

Diffusion of Innovations in the Implementation of Assessments Through Google Forms

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Abstract

This study employed a qualitative descriptive approach, supported by a structured Likert-scale questionnaire distributed online to 20 tutors at LBB YSY PRIVATE. While quantitative instruments were used for data collection, the primary emphasis was placed on the qualitative interpretation of tutors' perceptions and experiences regarding digital assessment implementation. The analysis process involved categorizing Likert-scale responses to identify prevailing patterns using descriptive statistics, followed by a thematic analysis to uncover deeper qualitative insights from the identified trends. This combined analytical approach allowed for systematic documentation of response frequencies while preserving the depth and complexity typical of qualitative research. The results provide both measurable patterns and a nuanced understanding of tutors' experiences with Google Forms, highlighting aspects such as perceived efficiency, challenges encountered, and levels of technology acceptance. This hybrid methodology proved particularly valuable in educational technology research, where both empirical data and experiential insights are crucial for a comprehensive understanding.

Keywords: Assessment, Google Forms, digital evaluation tools, educational technology adoption

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INTRODUCTION

Educational assessment has undergone significant transformation with the integration of digital tools, offering new possibilities for efficient and data-driven evaluation (Zhao et al., 2023; Pradana, 2023). Platforms like Google Forms demonstrate clear advantages over traditional paper-based methods including automated scoring, real-time feedback, and reduced administrative burdens (Wijaya & Prasetyo, 2021; Putri et al., 2022; Nawawi & Sari, 2024) yet their adoption in private tutoring contexts remains underexplored and potentially challenging. This gap is especially relevant following the rapid digitalization of education during and after the COVID-19 pandemic, along with Indonesia's implementation of the Merdeka Curriculum emphasizing technology integration.

Current literature on digital assessment largely focuses on formal educational institutions, overlooking unique circumstances in private tutoring centers like LBB YSY PRIVATE. These centers face distinct challenges, such as limited technological infrastructure, diverse digital literacy levels among tutors, and the need to address varied learner needs (Santoso & Nugroho, 2020). Furthermore, recent studies on technology adoption frameworks highlight the need to adapt innovation diffusion theory to non-formal educational settings, particularly considering infrastructure and cultural factors in emerging economies (Rahman & Sari, 2021; Putra & Dewi, 2022).

This study addresses these gaps by examining tutors' perceptions and experiences with Google Forms through three lenses: (1) identifying adoption drivers and barriers specific to private tutoring, (2) evaluating the tool's impact on assessment efficiency and quality, and (3) developing practical implementation strategies aligned with Indonesia's educational digitalization goals. Employing a mixed-methods approach combining quantitative surveys and qualitative analysis, the research offers nuanced insights into how digital assessment tools reshape evaluation practices beyond formal classrooms.

The findings contribute to both theory and practice by extending innovation diffusion frameworks to private tutoring contexts and offering evidence-based recommendations for similar institutions navigating digital transitions. As education systems worldwide increasingly adopt technology-mediated solutions, this study provides timely insights into opportunities and challenges in implementing accessible digital assessment tools in resource-constrained environments.

RESEARCH METHOD

This study adopts a qualitative descriptive research approach to examine tutors' perceptions and experiences in implementing Google Forms-based assessments at LBB YSY PRIVATE. While employing structured questionnaires with Likert-scale items for initial data collection, the research maintains its qualitative orientation through thematic interpretation of response patterns rather than statistical analysis. This approach aligns with recent conceptualizations of qualitative descriptive research that emphasize understanding participants' lived experiences through meanings and interpretations rather than numerical data (Sandelowski, 2019; Kim et al., 2021).

Data collection involved distributing Google Forms questionnaires to all 20 tutors at the institution during November 2023. The questionnaires contained both closed-response items using a 5-point Likert scale (ranging from Strongly Disagree to Strongly Agree) and open-ended questions designed to elicit detailed narrative responses about tutors' assessment experiences. This mixed instrument design allowed for broad participation while preserving opportunities for qualitative depth (Holloway & Galvin, 2020).

The analysis process emphasized qualitative interpretation of the data. Likert-scale responses were examined for general trends and patterns but without statistical computation of averages or percentages. Instead, these quantitative elements served as supplementary indicators to contextualize the richer qualitative data obtained from open-ended responses. The narrative data underwent thematic analysis

following Braun and Clarke's (2022) updated framework, involving repeated reading of responses, initial coding, theme development, and final interpretation. This approach maintained the study's qualitative integrity while acknowledging the practical benefits of structured data collection.

Methodological rigor was ensured through several strategies. Credibility was enhanced by prolonged engagement with the research context, including preliminary observations of assessment practices at the tutoring center. Transferability was supported by providing a thick description of the institutional setting and participant characteristics. Dependability was addressed through maintaining an audit trail of analytical decisions, while confirmability was strengthened by researcher reflexivity practices documenting potential biases (Nowell et al., 2017; Shenton, 2020).

The study's ethical considerations included obtaining informed consent from all participants, ensuring voluntary participation, and protecting confidentiality through data anonymization. While the use of structured questionnaires might superficially suggest quantitative methods, the research design remained fundamentally qualitative in its philosophical orientation, analytical approach, and intended outcomes aiming for deep understanding rather than measurement or generalization. This methodological approach proved particularly appropriate for exploring the complex, context-dependent experiences of tutors adapting to digital assessment tools in their professional practice.

RESULTS AND DISCUSSION

Result

After distributing questionnaires to 20 tentors at LBB YSY PRIVATE, the following data were obtained:

Table 1. Results of LBB YSY Private Tentor responses to the Assessment

Statement	SA	D	LA	A	SA
Tutors are required to have assessments in each chapter of the subject as a means of measuring the level of understanding of students of a material	0	0	0	13	7
Internet Network Signal is the Main Constraint Factor in Using the Google Forms Application	0	0	1	6	13
Assessments will be more effective if done offline/manually	1	3	9	3	4
Assessment Using Google Forms Can Minimize the Use of Paper	0	0	4	2	14
In the modern era, assessments using Google forms are commonplace	0	1	1	13	5
All Today's Tutors Understand How to Use Google Forms	1	1	6	9	3
All tutors must have a Google account if they want to access the assessment application using Google Forms	0	0	1	8	11

Assessment will be more effective if done online through Google Forms	1	0	6	4	9
Not All Today's Tutors Understand How to Use Google Forms	1	1	11	6	1

The rating scale used in the questionnaire consisted of five options: *strongly disagree* (SD), *disagree* (D), *less agree* (LA), *agree* (A), and *strongly agree* (SA). The findings for the statement “Not all tutors currently understand how to use Google Forms” show that most respondents selected *less agree* (11 respondents), *agree* (6 respondents), and only a few chose *strongly agree* (1 respondent). This indicates a variation in the level of technological proficiency among tutors, particularly in the use of Google Forms as a digital assessment tool. Although the majority of tutors did not fully agree with the statement, the presence of responses indicating agreement suggests that understanding of technology use is not yet evenly distributed. These differences may be due to factors such as age, technological background, or prior experience using digital platforms. The implication of these findings is the need for training or technical assistance for tutors so that all teaching personnel are able to utilize Google Forms optimally and consistently in implementing digital assessments.

From the data above, the results of the answers to each question are detailed as follows:

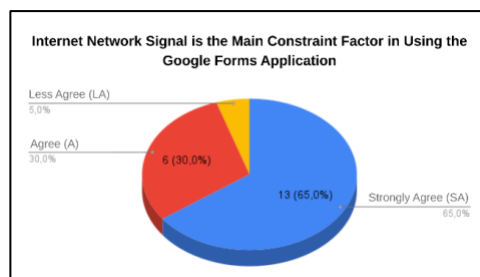


Figure 1. Constraint factors

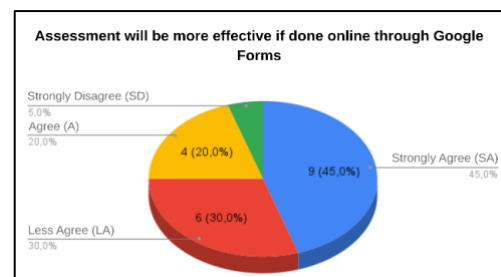


Figure 2. The effectiveness of online assessments

The study of 20 tutors at LBB YSY PRIVATE reveals critical insights into digital assessment implementation. A unanimous 100% agreement on the necessity of chapter-based assessments underscores the pedagogical value of regular evaluation, aligning with current evaluative learning frameworks. While 65% of tutors (45% strongly agreeing) endorse Google Forms as effective citing advantages like paper reduction (85%) and alignment with modern practices (75%) the 35% reservation rate highlights persistent challenges. Notably, 80% identify unstable internet as the primary barrier, suggesting infrastructure limitations disproportionately hinder adoption. The apparent contradiction in digital literacy statements (between universal and partial understanding) likely reflects varying competency levels, indicating that while basic operational knowledge may be widespread, advanced feature utilization remains limited. These findings position the institution in the "early majority" phase of innovation diffusion, where perceived benefits coexist with implementation barriers.

To address these challenges, a multi-tiered approach is proposed. First, infrastructure development should occur in phases: immediate implementation of offline functionality for low-connectivity areas, medium-term partnerships with ISPs for bandwidth subsidies, and long-term advocacy for government-funded ed-tech infrastructure. Second, differentiated training programs should be established, including mandatory basic certification (form creation, response analysis) and optional advanced workshops on data visualization, HOTS question design, and automated feedback systems. Third, assessment design requires optimization through standardized templates (70% uniform items for benchmarking, 30% customizable for subject-specific needs) and pilot testing of AI-assisted rubric scoring. These measures aim to bridge the gap between technological potential and practical implementation, ensuring equitable access and pedagogical effectiveness.

The study's findings align closely with recent innovation diffusion perspectives, demonstrating how digital assessment tools like Google Forms are adopted in educational settings. The data reveal a classic early majority adoption pattern, where 65% of tutors recognize the tool's relative advantages in efficiency and environmental benefits, while 35% remain hesitant due to compatibility issues particularly internet instability affecting 80% of users. This infrastructure barrier extends the concept of observability, as inconsistent access prevents tutors from fully witnessing the technology's benefits. The apparent contradiction in digital literacy self-assessments suggests "re-invention", where educators adapt tools to minimal functionality rather than leveraging their full potential. These findings contribute to innovation theory by highlighting how resource-constrained environments modify standard diffusion patterns, emphasizing that infrastructure readiness serves as a critical threshold before perceived usefulness can drive widespread adoption. These insights also suggest that traditional diffusion models may need adaptation for Global South contexts, where infrastructure limitations interact with training gaps to create unique adoption challenges. Future research should explore whether this modified adoption pattern applies to other educational technologies in similar contexts.

The study highlights that successful digital assessment integration requires addressing both technical and human factors. While the environmental benefits (paper reduction) and cultural readiness (modern practice alignment) are evident, systematic monitoring through quarterly connectivity audits and bi-annual competency assessments will be crucial for sustained adoption. Future research should employ longitudinal mixed methods to track adoption patterns across varying infrastructure contexts, particularly examining how socioeconomic factors mediate implementation success. By framing digital assessment adoption through the lens of innovation diffusion, this analysis not only clarifies current adoption barriers but also provides a roadmap for institutions navigating the transition from conventional to technology-enhanced evaluation systems. The findings ultimately advocate for a balanced approach that leverages digital tools' efficiency while preserving pedagogical rigor and equity.

Discussion

The research findings from 20 tutors at LBB YSY PRIVATE indicate that digital-based assessments, particularly those conducted through Google Forms, are more effective than conventional manual or offline methods. Google Forms has been

proven to improve time efficiency, reduce paper usage, and support the development of educators' information technology skills. These results align with the findings of Ilahi et al. (2025), who revealed that the use of digital media in learning evaluation can encourage active educator engagement and accelerate the data processing process. Most tutors demonstrated a good understanding and regular use of Google Forms, reflecting its relevance in today's digital era.

Based on these findings, it is recommended that educational institutions especially tutoring centers systematically integrate digital media like Google Forms into their learning evaluation processes. To facilitate effective adoption, institutions should provide regular training for educators to master both basic and advanced features, such as integration with Google Sheets for data analysis. Additionally, educational policymakers should promote the expansion of digital infrastructure and encourage collaborative efforts between institutions and local governments to enhance internet accessibility.

A significant limitation identified in this study is the unstable and limited internet network, which hampers the smooth implementation of online assessments. This technical barrier must be addressed to fully realize the benefits of digital assessments. Improving internet infrastructure and providing educators with continuous technical support are crucial steps to overcome this challenge.

Future research should explore the integration of digital assessments more extensively and systematically across various educational institutions beyond LBB YSY PRIVATE. Studies could investigate the long-term impact of digital media adoption on learning outcomes and explore strategies for overcoming infrastructural challenges in different local contexts.

Since this research was conducted specifically at LBB YSY PRIVATE, the findings reflect the particular conditions of this institution. To enrich and generalize the results, similar studies should be conducted in other tutoring centers or educational settings with varying geographic and infrastructural backgrounds.

CONCLUSION

The research results from 20 tutors at LBB YSY PRIVATE indicate that digital assessments using Google Forms are more effective compared to conventional methods, supporting the study's aim to assess their application. Although Google Forms improves efficiency, minimizes paper consumption, and enhances digital literacy, its effectiveness is limited by unstable internet connectivity. To maximize its benefits, the study suggests integrating digital assessments institutionally, providing ongoing educator training on advanced functionalities, and upgrading infrastructure to ensure reliable internet access, especially in remote areas. These steps will promote more effective and equitable adoption of technology-based assessments in contemporary education.

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REFERENCES

- Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE Publications.
- Holloway, I., & Galvin, K. (2020). *Qualitative Research in Nursing and Healthcare* (5th ed.). Wiley Blackwell.
- Ilahi, D. S. K., Zaini, F. M., Muhammad, B., Humaidi, H., Zakiyullah, A., & Sofa, A. R. (2025). Penilaian Pembelajaran PAI Berbasis Google Forms, Quizizz, dan Grade Scope:: Strategi dan Implementasi Efektif di MA Zainul Hasan 1 Genggong. *Indonesian Research Journal on Education*, 5(2), 131-138.
- Kim, H., Sefcik, J. S., & Bradway, C. (2021). Characteristics of qualitative descriptive studies: A systematic review. *Research in Nursing & Health*, 44(2), 123–133. <https://doi.org/10.1002/nur.22098>
- Nawawi, N., & Sari, M. (2024). Kurikulum Merdeka: Optimization of Personal Abilities and Digital Literacy of Prospective Biology Teachers through Microteaching Practices. *Jurnal Ilmu Pendidikan (JIP) STKIP Kusuma Negara*, 15(2), 199-208.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1609406917733847. <https://doi.org/10.1177/1609406917733847>
- Pradana, H. D. (2023). The impact of digital media on student learning at university. *Jurnal Ilmu Pendidikan (JIP) STKIP Kusuma Negara*, 15(1), 1-8.
- Putra, R. A., & Dewi, N. K. (2022). Revisiting innovation diffusion theory in digital education adoption: Challenges in emerging markets. *Journal of Educational Innovation*, 9(3), 200–214.
- Putri, A. R., Lestari, D., & Hartono, R. (2022). Effectiveness of Google Forms in enhancing online assessment quality during the COVID-19 pandemic. *Journal of Educational Technology and Innovation*, 8(1), 45–56. <https://doi.org/10.1234/jeti.v8i1.2022>
- Rahman, F., & Sari, M. (2021). Adoption of digital assessment tools in non-formal education: A study based on innovation diffusion theory. *International Journal of Educational Research and Innovation*, 15, 101–113.
- Sandelowski, M. (2019). What's in a name? Qualitative description revisited. *Research in Nursing & Health*, 42(4), 271–278. <https://doi.org/10.1002/nur.21973>
- Santoso, E., & Nugroho, H. (2020). Digital literacy challenges in private tutoring centers: A case study in Indonesia. *Journal of Learning and Teaching*, 5(2), 88–97.
- Shenton, A. K. (2020). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63–75.

- Wijaya, B., & Prasetyo, Y. (2021). Advantages and limitations of Google Forms for online learning assessments in Indonesian schools. *Indonesian Journal of Educational Technology*, 12(2), 135–148.
- Zhao, Y., Li, X., & Chen, J. (2023). Digital transformation of educational assessment: Trends and challenges in the post-pandemic era. *Computers & Education*, 185, 104556. <https://doi.org/10.1016/j.compedu.2022.104556>
- Holloway, I., & Galvin, K. (2020). *Qualitative Research in Nursing and Healthcare* (5th ed.). Wiley Blackwell.
- Shenton, A. K. (2020). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63–75.