

Demystifying Classroom Assessment: Unleashing the Power of Technology Tools

¹Samuel Adenubi Onasanya., ¹Abdu Danyaro., ¹Justina Ojoma Attah

¹[Department of Educational Technology, University of Ilorin, Nigeria](#)

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ABSTRACT

Background: Technology is a tool for instruction, not a replacement for teachers. Teachers are crucial for our nation's future and are essential implementers and integrators of technology in classrooms. They are responsible for innovative use of technology, as it enhances efficiency and effectiveness in everyday life. ICT comprehensively combines computer and telecommunication technology. **Aim:** They are also commonly used for the certification of competence, to monitor educational standards, and to provide learners with feedback. The qualitative aspect of assessment and evaluation in the field of education has a cutting-edge relationship with students' academics. **Method:** Teachers no doubt are saddled with many responsibilities which range from writing lesson plans and notes to instructional delivery and assessment. Hence there is a need for teachers to span to the innovation technology is offering by embracing technological-based assessment. This paper explored the roles of technology in bridging the gap between the paper-pencil assessment to technology-enhanced assessment and proffered strategies on how these assessment apps can be used in the classroom. The study revealed that there are free assessment applications teachers can use to grade students, thereby reducing their workloads. It was therefore recommended among others that training and seminars should be organised for teachers to enlighten them on technology-based assessment. **Result and Discussions:** Teachers need to take cognizance of the relevancy of the technological tools. It was further pointed out that while observing the relevance of the technology resources, there should be congruence between the tech tools and instructional curriculum. Other factors to be considered are the; appropriateness of the content and alignment with the learning goals. Teachers need to have clear-cut goals before selecting any technology for assessment. Among the common goals to be considered are; efficiency, cost, end-user proficiency, collaboration, and capacity. **Conclusion:** Assessment is vital to the education process. Online assessment can help learners engage more effectively and flexibly in knowledge and can help teachers manage assessment more proficiently and efficiently.

Keywords: Technology, Classroom Assessment, Tools



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Corresponding Author:

Samuel Adenubi Onasanya
Department of Educational Technology
[University of Ilorin, Nigeria](#)
1515, P.M.B, Ilorin, Nigeria
Email: bisionasanya@unilorin.edu.ng

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INTRODUCTION

The evolution in education has brought a paradigm shift from the instructor being a custodian of knowledge to students learning at their own pace based on the level of their cognitive ability. Notably, education in the 21st century is a multifaceted and systematic discipline. Enabling interactions between the students and teachers in our evolutionary world. The development of Information and Communication Technology (ICT) has changed almost every aspect of our society (Unwin & Unwin, 2017). ICT has significantly enhanced instructional delivery and assessment, offering global flexibility and convenience for students. The integration of ICT in education is closely linked to the use of technology, enhancing the overall effectiveness of learning experiences. Technology is a tool for instruction, not a replacement for teachers. Teachers are crucial for our nation's future and are essential implementers and integrators of technology in classrooms. They are

responsible for innovative use of technology, as it enhances efficiency and effectiveness in everyday life. ICT comprehensively combines computer and telecommunication technology. It also connotes the capability to use information via telecommunication-based internet services. Abdulrahman and Soetan (2018) described ICT as creating, recording, and communicating information for solving problems or providing needed services in various areas of human endeavor through the use of scientific tools and techniques.

ICT is communication equipment and software required to organize, study, strategize, and provide support to manage information systems based on computer software as well as hardware (Sephehdoust & Khodaei, 2013). ICT is referred to as the application of computers and telecommunication tools for storing, retrieving, transmitting, and processing data in the educational enterprise (Wordu et al, 2021). ICT is technology utilized for collecting, storing, excision, and distributing data in

various forms. ICT is the utilization of computer-based technology and the Internet for information and communication services delivery to a wide range of users (Sa'idu et al, 2014). ICT is the acquiring, processing, storage, and dissemination of voice, graphics, text, and digital data through a combination of computers and telecommunications-based micro-electronics (Shaibu et al, 2014). ICT can also be alluded to as all devices, networking components, applications, and a combination of systems that allow people and organizations to interact in the digital world. ICT technological innovations that support the creation, storage, manipulation, and communication of information along with appropriate methods, management, and application. ICT doesn't just thrive as a novel in educational activities, practices, and programs but as a viable resource in fostering effectiveness, academic performance, and engaging instructional delivery (Al-Hattami, 2020)

Accessibility of ICT has expanded the adoption and prospects of students to educational development. ICT integration in education is a major driving goal in the National Policy of Education (FRN, 2013). ICT has brought easier access to recording, storing, processing, retrieving, and transmitting information using technological facilities (Dambo & Wokocho, 2020). ICT plays a major role in complementary support for both teachers and students in content and instructional delivery, they are also used as learning aids. Student assessment is expedient in the teaching and learning process, it shows the strengths and weaknesses of the instructional process. In the 21st century, examinations and assessments serve a much wider range of purposes and take a greater variety of forms. They are also commonly used for the certification of competence, to monitor educational standards, and to provide learners with feedback. The qualitative aspect of assessment and evaluation in the field of education has a cut-edge relationship with students' academic performance (Onasanya et al, 2021).

Assessment can be categorized into two types; formative and summative evaluation. Formative assessment is a monitored form of assessment to know how well the students are learning. These assessments help students identify their strengths and weaknesses and target areas that need work. Formative assessments elicit communication between educators and learners, in the form of observations, questioning, and interactions. These communications give instructors valuable feedback about students' levels of academic achievement and skills acquired. At regular intervals, educators can ultimately evaluate student progress toward a goal. Conversely, at the end of an instructional unit, summative assessment analyzes student learnedness usually through tests, exams, and final projects. Assessment is vital to the teaching-learning process. In schools, the conspicuous form of assessment is summative. Summative assessments are used to determine what students have been able to comprehend at the end of a module, to promote students, to ensure they have

met required standards on the way to earning merit for school completion or to any climb professional cadre, or as a method entrance into further education. Technological integration in assessment practices brings about engagement in instruction, and motivation, and improves student achievement. It also reduces the bulk of activities on the part of the teachers.

Technology-enabled assessments help instructors make visionary decisions and offer a better perception of the extent to which students are learning the instructions being disseminated and if the technique they are using is strengthening or weakening learning. Online-based formative assessments provide instant responses and answers, enabling instructors to quickly respond to student needs. Real-time grading allows instructors to identify strengths and weaknesses, allowing for more efficient responses. Technology-based assessment apps enable teachers to provide feedback through video, audio, or text, engage in online chats, and send direct appraisals to families. This has redefined educational assessments at all grades and levels, enabling students to develop skills and access follow-up resources. Teachers can offer personalized learning and adapt instruction throughout the school day. The unique characteristics of technology-based assessments enable educators, students, and families to improve academic performance as a changing world is been navigated.

Electronic assessment is an essential tool in education because students receive feedback instantly and individually, which serves as an improvement in their work. E-assessment means using the technology to create, manage, and deliver assessments which can be diagnostic, summative, or formative. E-assessment eases teachers' stress, and is time-saving, compared to complex paper tests. In the digital world, assessment refers to the use of technology for the evaluation, design, feedback, and storage of results. Conventionally, assessments were solely paper-based. Conversely, with technological innovations, online assessments have progressively been included in the range of students' assessments. Digital assessment can help learners engage more productively at their own pace based on their cognitive abilities. Students can choose when and where they access content to learn or engage in assessment. This flexibility leads to regulated learning. Similarly, Online tests are more flexible, enabling different question formats such as; fill-in gaps, Likert scales, multiple choices, embedded-answer questions, and drag-and-drop exercises. Teachers can quickly carry out an analysis of student performance on specific subject matter, and validate the assessment. Using tools such as discussion forums and wikis, teachers can record group processes and support students as they progress through assessment tasks. Students can re-take online quizzes as often as they like, and gain formative feedback on basic conceptual competence.

Examples of digital assessment include proctored exams, multiple-choice digital tests, virtual reality simulations, standardized tests, video performances, and digital portfolios

(Smith, 2017; Daffin & Jones, 2018). With simulations, virtual worlds, online role plays, and online access to subject experts and resources, students can experience hands-on assessment at subsidized rates and appreciate the relevance of their learning. Each student's comment and reaction to a complex task like an online cooperative role-play or scenario can be tracked. Students can collaborate and interact when presenting their learning for assessment. Teachers can rapidly distribute learning support and feedback to all students in virtual environments. Electronic records, for efficiency in compiling later marks and for quality-assurance purposes can be kept by teachers for both immediate and futuristic purposes.

METHOD

This research methodology focuses on the integration of technology tools in classroom assessment. A comprehensive approach was used to gather information, including a literature review, empirical research, expert interviews, analysis of best practices, comparative studies, and educational technology conferences and workshops. A literature review was conducted to explore existing scholarly articles, academic journals, books, and other relevant publications related to classroom assessment and the integration of technology tools. Online databases such as JSTOR, PubMed, and Google Scholar were used to identify peer-reviewed studies and theoretical frameworks. Empirical research studies were examined to gain insights from practical applications of technology tools in classroom assessment. Expert interviews were conducted with educators, assessment specialists, technology integrationists, and researchers to gather firsthand knowledge and experiences regarding the effective use of technology tools for assessment purposes. A critical analysis of best practices and innovative approaches in utilizing technology tools for assessment was conducted, exploring case examples, success stories, and innovative methodologies implemented in educational institutions to enhance assessment practices through technology integration. Comparative studies were conducted to understand the differences and similarities in assessment practices with and without the integration of technology tools. Attending educational technology conferences and workshops allowed for the exchange of ideas, networking with professionals, and exposure to the latest advancements in technology tools for assessment in educational settings. This approach ensures that the information presented is grounded in scholarly research, practical insights, and innovative perspectives, providing a valuable resource for educators, researchers, and stakeholders in the field of education.

RESULTS AND DISCUSSION

Apps for Classroom Assessment

Nearpod is a simplified resource for planning interactive lessons, making presentations, and evaluating online content. It can be used by teachers in making audio-visual content,

pictorials, PDF files, and quizzes. Nearpod is compatible to function on iPads, iPhones, Android tablets, smartphones, Chromebooks, Windows, PCs, and MacOS. Showbie is an assessment and evaluation app that can be used to deliver instructional resources, students can submit assignments write, draw, develop presentations, and make movies. Showbie is a grading tool available for desktop and mobile devices. It can also be useful for classroom management. Addition is a collaborative and interactive tool that can be used by teachers to manage their classrooms. The application provides a lesson planner, learner grading, classroom seating plans, learner profiles, reports, student attendance, timetables, calendars and so much more. This app is free and is available for Apple iOS, and Android devices in both mobile and tablet formats. The app similarly supports a web-based version that can be synced to other devices. Education Galaxy is a website that offers digital assessment, practice, and instruction for students' optimum engagement. It is a game-infused online learning platform. Education Galaxy is an outstanding method to deliver access to digital education for all schools because it is online-based and can be accessed on a range of devices.

Quizlet is among one of the biggest virtual flashcard sites. Quizlet is an exciting study tool for any classroom to prepare for tests and help them learn. Quizlet flashcard app is a fast and simple learning tool that helps in preparing for quizzes, assessments, or presentations. Quizlet is free and is available on mobile apps for iOS and Android. Quizalize is an internet-based resource for classroom, quizzes, polling, and assessment that can be accessed by computer, tablet, or mobile phone. It also enables immediate feedback as teachers can publish the analysis of students' data. Quizizz is a free studying tool that allows teachers to conduct student-centric formative assessments in a fun and appealing way for students of all grade levels. Teachers have the opportunity to choose from customized quizzes that range across all subjects. Quizizz works on all browsers and devices. Quizizz apps are available for Android, iOS, and Chromebooks. Movement Assessment Tool; this is an application tailored to assessing students' competencies and skills in physical and health education.

11+ English is an English practice app, containing Practice Papers of 12 multiple-choice test questions that cover comprehension, words and phrases, spelling, punctuation, and grammar exercises. This app is suitable for students preparing for elementary external examinations. Quick Voice is a voice recording app for recording audio live classroom sessions so that students can listen to it asynchronously. Crowd signal allows educators to create online surveys, competitions, and questions. Students can use smartphones, tablets, and computers to provide their answers. Education allows teachers to make standardized assessments and get instant feedback. Free online surveys help teachers to create surveys, quizzes, forms, and polls. Gimkit lets teachers make real-time quizzes. Google Forms are among the Google Suite, Google Forms lets teachers create quizzes, polls, and surveys and see

answers in real-time. Kahoot is a game-based and gamification assessment application. It can be played in real time and can also be in the form of an assignment. It covers a wide range of response modes, multiple choices, fill-in-the-gap matching, and so on. The Kahoot app can be downloaded on iOS (iPad and iPhone) and Android devices as well as on desktops (PCs, laptops, and Mac computers). Naiku Lets teachers write quizzes students can answer using their mobile devices. Poll everywhere; allows instructors to create a feedback poll, ask questions, and see results in real-time. Allows students to respond in various ways, either open-ended or close-ended. Formative It can be used for formative, diagnostic, and summative assessment, results can be received in real-time, and provide immediate feedback. Piazza, lets teachers upload lectures, assignments, and homework; pose and respond to student questions; and poll students about class content. This tool is better suited for older students as it mimics post-secondary class instructional formats.

Strategies for Selecting the right Technology Tool for Assessment

Evolution in education has made the physical appointments to see faculty members gone. In the 21st century appointment and meetings can be booked and done virtually. And as such it is expedient that the right technology should be chosen to meet the growing needs and complexities in the educational sector. While noting this Renard, (2020) delineated that in choosing the right technology for instructional assessment. Teachers need to take cognizance of the relevancy of the technological tools. It was further pointed out that while observing the relevance of the technology resources, there should be congruence between the tech tools and instructional curriculum. Other factors to be considered are the; appropriateness of the content and alignment with the learning goals. Teachers need to have clear-cut goals before selecting any technology for assessment. Among the common goals to be considered are; efficiency, cost, end-user proficiency, collaboration, and capacity (Chiappe et al., 2016). Similarly, McEntire and Greene-Shortridge (2011) asserted that a viable ed-tech platform should be flexible to be easily accessed via link or code and should be compatible with multiple devices, so learners can access the platform at a click. Additionally, among the criteria for selecting the right technology is a friendly interface. A digital learning environment (VLE), or classroom, should be highly tailored for tutors to use comfortably. Before implementing any technology in the classroom for assessment teachers should first test-run different functions to find the best student interface and tools for their needs (Christodoulou, 2020). Furthermore, Christodoulou (2020) stated that effective technology for assessment tools ought to help teachers effortlessly create classes, access appropriate information such as student cognitive ability, and offer a suitable mode of delivery.

CONCLUSION

Assessment is vital to the education process. Online assessment can help learners engage more effectively and flexibly in knowledge and can help teachers manage assessment more proficiently and efficiently. Identification of problems, analysis goals, and friendly interface are some of the strategies

21st-century teachers should consider while selecting technology for assessment in the classroom.

REFERENCES

- Abdulrahman, M. R., & Soetan, A. K. (2018). Lecturers' perceived ease of use of mobile devices for teaching undergraduates in Kwara State, Nigeria. *International Journal for Innovative Technology Integration in Education I (1)*, 1-14.
- Al-Hattami, A. A. (2020). E-Assessment of students' performance during the E-Teaching and learning. *International Journal of Advanced Science and Technology*, 29(8), 1537-1547.
- Chiappe, A., Pinto, R., & Arias, V. (2016). Open assessment of learning: A meta-synthesis. *International Review of Research in Open and Distributed Learning*, 17(6), 44-61.
- Christodoulou, D. (2020). Teachers vs Tech?: The case for an ed tech revolution. Oxford University Press-Children.
- Daffin Jr, L. W., & Jones, A. A. (2018). Comparing Student Performance on Proctored and Non-Proctored Exams in Online Psychology Courses. *Online Learning*, 22(1), 131-145.
- Dambo, B. I., & Wokocha, K. D. K. (2020). Assessing the integration of new office technologies in Rivers State public service administration. *Nigerian Journal of Business Education (NIGJBED)*, 7(2), 375-386.
- Fadare, A. O., Akinnubi, O. P. ., & Ogbaini, C. A. . (2024). Boosting Teacher Productivity: Effective Stress Management for Teachers in Public Secondary Schools in Kwara State, Nigeria. *Suluh: Jurnal Bimbingan Dan Konseling*, 9(2), 93-98. <https://doi.org/10.33084/suluh.v9i2.7108>
- McEntire, L. E., & Greene-Shortridge, T. M. (2011). Recruiting and selecting leaders for innovation: How to find the right leader. *Advances in Developing Human Resources*, 13(3), 266-278.
- Onasanya, T. O., Attah, J. O., Otemuyiwa, B. I., & Onasanya, S. A. (2021). Impact of the class maker app on the performance of undergraduates in online learning of ICT: The University of Ilorin experience. *West African Journal of Open and Flexible Learning*, 9(2), 55-74.
- Putra, C. A., & Sumardy, M. (2023). Factor Analysis of Student Learning Difficulties Using Powerpoint Media. *Tunas: Jurnal Pendidikan Guru Sekolah Dasar*, 9(1), 96-98. <https://doi.org/10.33084/tunas.v9i1.6596>
- Renard, L. (2020). Choosing the best classroom technology—5 things teachers should think about.
- Saidu, A., Tukur, A., & Adamu, S. (2014). Promoting sustainable development through ICT in developing countries. *European Journal of Computer Science and Information Technology*, 2(2), 24-29.

- Sari, E., Bulkani, B., & Rahmaniati, R. (2023). The Effect of Using the STAD (Student Teams Achievement Division) Cooperative Model Assisted by Finger Puppets on Students' Learning Motivation. *International Journal of Universal Education*, 1(2), 61–68. <https://doi.org/10.33084/ijue.v1i2.6949>
- Sepehrdoust, H., & Khodaei, H. (2013). The impact of information and communication technology on employment of selected OIC countries. *African Journal of Business Management*, 7(39), 4149-4154.
- Shaibu, O. G., Oshioqwa, J. A., & Mbaegbu, R. E. V. (2014). Business Education curriculum and the information and communication technology. *Nigerian Journal of Business Education*, 2(1), 231-240.
- Smith, J. S. (2017). Assessing creativity: Creating a rubric to effectively evaluate mediated digital portfolios. *Journalism & Mass Communication Educator*, 72(1), 24-36.
- Unwin, P. T. H., & Unwin, T. (2017). *Reclaiming information and communication technologies for development*. Oxford University Press.
- Wordu, H., Woryi, J. H., Charley, R. B., & Nkpolu-Oroworukwo, P. H. (2021). Global influence of information and communication technology (ICT) on education amidst Covid-19 pandemic. *International Journal of Innovative Social & Science Education Research*, 9(3), 72-79.