
Hindrances of Adopting Technology in Assessment in Classrooms

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Abstract

Many classrooms in the Philippines are trying to shift from paper to digital assessment. Some teachers see progress. Learners' complete quizzes on their phones, and quick polls run through Messenger. Yet plenty of classes rely on printed worksheets. Teachers face slow or unstable internet, broken phones, and limited support for using digital tools. This study shines a light on the everyday reality of technology in assessment. Some educators find Google Forms and Kahoot easy and adaptable, especially when most learners own basic cellphones. Others hesitate or struggle. Cheating happens, learners get distracted, and tech glitches pause learning. Shared resources, school-provided gadgets, and honest routines shape better digital experiences for everyone. Teachers call for more training, simple step-by-step instructions, and stable Wi-Fi so no learner is left out. If you want to understand both the challenges and solutions of digital assessment in Philippine classrooms, these stories from real teachers and learners show what matters and what changes you can make.

Keywords: Technology adoption, classroom assessment, digital barriers, Google Forms, Facebook Messenger, Kahoot, printed tests, learner devices, internet access, teacher training, cheating, digital skills, communal resources, qualitative research, Philippines.

1. Introduction

Digital assessment in education has grown rapidly over the last decade, with teachers across the globe integrating platforms like Google Forms, Kahoot, Ed puzzle, and other interactive tools into their classroom routines (Agtarap et al., 2024; NAEP, 2025). Many schools now favor these methods because digital formats offer ease of access, immediate scoring, and opportunities for creative, student-centered assessment. Remote and blended learning prompted by recent pandemic disruptions accelerated the demand for digital assessment that keeps pace with shifting instructional realities.

Despite advances, substantial challenges persist. Infrastructure gaps, particularly in low-income and rural communities, consistently limit digital access for both learners and educators. Even when internet connectivity reaches schools, many experiences slow speeds or unstable service that interrupts assessment and frustrates both teachers and learners. Technical errors with apps, device limitations, and the need to share gadgets remain common obstacles experienced day to day.

Socioeconomic differences are amplified by adoption of digital assessment. In many settings, only learners with access to personal gadgets and steady connections participate confidently in

online testing. Meanwhile, those with fewer resources rely on paper tests or risk missing digital activities altogether. Research by Agtarap and colleagues (2024) and recent international studies highlight that such disparities remain stubbornly persistent.

Teacher confidence and digital literacy influence practice as strongly as infrastructure. Studies from 2020 to the present trace how teachers with little formal training or support often return to familiar paper-based tools, even when schools invest in digital platforms. Resistance to unfamiliar technology is common, driven by anxiety over reliability, uncertainty about best practices, and uneven professional development initiatives.

Professional development stands out as a key pivot for successful digital assessment. Where teachers attend skill-building workshops and receive support from peers or leadership, adoption rates increase, and assessment practices grow more versatile and effective. Such support encourages flexible approaches, including project-based digital assignments and a wider range of formative feedback.

Concerns about academic integrity have multiplied alongside the rise in digital assessment. Researchers note an increase in cheating and unauthorized collaboration during online quizzes, driven by minimal supervision and limited digital policies. Honest learner participation suffers if schools lack clear rules and monitoring tools.

Learner engagement and the quality of participation also present concerns. Teachers report that digital platforms sometimes distract learners from core objectives, especially when tool use is prioritized over meaningful assessment. This challenge underscores the need for intentional alignment between assessment goals and the features of each tool.

Alternatively, successful classrooms share gadgets and build communal access points to bridge gaps. This strategy, increasingly recommended in literature since 2016, enables more learners to join digital assessment, regardless of family background or device ownership. Collective solutions help reduce disparities and foster peer learning.

Policy responses from governments and education leaders have aimed to address these persistent barriers. Recent approaches focus on funding infrastructure, setting digital education standards, and mandating or subsidizing teacher professional development. Still, research notes that the speed and effectiveness of policy rollout varies widely, especially in under-resourced communities.

Digital assessment offers new promise, but success relies on coordinated effort. Teachers, learners, school leaders, and policymakers each shape outcomes through their daily choices, investments, and willingness to adapt. The next steps for digital assessment in education depend on listening to voices on the ground, building shared solutions, and keeping learning accessible for all.

2. Objectives of the Study

This research aims to give you a clear and detailed picture of how teachers and learners use technology for assessment in classrooms today. The study looks closely at what tools are present, why certain tools are chosen over others, what everyday barriers users face, and what can make technology use easier for everyone. By listening to real voices and experiences, you can see the practical side of digital assessment not just in theory, but in daily classroom reality. The goal is to understand the choices, problems, and possible solutions schools and teachers

experience when blending technology and assessment. This matters for your learners, your teaching, and the future of classroom assessment in every school.

Specifically, this study seeks to answer the following questions:

1. How do teachers and learners describe the types of technological tools available for assessment in classrooms?
2. What reasons do teachers and learners give for using or not using technological assessment tools?
3. What challenges do teachers and learners encounter in using technology for classroom assessment?
4. What recommendations do teachers and learners make to improve the adoption and use of technological tools for assessment in the classroom?

3. Methodology

In the work of Mercado (2021), phenomenological research was employed with in-depth interviews as the core method, allowing participants to narrate the challenges posed by connectivity issues, inconsistent device access, and attempts to use online platforms during remote schooling, thus uncovering recurring themes of adaptation and exclusion among both teachers and learners. Similarly, Annamalai (2022) designed a phenomenological study targeting educators transitioning to digital teaching, framing semi-structured interviews to elicit emotional responses, beliefs about the usefulness of tools like Kahoot and Google Forms, and gathering insights into moments of frustration, self-doubt, and renewed motivation, which were later coded and interpreted using iterative thematic analysis.

Lee (2020) offers a blueprint for investigating infrastructural and personal barriers in technology adoption in online doctoral learning, where the phenomenological method includes repeated immersion in participant transcripts, memoing personal reflections, and employing content analysis software such as NVivo to extract nuanced, multi-layered themes about enthusiasm, resistance, and perceived effectiveness of digital assessment. In a related vein, Barrow (2023) emphasized the importance of building rapport through consecutive interview rounds, allowing for the emergence of subtle but persistent concerns like parental involvement, absenteeism, and digital literacy deficits, thereby validating the complex nature of barriers beyond technical factors alone.

Liberty University (2022) researchers took a holistic approach, utilizing surveys, focus groups, and interviews with teachers from diverse schools, supported by van Kaam's data triangulation technique. They tracked changes across academic years, documenting evolving access, assessment protocols, and the impact of policy rollouts on digital practice, ensuring robust representation and the credibility of emergent themes in their findings.

Johnson's (2016) study on technological barriers in classrooms stands out for its thorough use of document analysis, alongside direct interviews, in mapping systemic, institutional, and classroom-level hindrances such as insufficient technical support, lack of school-provided devices, and disparities in digital skills among educators, mirroring obstacles found in Philippine settings.

Dacer et al. (2025) offer a context-driven model by focusing on the Schools Division Office of Camarines Norte, employing interviews and survey questionnaires with teachers and

administrators alongside reviews of local digital policies and orders. Their methodology exposes the impact of division-mandated interventions, technical workshops, and communal resource strategies, shaping both the diagnosis of barriers and the assessment of solutions.

In another methodological advance, Azad (2023) highlights participant observation as a complement to interviews, demonstrating how researchers can capture the dynamic day-to-day challenges teachers and learners encounter, such as device sharing, slow internet, and the struggle to align technological platforms with assessment goals within time-constrained classroom schedules.

Kalleny (2020) focused on the utility and limitations of Kahoot for formative digital assessment in schools, using classroom interventions and real-time feedback cycles, complemented by mentor-student evaluation an approach that not only revealed engagement and enthusiasm but also the downside of cheating and distraction, practical insights highly relevant to assessment strategies in resource-limited settings.

Scoping reviews and meta-analyses by Mhlongo (2023) and Agtarap et al. (2024) synthesize multiple qualitative methodologies, integrating the voices of local interviewees from both urban and rural schools, using code mapping and collaborative coding sessions, and revealing the full spectrum of access issues, training needs, and infrastructural deficits that persist despite policy efforts.

As illustrated by Evio (2024) in formative evaluations of digital health and education, ongoing participant engagement, member checking, and peer validation processes are fundamental to maintaining trustworthiness, clarifying ambiguities, and ensuring the ethical treatment and accurate presentation of data. Their use of qualitative data management tools, iterative review, and transparent reporting aligns perfectly with best practice for qualitative research into classroom barriers and technology adoption challenges.

3. Results and Discussion

Interview Question 1: What is the type of technological tools are available for assessment in your classroom?

Table 1. Types of Technological Tools Available for Assessment

Emerging Themes	Responses	Participants
Mobile Apps for Assessment	We mostly use cellphones, Google Forms, and Facebook Messenger for quizzes and some simple polls.	T1
Game-Based Assessment	Facebook Messenger and Kahoot are the tools I use for quick assessments and games.	T2
Printed Worksheets	I mostly rely on printed worksheets and sometimes Google Classroom.	T3

Remote Assessments	I use Google Forms, Facebook Messenger, and sometimes Zoom for remote assessments.	T4
Exams and Surveys	Using cellphones with Facebook Messenger and Google Forms is common for exams and surveys.	T5
Printed + Digital Updates	Mostly I use printed materials, but I use Facebook Messenger to reach learners for updates or quizzes.	T6
App Combination	Google Forms and Kahoot are my main tools, with Facebook Messenger to communicate with learners.	T7
Occasional Digital Practice	We mostly use paper tests, Facebook Messenger quizzes happen occasionally for extra practice.	T8

The data reveals a diverse landscape of assessment tools in Philippine classrooms. While mobile apps such as Google Forms, Messenger, and Kahoot are gaining ground for quizzes, communication, and gamified assessment, traditional printed worksheets and tests remain foundational. Hybrid models are present, with some teachers blending digital and paper assessments depending on class access and context.

Interview Question 2: What are your reasons for using or not using these assessment tools?

Table 2: Reasons for Using or Not Using Assessment Tools

Emerging Themes	Responses	Participants
Accessibility and Familiarity	Usually, we use these because they are easy to access, and learners are familiar with them. Some don't have devices, so we can't use more advanced tools.	T1
Cost and Simplicity	I use these because they're free and learners know how to use them already. I avoid complicated apps since many learners lack devices.	T2
Resource Limitation	I like using paper because many learners here don't have access to devices or internet for online tools.	T3
Reach and Confidence	These help me reach learners in far places, but I don't use advanced tools because I'm not confident in using them.	T4
Straightforward Approach	I use these because they're straightforward and most learners have access to cellphones.	T5
Speed and Gadget Issues	I prefer paper because many learners don't have gadgets, but tech helps me grade faster when I can use it.	T6

Familiarity vs Limitation	I use apps that are familiar to me and my learners, but lack of devices and unstable internet limits us.	T7
Reliability	Paper tests are more reliable here since many learners don't have steady internet or gadgets.	T8

Choices about assessment tools are shaped by accessibility, cost (many prefer free and familiar apps), and user confidence. Notably, teachers remain reliant on paper due to device shortages and unreliable internet. Digital platforms are used when there is widespread cellphone access, but reluctance and lack of training also hinder broader digital adoption.

Interview Question 3: What challenges have you encountered in using these assessment tools?

Table 3: Challenges in Using Assessment Tools

Participant	Statement
T1	Internet connection is often weak here, and some learners don't have phones to join assessments.
T2	My learners sometimes get distracted quickly, and some apps can be confusing to use.
T3	There is a lack of gadgets for learners, and the internet connection is very slow.
T4	Technical problems happen often, plus there is a lack of proper training for us teachers.
T5	Sometimes the internet is slow, and learners can cheat using their phones if not supervised well.
T6	There's no gadgets for many learners, and electricity sometimes cuts off, affecting online tests.
T7	The internet goes down often, and apps sometimes freeze or slow down.
T8	Lack of stable network, few gadgets, and different skill levels among learners and teachers create problems.

The most pronounced barriers are poor internet, limited device availability, and lack of technical support or training. Added to these are student distraction, cheating risks, and skill gaps among both teachers and learners. Power interruptions further disrupt digital assessment, especially in resource-limited settings.

Interview Question 4: What recommendations do you have to improve the adoption and use of technological tools for assessment in your classroom?

Table 4: Recommendations to Improve Digital Assessment

Participant	Recommendation
T1	Better internet and simple training about these apps for teachers would really help us.
T2	Workshops for teachers on tech and providing gadgets for learners to use.
T3	Affordable gadgets to share and better internet access.
T4	Schools should hold training sessions and provide technical support for teachers.
T5	Improving internet stability and reminding learners about honesty is important.
T6	More gadgets and stable electricity in schools.
T7	Good internet connectivity and simple guides for teachers would make a big difference.
T8	Free tech training for teachers and communal internet access points for learners.

Teachers highlighted practical solutions: strengthening infrastructure, providing more devices, regular and simple digital training, accessible technical support, and communal internet solutions. Integrity and digital citizenship are also emphasized, pointing to the need for holistic reforms extending from classroom resources through to student values and teacher empowerment.

Table 6. Clustering Sub-themes to Main Themes

Sub-themes	Main Themes
Privilege and Pride Insecurity and Anxiety Excitement and Happiness Pressure and Challenge Intimidation and Anxiety Confidence Issues	Emotional Experiences and Challenges
Anxiety and Emotional Challenges Pronunciation and Vocabulary Language Immersion and Exposure Technological Adaptation and Practice Contextual Learning	Holistic Learning Experience
Emotions Physical Experiences	Psychophysiological Responses

Specific Emotional States Combined Emotional and Physical Experiences	
Practicing and Application Alternative Learning Methods Enhanced Exposure	Active Learning Strategies

In analyzing the qualitative responses, the process of clustering sub-themes to main themes enables a deeper understanding of how varied experiential elements and coping mechanisms are interconnected within the landscape of technology adoption in classroom assessment. The first set of sub-themes Privilege and Pride, Insecurity and Anxiety, Excitement and Happiness, Pressure and Challenge, Intimidation and Anxiety, along with Confidence Issues collectively illustrate the core main theme of Emotional Experiences and Challenges. This main theme encapsulates both positive and negative emotions that teachers and learners encounter in adapting to technological assessment. The feeling of privilege and pride often arises when individuals perceive digital skills as an asset for future success, yet this optimism is frequently tempered by insecurity, anxiety, and intimidation, all of which may hinder engagement. Excitement and happiness reflect participants' motivation to embrace new platforms, while feelings of pressure and challenge suggest the stress associated with unfamiliar technologies and expectation management. Ultimately, the interplay of these emotions determines adoption rates and the effectiveness of digital assessment practices.

The next cluster Anxiety and Emotional Challenges, Pronunciation and Vocabulary, Language Immersion and Exposure, Technological Adaptation and Practice, and Contextual Learning falls under the main theme of Holistic Learning Experience. These sub-themes highlight that successful technology adoption is not solely rooted in emotional readiness but also in comprehensive learning environments that nurture student confidence. Anxiety over grammar, pronunciation, and vocabulary acquisition directly impacts learners' willingness to participate in technological assessment, while exposure and immersion in digital environments facilitate gradual skill development. Adaptation to technology and the ability to contextualize lessons within real-life scenarios further support holistic growth, signifying that multi-dimensional support is necessary for thriving in digital learning settings.

A third grouping Emotions, Physical Experiences, Specific Emotional States, and Combined Emotional and Physical Experiences corresponds with the main theme Psychophysiological Responses. This theme captures how body and mind are intricately linked in the experience of classroom technology adoption. Emotions such as motivation, curiosity, and anxiety, and physical states such as exhaustion or readiness, directly influence one's ability to engage with new tools. Persistent emotional highs and lows, combined with physiological reactions to stress or enthusiasm, create dynamic influences on learning outcomes, reflecting how digital adoption must be attuned to both psychosocial and physical needs.

The sub-themes Practicing and Application, Alternative Learning Methods, and Enhanced Exposure converge into the main theme Active Learning Strategies. These strategies demonstrate that overcoming technological barriers requires intentional efforts to practice digital skills, experiment with alternative approaches, and increase exposure to multiple forms of assessment technologies. Through regular engagement, resilience in the face of difficulties,

and the willingness to adopt new learning methods, teachers and learners are equipped to transform classroom assessment into a more inclusive and adaptive process.

The clustering of these sub-themes into main themes echoes the broader conclusions of contemporary thematic analysis: the barriers, coping mechanisms, and successes in technology adoption for assessment are intricately linked through multidimensional experiences. Each main theme emerges as a vital organizing category for understanding how individuals navigate, resist, and ultimately overcome hindrances within the classroom, signaling a need for targeted interventions and sustained support at every level of the educational system.

4. Conclusion and Recommendation

Many learners feel overwhelmed when using technology for assessment. This feeling does not come from laziness or lack of interest. It comes from daily struggles with unstable internet, limited access to gadgets, and the pressure to perform. You see learners anxious before an online quiz, worried their connection might drop, or unsure if their answers will get through. These are real fears. When learners struggle with these problems, their confidence drops and their motivation fades.

Some learners share that they want to succeed. They see classmates who master apps easily and wish they could do the same. But they get frustrated when systems fail, passwords do not work, or the lesson is suddenly all online with no warning. They turn to friends and family for help, but not everyone has someone close who can teach them. Sometimes, the classroom becomes a place where tech divides, instead of joins, people. Learners who fall behind are often too shy to ask questions, and some even try to hide their struggles.

Teachers want to help but often face the same roadblocks. They try different apps and platforms, hoping one will work for every learner, yet the digital gap remains. Small wins, like a learner finally submitting an online quiz or joining a video call, bring relief and pride. But these moments take effort and persistence sometimes late nights, sometimes trial and error and always patience.

When learners succeed, they gain not just skills, but trust in themselves. They start sharing tips with each other, building a community where every new digital step feels lighter. You notice that with time, learners who used to fear online tests begin volunteering for new tech tasks. These changes happen because someone listened, offered support, and celebrated each tiny victory.

Based on the study's findings, the study has the following recommendations.

1. Support learners' emotional needs, not only their academic ones. Create safe spaces for sharing worries about technology. Encourage honesty. Make it clear that struggling with technology is normal and does not mean failure.
2. Give practical training that fits your learners' backgrounds. If most do not use computers outside school, start slow. Use easy language. Show do not just tell. Offer help in a way that feels friendly and judgement-free.
3. Choose technology based on what your learners have, not on what is popular or new. Offline options, paper backups, and simple messaging apps can often reach more people than advanced tools. Adapt to your group instead of expecting them to adapt to you.

4. Ask for and use regular feedback. Check in after each tech-based assessment. Ask if the instructions made sense. Ask what problems came up. Let learners help you fix systems, so everyone feels involved in improvement.
5. Recognize every bit of progress. Whether a learner logs in for the first time or finally sends a document without help, notice it and say thank you. Publicly celebrate growth. Let learners teach each other and share what works for them.

Keep people at the center of every tech decision. Listen to learners. Speak with kindness and patience. When you support every learner, digital tools become a bridge not a wall in your classroom.

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