditional teaching methods largely hinges on student reception.

Grasping the perceptions of undergraduates regarding these online technological tools is essential for several reasons. Firstly, it highlights how effectively these tools boost student engagement and aid in the comprehension of course materials. Secondly, it allows universities to pinpoint and address any difficulties students encounter with technology, thereby providing better support and allocating resources more efficiently. Lastly, by understanding student perceptions, educators can adapt and innovate teaching strategies to align with the changing digital landscape and cater to the diverse learning preferences of contemporary students.

3. RESEARCH QUESTIONS

1. What are the preferred online technological tools used by undergraduate students?
2. What are the students' perception on the use of online technological tools for learning?
3. What are the challenges and concerns facing students in the use of online technological tools?

4. LITERATURE REVIEW

In the 21st century, technology underwent a significant transformation, evolving into what we now know as Web 2.0 technologies. This shift brought about a fundamental change in how information is created, delivered, and accessed. Web 2.0 is both a concept and a technology, characterized by features such as openness, personalization, collaboration, social networking, and user-generated content. Often referred to as the "social web," it represents the second stage of internet growth, emphasizing user interaction and collective participation. The emergence of Web 2.0 led to the development of social media technologies, which have become integral to how information is shared and engaged with online. These technologies encompass various tools for resource finding, organizing, and sharing, including online bookmarking, blogging, microblogging, collaboration tools, media sharing platforms, and social networking sites.

Social media technologies have permeated all aspects of society, including education, fundamentally altering the dynamics of interaction between students and educators. They have revolutionized how information is presented, evaluated, and discussed, making teaching and learning more interactive and collaborative. As these technologies continue to be integrated into education, they reshape the landscape of teaching and learning, fostering greater

engagement and participation among students and educators alike. Social media technologies are increasingly empowering students to take charge of their learning journey. These tools allow students to create, organize, and customize learning content based on their interests and preferences, leading to more personalized and self-directed learning experiences. As a response, higher education institutions are incorporating social media technologies into their ICT strategies to foster learner-centered and personalized education systems.

The evolving landscape of learning interactions involves the use of various technologies, platforms, and devices, posing challenges for faculty and educational institutions in managing the learning environment. Learners and instructors in higher education are described as 'bricoleurs,' utilizing a diverse range of tools available in their everyday experiences, including social networks, cloud computing services, mobile apps, and physical meet ups. Given the widespread adoption of Web 2.0 technologies in higher education and their associated benefits, there is a need for further research to understand the digital technologies utilized by college students and how they leverage these tools for learning. This understanding is essential for informing and enhancing teaching and learning practices in higher education settings.

Studies indicate that social media platforms are being used more often to establish official and informal learning environments. Originally designed to support individual knowledge management and construction, these spaces are frequently called Personal Learning Environments (PLEs), digital spaces, or individual learning platforms. They have the potential to develop into social learning networks, systems, or platforms over time, where knowledge is mediated and created collectively (Dabbagh & Reo, 2011; Kitsantas & Dabbagh, 2010; Minocha & Kerawalla, 2011).

Although PLEs and PLNs are not dependent on any one technology, cloud-based Web 2.0 applications and technologies are usually used to support them. These resources let students manage their own learning processes, participate in the creation of communal knowledge, and create, organize, and share content (Dabbagh & Reo, 2011; Martindale & Dowdy, 2010). This demonstrates how important social media platforms are to improving learning experiences for both individuals and groups.

In order to establish PLEs and accomplish their learning objectives, adult professionals can leverage social media technology, according to Dabbagh and Kitsantas' (2013) research. According to their study, the majority of participants (N=87) used social networking sites for networking and socializing (72%, 60%); blogs, wikis, and social media sharing technologies for personal learning (70%, 60%, and 62%, respectively); and games and social media sharing technologies for entertainment (88%, 76%). In the context of PLE and PLN development, wikis, cloud-based technologies, social networks, and social media sharing tools were valued for social engagement and collaboration, while blogs, microblogs, and social bookmarking tools were considered more helpful for managing personal information.

Dabbagh, Kitsantas, Al-Freih, and Fake (2015) investigated in a follow-up study how college students use social media technologies to establish PLEs and PLNs and evaluated how useful these tools are for learning. According to the study, students used social media platforms to create PLEs and PLNs while participating in self-regulated learning processes such goal-setting, task- strategies, self-monitoring, and self-evaluation. Students also stated that they were naturally driven to use social media platforms to build PLEs and PLNs. This internal drive is in line with research showing how social media can inspire people through intergroup dialogue and community involvement (Mason & Rennie, 2007; McLoughlin & Lee, 2010; Minocha & Kerawalla, 2011).

These results highlight the ways in which social media platforms can facilitate both group knowledge creation and self-directed learning. Students can participate in vibrant, interactive learning communities, personalize their educational journeys to fit their interests and goals, and improve their learning experiences by utilizing these

resources. Dabbagh and Fake (2017) did a study examining the blog posts of 109 college students (75 undergraduates and 34 graduates) with regard to the digital tools utilized by students for learning. The blog entries addressed queries regarding the identities of the students, their preferred methods of learning, the hardware and software they use, the digital tools they would want to have, and the perfect personal learning environments (PLEs).

According to the survey, students mostly utilize laptops and cellphones for educational purposes, highlighting the devices' portability and connectivity as important advantages. Notably, graduate students were more likely to pick tablets, whereas undergraduates preferred cellphones. Undergraduates identified search engines as the most useful software for learning, followed by social networking sites and online films. On the other hand, graduate students gave the highest rankings to search engines, eBooks, and internet movies. Digital libraries, mobile apps, blogs, and podcasts were the least popular learning resources in both categories. These findings highlight the varying preferences and usage patterns of digital technologies among different student populations. The preference for laptops and smartphones underscores the importance of mobility and access in contemporary learning environments. Moreover, the differing priorities between undergraduates and graduates regarding software use suggest a need for educational strategies that cater to the specific needs and preferences of each group. The study therefore underscores the significant role that digital technologies play in supporting students' learning processes and the importance of understanding these preferences to inform the development of more effective and personalized educational tools and environments.

6. METHODOLOGY

This study employed a quantitative method to gather data on the perceptions of undergraduates towards the use of online technological tools for learning in universities in Kwara State, Nigeria. Surveys were administered to collect this quantitative data. The study sample consisted of 300 undergraduate students, with 100 students randomly selected from each of the following institutions: University of Ilorin, Kwara State University Malete, and Landmark University, Kwara State. Each participant received a standardized questionnaire, and the data collected were analyzed using percentages.

6. RESULT

Table 1: Preference for Online Technological Tools

Learning Management Systems (e.g., Moodle, Blackboard, Canvas)	128
Video Conferencing and Webinar Tools (e.g.,Zoom, Microsoft Teams, Webex)	57
Online Collaboration and Productivity Tools (e.g., Google Workspace, Office 365)	23
Virtual Learning Environments	8
Educational Apps and Software	53
Online Assessment and Testing Tools	31
Total	300

128 respondents (42.67%) preferred Learning Management Systems (e.g., Moodle, Blackboard, Canvas), which are commonly used for course management and content delivery. 57 respondents (19%) preferred Video Conferencing and Webinar Tools (e.g., Zoom, Microsoft Teams, Webex), which are typically used for virtual classes, webinars, and online meetings. Online Collaboration and Productivity Tools (e.g., Google Workspace, Office 365): 23 respondents (7.67%) preferred these tools, which support collaboration and document sharing. 8 respondents (2.67%) preferred virtual learning environments, which provide immersive and experiential learning. 53 respondents (17.67%) preferred educational apps and software, which cover a wide range of subjects and skills, while 31 respondents

(10.33%) preferred online assessment and testing tools, which are used for quizzes, exams, and evaluation.

Table 2: Perception of Students Using Online Technological Tools

S/N		SA		A		D		SD	
		N	%	N	%	N	%	N	%
1)	Online technological tools enhance my learning experience	172	57.3%	65	21.7%	44	14.7%	19	6.3%
2)	Online tools make it easier to access course materials and resources	207	69%	53	17.7%	29	9.7%	11	3.6%
3)	I feel more engaged in online classes compared to traditional in-person classes.	67	22.3%	207	69%	17	5.7%	9	0.3
4)	Online tools are user-friendly and easy to navigate.	71	23.7%	148	49.3%	79	26.3%	2	0.7%

Table 2 shows that 172 respondents (57.3%) Strongly Agreed to Online technological tools enhance my learning experience, 65 respondents (21.7%) Agree, 44 respondents (14.7%), 19 respondents (6.3%) Disagreed Strongly Disagree. 207 respondents (69%) Strongly agreed that online tools make it easier to access course materials and resources. 53 respondents (17.7%) Agree, 29 respondents (9.7%) Disagree, while11 respondents (3.6%) Strongly Disagreed (SD). A significant majority (86.7%) of respondents either strongly agreed or agreed that online tools make it easier to access course materials and resources, indicating a strong positive perception regarding accessibility. 67 respondents (22.3%) Strongly agreed that I feel more engaged in online classes compared to traditional in-person classes, 207 respondents (69%) Agreed, 17 respondents (5.7%) Disagreed while 9 respondents (3%) Strongly disagreed to the statement.

Table 3: Challenges and Concerns

S/N		SA		A		D		SD	
		N	%	N	%	N	%	N	%
1)	I face technical difficulties or issues while using online tools for learning	59	19.7%	73	24.3%	117	39%	51	17%
2)	Online learning can be isolating and lacking in social interaction	34	11.3%	43	14.3%	173	57.6%	50	16.6%
3)	I sometimes struggle to stay motivated while learning online	207	69%	53	17.7%	29	9.7%	11	3.6%

Table 3 reveals that 59 respondents (19.7%) Strongly Agreed to I face technical difficulties or issues while using online tools for learning: Agree 73 respondents (24.3%), Disagreed 117 respondents (39%) while strongly disagreed 51 respondents (17%). 34 respondents (11.3%) Strongly Agreed that Online learning can be isolating and lacking in social interaction, 43 respondents (14.3%) Agree, 173 respondents (57.6%) Disagree, 50 respondents (16.6%) Strongly Disagreed (SD). Furthermore, 207 respondents (69%) Strongly Agreed to I sometimes struggle to stay motivated while learning online, 53 respondents (17.7%) Agreed, 29 respondents (9.7%) Disagreed (D), 11

respondents (3.6%) Strongly Disagreed.

7. DISCUSSION

The analysis of undergraduate students' preferences and perceptions towards online technological tools for learning in universities in Kwara State, Nigeria, reveals insightful trends and significant attitudes. Learning Management Systems (LMS) such as Moodle, Blackboard, and Canvas emerged as the most preferred tools among students. These systems are valued for their robust capabilities in managing courses and delivering content efficiently. Following LMS, video conferencing tools like Zoom, Microsoft Teams, and Webex are also highly favored, reflecting the importance of synchronous communication in the learning process. The preference for these tools underscores the necessity for real-time interaction, which aligns with findings from other studies that highlight the role of video conferencing in maintaining student engagement and facilitating real-time communication (Dhawan, 2020).

Regarding students' perceptions of online technological tools, the majority view these tools positively. Many students strongly agree that these tools enhance their learning experience, with others also expressing agreement. This positive reception is consistent with existing literature that underscores the benefits of online learning tools in improving educational outcomes by providing flexible access to resources and personalized learning experiences (Means et al., 2013). Additionally, the ease of access to course materials is a critical advantage, as indicated by the strong consensus among students. The high level of agreement on this point suggests that accessibility is a major factor in the positive perception of online learning tools.

Despite these benefits, the data also highlight several challenges and concerns. A notable proportion of students strongly agree that they face technical difficulties, with others also agreeing to this issue. This indicates that technical barriers remain a significant obstacle in the effective use of online learning tools. This finding is in line with prior research that identifies technical issues as a common hindrance in the adoption of e-learning systems (Parkes, Stein, & Reading, 2015). Motivation also emerges as a critical challenge, with many students strongly agreeing that they struggle to stay motivated while learning online. This high level of agreement highlights a pervasive issue in online education, where the lack of physical presence and direct interaction can lead to decreased motivation and engagement (Hartnett, St. George, & Dron, 2011). The struggle with motivation is a crucial aspect that needs to be addressed to improve the efficacy of online learning environments.

In conclusion, while there is a strong preference for and positive perception of online technological tools among undergraduate students in Kwara State, several challenges persist. Technical difficulties and issues with maintaining motivation are significant concerns that need to be addressed to enhance the overall effectiveness of online learning. Addressing these challenges through improved technical support and strategies to increase student engagement could lead to more successful and satisfying online learning experiences (Kebritchi, Lipschuetz, & Santiague, 2017). The findings emphasize the need for universities to continually adapt and refine their online learning strategies to better meet the needs of their students.

8. CONCLUSION

The results suggest that while online technological tools are generally well-received by the surveyed undergraduates, they come with certain challenges. Issues like technical difficulties and lack of motivation need to be addressed by universities and educators to enhance the online learning experience. By tackling these problems and making the tools more user-friendly, online education can become more effective and engaging. The data underscores the importance of continuous efforts to offer technical support and develop strategies to boost student motivation. These steps are crucial in helping students overcome obstacles and creating a more successful online learning environment.

9. RECOMMENDATION

Based on the findings of the study on the perception of undergraduates towards the utilization of online technological tools for learning in universities in Kwara State, Nigeria, it was therefore recommended that:

1. Technological infrastructure should be enhanced to ensure reliable internet connectivity and access to online tools. This includes increasing bandwidth, providing access to necessary devices, and establishing Wi-Fi coverage in campus areas.
2. The school should make available dedicated technical support services that can assist students in resolving issues related to online tools and technology. A help desk or support team can be
3. Training programs for students should be organized by the school administrators to familiarize the students with the online tools and platforms.
4. Faculty members should be trained to effectively utilize online tools in their teaching.
5. Instructors should be encouraged to design engaging, interactive, and user-friendly online courses

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