



EXPLORING TEACHERS' EXPERIENCES IN IMPLEMENTING DIGITAL FORMATIVE ASSESSMENT IN TECHNOLOGY-ENHANCED CLASSROOMS

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Abstract:

The rapid development of digital technology has altered the way formative assessment is implemented in English language education by allowing teachers to track learning progress, deliver instant feedback and promote student-centred instruction. The objective of this study is to investigate the experiences of English teachers in adopting digital formative assessment in technology-enhanced classrooms. A qualitative multiple case study design was adopted to explore in depth teachers' perceptions, instructional practices, problems and adaptive strategies. The study involved five purposively selected English teachers from secondary schools who had experience in incorporating digital technology into formative assessment. Data were gathered from semi-structured interviews, non-participant classroom observation and document analysis. Results showed that digital formative assessment helped teachers to deliver timely and meaningful feedback, continuously monitor students' progress, improve classroom engagement and make data-based instructional decisions. Teachers used various digital platforms and AI-assisted technologies to enhance formative assessment activities. However, the participants faced problems such as unreliable internet access, different digital skills of students, longer preparation time and worries about academic integrity. Teachers met these problems by blending several digital platforms, using authentic assessment activities, encouraging collaborative learning, and using assessment data for continual reflection to improve instruction.

Keywords: digital; formative assessment; English; technology; classroom

INTRODUCTION

Digital technologies have rapidly evolved and revolutionized the teaching and learning at all levels of education, including English language instruction. Today's classrooms are a mix of learning management systems, cloud-based applications, artificial intelligence (AI), mobile learning platforms and interactive assessment tools. These technologies have enabled English teachers to develop learning environments that are more dynamic, learner-centered and responsive to the particular learning needs of pupils. Digital technologies have rapidly appeared as crucial tools to enable the distribution of instructional content, to track learning progress, to facilitate communication and to provide prompt feedback that fosters continuous development (Mantra et al., 2024). Therefore, formative assessment is currently one of the most popular educational approaches in technology-enhanced English language schools.



Formative assessment is a widely known assessment strategy that tries to improve learning as it takes place rather than only measuring learning outcomes at the end of instruction (Nicol & MacFarlane-Dick, 2006). It offers teachers opportunities to collect evidence of student understanding, find gaps in learning, and change their lesson as needed. Students, however, get constructive criticism that promotes reflection, self-regulation, and participation in the learning process. Formative assessment has a strong effect on student achievement when assessment information is used to guide teaching and assist learners' progress (Zaibout et al., 2024). This view has changed the evaluation of education from a product-oriented activity to continuous learning in which assessment, instruction and feedback are intimately related.

Formative assessment is particularly useful in the field of English language teaching (Pinto-Llorente & Izquierdo-Álvarez, 2024). Language acquisition is a process of constant practice, interaction and steady growth of different competencies, such as hearing, speaking, reading, writing, vocabulary and grammar. With digital assessment technologies, teachers may capture student language performance in authentic scenarios and foster learner engagement through the use of multimedia resources, gamification, collaborative activities, and adaptive learning environments (Onasanya & Ajamu, 2024).

These features make possible more tailored and inclusive learning experiences, allowing teachers to meet learners' different language abilities and learning preferences (Widiastuti et al., 2026). In addition, teachers sometimes face obstacles linked to digital infrastructure gaps, inequalities in students' digital literacy, increased workload, academic integrity issues, and the fast pace of educational technologies (Utari et al., 2021). These realities demonstrate that the effective use of digital formative assessment involves much more than the mere adoption of technology tools.

Previous research has well established the educational benefits of formative assessment such as increased learner engagement, improved motivation, enhanced quality of feedback and more chances for self-regulated learning (Alordiah, 2025; Baird et al., 2026; Fatmawati & Muhsinin, 2026). However, much of the existing study has focused on quantitative assessment of learning outcomes or has studied the usefulness of specific digital applications. Relatively few studies have studied the experiences of English teachers as they engage with digital formative assessment in their regular instructional practices. The lived experiences of teachers, their professional judgments, their classroom modifications and the contextual issues they face are still under-represented. This is particularly so in diverse educational contexts where technological preparedness, institutional support and learner characteristics are very different.

The current study investigates the experiences of English teachers utilizing digital formative assessment in technology enhanced classrooms. The study is based on qualitative research design. The aim is to understand the teachers' views of the potential and problems, teaching approaches, and professional accommodations of employing digital tools in formative assessment. The study aims to provide valuable information on digital

assessment, technology-enhanced language learning and Assessment for Learning in English language education by generating contextualized information through an in-depth investigation of teachers' experiences.

The findings are expected to provide useful implications for English language teachers, educators, curriculum writers, educational leaders and legislators who are striving to enhance the practices of formative assessment in the increasingly digital learning contexts. This study adds to our knowledge of how technology can be used not only as a means of assessment, but also as a tool to promote meaningful learning, continuous feedback and the development of twenty-first-century communicative competence by shedding light on teachers' experiences.

RESEARCH METHOD

The present study was a qualitative research design employing the multiple case study method to examine the experiences of English teachers in applying digital formative assessment in technology-enhanced classrooms. A qualitative technique was deemed acceptable as the study sought to explore participant perspectives, experiences and instructional practices within their natural teaching context (Cohen et al., 2018). The research was about teachers' interpretation, implementation and adaptation of formative assessment methods through digital technologies in the English language classroom. The multiple case study design allows an extensive evaluation of similarities and variations across varied educational contexts, yielding a holistic knowledge of the phenomenon.

The purposeful sampling of five English teachers was from secondary schools and institutions that have incorporated digital technologies in English language education. The selection criteria were (1) actively teaching English at the time of data collection, (2) regularly using digital assessment tools such as Google Classroom, Moodle, Microsoft Teams, Kahoot!(2) willingness to use technologies such as Quizizz, Padlet, Mentimeter, Nearpod, or AI-based assessment tools to promote formative assessment, and (3) readiness to be interviewed, observed in class, and share documents. The number of participants was small, but each teacher was situated in a different instructional setting, which made it possible to explore individual experiences in depth and to compare across cases.

Data were acquired through semi-structured interviews, non-participant classroom observation and document analysis. Each teacher was interviewed individually in a semi-structured interview of about 60-90 minutes, in an effort to investigate perceptions, instructional strategies, decision-making processes, obstacles and experiences in the implementation of digital formative assessment. Methodological triangulation was also used to give contextual evidence through analysis of supporting documents such as lesson plans, digital assessment activities, assessment rubrics, feedback logs, and instructional materials.

Data were analysed using theme analysis utilizing the six-phase framework (Mantula et al., 2024). The study begins with familiarisation through

repeated reading of interview transcripts, observation field notes and documentation data. Initial coding identified important patterns that were then sorted into categories and polished into overarching themes that mirrored teachers' experiences with using digital formative assessment.

FINDINGS AND DISCUSSION

The data for this study were collected by means of semi-structured interviews, classroom observations, and document analysis from five English teachers who had used digital formative assessment in technology-enhanced classrooms. Thematic analysis identified five main themes that characterized teachers' experiences of integrating digital formative assessment in English language education. Themes identified included teachers' opinions of digital formative assessment, the digital resources used, the pedagogical benefits, problems in implementation and solutions used to improve assessment procedures. The results are displayed in the tables below and are followed by descriptive explanations, supported by evidence from the qualitative data.

Table 1. The teachers' Perceptions on Digital Formative Assessment

Teacher	Main Perception	Representative Response
T1	Assessment should continuously guide learning.	"Digital assessment helps me understand students' progress during every lesson."
T2	The feedback provision is more immediate and meaningful.	"Students know their mistakes instantly and can improve immediately."
T3	Digital assessment increases classroom interaction.	"Students become more active because they enjoy responding through digital platforms."
T4	The technology can be used to support differentiated instruction.	"The assessment information can help me adjust activities according to students' learning needs."
T5	Formative assessment improves student responsibility.	"Students become aware of their own learning progress through continuous feedback."

The interview results showed that the five teachers considered digital formative assessment as an integral part of the teaching and learning process, not just a tool for delivering grades. Teachers often stated that technology allowed for the constant tracking of student learning and in turn, improvements to instruction could be made in a timely manner. They also saw digital formative assessment as a means to boost learner engagement, encourage self-reflection, and improve communication between teachers and students. In sum, participants saw formative assessment as an important approach to enhancing

student learning via instruction.

Table 2. Digital Platforms Used by the teachers for Formative Assessment

Teacher	Digital Platforms	Primary Purpose
T1	Google Classroom, Quizizz	Assignment submission and quizzes
T2	Kahoot!, Padlet	Interactive quizzes and collaborative discussions
T3	Google Forms, Mentimeter	Exit tickets and instant feedback
T4	Moodle, Microsoft Teams	Learning management and assessment
T5	Google Classroom, ChatGPT, Quizizz	Feedback, writing support, and formative quizzes

The results show that teachers used a number of digital platforms for implementing formative assessment. The most used platform was Google Classroom, as it allowed teachers to arrange learning materials, deliver assignments and provide individualized feedback easily. Interactive programs like Kahoot!, Quizizz and Mentimeter were used largely to measure students' understanding during the lessons and to keep students engaged in the classroom. Another participant used generative AI to provide additional feedback on writing and to promote reflective learning among students. The data indicate that teachers deliberately chose digital resources in line with their teaching goals and the learning needs of the students.

Table 3. Students' Perceptions of the Benefits of Digital Formative Assessment

Benefit	Number of Teachers (n=5)	Supporting Evidence
Immediate feedback	5	Students receive prompt responses to their work.
Develop student engagement	5	Interactive activities motivate participation.
Better monitoring of learning progress	5	Teachers identify learning difficulties more quickly.
Improved learning motivation	4	Students show greater interest in classroom activities.
More efficient assessment management	4	Automatic scoring reduces teachers' workload.

All participants agreed that the most important benefit of digital formative assessment was quick feedback. Teachers said that quick feedback helped pupils identify misconceptions before they became ingrained learning problems. The digital evaluation also boosted classroom involvement, as the technology-based tasks were entertaining and encouraging for pupils. The teachers also liked the

availability of learning analytics, since it enabled them to monitor students' development more efficiently. Automatic scoring relieved administrative burdens, but teachers noted the need for qualitative teacher feedback to develop higher-order language acquisition skills such as writing and speaking.

Table 4. Challenges of Using Digital Formative Assessment

Challenge	Number of Teachers (n=5)	Description
Internet connectivity	4	Unstable internet disrupted assessment activities.
Students' digital literacy	3	There some students required additional guidance.
Teacher workload	3	Preparing digital assessments required considerable time.
Academic integrity	2	Monitoring independent online work was difficult.
Limited institutional support	2	Insufficient professional development opportunities.

Although teachers had positive attitudes towards digital formative assessment, they faced various hurdles in implementation. The biggest reported concern was an unreliable internet connection that sometimes halted-assessment activities and delayed feedback. Participants also highlighted variations in students' digital skills which needed more instructional support before assessment activities could be effectively undertaken. Many teachers said that developing meaningful digital formative assessments took a lot of prep time, especially when creating realistic English language assignments. There were also concerns about academic honesty and limited institutional support, emphasizing the importance of continued professional development and technical infrastructure.

Table 5. Teachers' Approaches to Improving Digital Formative Assessment

Strategy	Number of Teachers (n=5)	Purpose
Combining multiple digital platforms	5	Increase flexibility and engagement
Providing continuous feedback	5	Encourage students' language development
Using collaborative assessment	4	Encourage peer learning
Integrating authentic language tasks	4	Improve communicative competence

Reflecting on assessment data	5	Improve future instructional planning
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The results show that teachers used different ways to optimize the effectiveness of digital formative assessment. All participants stressed the need to integrate several digital platforms to meet diverse educational purposes and learner needs. The findings imply that digital formative evaluation has become a fundamental part of English language teaching in general. Teachers experienced technological and pedagogical hurdles, but consistently viewed digital formative assessment as a useful tool to enhance student engagement, give timely feedback and promote evidence-based instructional decision-making. The convergence of interview, observation and document analysis data further increased the credibility of these findings and underlined the changing role of technology in facilitating assessment for learning.

Discussion

The formative assessment process is enhanced by the inclusion of digital tools which allow teachers to track students' progress in real time, recognize misconceptions and intervene quickly. The digital technologies did not supplant the professional judgment of teachers, but rather provided tools that helped them to make better-informed educational judgments.

Another key result is the varied usage of digital tools to support formative assessment. The participants utilized several technologies such as Google Classroom, Google Forms, Moodle, Kahoot!The selection of Quizizz, Padlet, Mentimeter, Microsoft Teams and AI-assisted applications depended on the individual teaching goals . This is in line with prior research that has demonstrated that technology-enhanced assessment allows for more flexibility, accessibility, and efficiency in collecting evidence of student learning. The teachers are also showing increasing digital competency by using several digital platforms and carefully combining different technology to create engaging and learner-centered English language courses (Candrawati et al., 2025).

The results also suggested that rapid and constant feedback was the major advantage of digital formative evaluation. All participants highlighted that the fast feedback helped students to see what they did well and what they needed to work on instantly which supported introspection and continual progress. The feedback also facilitated independent learning by enabling students to assess their own progress and alter their learning tactics accordingly. Teachers stress that automated feedback from digital systems can't wholly replace personal input from teachers (McGuire, 2025), especially for complicated language skills such as writing, speaking and critical thinking, which still need comprehensive qualitative remarks.

The data also show that digital formative assessment plays an important role in students' involvement in English language learning. Participants said that interactive quizzes, collaborative digital activities, quick polling and multimedia learning tasks all helped to prompt students to participate more actively during sessions. However, in addition to the benefits, participants also recognized

certain barriers to the implementation of digital formative assessment. The most frequent impediment was the technical problems, especially the instability of the internet connection, which sometimes interrupted the activities of evaluation and limited the involvement of students.

Variations in students' digital proficiency also meant that teachers needed to provide more support before assessment assignments could be successfully completed. The teachers also recognized that creating meaningful formative evaluations in digital forms took a lot of effort, creativity, and pedagogical competence. These findings imply that successful implementation of digital formative assessment depends not only on the availability of technology tools, but also on teachers' assessment literacy, technological competence and institutional support (Onasanya & Ajamu, 2024).

An emergent finding of this study is the increasing role of artificial intelligence (AI) in formative assessment. One participant mentioned utilizing AI-assisted tools to write feedback and to prompt students to modify their own work before getting feedback from the teacher.

Another major conclusion relates to the reflective use of evaluation data by teachers. Participants said that they used the findings of the digital assessments regularly to examine the learning patterns, diagnose the issues of the pupils, and improve the upcoming lesson plans. This kind of reflective practice is an example of how formative assessment may support adaptive teaching, making instruction more sensitive to the changing needs of learners and supporting a more individualized approach to English language education.

The findings generally show that digital formative assessment has altered the role of assessment in English language classes. Digital formative assessment has shifted from being a tool for assessing accomplishment to being part of teaching and learning supporting ongoing feedback, student engagement, instructional modification and reflective teaching practice. The experiences of the five participating teachers show that the efficient implementation involves the convergence of pedagogical expertise, technology competence and evaluation literacy. Future qualitative research in more diverse educational environments with multiple stakeholder perspectives, such as students, school leaders and curriculum developers, would further increase our understanding of how digital formative assessment can support English language learning in more technology-rich educational environments.

CONCLUSION

The experiences of the five participating teachers reveal that digital tools not only improve the efficiency of assessment, but also encourage more interaction from students, learner autonomy and reflective teaching methods. While there were challenges related to technology infrastructure, online literacy, preparation time and academic integrity, teachers succeeded in adapting their assessment strategies to facilitate language learning by using multiple digital platforms and providing continuous feedback. The results emphasize that successful application of digital formative assessment depends on the integration

of assessment literacy, pedagogical competency and technological proficiency.

REFERENCES

- Alordiah, C. (2025). Enhancing Learning Outcomes through Formative Assessments in Africa: A Systematic Review of Practices, Challenges, and Opportunities. *E-Kafkas Eğitim Araştırmaları Dergisi*, 12(2), 592–615. <https://doi.org/10.30900/kafkasegt.1630814>
- Baird, J. A., Filipe Pancada Correia, C. F. D., Cowie, B., El Masri, Y., Hayward, L., Kanjee, A., Ng, D., Flórez Petour, M. T., Popov, M., & Yan, Z. (2026). Formative assessment—a global phenomenon. In *Assessment in Education: Principles, Policy and Practice*. Routledge. <https://doi.org/10.1080/0969594X.2026.2673240>
- Candrawati, I. A., Widiastuti, I. A. M. S., & Mantra, I. B. N. (2025). Challenges And Opportunities In Online Assessment: Vocational Teachers' Perspectives On Pedagogical Transform In Digital Era. *JIPi (Jurnal Ilmiah Penelitian Dan Pembelajaran Informatika)*, 10(4), 4155–4161. <https://doi.org/10.29100/jipi.v10i4.9358>
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research Methods in Education* (Eight Edition). Routledge. www.routledge.com/cw/cohen
- Fatmawati, K., & Muhsinin, U. (2026). Implementation of Black and Wiliam's Formative Assessment Framework in The Merdeka Curriculum: Enabling Factors and Challenges in Elementary Education. *Muallimuna: Jurnal Madrasah Ibtidaiyah*, 11(2), 130. <https://doi.org/10.31602/muallimuna.v11i2.22385>
- Mantra, I. B. N., Maba, W., Wedasuwari, I. A. M., & Staupelyte, A. (2024). Empowering Students' Language Competence and Cultural Awareness Through Communicative Approach. *International Journal of Social Science*, 4(4), 509–514. <https://doi.org/10.53625/ijss.v4i4.9254>
- Mantra, I. B. N., Maba, W., & Widiastuti, I. A. M. S. (2025). Role of Sociolinguistics in Shaping Students' Language Use in Multilingual Classrooms. *International Journal of Multidisciplinary Approach Research and Science*, 3(03), 926–935. <https://doi.org/10.59653/ijmars.v3i03.1901>
- Mantula, F., Mpofu, A. C., Mpofu, F. Y., & Shava, G. N. (2024). Qualitative Research Approach in Higher Education: Application, Challenges and Opportunities. *East African Journal of Education And Social Sciences*, 5(1). <https://doi.org/10.46606/eajess2024v05i01.0343>
- McGuire, M. (2025). Feedback, reflection and psychological safety: rethinking assessment for student well-being in higher education. *Assessment and Evaluation in Higher Education*. <https://doi.org/10.1080/02602938.2025.2548590>
- Nicol, D., & MacFarlane-Dick, D. (2006). Formative assessment and selfregulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199–218. <https://doi.org/10.1080/03075070600572090>
- Onasanya, S. A., & Ajamu, A. O. (2024). Formative and Summative Assessment

- Using Technology: A Critical Review. *Mimbar Ilmu*, 29(1), 1–8.
<https://doi.org/10.23887/mi.v29i1.72042>
- Pinto-Llorente, A. M., & Izquierdo-Álvarez, V. (2024). Digital Learning Ecosystem to Enhance Formative Assessment in Second Language Acquisition in Higher Education. *Sustainability (Switzerland)*, 16(11).
<https://doi.org/10.3390/su16114687>
- Utari, Z., Sesmiarni, Z., & Syafitri, W. (2021). AI-Mediated Digital Formative Assessment, EFL Writing: Validity, Teacher Digital Literacy, Ethical Implications. *Print) Journal of English Language and Education*, 11, 2026.
<https://doi.org/10.31004/jele.v11i1.1775>
- Widiastuti, I. A. M. S., Sawitri, N. L. P. D., Widhiasih, L. K. S., Maba, W., & Suartama, I. K. (2026). Exploring the roles of technology and self-regulated learning in enhancing students' English competence. *Journal of Education and E-Learning Research*, 13(1), 150–156.
<https://doi.org/10.20448/jeelr.v13i1.8262>
- Zaibout, N., Madrane, M., Khamlichi, L., & Laafou, M. (2024). Analysis Of Effectiveness And Impact Of Integrating Digital Technologies In Formative Assessment. *International Journal on "Technical and Physical Problems of Engineering" (IJTPE) Issue*, 60, 417–427. www.iotpe.com