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Research Paper

A Workshop on the Implementation of Alternative Digital Assessment Media for Teachers at Pondok Pesantren Al Jauharen Jambi

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ABSTRACT

This community service program aims to empower teachers (ustadz–ustadzah) at Pondok Pesantren Al Jauharen Jambi through a workshop on implementing alternative digital assessment media, particularly Google Forms and Quizizz, to enhance the effectiveness, variety, and accuracy of learning assessment. The main problems identified among the partners include the low utilization of digital assessment tools, limited variety and quality of assessment instruments, time-consuming manual scoring processes, and the absence of standardized procedures for digital assessment at the institutional level. The program was designed using a needs-based capacity-building approach and implemented in four stages: preparation, implementation, assistance, and evaluation. The preparation stage consisted of a rapid needs assessment, the development of training modules, and technical coordination with the partner institution. The implementation stage comprised theoretical and demonstration sessions, guided practice, and simulations of digital assessments. The assistance stage involved technical clinics for individual teachers and a review of the assessment instruments they developed. The evaluation stage included pre–post competency tests, satisfaction questionnaires, and monitoring of digital assessment adoption in actual classroom practice.

Keywords: digital assessment, Google Forms, Quizizz, pesantren, teacher competency development.

INTRODUCTION

The ongoing digital transformation in education requires institutions at all levels, including Islamic boarding schools (pesantren), to enhance information and communication technology (ICT) literacy and to integrate technology into both teaching and assessment processes (Ismawati & Ramadhanti, 2022; Kennedy, 2023). Pondok Pesantren Al Jauharen Jambi, established around 1927 and currently serving approximately 600 students (santri), combines religious education with the national curriculum. This dual mandate positions the pesantren as an institution that must integrate religious values with 21st-century competencies, including the effective use of digital technologies for learning assessment.

Initial observations and a needs analysis conducted at Pondok Pesantren Al Jauharen Jambi revealed that the use of digital media for assessment remains limited. Assessment methods have not yet been sufficiently varied, while scoring and record keeping are still primarily conducted manually, and there is no standardized set of instruments and procedures for digital assessment at the institutional level. These conditions result in delayed feedback for students, a lack of structured data for reflection and instructional improvement, and a high workload for teachers in processing and reporting assessment results. Such challenges are consistent with broader findings that low digital readiness among educators and weak institutional frameworks can hinder the effective integration of technology into educational practice (Manongga et al., 2022; Madjid, 2021; Yahya et al., 2023).

A growing body of literature indicates that professional development in educational ICT, including the use of artificial intelligence (AI) and interactive digital tools, can enhance teachers' technological competencies, support the development of higher-quality assessments, and improve student motivation (Ismawati & Ramadhanti, 2022; Ronsumbre et al., 2023; Diantama, 2023). Digital assessment media such as Google Forms and Quizizz offer features for creating varied item formats, performing automatic scoring, generating basic analytics, and providing instant feedback. These features have been shown to increase student engagement and promote more efficient assessment processes, particularly when teachers receive structured training and ongoing support (Manongga et al., 2022; Pambudi et al., 2023; Ronsumbre et al., 2023).

At the same time, recent discussions on digitalization and AI in education emphasize the need to strengthen teachers' professional and leadership capacities to manage change and guide students through increasingly complex learning environments (Chang & Arisanti, 2022; Prastiwi & Widodo, 2023; Arisanti et

al., 2024). In religious and value-laden contexts such as pesantren, the adoption of digital technologies is not only a matter of technical skill but also of aligning new tools with institutional culture and educational goals. Studies on the positive and negative impacts of AI in learning underscore the importance of critical and context-sensitive implementation strategies (Madjid, 2021; Diantama, 2023).

The present community service program is aligned with the Merdeka Belajar–Kampus Merdeka (MBKM) policy and university performance indicators (IKU), particularly those related to student involvement in off-campus activities and the utilization of lecturers' work by society (Kennedy, 2023; Ramadhina et al., 2023). By involving university students in field-based, community-oriented activities, the program also supports the development of 21st-century competencies and meaningful experiential learning opportunities (Chang & Arisanti, 2022; Prastiwi & Widodo, 2023). In addition to strengthening digital assessment competencies, the program addresses aspects of institutional governance, including assessment data management, the scheduling of assessment activities, and internal communication, to make digital assessment practices more integrated and sustainable at Pondok Pesantren Al Jauharen Jambi.

Within this broader context, the main objective of the program is to improve teachers' competence in designing and managing digital assessments using Google Forms and Quizizz. Specifically, the program seeks to enhance teachers' skills in creating varied digital assessment instruments and managing quiz or class spaces on these platforms, to encourage the implementation of pilot digital assessments in regular teaching sessions, to provide training modules and ready-to-use item bank templates accompanied by standard operating procedures (SOPs) for digital assessment, to establish a community of practice as a platform for knowledge sharing and sustainability, and to lay the groundwork for data-based decision making through the use of assessment analytics generated by digital platforms (Ismawati & Ramadhanti, 2022; Manongga et al., 2022; Ronsumbre et al., 2023).

METHOD

This community service program employed a needs-based capacity-building approach to strengthen teachers' digital assessment competencies. The activities were organized into four main stages: preparation, implementation, assistance, and evaluation.

In the preparation stage, a rapid needs assessment was conducted to map teachers' baseline ICT competencies, their access to devices and internet connectivity, their familiarity with existing platforms, and their operational constraints in conducting assessments, such as workload, time allocation, and institutional support. Based on the results of this needs assessment, the team developed training modules and instructional materials that included step-by-step guides for using Google Forms and Quizizz, editable item bank templates, guidelines for configuring automated feedback and scoring, SOPs for implementing digital quizzes and

assessments, and checklists to guide classroom implementation. During this stage, technical coordination was also carried out with the management of Pondok Pesantren Al Jauharen Jambi in order to align the activity schedule with the pesantren's agenda, appoint local coordinators, and ensure the availability of rooms, devices, and internet access.

The implementation stage took the form of a workshop divided into three main sessions: theory and demonstration, guided practice, and simulation, combined with the sharing of good practices. The first session introduced participants to the concepts of digital and authentic assessment, as well as to the advantages and limitations of Google Forms and Quizizz. This session also covered account, class, and quiz room management and presented examples of formative and summative assessments using digital platforms. The second session focused on guided practice, during which participants developed various item types, including multiple-choice, short-answer, and brief stimulus-based constructed-response items. They also practiced integrating multimedia (images and videos) into items, setting scoring and answer keys, configuring automated feedback, and developing simple item banks aligned with their respective subject areas. The third session involved simulations of quiz implementation using the participants' own accounts, reflection on their experiences as both "teachers" and "students," the use of basic analytics features such as score summaries and response distributions, and group discussions to share good practices.

Figure 1. Workshop documentation

The assistance stage comprised on-site and online mentoring or technical clinics for individual teachers and classes. In this stage, the team supported participants in resolving access and platform

configuration issues, reviewed the assessment instruments they developed, and provided formative feedback on item quality and alignment with learning objectives. In order to address constraints related to device availability and internet connectivity, several adaptive implementation strategies were adopted. These included group-based practice using a single device for several students, semi-online modes in which students completed tasks offline and later submitted their responses digitally when a connection was available, and the use of shared accounts for particular classes when individual device access was not feasible.

In the evaluation stage, the program outcomes were assessed using pre–post competency tests, satisfaction and readiness questionnaires, and monitoring of digital assessment adoption in actual teaching practice. The pre- and post-tests measured changes in participants' knowledge and skills in operating the digital assessment platforms. The questionnaires captured participants' perceptions of the relevance and quality of the training content and facilitation, as well as their readiness to implement digital assessments in their own classes. Monitoring focused on the number of quizzes created and administered, the number of participating students, the estimated time needed to complete the quizzes, and summary data on student performance, such as scores, distributions, and common errors. Documentation in the form of photographs, videos, attendance lists, samples of participants' assessment instruments, and outputs from quiz simulations was also collected.

Intermediate performance indicators were set to ensure that at least 80 to 90 percent of participants would demonstrate improvement in their pre–post test scores, that at least 70 percent of participants would implement digital assessments within two weeks after the workshop, and that the community of practice would remain active for at least one month after the core activities. The overall timeline followed the approved proposal: the first month was dedicated to preparation and needs assessment, the second to the core workshop and initial assistance, and the third to extended assistance, monitoring, evaluation, reporting, and dissemination.

DISCUSSION

Implementation of the program up to the interim reporting stage has yielded results consistent with the initial design. In the preparation and design stage, the needs assessment successfully mapped the diversity of teachers' ICT competencies, which ranged from beginner to intermediate levels. Many teachers were already somewhat familiar with the Google ecosystem, particularly Gmail and Google Drive, which made Google Forms a relatively accessible entry point compared with other platforms. This finding is in line with studies showing that prior exposure to general digital tools can facilitate the adoption of more specific educational technologies (Ismawati & Ramadhanti, 2022; Kennedy, 2023). The mapping also identified

specific periods during the day when internet connectivity was unstable, and this information was used to schedule practice sessions and simulations at more suitable times.

The training modules and practice materials were compiled systematically and were perceived as helpful by participants. These materials included editable Google Forms and Quizizz templates, clear guides for configuring automated feedback and score summaries, examples of assessment analytics such as score distributions and item performance, standard operating procedures for implementing digital quizzes in the pesantren context, and operational checklists to support standardized digital assessment procedures. The comprehensiveness of these resources reflects recommendations in the literature that emphasize the importance of structured, step-by-step guidance when introducing digital tools to educators (Ronsumbre et al., 2023; Yahya et al., 2023).

The workshop achieved the targeted attendance and was characterized by active engagement. During the guided practice sessions, most participants were able to design quizzes using multiple-item formats, set up automatic scoring and answer keys, design instant feedback for both correct and incorrect responses, and compile simple item banks corresponding to the subjects they taught. This pattern aligns with findings that hands-on training focusing on authentic classroom tasks tends to yield higher levels of teacher engagement and skill acquisition in educational technology programs (Manongga et al., 2022; Pambudi et al., 2023).

Improvement in participants' competencies was reflected in increased pre–post test scores and the enhanced quality of the assessment instruments produced. Initial analysis of the instruments suggested clearer learning indicators, greater consistency in item formats, and more substantial alignment between learning objectives and the tasks used to assess them. Such improvements resonate with prior evidence that targeted training and guided practice in assessment design can positively affect the validity and reliability of teacher-developed instruments (Ismawati & Ramadhanti, 2022; Arisanti et al., 2024).

During the initial assistance stage, several teachers piloted digital assessments in one or two classes. From these pilots, basic data were obtained, including the number of participating students, quiz completion rates, and the average time required for students to complete each assessment. Teachers began using these data as a starting point for reflecting on their instructional practices, particularly to identify topics that students found difficult and to consider appropriate follow-up teaching strategies. This emerging use of data echoes the shift toward evidence-based decision-making in educational practice, as discussed in recent studies on AI and digitalization in education (Manongga et al., 2022; Ramadhina et al., 2023; Diantama, 2023).

The program also documented the emergence of a community of practice among teachers. A WhatsApp group and shared Google Drive folders were established and used as platforms for communication, template sharing, and consolidation of a shared item bank. This community remained active within the first month after

the core workshop, indicating positive initial momentum toward sustainability. The formation of such professional learning communities has been highlighted in the literature as a key factor in sustaining training program outcomes and supporting continuous professional growth (Chang & Arisanti, 2022; Prastiwi & Widodo, 2023).

At the same time, several challenges were recorded that affected the pace and depth of implementation. These included variation in ICT literacy among teachers, limited availability of devices for simultaneous use by students, and unstable internet connectivity at times. While these issues did not prevent the program from achieving its immediate objectives, they influenced individual teachers' readiness and the extent to which digital assessment practices could be consistently integrated into their teaching. Similar structural and contextual constraints have been reported in other studies on the integration of digital or AI-based tools in schools and vocational education settings (Madjid, 2021; Yahya et al., 2023).

The results of this program provide empirical support for the argument that structured professional development in educational technology can enhance teachers' readiness to adopt digital assessment tools. The observed improvements in teachers' ability to design varied digital assessment instruments and manage quiz environments on Google Forms and Quizizz are consistent with previous studies showing that ICT training contributes to increased technological competence and improved quality of evaluation processes (Ismawati & Ramadhanti, 2022; Manongga et al., 2022; Ronsumbre et al., 2023). The combination of quantitative evidence from pre–post tests and qualitative improvements in the assessment instruments suggests that the program has fostered both conceptual understanding and practical skills.

The successful implementation of pilot digital assessments in regular classes indicates that the training translated into observable changes at the classroom level. By using digital platforms, teachers were able to obtain scores and basic statistics more quickly than with traditional paper-based methods, which corroborates prior findings on the efficiency gains associated with digital and AI-supported assessment (Kennedy, 2023; Diantama, 2023). The availability of structured data—including score distributions, item-level performance, and patterns of common errors—enabled teachers to conduct more systematic reflection on their teaching. This aligns with broader discussions on the role of data-driven practices and analytics in enhancing feedback loops and improving learning outcomes (Manongga et al., 2022; Ramadhina et al., 2023).

The emergence of a community of practice among teachers at Pondok Pesantren Al Jauharen Jambi also has important implications for sustainability. Professional learning communities have been recognized as effective mechanisms for supporting continuous professional development, strengthening teacher collaboration, and maintaining innovation beyond the initial intervention period (Chang & Arisanti, 2022; Prastiwi & Widodo, 2023). In this program, the WhatsApp group and shared Google Drive folders served as

informal yet active platforms for peer support, resource exchange, and collaborative curation of item banks. This finding aligns with the view that social and organizational support structures are as critical as individual skills in sustaining the integration of new technologies in educational settings.

At the same time, the challenges documented in the program underscore the need to address structural and contextual factors when promoting digital assessment in resource-constrained environments. Variation in ICT literacy across teachers suggests that professional development programs should offer differentiated pathways, with more intensive, foundational support for beginners and more advanced, analytic-oriented modules for those with higher initial competencies. This is consistent with recommendations from studies on AI and digital tools in education, which highlight the importance of tailoring training to diverse needs and levels of readiness (Yahya et al., 2023; Arisanti et al., 2024).

Constraints related to device availability and unstable internet connectivity highlight the relevance of hybrid and semi-online models of assessment that do not rely exclusively on continuous high-quality connections. The adaptive strategies developed in this program—such as group-based device sharing, offline or semi-online task completion, and the use of shared accounts—demonstrate practical approaches to implementing digital assessment in such contexts. These strategies resonate with findings that emphasize flexibility and contextual adaptation as key principles in the digitalization of learning and assessment, particularly in under-resourced schools and pesantren (Madjid, 2021; Ronsumbre et al., 2023).

From a governance perspective, the results emphasize the importance of institutionalizing digital assessment through policies, SOPs, and minimum technical standards. Without this institutional anchoring, the use of digital assessment tools risks remaining dependent on the motivation of individual teachers and may be difficult to sustain in the face of staff turnover or shifting priorities. The development of internal standards—such as naming conventions for forms and files, standardized item structures and rubrics, and a centralized digital item bank—is in line with calls in the literature for more robust management frameworks to support the integration of digital and AI-based solutions in education (Kennedy, 2023; Diantama, 2023).

, the findings of this program align with the broader agenda of digital transformation in education and with policy directions such as MBKM and university performance indicators. By involving university students in community-oriented digital education initiatives, the program simultaneously addresses school-level needs and contributes to higher education goals related to meaningful experiential learning (Chang & Arisanti, 2022; Ramadhina et al., 2023). While more detailed quantitative analysis—such as statistical testing of pre–post differences and finer-grained analysis of quiz usage patterns—is still needed to further strengthen the evidence base, the interim results already indicate that targeted training, practical support, and attention to sustainability can produce tangible changes in teachers' assessment practices within a relatively short period.

CONCLUSION

The digital assessment workshop program at Pondok Pesantren Al Jauharen Jambi has contributed to improving teachers' initial competencies in designing and managing assessments using Google Forms and Quizizz. The implementation of digital assessments has accelerated the scoring process, increased teachers' efficiency, and generated structured data for feedback and instructional reflection. Classroom pilots have demonstrated the potential of digital quizzes to enhance student engagement through interactive and varied assessment formats.

Challenges related to device limitations, internet connectivity, and heterogeneous ICT literacy were addressed through group-based practice, ready-to-use templates, adaptive scheduling, and small-scale mentoring. Based on these experiences, several recommendations can be put forward. The pesantren is encouraged to formalize SOPs for digital assessment at the institutional level, to strengthen the teacher community of practice as a platform for peer learning, to expand and enrich a shared item bank across subjects, and to disseminate program outcomes through both academic and popular publications so that the model can be replicated in other educational settings with similar characteristics.

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