THE USE OF EDUCATIONAL TECHNOLOGY IN FORMATIVE ASSESSMENT TO PROVIDE EQUITY

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Abstract

This article explores the role of educational technology in supporting equal formative assessment practices. It examines how technology-based tools can improve the process of formative assessments; provide students with more flexibility in their learning, increase student engagement, and receive instant feedback. The article also discusses the benefits of personalized learning and differentiated assessments, as well as the advantages of real-time data collection and analysis. Specific examples of formative assessment technologies are provided, highlighting their impact on teaching and learning.

Key words: Formative Assessment, Educational Technology, Equity, Personalized Learning, Differentiated Assessments, Student Engagement, Data-Driven Instruction

Introduction

Educational technology tools that automatically present and collect student responses improve the ongoing assessment process. Puspawati (2014) states that it is also important to ensure that tests represent the knowledge of diverse groups because a fair task should give a consistent result regardless of the individual and cultural differences among test takers [4]. This avoids common inequities because of linguist and cognitive variations among language learners, which can impact their overall scores. Online and differentiated formative assessment gives students more flexibility to learn in their own time. Digital tools like online quizzes with multiple choice or open-ended questions, writing checker tools, and others enable students to revisit feedback and topics covered in class at their convenience.

Providing equity

The selection of assignment activities should be based on the principles of equity and fairness, allowing all students to demonstrate their abilities and knowledge. In that way, learners from a variety of backgrounds would not be adversely affected by the topics addressed in these assignments because tasks are free of gender bias, cultural references, and field-specific studies.

Assignments should be made to be equitable and accessible to all students, regardless of their background or level of expertise. Changes should be made specifically for a few students who require further assistance. For students whose

vocabulary is narrower, more time should be allocated for the reading activity so they don't feel under pressure. Students who have trouble coming up with ideas and organizing themselves are given a planner to help them write an essay outline and content words, or umbrella phrases, to help them come up with ideas. These adjustments will address the target learners' needs while also fostering an inclusive and encouraging atmosphere. In that way, learners will be able to demonstrate their skills without running into preventable obstacles.

Increased Student Engagement and Feedback

To increase the efficacy and equity of the assessment tasks, technology will be used. Online tools can be used for formative as well as summative assessments, according to Ervin-Kassab (2014), with the goal of using the data to inform instructional practice. In addition to being advantageous for teachers, using online resources can increase their engagement, give them individualized feedback, which they can then review later and monitor their development [3]. Education technology tools like classroom response systems (clickers) and apps allow educators to pose multiple-choice questions and collect student responses immediately. Bikowski (2018) mentioned the trend of using technology for grammar practice because these resource-oriented exercises are useful for memorizing forms [1].This allows educators to identify key issues quickly, such as when students misunderstand a concept (e.g., when students confuse area and circumference).

Educators who use formative assessment are able to obtain instant feedback on student comprehension, which allows them to adjust instruction on the fly. Students are more engaged and empowered with this kind of flexible learning process, which also helps them feel more connected to the curriculum and their peers. Technology-based tools can also help reduce the markup burden for teachers by allowing them to record and analyze data digitally. Formative assessment tools like online quizzes and interactive simulations allow educators to provide instant feedback on student learning. There are a lot of online tools to create quizzes with all types of questions, such as Quizlet, which gives options to play quizzes in individual and team modes. Another great tool is Classkick, which offers a lot of various templates to create assigned tasks. One of them is the exit ticket, which is great to use at the end of the lesson, as self-assessment and instructors can simultaneously monitor the process. There is also a variety of text to quiz creators. For example, Quizalize.com can be used for free, while Yippity.io has some limitations in its free version and Conker.ai offers various customized types of quizzes. Another alternative version of Kahoot, which can be used by individual educators, is PanQuiz. Formative can be used for colleague collaboration, plagiarism checking, and assessing projects with rubrics.

Many of these types of programs encourage digital engagement through game-like formats that are more fun than a traditional quiz. They also offer a variety of

question types that can be used to assess student understanding throughout the lesson. This can be especially helpful for high-stakes assessments, such as state testing.

Personalized Learning and Differentiated Assessments

Digital formative assessment provides teachers with insights they could never have achieved through traditional means. In ESL and EFL classrooms, it is important to provide differentiated instruction to meet diverse learners' needs. Positive student motivation to learn can be facilitated, according to Tomlinson (2005), by offering learning opportunities that are engaging and relevant to individuals, suitably demanding for them, and flexible enough to allow them to study in ways that suit them [6].

A digital tool can instantly highlight gaps in student knowledge and understanding, saving teachers valuable time in identifying areas for additional instruction. Additionally, the use of technology-based tools for formative assessment allows educators to customize their assessments to cater to specific learning styles. The platform MagicSchool Plus can be used for designing lessons with differentiated instructions and creating personalized tasks. On this platform, educators can create syllabuses, lesson plans, and unit plans based on their learners levels and ages. For assignments that assess productive skills, it can help generate analytic rubrics if guidance and prompts are provided. Another feature that can be useful is ice breakers, team builders, project work, or group work activity generators. Moreover, it can generate a vocabulary list, a jeopardy review game, an assignment scaffolder, and even teacher's jokes. However, all of these generated activities should be looked through critically and changed if necessary by the educators themselves.

For instance, visual learners benefit from multimedia presentations and interactive content, while auditory learners respond better to audio-based tests. Furthermore, many technology-based assessment tools offer adaptive assessments that automatically adjust the level of difficulty and content based on individual student performance. This means that if a student is performing well, the system will recommend moving on to more advanced material, while if they're struggling, it will suggest additional resources and practice. This personalized guidance can help to improve student engagement and overall learning outcomes. Moreover, it can reduce the burden on teacher time by alleviating the need for manual marking and feedback.

Real-Time Data Collection and Analysis

When using technology-based tools, teachers are able to instantly see data and results of their student's responses. This helps them make decisions about what to teach next, and it also allows them to identify any issues that require further investigation. In addition, digitized platforms allow for reporting at multiple levels of interaction, like small groups, classrooms, grades, schools, and districts. These kinds of platforms also help teachers adapt their curriculum to meet students where they are, moving them

toward proficiency and growth by utilizing adaptive testing technology and large data-analysis tools. Educational technology can also empower students to take a more active role in their education by giving them immediate feedback on their progress, fostering a growth mindset and increasing classroom engagement. For example, a platform like Nearpod allows students to add gamification and create differentiated activities as formatives to show what they know in ways that are more engaging than traditional test formats. After students complete assignments, detailed reports can be viewed from Nearpod sessions on student activity and engagement. Instructors can provide not only grades but also constructive feedback so that learners can revise their errors and rewrite their work. It also shows the overall statistics of the whole class's performance. These results are automatically reported to the teacher and are easy to share with parents and administrators. This type of reporting is much more efficient than the old methods that many educators use, such as bell ringers, tests, and reading journals. It can even help teachers create more complex assignments for their students.

Finally, digital formative assessment technologies streamline teaching processes and administrative tasks for educators. According to Brown (1991), student-centered learning, as it is our primary responsibility as educators to enable students, promote a natural desire for learning, and view students as collaborators in a shared endeavor [2]. Technology gives teachers concrete data to guide their instruction, providing a significant improvement over previous forms of formative assessment that relied on manual grading and provided only broad insight into class performance while supporting an inclusive environment in the classroom.

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