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Impact Of Information and Communication Technology on Students' Academic Performance

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Information and Communication Technology is one of the foremost technologies among the emerging technologies that play an important role in every sphere of human endeavour. It has witnessed a massive transformation over the years which makes teaching and learning easier and more enjoyable, and has changed the ways people live, learn, work, and play. Consequently, the internet has been a vital tool to the present information society, and a world without the internet is unimaginable (Adedakun et al., 2020). This study aims to investigate the impact of information and communication technology on students' learning engagement and academic performance. According to UNESCO, Information and communication technology (ICT) is defined as a technological and engineering discipline that uses scientific and management techniques in information handling (Ratheeswari, 2018). Hence, it uses different technologies to capture, communicate, collect, analyse, store and distribute the information needed to perform a specific task faster (Bobillier Chaumon et al., 2014; Pedagoo, 2020). It is imperative to note that the outbreak of the Covid-19 Pandemic forced several higher institutions of learning in developing countries to adopt digital technology for the learning process (Adedakun & Omolola, 2020).

Adedakun et al., (2022) studied the benefits, challenges and prospects of Electronic Learning System using two research processes administered to students and lecturers, and the findings of their study show that information technology will improve performance and lead to greater productivity when standard IT infrastructure is installed. Hence, all education curricula should be incorporated with appropriate digital technology to meet the present and future challenges of globalisation and the knowledge economy (Adedakun, 2022).

—ICT gives students a better understanding and enhances their retention capability by using different information technology tools—

The impact of ICT on students' academic performance includes benefits and some challenges, but the benefits outweigh the challenges.

Benefits of Information and Communication Technology to Students

It is worthy of note that the use of ICT gives students a better understanding and enhances their retention capability by using different information technology tools such as videos, graphics, animation, etc. in a complete and entertaining way.

Some of the key benefits of ICT include but are not limited to the following:

- It promotes a carbon-free environment.
- Easy distribution of learning resources.
- It enhances student ICT capability and ICT literacy.
- It enhances retention capability.
- It enhances interactivity.
- Easy creation of study materials.
- It offers self-paced learning and personalisation.
- It promotes collaboration between students.
- It provides swift and enormous access to learning resources.
- It promotes active and independent learning.

Challenges of Information and Communication Technology to Students

It is apparent that several challenges arise from ICT adaptation but most developing nations face drawbacks such as weak internet connection and high cost of using the internet which makes so many students lose interest in the technology especially students from rural communities. Other key challenges experienced are the complexity of the system and the adaptability struggle due to the lack of experienced technical personnel. Some of the major challenges faced by ICT include but are not limited to the following:



- Lack of human interaction
- Financial restriction
- Overdependence on smart devices.
- Technical issues
- Lack of self-motivation
- Intermittency of Electricity Supply.
- Social isolation
- Low level of computer literacy
- Feedback is limited

In conclusion, there should be concurrent training and re-training of the teaching personnel to be abreast of the ever-evolving information technology to boost students' academic performance, the paper recommended that students with internet mobile phones and other gadgets should be encouraged to use the internet to supplement their academic research in their various fields of study rather than the usual chatting, and catching fun with friends and family all the time. Similarly, students should reduce their commitment to social media to allow them to have adequate time for their studies among others. There should be a provision of standard IT infrastructure, a responsive e-learning platform, and strong internet connectivity for effective service delivery and quality assurance.

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Engr. Najeem Olawale ADELAKUN is a career driven achiever with over Fifteen (15) years working experience in both industry and academic. He has served as a Craftsman, Technician, Electrical Engineer, Design Engineer, Lecturer, Reviewer, Editor, Facilitator, Instructor, Mentor, Website Designer, ICT Coordinator at various times in different organisations. He currently works at Federal College of Education Iwo, Osun State as an Engineer in the department of Works and Services. Engr. Adhlakun current research interest are in various aspects of Electrical power system Engineering and information technology. He has authored and co-authored over fifty (50) publications in both local and international journals and conferences. Some of his published works are highly cited in both Scopus, Google scholar and in other academic field. He is serving as a member of editorial or reviewer board to over 40 Scopus/WOS/Elsevier journals, and also as a member of the technical, program, scientific and steering committee members at different times to over 10 international conferences. He is a COREN registered engineer, a fellow member of International Organization for Academic and Scientific Development (IOASD), and a member of several professional societies such as the Nigerian Society of Engineers (NSE), Nigerian Institution of Electrical Electronics Engineering (NIEEE), The Nigerian Institution of Facility Engineering & Management (NIFEngM), Nigerian Institution of Professional Engineers and Scientists (NIPES), National Society of Black Engineers (NSBE), International Association of Educators and Researchers (IAER), Association for Computing Machinery (ACM), International Association of Electrical, Electronic and Energy Engineering (IAEIEEE), International Society for Applied Computing (ISAC), Institute of Research Engineers and Doctors (IRED), Asian Council of Science Editors (ASCE), among others. He is currently the National Publicity Secretary to Nigerian Institution of Facility Engineering and Management (NIFEngM), an active member of Nigerian Society of Engineers (NSE) Ilaro Branch, and has contributed immensely in different capacities such as: The collation/uploading of NSE Ilaro Branch 1st National conference proceeding on the branch website in 2020, he single-handedly designed E-Voting system for Nigerian Society of Engineers (NSE) Ilaro Branch in 2020 which he also served as a member of the Electoral Committee of the Branch during the AGM/branch election, in 2022 he also designed E-Voting system and also served as the secretary to the Electoral Committee during the AGM/branch election, also designed NSE Ilaro Branch e-data collation form for the newly inductee corporate members just to mention a few.

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