

Enhancing Learning and Assessment Management through Microsoft Teams Training at MA Nurul Qadim

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ABSTRACT

The rapid digital transformation in education has redefined teaching and assessment practices, demanding teachers to strengthen their competence in managing technology-based learning environments. This community service project aimed to enhance the digital capacity of teachers at MA Nurul Qadim by implementing Microsoft Teams as a central platform for instruction, collaboration, and assessment. The program employed a combination of applied training, participatory practice, and continuous mentoring to build teachers' digital literacy and pedagogical adaptability. Through hands-on workshops, teachers learned to create virtual classrooms, organize learning materials, conduct interactive sessions, and manage student assessment within the platform. Evaluation results, drawn from pre- and post-training assessments, classroom observations, and reflective interviews, revealed a significant increase in teachers' digital competence and confidence in using Microsoft Teams for instructional purposes. Moreover, the initiative produced Standard Operating Procedures (SOPs) to ensure consistent and sustainable digital practices across the institution. Overall, the project underscores that contextually grounded and structured professional development can effectively foster teachers' technological proficiency, encourage innovation in pedagogical approaches, and build a resilient school culture that is responsive to ongoing educational transformation.

Keywords: Digitalization, Microsoft Teams, Professional Development, Teacher Training

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INTRODUCTION

Education plays a vital role in developing competent and character-driven human resources capable of facing the challenges of global transformation (Sidik et al., 2024). In the era of the Fourth Industrial Revolution and Society 5.0, educational institutions are required to integrate digital technology into learning

management and assessment processes (Ariska et al., 2025). However, digital transformation in education should not be understood merely as the adoption of tools; it also demands a paradigm shift in mindset and pedagogical management to ensure that technology genuinely enhances to the quality of teaching and learning (Oktavia, 2025).

Preliminary observations at MA Nurul Qadim, a private Islamic senior high school in Probolinggo Regency, East Java, found that the majority of teachers maintained to use traditional teaching methods and manual assessments. Approximately 72% of teachers continued to use traditional ways, with only a few experimenting with Microsoft Teams or alternative systems like Google Classroom. Most communication with students occurred through WhatsApp groups, and grading was done manually, resulting in inefficiencies and weak documentation. These conditions illustrate a significant gap between the growing demands of digital education and teachers actual practices in madrasah-based learning environments (Afra et al., 2025).

Although the COVID-19 pandemic temporarily accelerated the use of digital tools, this momentum declined after the return to face-to-face learning (F. M. Fauzi et al., 2024). Interviews with the principal and teachers indicated that the main challenges include (1) the absence of structured and practical training aligned with classroom realities, (2) limited understanding of Microsoft Teams features for classroom management and digital assessment, (3) reliance on traditional pedagogical methods, and (4) inadequate infrastructure and lack of standardized operational guidelines. This situation mirrors the broader challenges in many rural Islamic schools, where digital transformation efforts often remain fragmented, unsystematic, and unsustainable (Anwar et al., 2025).

Previous community service projects have primarily aimed to improve teachers' digital literacy using generic platforms such Google Classroom or short-term digital skills courses. However, these initiatives infrequently address the pedagogical and contextual concerns of madrasah teachers, who have to integrate technology into faith-based educational frameworks. Meanwhile, studies on Microsoft Teams highlight its potential to improve learning efficiency and teacher-student collaboration, yet most of these studies were conducted in urban or technologically advanced institutions. Consequently, there remains a research and practice gap concerning how Microsoft Teams can be effectively implemented in rural Islamic schools that strive to balance digital modernization with the preservation of moral and religious values.

The novelty of this project lies in its development of a contextualized and sustainable digital training model specifically designed for teachers in rural Islamic schools. It introduces a continuous mentoring system and the formulation of Standard Operating Procedures (SOPs) to institutionalize digital practices

beyond the training phase. Academically, this project expands the discourse on digital transformation in Islamic education by presenting an empirical, context-sensitive model for resource-limited madrasahs. Practically, it empowers teachers to use Microsoft Teams innovatively and effectively, aligning digital transformation with the school's vision of becoming an "Adaptive Smart Islamic School."

Based on this rationale, the objectives of this Community Service project are: (1) To strengthen teachers' digital competence and pedagogical mindset in utilizing Microsoft Teams as a platform for learning and assessment management, and (2) To design, implement, and institutionalize a continuous mentoring model that promotes a sustainable digital culture within the madrasah.

METHOD

This community service project employed a participatory approach integrated with an action research design, engaging teachers actively in every stage of the program to promote ownership, reflection, and long-term sustainability (Utomo et al., 2025). The participants consisted of 25 teachers from MA Nurul Qadim, purposively selected based on their teaching activity, openness to innovation, and commitment to implementing digital learning. The participants' ages ranged from 27 to 52 years, with teaching experience varying between 3 and 25 years. Most teachers had limited prior experience in managing digital classrooms and online assessments.



Figure 1. Front View of MA Nurul Qadim

The program was conducted in three systematic stages: (1) planning, (2) implementation, and (3) monitoring and evaluation (Nur et al., 2022). In the planning stage, a comprehensive needs assessment was carried out through interviews and digital literacy surveys involving the principal, teachers, and IT staff. The research identified several obstacles to digital integration, including insufficient platform familiarity and inadequate access to digital devices. These findings drove the construction of a customised Microsoft Teams training

curriculum focusing on class administration, digital material organization, student involvement, and evaluation tools (Elbanisa & Sueb, 2022). Preparations during this stage also included ensuring adequate facilities such as training devices, reliable internet connections, and printed training modules. Furthermore, a dedicated implementation team: comprising a program coordinator, facilitators, technical support, and documentation staff was formed to ensure smooth execution. The planning phase lasted for two weeks and laid a strong foundation for the next stages (Firdaus et al., 2025).

The implementation stage began with an orientation and socialization meeting involving school leadership to build shared commitment toward digital transformation. This was followed by a five-day intensive workshop combining demonstrations, guided practice, and peer collaboration. During this period, teachers learned to create and manage digital classrooms, upload learning materials, assign tasks, and assess student work using Microsoft Teams. To reinforce learning, a three-week mentoring phase followed the main training (Asriadi et al., 2024). Facilitators offered both online and offline coaching sessions to help instructors implement newly gained digital skills directly in their classrooms. One significant accomplishment of this phase was the joint production of a Standard Operating Procedures (SOPs) document to support the long-term sustainability of digital teaching methods at the school (Rufino et al., 2025).

The monitoring and evaluation stage utilized mixed-method approaches to measure teachers' progress comprehensively (Salajegheh et al., 2024). Evaluation focused on both technical competence and attitudinal change, as summarized in Figure 1. Data were collected through pre- and post- tests, digital classroom observations, self-assessment questionnaires, and reflective interviews. The results provided valuable insights into teachers' growth, confidence, and behavioral change after the training (Muhammad et al., 2025).

To ensure that the program's outcomes were evaluated comprehensively and objectively, a mixed-methods analytical framework was employed. This approach was selected to integrate the measurable results of teachers' digital competence improvement with in-depth insights into their behavioral and attitudinal transformations. By combining statistical testing with interpretive thematic analysis, the study was able to capture both the quantitative effectiveness of the training intervention and the qualitative nuances of teachers' experiences throughout the digital capacity-building process (Guetterman et al., 2024).

Quantitative data (pre-test and post-test scores) were analyzed using paired-sample t-tests in SPSS to determine whether there was a statistically significant improvement in teachers' digital competence after the program (Handayani &

Mulyono, 2025). Mean scores and standard deviations were compared, and effect sizes (Cohen's *d*) were calculated to measure the magnitude of improvement.

Qualitative data from observation notes and reflective interviews were analyzed using thematic analysis, following Braun and Clarke's (2006) six-step framework (Amri, 2025): familiarization, coding, theme generation, review, definition, and interpretation to identify key behavioral and attitudinal changes among teachers.

Ethical approval for this project was granted by the Community Service Ethics Committee of Nurul Jadid University. All participants were informed about the program objectives, procedures, and data confidentiality. Written informed consent was obtained before participation, and teachers were assured of their right to withdraw from the program at any time without penalty.

The methodological framework is summarized in Figure 1, illustrating the cyclical and participatory nature of the project.

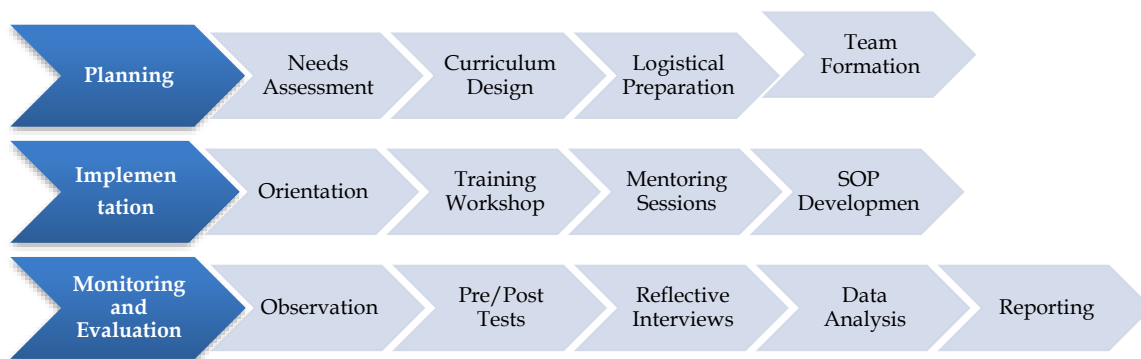


Figure 2. Research Design and Implementation Flow

This structured methodological design provides a repeatable and ethical approach for improving teachers' digital competency, particularly in terms of integrating Microsoft Teams into classroom management, digital content delivery, and formative evaluation. The collaborative and iterative method enhanced teachers' technical skills, but also built their confidence and reflective capacity in integrating digital pedagogy within Islamic education environments (Zaimina & Munib, 2025).

RESULTS AND DISCUSSION

RESULT

The community service project at MA Nurul Qadim effectively improved teachers' digital literacy and their ability to manage technology-enhanced learning and assessment through Microsoft Teams. The evaluation combined pre-post testing, classroom observations, reflective interviews, and feedback surveys to measure both competence gains and attitudinal changes (Nababan et al., 2024).

At the baseline, most participants demonstrated limited digital competence, with an average pre-test score of 58.3/100. Only 28% had prior experience with Microsoft Teams, and anxiety toward technology use was common. As one teacher expressed, *“I often feel confused when asked to use digital platforms. I’m afraid I’ll make mistakes in front of students.”* This aligns with the Technology Acceptance Model (TAM), where low perceived ease of use initially inhibited adoption (Ekaputra et al., 2024).

Following the planned training and mentoring phases, individuals showed significant improvement. The post-test mean increased to 84.7, a 26-point rise. Competence in building virtual classrooms, uploading materials, and constructing digital evaluations increased significantly, as shown in Table 1. These measurable gains support UTAUT’s performance expectancy construct (Tavid & Kurniawati, 2024), teachers adopted Microsoft Teams when its usefulness for classroom management became evident.

Table 1. Pre-test and Post-test Results of Teacher Competency

Indicator	Pre-test (%)	Post-test (%)	Improvement
Ability to create virtual classroom	31	92	+61
Ability to upload materials	24	88	+64
Ability to assign and grade assessments	27	85	+58
Confidence in using Microsoft Teams	36	87	+51

Teachers’ confidence and self-efficacy also increased significantly, consistent with Social Cognitive Theory (SCT), which emphasizes mastery experience and peer modeling (Izzatunnisa et al., 2024). Reflective interviews revealed that 87% of participants reported greater confidence after mentoring, compared to only 36% before. One teacher noted, *“After practicing several times and being guided step by step, I realized Microsoft Teams actually makes my work easier.”*

The project also encouraged a collaborative digital culture. Observation notes documented peer-to-peer assistance during the second training week, indicating emergent informal mentoring. Such collective learning reflects SCT’s concept of reciprocal determinism, where social interaction reinforces behavioral change (Ginting et al., 2024). Additionally, post-program classroom observations showed teachers applying blended learning strategies: using Teams for discussions, file sharing, and online quizzes enhancing student engagement and feedback cycles (Fauziah et al., 2024).

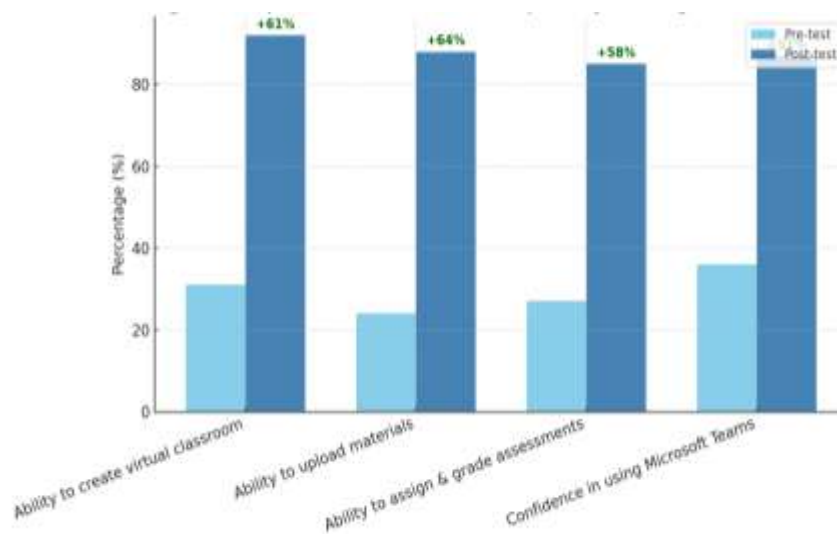


Figure 3. Improvement of Teacher Competency after Microsoft Teams Training

While some participants still faced external constraints such as unstable internet or limited device access, most demonstrated adaptability by collaborating or sharing resources, showing increased digital resilience and professional commitment (Mawaddah et al., 2025).

Overall, the results confirm that the participatory Microsoft Teams training not only improved technical proficiency but also transformed teachers' attitudes and collaborative practices (Pratama & Mansur, 2023), aligning with the theoretical assumptions of TAM, UTAUT, and SCT. This combination of individual confidence, perceived usefulness, and social reinforcement marks the emergence of a sustainable digital culture in MA Nurul Qadim (Wardani et al., 2025).



Figure 4. Application of Microsoft Teams in Learning

DISCUSSION

The findings of this community service project demonstrate that sustainable digital transformation in Islamic schools requires more than technical training it demands cultural adaptation, contextualized mentoring, and the integration of spiritual values into digital practices (Masruri et al., 2025). At MA Nurul Qadim, a rural Islamic institution where most teachers had limited exposure to technology, the mentoring model proved effective not only in enhancing digital skills but also in fostering a mindset that views technology as part of religious and moral responsibility in teaching (Iwani et al., 2024). This perspective aligns with the Islamic principle of *amanah* (trust) and *itqan* (excellence in work), which encourage teachers to utilize all available means including digital tools for the betterment of students' learning (Rahmah et al., 2025).

From the theoretical perspective, the results provide a nuanced application of the Technology Acceptance Model (TAM) within the madrasah context. Teachers' perceived usefulness of Microsoft Teams was not solely based on efficiency or convenience, as the theory suggests, but also intertwined with their awareness of teaching as a form of *ibadah* (worship) (Sufiyani & Mufid, 2025). During mentoring sessions, several participants expressed that using digital tools effectively was part of fulfilling their duty to deliver knowledge responsibly (Nurzam & Maujud, 2025). This moral dimension deepened their motivation to adopt technology, illustrating how religious consciousness can reinforce the "perceived usefulness" component of TAM in faith-based institutions (Bahri et al., 2025). Meanwhile, "perceived ease of use" was strengthened through hands-on mentoring, where facilitators guided teachers step by step, allowing them to experience reduced anxiety toward technology (Limaheluw et al., 2025).

Similarly, the program operationalized elements of the Unified Theory of Acceptance and Use of Technology (UTAUT) in a distinctive way. The "social influence" factor was evident not only in administrative encouragement from the principal but also in the *ukhuwah* (brotherhood) among teachers that developed during peer mentoring (Huda, 2025). Teachers who mastered Microsoft Teams became informal role models for others, illustrating how community norms in a madrasah can accelerate digital adoption. The existence of supportive facilitating conditions such as institutional Standard Operating Procedures (SOPs) and accessible digital guidelines ensured that technological innovation was not viewed as foreign but as integrated into the school's collective religious and pedagogical identity (Rumra et al., 2025).

Bandura's Social Cognitive Theory (SCT) also finds practical resonance here. The emergence of peer mentors demonstrated the role of observational learning within a faith-oriented setting. Teachers did not learn solely through formal instruction but also through mutual observation, imitation, and encouragement,

often expressed in the form of ta'awun (mutual help). This social learning process, grounded in Islamic ethical values, fostered both competence and confidence key factors of self-efficacy among teachers who were initially hesitant to engage with digital tools (Ulum et al., 2024).

Beyond theoretical alignment, this project contributes a context-specific understanding of digital transformation in rural Islamic schools. Limited internet connectivity, outdated devices, and minimal technical support are structural challenges that often hinder technological integration in such environments (Hidayati et al., 2025). However, the program's adaptive strategies such as using asynchronous learning and promoting file-sharing through lightweight applications demonstrated that meaningful digital adoption is possible even in resource-constrained contexts (Joesyiana et al., 2024). The teachers' creativity in blending online and offline instruction reflects a form of *ijtihad pedagogis* a contextual, problem-solving approach that harmonizes modern technology with local realities (Nurhikmah, 2024).

Moreover, the program illuminated the possibility of integrating digital literacy with spiritual literacy (H. A. H. Fauzi et al., 2025). The mentoring sessions often began with short reflections or prayers, emphasizing that mastering technology is part of preparing oneself to be a better servant and educator (Bhismantara et al., 2024). This approach created a positive emotional environment that demystified technology and aligned its use with the teachers' moral and religious identity (Setyaningsih et al., 2020). Consequently, digital practices were not perceived as external impositions but as natural extensions of the teachers' *niyyah* (intentions) to teach more effectively.

Compared with previous community service projects that primarily emphasized technical aspects of e-learning, this initiative's distinctive contribution lies in developing a digital Islamic pedagogy a model of technological adoption rooted in collaboration, reflection, and spirituality. The creation of institutional SOPs, continuous peer mentoring, and value-based reflection sessions ensured that digital innovation became embedded in the school's teaching culture rather than remaining a temporary intervention (Khoirohnissah, 2023).

Considering these achievements, several obstacles remain (Tamphu et al., 2024). Insufficient access to stable internet and certain teachers' persisting reliance on external support highlight the significance of ongoing mentoring and infrastructure enhancement (Maskur, 2023). Nonetheless, the experience at MA Nurul Qadim underscores that when digital empowerment is framed within the values of *amanah*, *ukhuwah*, and *itqan*, technology adoption in Islamic education can evolve into a sustainable, culturally resonant transformation (Abrori et al., 2024).

CONCLUSION

This community service project significantly enhanced the digital competence of teachers at MA Nurul Qadim, particularly in the effective use of Microsoft Teams for classroom management, assignment organization, and online assessment. Through a combination of structured training, participatory mentoring, and continuous reflection, teachers developed not only the technical ability to operate digital platforms but also a deeper understanding of digital pedagogy. The program succeeded in transforming teachers' initial apprehension into confidence, thereby establishing a supportive environment where collaboration, mutual assistance, and peer learning became central to professional growth. Moreover, the emergence of teacher leaders who actively promoted the integration of Microsoft Teams within their respective departments reflects a shift toward a sustainable digital learning culture. This transformation is particularly significant in the context of Islamic educational institutions, where technology adoption often faces both infrastructural and cultural barriers.

From an educational perspective, the findings highlight the need of context-based, hands-on digital training that is designed to meet teachers' specific classroom demands. Schools attempting to imitate this model ought to emphasize participatory techniques that combine technical coaching with reflective mentoring to achieve skill internalization. On a policy level, the results highlight the need for institutional commitment to digital transformation in education. School management and local education authorities should formalize ongoing digital professional development programs, allocate specific budgets for ICT enhancement, and develop monitoring systems that track digital competence progress among teachers. Additionally, collaboration between schools, higher education institutions, and technology providers should be encouraged to ensure that teachers have access to updated tools, technical support, and continuous capacity building opportunities. Embedding these practices into institutional policy frameworks would create a more resilient and future-ready education ecosystem.

Despite its success, the project faced several challenges, including a limited number of participants, short training duration, and infrastructural issues such as unstable internet connectivity and restricted access to digital devices. These constraints limit the generalizability of findings to broader educational contexts. Therefore, future programs should expand participation, integrate blended learning models for flexible engagement, and extend mentoring periods to reinforce long-term skill retention. As a follow-up plan, the project team intends to conduct a longitudinal study assessing the sustained impact of Microsoft Teams integration on teacher performance and student learning outcomes over the next academic year. Moreover, comparative studies across different Islamic

educational institutions are proposed to explore how contextual variations affect the success of digital transformation initiatives. By bridging these research and policy dimensions, this project lays a foundation for more inclusive, sustainable, and technology empowered Islamic education practices.

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