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E-Assessment Tools a Potent Futuristic Approach for Economic Learning Among Learners

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ABSTRACT
In today's era, digitalization has made the most prominent effect on almost every field, especially in the field of education. In education, ICT integration is commonly used to describe a technology-based teaching and learning process that is closely linked to the use of learning technologies in education at a higher level. The use of technology in education adds significantly to the whole T-L process, whether we are discussing pedagogical or assessment elements. Technology in Assessment for Learning (AFL) is a teaching and learning strategy that generates feedback that is then utilized to enhance student performance. To improve the quality of assessment, one can use different assessment tools that can be directly linked to improvements in student performance. Various e-assessment tools that can help teachers, students, as well as administrators, are Google Form-based quizzes, Kahoot!, Quizizz, Socrative, Near Pod, Educanon, etc. Thus, the present paper focuses on the concept of e-assessment tools, the need and significance of the e-assessment tools, and a list of various e-assessment tools with their usage. Further, in this paper, the authors try to provide some suggestive educational implications regarding the effective usage of e-assessment tools in the teaching-learning process so as to optimize learning among students.

Keywords: Assessment for learning (AFL), e-assessment tools, ICT, teaching effectiveness

Introduction

Since the 1920s, when Sidney L. Presses created equipment for automatic testing, ICT (Information and Communication Technology) has been a useful instrument in the field of education. At the same time, schools began to adopt standardized assessment and automatic scoring technologies, which made large-scale testing more practical and cost-effective. With the launch of the World Wide Web in the 1990s, enormous changes happened. Since then, several nations have entered the era of e-learning and e-assessment (Alruwais, Wills, and Wald).

e-Assessment

According to Haken (2006), assessment plays a critical role in ensuring that educational institutions meet their learning objectives and is a vital way to offer the key proof required for obtaining and sustaining accreditation. Hersh (2004) advocated for the notion that assessments of student learning should be seen as a crucial part of both teaching and learning. A part of the feedback loop that raises institutional performance, they also contribute. Good evaluation serves a number of functions and benefits a wide range

of stakeholders (Swearington, n.d.). 2004 (Love & Cooper). According to Knuth, Herman, and Dietal (1991), assessment gives administrators, teachers, and other important decision-makers an accurate representation of student achievement. As a consequence, seven reasons for evaluation were determined by Kellough and Kellough (1999):

1. To enhance student learning;
2. To pinpoint students' areas of strength and weakness;
3. To review, evaluate, and enhance the efficiency of various teaching learning strategies;
4. To review, evaluate, and enhance the efficacy of curricula;
5. To enhance the efficiency of teaching;
6. To provide helpful administrative data that will speed up decision-making; and
7. To engage with stakeholders.

E-assessment refers to an electronic assessment procedure in which responses are recorded and assessment activities are presented using ICT. This comprises the process of end-to-end evaluation as seen by students, instructors, learning institutions, awarding organizations, regulators, and the general public (Hettiarachchi, Antonia Huertas). Technology will prove to be essential to the assessment and evaluation process since, according to Bennett (2002), it is essential to learning. Technology, according to Bennett, will not only enable genuine assessment but also facilitate testing. He emphasizes the accomplishments of online universities and high schools in the United States and talks about e-learning as a part of the scholarly tools of the twenty-first century.

Need and Significance

With the development of personal computers and the Internet, ICT's impact on the teaching-learning process grew and became inevitable. The first web browser was released in 1993, and although it was first only used for internal communication inside a few organizations, it quickly acquired wider adoption (Richardson, 2009). When the Internet originally began, its source codes were inaccessible, its web pages weren't interactive or dynamic, and it was dominated by a small number of exclusive companies or people. The development of Web 2.0 apps in the early 2000s, greatly increased the accessibility and use of the Internet (O'Reilly, 2005). Online training may have been made possible by the widespread use of personal computers and the Internet that began in the 1980s (Mason & Kaye, 1989). Online learning and teaching-related innovations have proliferated throughout time. Users may now communicate with one another, with software, and with content to boost their active participation on an online platform thanks to modern technology (Brack & Benson, 2010).

An interactive element of an online platform for teaching and learning improves both the processes for online evaluation and hands-on learning. During the Web 2.0 era, with the advent of first-generation internet technologies, these engagement tools and capabilities have advanced dramatically. However, in the present Web 4.0 era, they have become significantly more sophisticated. These innovations include wikis, blogs, online services, folksonomies, digital media files, file-sharing applications, mobile learning technologies, simulations, social networking software, virtual worlds, and electronic portfolios. As a result of these advancements, the number of persons and organizations offering online education has gradually expanded.

In contrast, when designing and implementing online teaching-learning practices, the core elements that should be considered first and foremost are the disparities between students, the material, and the learning outcomes/objectives, just as they are in-person, face-to-face education practices. Qualifications and skills

of instructors may also be included in this category. These considerations would drive the planning of the instructional method based on the conditions at hand. The ideas that must lead to increased teaching quality and evaluation methods are similar across in-person and online learning-teaching methodologies. To increase the quality of teaching practices, consider the following basic principles:

- clearly stating learning objectives,
- Creating content that would pique students' interest,
- Linking information to real-world circumstances
- Recognizing individual differences and taking these differences into account when organising the learning-teaching process
- Making use of relevant evaluation instruments
- Offer timely feedback
- Ensuring that students actively engage in the processes of learning and assessment
- learning from students (using their feedback to enhance and/or expand teaching practices), • effectively and productively interacting with students, and increasing student participation (Ramsden, 2003; Chickering & Gamson, 1987).

The fundamentals for improving learning and teaching processes stress the need to select the appropriate assessment tools, provide feedback, include students in the assessment processes, and evaluate teaching strategies based on student input. The instructor is in charge of planning and directing the learning-teaching process while using face-to-face teaching methods. Technology infrastructure, teaching management system software, teacher technological ability, and instructors are highlighted by process and online teaching approaches. The institutions have a responsibility to offer the required technical infrastructure, which would appear to be a vital requirement for a robust and high-quality online education (Nichols, 2008). In addition to developing and maintaining technologies and operating systems to support online education, many institutions use learning management systems (LMS) designed specifically for online teaching and/or virtual learning environments (VLE). Even while certain principles for improving educational quality are comparable in face-to-face and online settings, teaching techniques have undergone a significant structural shift as a result of the capabilities of LMSs in online teaching settings. For example, it is now important to plan and carry out the teaching process in a way that integrates both in- and out-of-school activities, in-person and online options, the use of synchronous and non-synchronous approaches, and both the national and global levels. As a result, evaluation practices have evolved to meet the needs of the contemporary situation.

e-Assessment Types

Fundamental assessment principles serve as the basis and launch point of an e-assessment design. Some elements of the plan are applicable to both in-person and online assessments; therefore, a detailed planning procedure is required before beginning the assessment process. For instance, the answer to the question "What is the goal of the assessment?" must be provided in the first step of the assessment plan in order to serve as the basis for judgements made later. Two different answers to this question are possible, such as "to determine if they are successful in a specific course or assignment" or "to identify students' weak areas and develop instructional strategies to compensate for them." Formative assessment, summative assessment, and assessment as learning are the conceptual definitions of these terms (Carless, 2007, Earl, 2003, Gibbs, Habeshaw & Habeshaw, 1988).

e-assessment types can be broadly categorized as Diagnostic, Formative, and Summative.

• **Diagnostic** - To determine the students' present knowledge and skill level so that learning activities may be matched to their needs, an assessment assignment is employed. These evaluations are carried out before learning has taken place.
• **Formative** - An evaluation activity gives students to practice applying what they have learned in the present course and suggests possible development activities they may do to increase their comprehension. These kinds of evaluations take place when students are learning.
• **Summative** - Assessment assignment responses are intended to evaluate and assess a student's level of comprehension and skill development for advancement or certification. After all, learning has been accomplished, this final exam is used. These tests can be administered as computer-based assessments (CBA), which are provided and graded by computers, or computer-assisted assessments (CAA), which use computers to support some of the practice, including online discussion forums for the audience and peer evaluation. educational module (e-learning or blended Learning) Assessment Information-rich feedback for the learner to support the following learning objective Next educational module (e-learning or blended Learning) Module for revision remarks for the student packed with information to assist revision Successful Systems that don't perform well for collaborative projects, online completing and submitting work, or storing.

Assessment and Examination Reform Suggestions for NEP 2020 Implementation Strategies:
The National Assessment Centre has been established for Performance Assessment, Review, and Analysis of Knowledge for Holistic Development (PARAKH). Achievable implementation methods must be developed by integrating national and state-level organizations like Rashtriya Mulyankan Kendra/PARAKH/NCERT, SCERTs/SIEs, CBSE, and other Boards of Assessments (BoAs) into the process. Following are some of the implementation strategies:

- Creating new assessment patterns for summative and formative exams, as well as evaluating educational levels.
- Developing a formative and adaptive assessment culture in schools to improve teaching-learning procedures and stimulate learning.
- Improving elementary school teachers' capacity to implement "assessment as learning" and "assessment for learning." This necessitates the creation of manuals, handbooks, and training modules for offline, online, and hybrid modes.
- Improving the competence of paper moderators and paper setters for unique assessment patterns.
- Developing question banks for competency-based questions that assess higher-order abilities across a range of disciplines for grades 1-12.
- Developing assessment criteria and evaluation methods for the state census tests in grades 3, 5, and 8.
- Redesigning report cards for use in school-based evaluations to inform parents about their children's progress.
- All states and UTs developing an IT-based monitoring system to measure students' academic success in grades 1 through 12.
- Development of common norms, criteria, and recommendations for secondary education evaluation and assessment that are consistent with NCF-2020 for all Boards of Assessment (BoAs).
- Development of a strategy to reduce test burden by analyzing all policy ideas in collaboration with assessment boards.

- Analysing the subjects covered by the CBSE and other BoAs at the secondary and senior secondary levels to make sure that academic and skill courses with the potential for vertical integration are provided in a structured and topical way.
- The CBSE and other Boards of Assessment (BoAs) have reinforced, and renamed comparison exams "Improvement exams," and given them modest stakes (National Education Policy, 2020 Assessment Reforms).

e-Assessment Tools

➢ **Kahoot!**

The online gamified teaching application "KAHOOT!" focuses on student motivation and interaction. It is a fast-paced evaluation tool that looks like a "game show," allowing teachers to monitor their students' progress as they play a "game" (Licorish, George, Owen& Daniel, 2018). Historically, higher education institutions have used student response systems, sometimes known as "clickers," such as "iClicker" or "ResponseCard" (Hall, Thomas, Hilgers & Collier, 2005; Mu & Paparas, 2015). By integrating and fostering student participation in large lecture halls at the college level, these student response systems attempt to enhance active learning rather than passive learning in a teacher-centered environment (Hall et al., 2005; Nielsen, Stav, & Hansen, 2013). It's partly because clickers aren't used as frequently in K–12 classrooms in the United States that 'KAHOOT!' is a popular assessment tool there (Bicen & Kocakoyun, 2018; Plump & LaRosa, 2017). Due to its accessibility, low cost, and user-friendliness, teachers may adopt a fun and unique student response system that is more engaging to the kids than typical student response systems (Licorish et al., 2018). In contrast to standard student response systems, "KAHOOT!"'s gamified components integrate vivacity, light music, and competition, keeping players on their toes the whole time (Lin, Ganapathy, & Kaur, 2017; Mu & Paparas, 2015). As a result, the students are completely engrossed in the game and give the best indication of their comprehension of the subject.

Kahoot is one of the best game-based learning platforms being employed in educational institutions. A platform for real-time, game-based learning is publicly accessible that has attracted more than 30 million users worldwide and has garnered widespread popularity globally. It enables educators to design games-based tests, polls, and other activities where participants compete with one another. At the conclusion of the Kahoot session, the top respondents to each question are made public, and the overall winner(s) are presented. The winners will be shown on the scoreboard after the game. The advantage of Kahoot is that the instructors may export and preserve the results, including their descriptive analysis data, for later use. To start, instructors must log in to the Kahoot website (https://getkahoot.com) in order to create a Kahoot game. The teachers can design questions utilizing Kahoot's capabilities after selecting an option. Finally, they will be given a code that was produced automatically. Their pupils may access the game via a laptop or smartphone by using the Kahoot app or by visiting the website www.kahoot.it. The pupils must register their names and input the code that appears on the screen. Once the Kahoot game begins, the students will score points for giving accurate answers and for responding quickly. At the conclusion of the session, the winners of each Kahoot will be recognized, and their names will be placed on a special frame called "Kahooters of the Month."

➢ **Google forms**

Another useful tool for the classroom is Google Forms, which makes it easier to gather and analyze data. A free tool for creating cloud-based documents that enable users to collaborate on data-gathering forms is

called Google Forms (Hsu and Wang, 2007). Additionally, it offers spreadsheet features that let users examine data in several multimodal forms. Google Forms may be used to measure students' prior knowledge, spot misunderstandings, and engage students in conversation in order to enhance learning. Teachers may quickly see which questions were missed the most and choose which ideas to study with students because quizzes in Google Forms can be automatically scored and a summary of all answers can be displayed right away under the "responses" tab (Stehr and Eisenreich, 2018). Google Forms can offer teachers and students real-time feedback. There are choices in the quiz settings in Google Forms that allow students to view their final grade and the questions they answered correctly or wrongly as well as their overall score right away after each submission. Due to the quick feedback, they might start doubting their comprehension and seeking assistance right away. Faculty can then evaluate how well students comprehend the content. A formative assessment, in particular, might be provided to students in the class just after a subject has been introduced, at the start of the following class as a follow-up exercise, or at the conclusion of a unit. Instructors can alter follow-up activities based on student feedback to determine which concepts need to be reviewed (Nguyen and An, 2018). Despite the many advantages of Google Forms, there are some restrictions. At the moment, Google Forms do not support mathematical symbols or any other type of input for the simplest of equations Additionally, formatting choices like italicizing, underlining, text, and boldfacing are not available. With their cell phones or computers in front of them, students may easily become sidetracked when using Google Forms, which is another potential issue. It could be challenging to get disinterested pupils to participate in class activities and debates again. Yet these problems may be solved, for instance by using visuals instead of equations when typing them, capitalizing words to emphasize them, or moving around the classroom to make sure all students are paying attention.

As a tool, Google Forms may be utilized by instructors for a variety of purposes. This program may be used to manage assignments, get student feedback, write book reviews, collaborate on group projects, and generate quizzes or surveys, which are its most popular uses. This tool's ability to gather responses and offer simple analytical assessments of the collected findings is a helpful feature. Then, for additional examination, these findings may be transferred into a different editor (such as Google Docs or Sheets).

- **Quizizz**

One of the game-based learning applications that use the gamification principle is Quizizz (MacNamara and Murphy 2017). To engage students and customers, Quizizz combines entertaining information technology, scientific principles, and gaming ideas. When pupils have finished responding. Every time a question is asked online, Quizizz will show an image and a message to show whether the response is correct or incorrect. For pupils, it serves as a source of amusement and fascination (Miller 2017). Quizizz may be used as an alternative to the new world to organize classroom activities and provide students with an assessment (MacNamara and Murphy 2017). When Quizizz is implemented, feedback from monitoring and evaluation exercise 152 reveals a high level of student involvement (Boulden et al. 2017). Quizizz is used in this study as the intervention method's implementing medium, and the application's utilization of the game-based learning idea is maximized.

Quizizz offers multiplayer games that make in-class tasks like answering questions more engaging and enjoyable. Quizizz is an instructional programme that resembles a game. It differs from other educational programs thanks to a number of elements, including memes, avatars, themes, and enjoyable music.

Quizizz is a fun game that may be used in the classroom to do short evaluations (Basuki and Hidayati). In conclusion, Quizizz is a online application used to generate interactive quizzes that are evaluated in the classroom. Quizizz differs from other programmes in a number of ways. Konstantinidis, Theodosiadou, and Pappos list the following aspects as benefits of the Quizizz application: first, depending on the assessment's goals, the Quizizz application may be configured into either a live game or a homework game. Second, each question's proper response will be shown by the Quizizz features once it has been answered. Third, a review with all the questions will be displayed after the assignment is complete. In addition, the instructor has the option to pause the clock and display the leaderboard. Quizizz is intriguing, according to Medvedovska, since assessors may include music and images. Once the pupils have selected the correct response, these things will show. When the work is complete, the progress report may be retrieved and analyzed to view in an Excel sheet. The benefit of utilizing Quizizz, according to Chaiyo and Nokham, is that the student could not cheat because of the random questions it offers. They will thus concentrate more on the quiz. Lestari found that when using Quizizz, pupils are more focused and attentive to the test. The kids also understand the right response to every question they have answered. They can learn each student's ranking at the end of the session. Whereas Quizizz's drawback is that pupils may suffer a drop in level as a result of the amount of time impacting the outcomes. The results are higher when the quiz is completed more quickly. An internet connection is required to use Quizizz. Students won't be able to participate in the Quizizz session if the connection is poor.

Suggestions

- Proper e-assessment tool use improves student learning.
- When instructors use e-assessment, it lessens the workload of practitioners and administrators.
- Compared to paper exams, online tests may be accessible from a wider variety of places.
- permits students to assess their comprehension at their own convenience.
- Quickly erasing misunderstandings may be done by providing online learners with quick expert comments in response to their chosen responses.
- The time saved from marking can be put to better use, such as helping students who are having a hard time.
- Assessment results may be collected and assessed more quickly for quality assurance and curriculum revision procedures.
- conserving space for paper storage
- By displaying their work in an online environment, students are encouraged and given more control. The act of displaying their work on an online portfolio seems to increase students' expectations and give them a sense of audience.

Conclusions

Online assessment tools can be the most useful replacement for traditional pen-and-paper tests of pupils. Although there are some drawbacks, they are outweighed by the positives. These interactive tests will not only engage pupils but also inspire them. It enables teachers to perform mobile learning, meaning they may administer tests whenever and wherever they choose and promptly record the results. This application may be readily included to perform evaluations online during midterm or hourly exams in agricultural higher education. We can extend education outside the confines of the traditional classroom thanks to these online learning tools. Some benefits of these technologies include fostering a good attitude in kids,

exploring new ideas, and finally adding a dash. These tools also help students explore new ideas, foster good energy, and ultimately inject a little bit of fun into the learning environment. We vouch for the fact that the gamification of learning has increased student involvement, even among the shyest ones, and combined it with a welcoming, competitive digital atmosphere. In order to become smarter and somewhat more digital, let's combine e-learning tools with our current ones since, in the hands of excellent instructors, technology has the power to alter education.

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