



EMPOWERING EARLY CHILDHOOD TEACHERS IN THE DEVELOPMENT OF DIGITAL MEDIA-BASED TEACHING MATERIALS IN BAHAGIA VILLAGE, BABELAN DISTRICT, BEKASI REGENCY

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ABSTRACT

This community service project aims to strengthen the digital competence and creativity of early childhood education (PAUD) teachers in Kelurahan Bahagia, Babelan Subdistrict, Bekasi Regency. The project responds to the growing need for innovative teaching materials that integrate multimedia and digital literacy in early childhood education. Using a participatory approach, the program involves training, mentoring, and practice to equip teachers with the skills to create digital learning content using platforms such as Canva for Education, PowerPoint Interactive, and Adobe Animate. Thirty PAUD teachers took part in the program. The project produced tangible outcomes, including the creation of digital learning modules, interactive media, and classroom videos. The results show a significant improvement in teachers' ability to design digital materials, increased learner engagement, and greater teacher confidence in applying technology in the classroom. The activity also promotes collaboration between higher education and community education, aligning with the goals of Indonesia's Merdeka Belajar Kampus Merdeka policy and the Sustainable Development Goal (SDG) 4 on Quality Education.

Keywords: *teacher empowerment; digital literacy; early childhood education; multimedia learning; community engagement*

INTRODUCTION

Bahagia Village, Babelan District, Bekasi Regency, is a densely populated area, with the majority of residents working as laborers, small traders, and informal sector workers. Rapid regional development has not been accompanied by equitable distribution of early childhood education. Most early childhood education institutions in the area still rely on conventional learning methods using textbooks and simple teaching aids.

Early childhood education teachers face difficulties in developing creative and relevant teaching materials in line with technological advances. Lack of training and limitations Digital media has resulted in teachers' limited ability to integrate information

technology into learning activities. This has resulted in low learning motivation in children and suboptimal development of cognitive, social, and language skills.

In this context, a program to empower early childhood education (PAUD) teachers through the development of digital media-based teaching materials is needed. This program aims to improve teachers' digital literacy while supporting the "Merdeka Belajar Kampus Merdeka" (MBKM) policy, which emphasizes collaboration between universities and the community. Students are involved as facilitators in these activities, thus contributing to the achievement of the university's Key Performance Indicators (KPI).

In addition to addressing local needs, this program supports Sustainable Development Goal (SDG) No. 4: Quality Education, by enhancing the capacity of educators at the most basic level. Improving teacher competency is expected to have a direct impact on the quality of educational services in the community and foster a learning culture that adapts to technological developments.

METHOD

This activity was implemented through five main stages: outreach, training, technology implementation, mentoring, and evaluation. The outreach phase was conducted to introduce the importance of using digital media in early childhood learning. The training focused on practical work on creating multimodal literacy-based teaching materials using applications such as Canva for Education, PowerPoint Interactive, and Adobe Animate. During the implementation phase, early childhood education (PAUD) teachers implemented the training findings in their classrooms.

Mentoring was provided by lecturers and students to ensure the successful implementation of the digital teaching materials. The program concluded with an evaluation through direct observation and participant reflection to measure teacher competency improvement. The program's sustainability was maintained through online communication using platforms such as WhatsApp and Zoom.

The community service activities were carried out over eight months and consisted of five stages: (outreach, training, technology implementation, mentoring and evaluation, and program sustainability).

1. Outreach

The initial phase was conducted to raise awareness among PAUD teachers about the importance of using digital media. The team explained the benefits of digital literacy in early childhood learning and presented concrete examples of engaging digital teaching materials.

2. Training

The training was conducted in four sessions:

- Session 1: Introduction to the concept of multimodal literacy and the role of digital media.



- Session 2: Practical use of Canva, PowerPoint Interactive, and Adobe Animate.
- Session 3: Teachers create simple digital teaching materials.
- Session 4: Presentation and reflection on training outcomes.

3. Technology Application

Teachers apply the training findings in the classroom, for example, by creating interactive digital books, short learning videos, or interactive worksheets. Students assist with documentation and trial use of these media with children.

4. Mentoring and Evaluation

Mentoring is carried out intensively by lecturers and students. Evaluation is conducted through classroom observations, interviews, and simple questionnaires to measure teacher competency improvement. Aspects evaluated include creativity, technological skills, and pedagogical abilities.

5. Program Sustainability

After the training concludes, communication continues through WhatsApp groups and monthly Zoom meetings. Teachers can consult, share their work, and receive further guidance online.

RESULTS AND DISCUSSION

The implementation of the program demonstrated a marked improvement in the ability of early childhood education (PAUD) teachers to use digital technology. Before the program, only about one-third of teachers were able to operate basic presentation software. After the training, almost all participants were able to create interactive teaching materials that combined text, images, audio, and video.

Teachers reported increased student enthusiasm. Media based on moving images and sound made it easier for children to understand abstract concepts such as colors, shapes, and numbers. Furthermore, teachers became more confident in exploring new digital platforms. From a pedagogical perspective, digital media-based learning enables a multimodal literacy approach, which combines various communication modes (verbal, visual, auditory, and kinesthetic). This approach aligns with the constructivist theories of Piaget and Vygotsky, which emphasize the importance of concrete experiences and social interaction in early childhood learning.

This activity also served as a learning tool for the participating students. They gained practical teaching experience and collaborated with the community, in line with the spirit of MBKM (Community-Based Learning). The collaboration between lecturers, students, and teachers resulted in a positive synergy between on-campus theory and field practice. The main obstacles encountered were the limited availability of digital devices in some PAUDs and unstable internet connections. A temporary solution was implemented by borrowing equipment from the campus and using offline teaching

materials. Overall, the program's benefits far outweighed the challenges encountered. Activity outputs included:

1. Scientific articles on community service.
2. Video documentation of the activities uploaded to YouTube.
3. Preschool teacher training posters and modules.
4. Intellectual Property Rights (IPR) applications for digital teaching materials.

These results demonstrate that sustainable training-based empowerment is effective in improving the digital literacy of educators. The program can be replicated in other areas with similar characteristics, particularly in peri-urban areas with limited technological facilities.

CONCLUSION

The Early Childhood Education (PAUD) teacher empowerment program in Bahagia Village, Babelan, Bekasi, has successfully improved teacher competency in designing and implementing digital media-based teaching materials. Through training and mentoring, teachers gained practical skills in creating interactive teaching materials and understanding the principles of multimodal literacy. The impact was seen in increased motivation for children to learn and the quality of classroom learning.

This activity also strengthened collaboration between universities and the community and provided real-world experience for students. Going forward, continued support is expected in the form of technological resources and advanced training programs to ensure the continued development of digital learning innovations in PAUD.

The PAUD teacher empowerment program, which focuses on developing digital media-based teaching materials in Bahagia Village, Babelan District, Bekasi Regency, has proven effective in improving digital literacy and teacher creativity. Through training, mentoring, and hands-on implementation, teachers are able to create more engaging learning materials tailored to the needs of early childhood.

The program's impact includes increased teacher confidence, increased child engagement in the learning process, and the formation of a digital learning community among PAUD teachers. This program also provides academic benefits for students and lecturers, in line with the implementation of the Merdeka Belajar Kampus Merdeka (Independent Learning/Independent Campus) program. Recommendations for program sustainability include:

1. Procurement of simple technology devices in every PAUD.
2. Further training on interactive media based on video and animation.
3. Collaboration with regional education offices to expand the program's reach.

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