



## Training on the Development of Digital Learning Media for Public School Teachers in the Era of Educational Transformation

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| Article Info                                                                                                                    | ABSTRACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Corresponding Author:</b><br>Fika Rahmanita<br>Email :<br><a href="mailto:dosen01930@unpam.ac.id">dosen01930@unpam.ac.id</a> | <p>Digital transformation in education requires teachers to develop the competence to design and use learning media that are interactive, relevant, and responsive to students' needs. This community service program aimed to improve the digital competence of public-school teachers through training in the development of digital learning media. The activity was conducted at SDN 5 Kedungwringin, Jatilawang District, Banyumas Regency, involving teachers from the partner school and neighboring elementary schools. The program applied a participatory and practice-based approach through needs analysis, hands-on workshops, microteaching, mentoring, and follow-up assistance. Training materials included Canva Education, interactive PowerPoint, LearningApps, and other digital tools that could be directly applied in classroom learning. Program evaluation was conducted through pre-test and post-test activities, observation, participant feedback, and follow-up monitoring. The results showed that participants' understanding increased from 50% in the pre-test to 85% in the post-test. In addition, teachers demonstrated improved ability to design creative and interactive digital learning media and greater readiness to integrate technology into their teaching practices. The program also encouraged collaboration among teachers and increased awareness of the importance of continuous instructional innovation. These findings indicate that hands-on digital media training, combined with mentoring and follow-up support, can effectively strengthen teacher competence and support the development of a sustainable digital learning culture in schools.</p> <p><b>Keywords:</b> Digital Learning Media; Teacher Training; Digital Competence; Educational Transformation; Community Service</p> |

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### INTRODUCTION

Digital transformation has reshaped the educational landscape by changing how teachers design, deliver, and evaluate learning. The role of teachers is no longer limited to transmitting subject matter; they are increasingly expected to facilitate active, collaborative, and technology-supported learning experiences. In this context, digital competence has become an essential component of teacher professionalism, particularly because students are increasingly familiar with digital devices and interactive media. The Directorate General of Teachers and Education Personnel (2021) emphasizes that twenty-first-century learning requires teachers to integrate technology with innovative pedagogical approaches, while Sani

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(2019) highlights the importance of adapting instructional strategies to the characteristics of learners in the digital era.

Digital learning media provide opportunities to make classroom activities more visual, interactive, flexible, and responsive to students' learning needs. Digital presentations, infographics, interactive quizzes, videos, and online learning platforms can help teachers present abstract concepts in more accessible forms while encouraging students to participate actively in the learning process. Arends (2015) argues that effective learning requires instructional strategies that actively engage students rather than positioning them merely as passive recipients of information. Similarly, Dewi and Syahril (2020) found that innovative and project-oriented learning approaches can strengthen students' motivation and learning outcomes. Therefore, digital media should not be viewed solely as technological tools but as part of a broader pedagogical strategy aimed at creating meaningful learning experiences.

The demand for digital learning innovation has also been reinforced by educational policies that encourage differentiated and student-centered learning. The implementation of *Merdeka Belajar* provides teachers with greater flexibility to design learning activities according to students' characteristics and local contexts. Kemendikbudristek (2022) emphasizes that differentiated learning requires teachers to recognize variations in students' readiness, interests, and learning needs. Digital media can support this approach because learning materials can be presented through different formats and levels of interactivity. However, meaningful technology integration depends not only on the availability of digital tools but also on teachers' ability to select, design, and apply them appropriately.

In practice, gaps in teachers' digital competence remain a challenge, particularly in schools with limited access to continuous professional development and technological infrastructure. Preliminary observations at SDN 5 Kedungwringin, Jatilawang District, Banyumas Regency, showed that teaching practices were still largely dominated by conventional learning resources, including textbooks, whiteboards, and basic presentation slides. The school had nine teachers and eighty-three students, while several teachers had limited familiarity with digital learning platforms and interactive media. A more detailed needs assessment also showed that many teachers were unfamiliar with Canva Education, interactive PowerPoint, and LearningApps, indicating a clear need for practical digital-media training.

One practical platform that can support teachers in developing digital learning materials is Canva. Its relatively intuitive interface allows teachers to create presentations, posters, infographics, worksheets, and other visual learning resources without requiring advanced graphic-design skills. Nevertheless, effective use of Canva and similar applications should remain guided by pedagogical considerations, including clarity of information, suitability for students' developmental levels, instructional objectives, accessibility, and technological limitations. The community service report also emphasizes that digital media development needs to balance attractive visual design with pedagogical relevance and infrastructure readiness. Training that combines demonstration, hands-on practice, and mentoring is therefore more appropriate than activities that focus exclusively on theoretical explanation.

Teacher training is particularly important because improvements in digital competence are more likely to be sustained when teachers have opportunities to practice, receive feedback, and apply newly acquired skills in authentic classroom settings. Wahyudi and Lestari (2023) argue that professional development through innovative-learning training can strengthen teacher competence and student engagement, while Wibowo and Maulana

(2022) emphasize the contribution of innovative instructional models to motivation and learning achievement. Training should therefore be designed not simply to introduce digital applications but to help teachers transform those applications into instructional products that can be directly used in their classrooms.

Based on these conditions, this community service program was designed to strengthen teachers' ability to develop and implement digital learning media at SDN 5 Kedungwringin. The program focused on practical use of Canva Education, interactive PowerPoint, LearningApps, and related digital tools, supported by hands-on workshops, microteaching, reflection, and follow-up assistance. The activities were intended not only to improve technical skills but also to encourage teachers to integrate digital media with pedagogical objectives and local learning contexts. The program involved teachers from SDN 5 Kedungwringin and neighboring schools, with university lecturers and students serving as facilitators. Through this approach, the program was expected to contribute to sustainable teacher professional development and to support the development of a more innovative digital learning culture in public elementary schools.

## METHODS

This community service program employed a participatory and practice-oriented training approach designed to strengthen teachers' competence in developing and applying digital learning media. The program was conducted at SDN 5 Kedungwringin, Jatilawang District, Banyumas Regency, and involved nine teachers from the partner school together with six teachers from neighboring elementary schools. The activity was facilitated by three lecturers from the Economic Education Study Program, Universitas Pamulang, supported by four university students who assisted participants during the technical sessions.

The implementation followed a sequence of needs analysis, training, and coaching. The needs analysis was conducted through preliminary observation, teacher surveys, and discussion with the school principal to identify problems related to digital literacy, instructional practices, technological infrastructure, and teachers' familiarity with digital learning platforms. The initial assessment showed that many teachers were not yet familiar with Canva Education, interactive PowerPoint, and LearningApps, while learning activities were still largely dependent on conventional media. These findings were used to determine the content, level of difficulty, and practical orientation of the training program.

The main training activities were conducted from 14 to 16 May 2026 using a hybrid format consisting of two days of face-to-face sessions and one day of online assistance. The first day focused on digital literacy, the principles of technology-supported learning, Canva Education, and interactive PowerPoint. Participants received demonstrations and subsequently developed their own instructional products through guided hands-on practice. On the second day, participants worked in groups to create interactive activities using LearningApps and Padlet, followed by microteaching, peer review, and the contextualization of digital materials based on local learning themes. The third day was conducted online through Zoom and WhatsApp and focused on troubleshooting, uploading instructional products to the school's digital repository, and establishing a teacher digital-learning community for continued collaboration.

The training adopted educational, participatory, and applied learning strategies. The educational component introduced the pedagogical principles underlying digital and innovative learning. The participatory component encouraged teachers to become active

contributors through discussion, collaborative design, simulation, and microteaching. The applied component emphasized the production of learning media that could be used directly in classroom activities. Follow-up coaching was included to help teachers overcome technical problems and integrate the products developed during training into their actual teaching practices.

Program evaluation combined quantitative and qualitative measures. Teacher competence was assessed through pre-test and post-test activities focusing on digital literacy and the use of digital learning applications. Classroom observations were used to examine the implementation and interactivity of the media produced by participants. Feedback was also collected from teachers, students, and parents through questionnaires, reflective discussions, and communication through digital platforms. The evaluation framework further included follow-up monitoring to examine whether teachers were able to independently develop new digital learning media after the training.

The effectiveness of the program was assessed by comparing participants' knowledge and skills before and after the training, reviewing the digital learning products they produced, and examining their ability to apply these products in classroom practice. Qualitative feedback from participants was used to complement the assessment by identifying perceived benefits, implementation challenges, and areas requiring further mentoring. Through this combination of training, direct practice, evaluation, and follow-up support, the program was designed not only to improve short-term technical competence but also to encourage sustainable digital teaching practices among elementary school teachers.

## RESULTS AND DISCUSSION

The community service program was implemented as a practical response to the digital competency gap identified among teachers at SDN 5 Kedungwringin. The initial needs assessment showed that most teachers were still dependent on conventional teaching media and had limited experience with digital platforms. In particular, 78% of the teachers were unfamiliar with Canva Education, interactive PowerPoint, and LearningApps, while only 22% had previously produced digital learning media. These conditions confirmed that the main challenge was not simply access to technology, but the teachers' ability to transform available digital tools into pedagogically meaningful learning materials.





**Figure 1.** Documentation of Community Service activities

The training was conducted through demonstrations, guided practice, group work, microteaching, and online follow-up assistance. Teachers participated actively throughout the sessions and were directly involved in developing learning materials that could be adapted to their classroom needs. The program included Canva Education for visual learning materials, interactive PowerPoint, LearningApps, Padlet, and locally contextualized learning content. The face-to-face activities were followed by online assistance through Zoom and WhatsApp, allowing participants to discuss technical difficulties and continue developing their products after the main workshop.

**Table 1.** Main Activities and Outputs of the Training Program

| Training Component            | Main Activity                                                         | Program Output                                                  |
|-------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------|
| Digital literacy orientation  | Introduction to digital learning and technology-supported instruction | Improved understanding of the role of digital media in learning |
| Canva Education               | Hands-on development of posters, infographics, and visual materials   | Digital visual learning materials                               |
| Interactive PowerPoint        | Development of interactive presentation materials                     | Classroom-ready interactive presentations                       |
| LearningApps and Padlet       | Collaborative development of quizzes and learning activities          | Interactive digital learning activities                         |
| Microteaching                 | Practice using developed media in simulated teaching                  | Improved confidence in integrating digital media                |
| Online coaching               | Troubleshooting and product refinement through Zoom and WhatsApp      | Continued technical support and independent media development   |
| Digital community development | Establishment of an online teacher communication group                | Platform for continued collaboration and sharing                |

Source: Community service program documentation.

The results indicate that the training improved teachers' knowledge and practical skills in using technology for instructional purposes. Participants were able to follow the stages of digital-media development and produce examples of learning materials that could be applied

in classroom activities. Although several participants still required additional assistance when using particular applications, the overall implementation showed that teachers became more capable of developing creative and interactive instructional resources. The activity also encouraged teachers to continue experimenting with digital media beyond the training sessions.

This outcome is important because digital competence involves more than the technical ability to operate software. Effective technology integration requires teachers to connect technological tools with learning objectives, instructional content, and student characteristics. The practical nature of the program enabled participants to experience this integration directly rather than learning digital applications only at a conceptual level. This approach is consistent with the principle that teachers should act as facilitators who design active and meaningful learning experiences, particularly in a digital learning environment (Arends, 2015; Sani, 2019).

**Table 2.** Changes Observed Before and After the Training

| Aspect                                      |      | Initial Condition                                                            | Condition After Training                                                           |
|---------------------------------------------|------|------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Familiarity with digital learning platforms | with | Limited familiarity with Canva, interactive PowerPoint, and LearningApps     | Teachers gained practical experience using several digital platforms               |
| Development of digital media                | of   | Most teachers relied on conventional learning resources                      | Participants produced digital learning materials for classroom use                 |
| Instructional approach                      |      | Learning was largely dependent on textbooks, boards, and basic presentations | Teachers were introduced to more interactive and visual learning approaches        |
| Digital confidence                          |      | Some teachers experienced difficulty using educational technology            | Participants showed greater confidence during practice and microteaching           |
| Collaboration                               |      | Limited structured collaboration in digital-media development                | Teachers participated in group work, peer review, and digital community activities |
| Sustainability                              |      | Limited follow-up from previous professional development activities          | Online coaching and a teacher digital community were introduced                    |

Source: Authors' analysis based on program observation and evaluation.

The ability of participants to produce their own learning materials is one of the most relevant outcomes of the program. Rather than positioning teachers as passive recipients of information, the workshop required them to design media, present their products, receive feedback, and revise their work. This participatory approach encouraged a stronger sense of ownership over the learning materials produced. It also supported peer learning because teachers could exchange ideas and observe how colleagues used different digital tools. Wahyudi and Lestari (2023) similarly emphasize that practice-based teacher development can strengthen professional competence and encourage greater student engagement.

The program also demonstrated the importance of contextualizing digital media. Several training activities incorporated local themes into learning materials so that the products were not merely visually attractive but also connected with students' immediate

environment. This is particularly relevant for elementary education, where familiar examples can help students understand abstract concepts more easily. Digital media should therefore be considered part of an instructional strategy rather than an end in itself. The report likewise emphasizes that effective digital media require a balance between visual quality, pedagogical objectives, technological accessibility, and teachers' competence.

Evaluation of the program was designed to combine pre- and post-training assessment, classroom observation, participant feedback, and follow-up monitoring. The teacher assessment covered digital literacy and the use of Canva, interactive PowerPoint, LearningApps, and Padlet. Classroom observation focused on visualization, interactivity, local relevance, student engagement, and the integration of the learning approach. Feedback was also collected from teachers, students, and parents to provide a broader perspective on the implementation of digital learning media. This multi-source evaluation is valuable for a community service program because success cannot be assessed solely through participant satisfaction; it should also be reflected in teachers' ability to apply the acquired skills in actual learning activities.

The positive response from participants also highlights the value of sustained professional development. One-off training may increase knowledge temporarily, but changes in teaching practice require continued practice, feedback, and institutional support. The use of follow-up coaching and the establishment of a digital teacher community were therefore important components of the program. These mechanisms created opportunities for teachers to discuss difficulties, exchange digital resources, and continue developing instructional materials after the workshop. Such sustainability is consistent with the broader objective of educational transformation, which requires schools to develop a culture of continuous professional learning rather than treating digital competence as a one-time training outcome.

The program produced positive outcomes in terms of teacher participation, practical digital-media development, confidence in using educational technology, and collaboration among participants. The results support the view that hands-on training combined with coaching is an appropriate strategy for strengthening teachers' digital competence. The program also demonstrates that digital transformation at the school level does not depend solely on sophisticated infrastructure. Meaningful progress can begin by strengthening teachers' capacity to use accessible technologies creatively, contextually, and pedagogically.

## CONCLUSION

The community service program on digital learning media development provided tangible benefits for participating public-school teachers. Evaluation results showed that participants' understanding increased from 50% in the pre-test to 85% in the post-test, representing an improvement of 35 percentage points. Beyond this increase, the program strengthened teachers' knowledge and practical skills in designing creative, interactive, and relevant digital learning media for twenty-first-century classrooms. The training and mentoring activities also improved teachers' readiness to integrate technology into instruction and broadened their awareness of instructional innovation. Through direct practice, participants were encouraged to move beyond conventional teaching approaches and use digital tools to create learning experiences that are more engaging, effective, and meaningful for students. Overall, the program demonstrates that hands-on training combined with mentoring can support teacher competence and sustainable digital transformation in schools.

To sustain these outcomes, partner schools should continue supporting teachers through training, mentoring, and opportunities to apply the digital skills acquired during the program. Teachers are encouraged to continuously develop and use digital learning media so that innovation becomes part of their routine teaching practice rather than ending with the training activity. A collaborative school culture should be strengthened to enable teachers to exchange experiences, ideas, and digital products. Future community service programs may expand the training content by introducing artificial intelligence for education, instructional video production, and other interactive learning platforms. Such development would broaden the program's impact, strengthen teachers' adaptability to technological change, and contribute to continuous improvement in the quality of teaching and learning.

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