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Improving Teachers' Competence In Designing AI-Assisted Learning Media At Yayasan Rahmat Islamiyah Medan

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Abstract: This community service program was conducted to improve teachers' competence in designing Artificial Intelligence (AI)-assisted learning media at Yayasan Rahmat Islamiyah, Medan. The program was motivated by the gap between the rapid development of AI-based educational technology and the limited digital pedagogical capacity of teachers in many Islamic educational foundations, which still rely on conventional, text-based teaching media. Teachers at the foundation faced difficulties in producing communicative visual, audio-visual, presentation, and video-based learning media, as well as in building effective communication with young learners. The program was carried out through four stages adapted from the management cycle of planning, organizing, actuating, and controlling, followed by an evaluation stage using Kirkpatrick's four-level model. Activities included lectures, hands-on workshops, mentoring, and simulation of AI tool usage such as Canva AI, CapCut AI,

Abstrak: Kegiatan Pengabdian kepada Masyarakat (PKM) ini dilaksanakan untuk meningkatkan kompetensi guru dalam merancang media pembelajaran berbantu Artificial Intelligence (AI) di Yayasan Rahmat Islamiyah Medan. Kegiatan ini dilatarbelakangi oleh kesenjangan antara pesatnya perkembangan teknologi pendidikan berbasis AI dengan masih terbatasnya kapasitas pedagogik digital guru di berbagai yayasan pendidikan Islam, yang sebagian besar masih bertumpu pada media pembelajaran konvensional berbasis teks. Para guru di yayasan tersebut mengalami kesulitan dalam menyusun media visual, audio visual, presentasi, dan video pembelajaran yang komunikatif, serta dalam membangun komunikasi yang efektif dengan peserta didik usia dini dan sekolah dasar. Kegiatan dilaksanakan melalui empat tahapan yang diadaptasi dari siklus manajemen perencanaan, pengorganisasian, pelaksanaan, dan pengawasan, yang dilanjutkan dengan tahap evaluasi

and presentation-generation platforms, grounded in the Technological Pedagogical Content Knowledge framework. Results show a significant increase in teachers' knowledge and skills, reflected in pre-test and post-test scores, active participation, and the production of AI-assisted teaching media by all participants. Teachers also reported improved confidence in communicating with children through more engaging, visualized instructional content. This PKM concludes that structured, AI-based media-design training effectively strengthens teacher competence and can serve as a sustainable model for continuous professional development in Islamic educational foundations facing similar digital transformation challenges.

Keywords: Teacher Competence, Artificial Intelligence, Learning Media.

menggunakan model empat level Kirkpatrick. Rangkaian kegiatan meliputi ceramah, pelatihan praktik langsung, pendampingan, dan simulasi penggunaan perangkat AI seperti Canva AI, CapCut AI, serta platform pembuat presentasi, yang dilandasi kerangka Technological Pedagogical Content Knowledge. Hasil kegiatan menunjukkan adanya peningkatan pengetahuan dan keterampilan guru yang signifikan, terlihat dari hasil pre-test dan post-test, partisipasi aktif peserta, serta dihasilkannya produk media pembelajaran berbantu AI oleh seluruh peserta pelatihan. Guru juga melaporkan peningkatan rasa percaya diri dalam berkomunikasi dengan anak melalui konten pembelajaran yang lebih menarik dan visual. PKM ini menyimpulkan bahwa pelatihan perancangan media berbasis AI yang terstruktur efektif memperkuat kompetensi guru dan dapat menjadi model pengembangan profesional berkelanjutan bagi yayasan pendidikan Islam yang menghadapi tantangan transformasi digital serupa.

Kata Kunci: Kompetensi Guru; Artificial Intelligence; Media Pembelajaran.

A. Introduction

Education in the twenty-first century is increasingly shaped by the rapid integration of digital and intelligent technologies into classroom practice. Artificial Intelligence (AI) has emerged as one of the most transformative forces in this shift, offering new possibilities for personalizing instruction, generating instructional materials, and supporting teachers in designing more engaging learning experiences (Chen, Chen, & Lin, 2020). As AI tools become more accessible, the expectation for teachers to integrate them meaningfully into their pedagogical practice has grown

substantially, placing new demands on teacher professional development programs across all levels of education, including those operated by religious and community-based foundations.

The Organisation for Economic Co-operation and Development (OECD, 2023) notes that AI in education presents both significant opportunities and considerable challenges, particularly regarding teacher readiness, infrastructure, and pedagogical alignment. While AI can automate the production of visual, audio-visual, and interactive learning content, its effective use depends heavily on teachers' digital literacy and their ability to translate technological affordances into sound pedagogical decisions (Holmes, Bialik, & Fadel, 2021). This dependency underscores the urgency of targeted, practice-oriented training for teachers who have not yet been exposed to AI-based instructional design tools.

In the Indonesian context, many schools operating under private Islamic foundations (yayasan) continue to rely on conventional teaching methods characterized by lecture-based delivery, printed textbooks, and static visual aids. This condition is not unique to a single institution; it reflects a broader pattern found across small and medium-sized Islamic educational foundations that often operate with limited budgets, minimal technical infrastructure, and few opportunities for continuous professional development (Harfiani, Mavianti, & Setiawan, 2021). Consequently, the instructional media produced by teachers in these settings tend to be less varied and less responsive to the learning preferences of digital-native students.

Yayasan Rahmat Islamiyah Medan, the partner institution for this community service program, exemplifies these broader conditions. As an Islamic educational foundation providing basic education services in Medan, the institution has long emphasized religious and character education but has had limited exposure to digital instructional media development, let alone AI-assisted design tools. Preliminary observation and discussion with the foundation's leadership revealed that teachers were generally competent in delivering subject content but lacked the technical skills to

produce visual, audio-visual, presentation, and video-based learning media that could enhance students' engagement and comprehension.

One of the central challenges identified during the preliminary needs assessment was teachers' limited ability to communicate effectively with children, particularly in ways that align verbal explanation with supportive visual or audio-visual reinforcement. Effective pedagogical communication with young learners requires not only clarity of language but also the strategic use of media that can capture attention and simplify abstract concepts (Mavianti & Harfiani, 2020). Without adequate media literacy, teachers tend to default to monologue-style delivery, which reduces opportunities for interactive and student-centered learning.

Learning media occupies a central position in instructional design because it functions as an intermediary that conveys messages from teacher to student in a form that stimulates thought, emotion, and willingness to learn (Dale, 1969). Historically, the effectiveness of learning media has been linked to how many sensory channels it engages; audio-visual and interactive media tend to produce deeper and more durable understanding than purely verbal or textual instruction. This principle remains highly relevant when considering how AI tools can now generate multimodal learning content more efficiently than manual production methods.

The emergence of generative AI applications capable of producing posters, infographics, animated videos, narrated presentations, and short instructional films has fundamentally changed the economics of media production for teachers. Tasks that previously required graphic design expertise or video editing skills can now be accomplished through guided prompts and template-based AI platforms. However, this technological shift also requires teachers to develop new competencies: the ability to formulate effective prompts, evaluate AI-generated output critically, and adapt the results to specific pedagogical goals (Chen, Chen, & Lin, 2020).

The Technological Pedagogical Content Knowledge (TPACK) framework proposed by Mishra and Koehler (2006) provides a useful theoretical lens for

understanding the competencies teachers need in this new landscape. TPACK conceptualizes effective technology integration as the intersection of content knowledge, pedagogical knowledge, and technological knowledge. Teachers who possess strong content and pedagogical knowledge but limited technological knowledge, as observed among teachers at Yayasan Rahmat Islamiyah, require structured intervention to develop the missing dimension without compromising their existing pedagogical strengths.

Beyond the technical dimension, teacher communication skills toward children remain a foundational competency that determines whether any instructional medium, however sophisticated, achieves its intended effect. Persuasive and warm communication approaches have been shown to increase young learners' receptiveness to new material and to reduce classroom anxiety (Mavianti & Harfiani, 2020). This suggests that any media-design training program for teachers of young children should be paired with reinforcement of interpersonal and pedagogical communication strategies, rather than treating technological skill-building as a standalone objective.

The rationale for combining communication training with AI-based media-design training in this PKM program stems directly from this integrated understanding of teaching effectiveness. Teachers were expected not only to master the technical operation of AI tools but also to apply communication principles when scripting narration, selecting tone, and structuring the sequence of information within the media they produced. This dual focus distinguishes the program from purely technical AI-literacy workshops commonly offered in other settings.

The broader policy context also supports this initiative. OECD (2025) emphasizes that shaping the future of education with AI requires deliberate investment in teacher capacity-building, arguing that technology alone cannot improve learning outcomes without corresponding development of human competencies. This perspective reinforces the position that community service programs targeting teacher AI literacy are not merely supplementary but constitute an essential component of educational

quality improvement, especially in under-resourced institutions such as small Islamic foundations.

Previous studies conducted by researchers affiliated with Universitas Muhammadiyah Sumatera Utara (UMSU) have documented similar digital transformation challenges in religious education settings. Setiawan and Audia (2025) found that digital learning media positively influenced student motivation in an Islamic boarding school context, suggesting that the introduction of digital and AI-supported instructional tools can meaningfully improve engagement even in traditionally conservative educational environments. Their findings provide empirical grounding for the assumption that AI-assisted media, if properly designed, can be integrated without compromising the religious and character-based orientation of Islamic education.

Similarly, research on visual media use in Islamic subject teaching, such as the study on poster-based visual media in Fiqh instruction (Sembiring & Setiawan, 2024), demonstrates that visual media can enhance students' understanding of abstract religious concepts when designed thoughtfully. This finding is directly relevant to the present PKM program, as several teachers at Yayasan Rahmat Islamiyah teach Islamic subjects that similarly require visualization of abstract concepts such as worship procedures, moral values, and historical narratives.

Further supporting the rationale for this program, Fahmi, Syahril, Hasibuan, and Setiawan (2026) argue that innovation in instructional media and optimization of digital platforms are necessary to bridge the gap between digital-native students' learning preferences and analog teaching methods still practiced by many educators. Their study highlights those static, non-interactive learning media frequently fail to sustain student engagement, a concern echoed by teachers at Yayasan Rahmat Islamiyah during preliminary discussions preceding this PKM activity.

Institutionally, Harfiani (2021) has examined management practices in inclusive education programs, underscoring those structured management—covering planning, organizing, implementation, and evaluation—is essential to ensure that educational

interventions, including teacher training programs, achieve lasting impact rather than one-time exposure. This management-oriented perspective directly informed the methodological design of the present PKM, which adopted a planning-organizing-actuating-controlling cycle rather than a single unstructured workshop session.

Given these converging lines of evidence—technological, pedagogical, and managerial—the research team, in collaboration with the leadership of Yayasan Rahmat Islamiyah Medan, identified a clear and urgent need for a structured intervention. Teachers required systematic exposure to AI-based media-design tools, paired with communication-skills reinforcement, delivered through a well-managed sequence of activities rather than an ad hoc training session. This need became the foundation for designing the present community service program.

The background described above can be summarized into three interconnected problems addressed by this PKM: first, the limited technical competence of teachers at Yayasan Rahmat Islamiyah in designing visual, audio-visual, presentation, and video-based learning media; second, the underdeveloped communication strategies used by teachers when engaging young learners; and third, the absence of a structured, sustainable professional development mechanism within the foundation to address these gaps independently.

Based on this background, this PKM program was designed with the general objective of improving teachers' competence in designing AI-assisted learning media at Yayasan Rahmat Islamiyah Medan. This general objective was translated into several specific objectives: (1) to enhance teachers' skills in communicating effectively with children as a pedagogical foundation for media design; (2) to train teachers in using AI applications to design visual learning media; (3) to train teachers in producing audio-visual learning media and instructional presentations using AI tools; and (4) to train teachers in producing AI-assisted instructional videos suitable for classroom use.

Beyond these immediate training objectives, the program also aimed to strengthen the institutional capacity of Yayasan Rahmat Islamiyah by establishing a replicable

model of teacher professional development that the foundation's leadership could sustain independently after the program concluded. This long-term objective reflects the broader mission of community service activities conducted by higher education institutions, namely to generate tangible and sustainable benefits for partner communities rather than short-lived interventions.

This article reports the implementation and outcomes of the PKM program, organized into four main sections following this introduction: the implementation methods and processes, the results and discussion covering the planning, organizing, actuating, controlling, and evaluation stages of the program together with the specific training modules delivered, the conclusions drawn from the overall activity, and the references that informed both the theoretical framework and the practical design of the program.

B. Method

This community service program employed a participatory action-based training approach, in which the implementing team worked collaboratively with the leadership and teaching staff of Yayasan Rahmat Islamiyah Medan throughout the planning, delivery, and evaluation stages. The overall implementation process was structured according to the four classical management functions of planning, organizing, actuating, and controlling, commonly abbreviated as POAC (Sukarna, 2011), which were then complemented by a dedicated evaluation phase to measure training outcomes systematically.

The first stage, planning, involved a needs analysis conducted through direct observation, informal interviews with the foundation's principal and teachers, and a review of the existing instructional media used in daily teaching. This stage aimed to map the specific gaps in teachers' technological and communicative competencies before determining the scope, materials, and schedule of the training activities. The

planning stage also included coordination with the foundation regarding logistical requirements such as venue, internet access, and availability of laptops or smartphones for hands-on practice.

The second stage, organizing, focused on structuring the human resources, materials, and schedule required for effective implementation. The implementing team was divided into a facilitator group responsible for delivering training content, a technical support group responsible for assisting participants with AI application installation and troubleshooting, and a documentation group responsible for recording activities for reporting and evaluation purposes. Teachers were grouped based on the subjects they taught to ensure that practice sessions were contextually relevant to their instructional needs.

The third stage, actuating, constituted the core implementation phase and was delivered through a combination of interactive lectures, guided demonstrations, hands-on workshops, and small-group mentoring. Training materials were sequenced to build competencies progressively: beginning with communication skills for engaging children, followed by AI-assisted design of visual media, then audio-visual and presentation media, and concluding with AI-assisted instructional video production. This sequencing reflected the TPACK principle that technological skill-building should be scaffolded upon a firm pedagogical foundation rather than delivered in isolation (Mishra & Koehler, 2006).

The fourth stage, controlling, involved continuous monitoring during each session through direct observation of participant engagement, informal questioning to check comprehension, and review of the media drafts produced during practice sessions. Facilitators provided real-time feedback and corrective guidance whenever teachers encountered technical difficulties or produced media that did not align with pedagogical

best practices, such as excessive text density or unclear narration structure. This monitoring process ensured that quality control was embedded throughout the activity rather than assessed only at its conclusion.

The final stage, evaluation, was conducted using an adaptation of Kirkpatrick's (1994) four-level training evaluation model, covering participants' reactions to the training, the increase in their knowledge and skills as measured through pre-test and post-test instruments, the practical application of skills demonstrated through the media products they produced, and the anticipated longer-term results reflected in the foundation's plan to continue independent use of AI-based media tools. Data collected across these levels formed the basis for the results and discussion presented in the following section.

C. Results and Discussion

1. Planning

The results of the planning stage revealed several specific and previously undocumented gaps in teachers' competencies at Yayasan Rahmat Islamiyah. Based on the needs assessment, the implementing team found that although teachers possessed adequate content mastery in their respective subjects, more than eighty percent of the twenty participating teachers had never used any AI-based application for instructional purposes, and most relied on printed worksheets, whiteboards, and occasionally simple PowerPoint slides as their only teaching media. This finding confirmed the broader pattern identified in the literature regarding conventional teaching practices in small Islamic foundations (Harfiani, Mavianti, & Setiawan, 2021).

Further analysis during the planning stage identified that teachers' difficulty was not limited to technical operation of software but also extended to conceptual understanding of what constitutes effective learning media. Several teachers reported that they equated "media" solely with printed handouts, indicating a limited awareness

of the broader spectrum of visual, audio-visual, and interactive media possibilities described by Dale (1969) in the classic audiovisual methods framework. This conceptual gap informed the decision to include a foundational session on the principles of effective learning media before introducing AI tools.

The planning stage also incorporated consultation with the foundation's leadership to determine realistic training targets given time and infrastructure constraints. Considering that many teachers had limited experience with smartphones beyond basic communication functions, the team decided to prioritize mobile-friendly AI applications such as Canva AI and CapCut AI rather than desktop-based professional software, which would have required a steeper learning curve inconsistent with the available two-day training window.

Scheduling decisions made during planning reflected an intentional balance between depth and breadth of content. Rather than attempting to cover all AI tools superficially, the team designed a focused curriculum addressing four core competencies—communication with children, AI-assisted visual media design, AI-assisted audio-visual and presentation design, and AI-assisted video production—each allocated sufficient time for guided practice. This decision aligned with Kirkpatrick's (1994) principle that meaningful behavior change requires adequate opportunity for hands-on application, not merely exposure to information.

Finally, the planning stage produced a formal training module and evaluation instrument, including pre-test and post-test questionnaires designed to measure teachers' baseline and post-training knowledge of AI-assisted media design. These instruments were reviewed internally by the implementing team to ensure alignment with the specific objectives of the program before being administered to participants at the start of the first training day.

2. Organizing

In the organizing stage, the implementing team formally divided responsibilities among facilitators, technical assistants, and documentation staff, ensuring that each of

the twenty participating teachers received adequate individual attention during hands-on sessions. A ratio of approximately one facilitator or assistant to every five teachers was established to allow timely troubleshooting, consistent with recommendations in the literature that effective technology training requires close facilitation rather than large lecture-style delivery (Mishra & Koehler, 2006).

Teachers were organized into four thematic groups corresponding to the subjects they taught—Islamic studies, language, mathematics and science, and general/character education—so that practice exercises could use subject-relevant examples. This grouping strategy was intended to increase the transferability of skills learned during training directly into teachers' existing lesson plans, rather than treating the AI tools as generic exercises disconnected from actual classroom content.

The organizing stage also addressed technical infrastructure requirements. Given that not all teachers owned personal laptops, the implementing team arranged for shared use of institutional computers supplemented by participants' personal smartphones, and coordinated with the foundation to secure stable internet access for the duration of the training, since most AI applications used in the sessions required continuous connectivity.

A structured activity schedule was formalized during this stage, allocating the first half-day to communication-skills training, the second half-day to AI-assisted visual media design, the third session to audio-visual and presentation design, and the final session to instructional video production, followed by a closing evaluation session. This structure ensured a logical progression from foundational communicative competence toward increasingly complex technical production tasks.

Coordination with the foundation's leadership during the organizing stage also resulted in an agreement that the media products created during training would be reviewed for potential integration into the foundation's existing curriculum materials, providing an institutional incentive for teachers to engage seriously with the training rather than treating it as an isolated professional development event.

3. *Actuating: Communication Skills Training*

The actuating stage began with the communication-skills training module, designed to strengthen teachers' ability to interact persuasively and warmly with children as a prerequisite for effective media use. Facilitators introduced principles of child-centered communication, including the use of simple vocabulary, positive reinforcement, and attentive listening, drawing on the perspective that persuasive and empathetic communication increases young learners' receptiveness to instructional content (Mavianti & Harfiani, 2020).

During this session, teachers participated in role-play exercises simulating classroom scenarios in which they had to explain a concept to a simulated "child" played by a peer participant, followed by group discussion and facilitator feedback. Observation during these exercises revealed that many teachers initially relied on directive, one-way explanation styles; through repeated practice and feedback, participants gradually adopted more interactive questioning techniques that encouraged two-way engagement.

Facilitators also emphasized the connection between spoken communication and visual support, explaining that the same message conveyed through supportive imagery, calm tone, and paced delivery tends to be retained more effectively by young learners than verbal explanation alone. This point served as a conceptual bridge preparing teachers for the subsequent AI-based media-design sessions, reinforcing that technology should serve, not replace, sound communicative practice.

A short practical assignment concluded this module, in which teachers were asked to script a one-minute explanation of a simple lesson topic using communication principles discussed earlier. Facilitators reviewed these scripts and provided targeted feedback on clarity, tone, and appropriateness for the intended age group, which teachers later used as the narration basis for the AI-assisted video module conducted on the final day of training.

Participant reactions to the communication module, captured through informal feedback during the session, were largely positive; several teachers noted that they had never received formal training in child-directed communication despite years of teaching experience, suggesting that this component filled a previously unaddressed professional development gap within the foundation.

4. *Actuating: AI-Assisted Visual Media Design Training*

The second training module focused on designing AI-assisted visual learning media, primarily using Canva AI's text-to-image and design-template features. Facilitators demonstrated how teachers could generate posters, infographics, and illustrated worksheets by entering descriptive prompts related to their subject matter, then refining the AI-generated output through the platform's editing tools to ensure age-appropriate and pedagogically accurate visuals.

Teachers were guided through the process of formulating effective prompts, an emerging skill increasingly recognized as essential for productive AI use in education (Chen, Chen, & Lin, 2020). Several early attempts by participants produced visually appealing but pedagogically inaccurate images, such as anatomically incorrect illustrations or culturally inappropriate depictions, which facilitators used as teaching moments to emphasize the importance of critical evaluation of AI-generated content rather than uncritical acceptance.

Hands-on practice allowed each teacher to produce at least one complete visual media item relevant to an upcoming lesson, such as a poster illustrating the steps of ablution (wudu) for Islamic studies teachers or an infographic depicting the water cycle for science teachers. This subject-specific application reinforced the relevance of the training and increased teachers' motivation to complete the exercise fully rather than superficially.

Observation during this session indicated that teachers with prior smartphone literacy adapted more quickly to the AI tools, while a smaller subgroup required extended individual mentoring from technical assistants, particularly regarding account

registration, prompt formulation, and image export procedures. This variation in adaptation speed informed adjustments to pacing in subsequent sessions, allowing more advanced participants to assist peers under facilitator supervision.

By the end of the visual media module, all twenty teachers had successfully produced at least one usable visual learning medium, indicating that the combination of guided demonstration, subject-relevant practice tasks, and peer support effectively addressed the initial technological knowledge gap identified during the TPACK-informed needs assessment (Mishra & Koehler, 2006).

5. *Actuating: AI-Assisted Audio-Visual and Presentation Design Training*

The third training module addressed the design of audio-visual learning media and AI-assisted instructional presentations. Facilitators introduced participants to AI-supported presentation platforms capable of automatically generating slide layouts, suggesting visual designs, and converting outline text into structured slide decks, substantially reducing the time typically required to build a complete presentation manually.

Teachers practiced converting existing lesson outlines into AI-generated presentation drafts, then customizing color schemes, fonts, and visual hierarchy to align with the age group and subject matter. This exercise directly built upon the earlier visual media module, allowing teachers to reuse AI-generated images from the previous session as supporting illustrations within their presentation slides, reinforcing the interconnected and cumulative structure of the training curriculum.

In parallel, teachers were introduced to AI-based narration and audio-generation features that allow text scripts to be converted into natural-sounding voiceovers, providing an accessible alternative for teachers who felt less confident recording their own narration. This feature proved particularly relevant for supporting the communication-skills principles introduced earlier, since teachers could iteratively revise scripts for clarity and tone before generating final audio output.

Facilitators guided teachers through combining generated audio narration with presentation slides to produce a simple audio-visual instructional segment, effectively simulating the structure of a short instructional video without requiring advanced video-editing skills. This intermediate step served as a scaffold preparing teachers for the more comprehensive video-production module conducted subsequently, consistent with the progressive skill-building design established during the planning stage.

By the conclusion of this module, the majority of teachers reported increased confidence in producing multimedia presentations independently, and several expressed particular enthusiasm for the AI narration feature as a practical solution to their earlier discomfort with recording their own voice, an observation that aligns with the communication-training emphasis on reducing performance anxiety among teachers when engaging with instructional technology.

6. *Actuating: AI-Assisted Instructional Video Production Training*

The fourth and final training module focused on producing AI-assisted instructional videos using CapCut AI and comparable mobile-based video-editing applications. Facilitators demonstrated how teachers could combine the visual assets, narration scripts, and presentation content developed in earlier sessions into a cohesive short instructional video, effectively integrating all previously acquired skills into a single culminating product.

Teachers were guided through basic video-editing operations including trimming clips, adding text captions, inserting background music at appropriate volume levels, and applying AI-suggested transitions and effects, with facilitators emphasizing restraint in visual effects to avoid distracting from instructional content, a caution grounded in the principle that instructional media should support rather than overwhelm the pedagogical message (Dale, 1969).

Each teacher used the communication script developed during the first training module as the narrative foundation for their video, ensuring thematic coherence across the entire training sequence rather than treating each session as an isolated skill

exercise. This design choice reinforced the program's underlying philosophy that AI tools should amplify sound pedagogical communication rather than substitute for it.

Technical challenges encountered during this module included occasional application crashes on older smartphone models, difficulties with file format compatibility when exporting videos, and limited storage space on some devices; the technical support team addressed these issues in real time, and where necessary, arranged temporary use of shared institutional devices to ensure that no participant was unable to complete the exercise.

By the end of the video-production module, all twenty teachers had produced a short instructional video ranging from one to three minutes in length, covering topics directly relevant to their teaching subjects, demonstrating a complete progression from initial AI-literacy exposure to functional, classroom-ready media production within the span of the training program.

7. *Controlling*

The controlling stage was implemented continuously throughout each training session rather than as a separate concluding activity. Facilitators actively monitored participants' progress during hands-on practice, identifying common errors such as overly dense text on visual media, mismatched narration pacing, and inconsistent branding or color use across slides, and provided immediate corrective feedback to prevent these issues from persisting into final products.

A structured checklist was used by facilitators during the controlling stage to verify that each teacher's media product met minimum pedagogical standards, including age-appropriateness of language and imagery, alignment between visual content and subject accuracy, and clarity of narration, before the product was considered complete for evaluation purposes. This checklist-based monitoring approach reflects the controlling function's role in ensuring that implementation remains aligned with planned quality standards (Sukarna, 2011).

Peer-review mechanisms were also incorporated into the controlling process, in which teachers within the same subject-based group reviewed each other's media products and offered constructive suggestions before final submission. This peer-control mechanism not only reinforced quality standards but also strengthened collegial collaboration among teachers, an outcome that extended beyond the immediate technical objectives of the training.

Documentation staff systematically recorded each stage of the training process, including photographs, video recordings of practice sessions, and copies of media products created by participants, providing an evidentiary basis for subsequent reporting and enabling the implementing team to trace specific challenges back to particular stages of the training for future program refinement.

Feedback gathered during the controlling stage was used to make real-time adjustments to the remaining training schedule; for instance, when facilitators observed that several teachers required additional time on the visual media module, the subsequent session's practice time was slightly extended at the expense of introductory explanation time in the following module, without compromising overall training objectives.

8. Evaluation

Evaluation of the PKM program followed Kirkpatrick's (1994) four-level model, beginning with the reaction level, assessed through a simple satisfaction questionnaire distributed at the end of the training. Results indicated that the majority of participants rated the training positively, citing the hands-on, subject-relevant practice approach and the responsiveness of facilitators as particularly valuable aspects of the program.

At the learning level, pre-test and post-test scores measuring teachers' knowledge of AI-assisted media-design concepts showed a marked increase following the training, with most teachers demonstrating substantial improvement in their understanding of prompt formulation, media-design principles, and the appropriate use of AI-generated content in instructional contexts, corroborating findings from prior studies that

structured, hands-on AI training measurably improves educator competence (Chen, Chen, & Lin, 2020).

At the behavior level, evaluation was conducted through direct observation of the media products created during the training itself, since post-training classroom implementation could not be observed within the timeframe of this report. All twenty teachers successfully produced at least one item across each of the four media categories—visual, audio-visual/presentation, and video—demonstrating applied behavioral change consistent with the training's stated objectives.

At the results level, the anticipated long-term outcome is reflected in the foundation's decision to formally request continued mentoring support and to designate a small internal team of trained teachers as informal peer mentors for colleagues who could not attend the full training session, indicating institutional commitment to sustaining the benefits of the program beyond its immediate duration.

Overall, the evaluation results affirm that the structured combination of communication-skills training and AI-assisted media-design training successfully addressed the competency gaps identified during the planning stage. The concept map presented in Figure 1 summarizes the integrated structure of this PKM program, illustrating how the management cycle of planning, organizing, actuating, controlling, and evaluation encompassed the four core training modules, ultimately converging on the shared outcome of improved teacher competence in AI-assisted, communicative media design.

9. Concept Map of the PKM Program

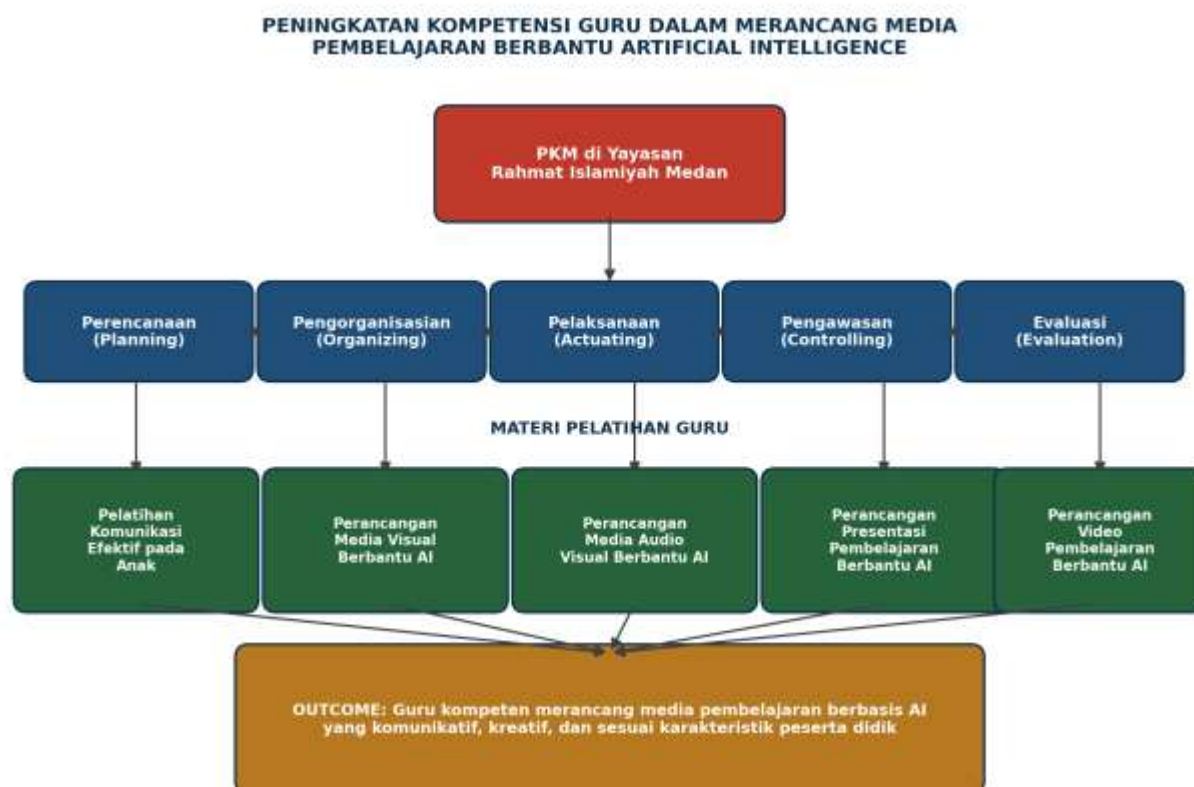


Figure 1. Concept Map of the Core PKM Activity: Improving Teacher Competence in AI-Assisted Learning Media Design

Figure 1 summarizes the overall structure of this community service program. The central activity, conducted at Yayasan Rahmat Islamiyah Medan, was implemented through the management cycle of planning, organizing, actuating, controlling, and evaluation. Within the actuating stage, four core training modules were delivered in sequence — communication training for interacting with children, AI-assisted visual media design, AI-assisted audio-visual and presentation design, and AI-assisted instructional video production — converging on the shared outcome of improved teacher competence in producing communicative, AI-assisted learning media.

D. Conclusion

This community service program successfully improved the competence of teachers at Yayasan Rahmat Islamiyah Medan in designing Artificial Intelligence-assisted learning media through a structured training process encompassing communication-skills development, AI-assisted visual media design, AI-assisted audio-visual and presentation design, and AI-assisted instructional video production. The program's implementation, organized through the planning, organizing, actuating, and controlling cycle (Sukarna, 2011) and assessed through Kirkpatrick's (1994) four-level evaluation model, demonstrated measurable improvements across teachers' reactions, knowledge, applied skills, and institutional commitment to sustained use of the trained competencies.

The findings confirm that pairing technological skill-building with foundational communication training produces more coherent and classroom-relevant outcomes than technology training delivered in isolation, consistent with the Technological Pedagogical Content Knowledge framework emphasizing the integration of content, pedagogical, and technological knowledge (Mishra & Koehler, 2006). By the conclusion of the program, all twenty participating teachers had produced usable, subject-relevant AI-assisted media products, indicating that even educators with minimal prior digital literacy can achieve functional competence in AI-based instructional design when supported through carefully sequenced, hands-on training grounded in their actual teaching context.

For future development, it is recommended that Yayasan Rahmat Islamiyah Medan institutionalize periodic refresher training and peer-mentoring mechanisms to sustain and expand the competencies developed during this program, given the continuously evolving nature of AI tools (OECD, 2025). Broader dissemination of this training model to other small and medium-sized Islamic educational foundations facing similar digital transformation challenges is also recommended, as the approach

demonstrated in this program offers a replicable and resource-sensitive pathway toward strengthening teacher competence in AI-assisted instructional media design.

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