*GERVASI: Jurnal Pengabdian kepada Masyarakat*
*Vol. 10, No. 01, April 2026*
*ISSN 2598-6147 (Cetak)*
*ISSN 2598-6155 (Online)*

# TRAINING ON DIGITAL TEACHING MATERIALS TO IMPROVE STORYTELLING AND WRITING SKILLS: BOOK CREATOR AND SEESAW

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***Submitted 15-01-2025*** ***Accepted 05-04-2026*** ***Published 27-04-2026***

## Abstract

This community service activity aims to improve the competence of elementary school teachers in using interactive digital media, such as Book Creator and Seesaw. This activity was motivated by various problems, including students' difficulties in developing story ideas, choosing vocabulary, and understanding narrative structure, which impacts low writing motivation. Furthermore, teachers' readiness to integrate digital technology is still limited, and support from the education system and infrastructure is not optimal. The method used was PAR (Participatory Action Research), which was implemented in KKG Cluster 3 Citaringgul, Bogor Regency, involving 15 teachers through three stages: needs analysis, training and mentoring, and reflective evaluation. The results showed an increase in teachers' skills in designing digital media with an average score of 3.6 (good category). Teachers were also able to produce engaging, interactive digital books. This activity encourages the formation of a digital literacy culture and an ICT-based community of practice.

**Keywords:** Participatory Action Research (PAR), interactive digital media, elementary school teachers, Book Creator, Seesaw

***Abstrak***

*Kegiatan pengabdian masyarakat ini bertujuan untuk meningkatkan kompetensi guru sekolah dasar dalam menggunakan media digital interaktif, seperti Book Creator dan Seesaw. Kegiatan ini dilatarbelakangi oleh berbagai permasalahan, antara lain kesulitan siswa dalam mengembangkan ide cerita, memilih kosakata, serta memahami struktur narasi, yang berdampak pada rendahnya motivasi menulis. Selain itu, kesiapan guru dalam mengintegrasikan teknologi digital masih terbatas, serta belum optimalnya dukungan sistem pendidikan dan infrastruktur. Metode yang digunakan adalah PAR (Participatory Action Research), yang dilaksanakan di KKG Klaster 3 Citaringgul, Kabupaten Bogor, melibatkan 15 guru melalui tiga tahap: analisis kebutuhan, pelatihan dan pendampingan, serta evaluasi reflektif. Hasil menunjukkan peningkatan keterampilan guru dalam mendesain media digital dengan skor rata-rata 3,6 (kategori baik). Guru juga mampu menghasilkan buku digital interaktif yang menarik. Kegiatan ini mendorong terbentuknya budaya literasi digital dan komunitas praktik berbasis TIK.*

***Kata Kunci:*** *Penelitian Aksi Partisipatif (PAR), media digital interaktif, guru sekolah dasar, book creator, Seesaw*

## INTRODUCTION

The development of information and communication technology (ICT) in the last two decades has transformed education from a conventional system to interactive, student-centred digital learning, in line with the demands of the Industrial Revolution 4.0 to Society 5.0. Digitalization enables learning beyond the classroom through synchronous and asynchronous interactions, the use of multimodal learning resources, and more personalized learning experiences (Bashir & Lapshun, 2025; Zou et al., 2025). Various studies have shown that pedagogically designed ICT integration can improve 21st-century skills such as critical thinking, communication, collaboration, and creativity, while also encouraging student learning independence (Aleksieva, 2025; Ndibalema, 2025; Ong & Annamalai, 2024). However, the success of its implementation is largely determined by the readiness and digital competence of teachers in managing technology-based learning effectively (Domínguez-González et al., 2025; Rahimi, 2024). In the Indonesian context, the Freedom to Learn policy requires teachers to be more adaptable, innovative, and reflective in designing meaningful learning experiences. Teachers are no longer simply transmitters of material, but facilitators capable of harmoniously orchestrating technology, content, and pedagogical strategies. Thus, teachers' ability to integrate ICT is not merely a matter of digital literacy but also a readiness to build a contextual, collaborative, and creative learning ecosystem. Strengthening teachers' capacity to use technology strategically is key to creating a learning environment that meets the demands of the 21st century and aligns with the spirit of Independent Learning, as emphasized in recent studies (Amemasor et al., 2025; Ma & Ismail, 2025).

One elementary education institution facing challenges in implementing digital-based learning is the Teacher Working Group (KKG) Cluster 3 Citaringgul, Babakan Madang District, Bogor Regency. The school environment in this cluster is relatively conducive, and most of the teachers are young and enthusiastic about learning innovation. However, several issues were identified that needed to be addressed. Based on initial observations and discussions, teachers continue to struggle to effectively develop students' storytelling and writing skills due to

limited access to engaging, interactive digital learning media. Students also often experience difficulties when asked to write stories. Many of them don't know how to initiate an idea, choose the right words, or develop a coherent storyline. As a result, their writing tends to be short, undeveloped, and lacks clear connections between the story's parts. This situation also impacts students' interest and motivation in learning the language.

On the other hand, schools actually have several technological facilities, such as digital television and basic internet access, that can support the learning process. However, the use of these technologies in teaching and learning activities has not been optimal. Teachers still tend to use conventional learning methods, so the available technology has not been fully utilized to help students develop ideas, enrich vocabulary, and build better narrative structures. Furthermore, limited practical experience with learning technology and the lack of a sustainable digital learning system support also contribute to these challenges. This creates a gap between the availability of technological facilities and their effective application in creative learning. This situation indicates that the potential of using technology to support students' writing skills has not been fully utilized in classroom learning practices.

To address these issues, the PGRI Indraprasta University community service team designed a digital learning materials training program using Book Creator and Seesaw to improve storytelling and writing skills. Book Creator is used to produce multimodal digital books that integrate text, images, audio, and video, while Seesaw is used as a digital assessment platform that supports collaboration and reflection on learning. This program integrates a blended learning approach that flexibly combines face-to-face and online learning (Islamiyati et al., 2025), as well as interactive learning that encourages active student participation through direct feedback (Rahmah, 2025). This approach has been proven effective in increasing students' intrinsic motivation and self-efficacy through the use of interactive digital media (Chen et al., 2025). The beginning stage of activities focused on mapping teacher needs through classroom observations and interviews.

**Table 1 Results of the Teacher Needs Analysis in KKG Cluster 3 Citaringgul**

| No | Observed Aspects | Indicator | Percentage of Teachers with Mastery | Description |
|---|---|---|---|---|
| 1 | Use of digital devices in learning (laptops, projectors, cell phones) | Teachers use devices to display materials | 78% | Most teachers are familiar with using basic devices, but only for presentations. |
| 2 | Use of digital learning applications (Book Creator, Seesaw, Canva, Padlet) | Teachers use applications to create interactive media | 25% | Only a small proportion of teachers have tried creating digital media, especially Canva. |
| 3 | Ability to design digital learning media. | Teachers are able to compose media with elements of text, images, and interactivity | 18% | The majority of teachers do not understand the principles of digital media design. |
| 4 | Integration of digital media in student writing/storytelling activities | Teachers use digital media to improve student literacy skills | 22% | Media use is still demonstrative and does not actively involve students |
| 5 | Utilization of teacher collaborative platforms (Google Classroom, WhatsApp Group, local LMS) | Teachers utilize platforms to share teaching materials or reflections | 45% | Teachers primarily use WhatsApp groups for coordination, which is not yet optimal for collaborative learning. |

Based on the observations and interviews above, it appears that teachers' digital literacy levels remain low to medium. While most teachers possess the tools and motivation to learn, they lack the skills to design engaging, contextually relevant digital media. The problem-solving plan in this activity includes: (1) technical training in creating digital media based on Book Creator and Seesaw, (2)

mentoring teachers in developing creative learning projects based on digital stories, and (3) implementing a reflective evaluation model to measure improvements in students' writing and storytelling skills. This activity not only focuses on improving teachers' technical competencies, but also on developing new pedagogical mindsets that are adaptive to digital learning (Ajani, 2024).

The targets of this PKM activity include: (1) improving teachers' ability to utilize digital applications for language learning, (2) the birth of digital storybook products created by teachers that can be used as teaching media, and (3) the creation of a sustainable learning model based on ICT in KKG Gugus 3 Citaringgul. In the long term, this activity is expected to strengthen teachers' and students' digital literacy, increase learning motivation, and foster a creative learning culture aligned with the demands of educational transformation in the digital era (Yusupova et al., 2025).

This program aims to improve teachers' digital literacy and equip them with practical skills in creating interactive technology-based teaching media. The benefits of this activity are felt not only by teachers as partners but also by educational institutions as a whole. Teachers gain new skills in managing technology-based learning, students gain more engaging, context-rich learning experiences, and the school gains an enhanced reputation as an institution responsive to educational innovation. Furthermore, this activity has the potential to become a model of best practice, replicable in other school clusters to develop digital literacy competencies and foster project-based learning. Thus, this activity has strategic relevance to supporting national education goals, namely, producing students who are adaptive, creative, and possess 21st-century skills through the wise and sustainable use of educational technology.

## METHOD

This community service activity was implemented using a Participatory Action Research (PAR), with training and mentoring, emphasizing partners' active involvement of partners in every stage (Vaughn & Jacquez, 2020). Thus, this activity adopts the principle of “learning by doing,” where hands-on practice and

ongoing mentoring are key components of effective teacher professional development in technology integration (Philipsen et al., 2019).The partner in this activity is the Teacher Working Group (KKG) Cluster 3 Citaringgul, Babakan Madang District, Bogor Regency, comprising 15 elementary school teachers. Partners were selected based on the need to improve digital literacy competencies and pedagogical skills in developing technology-based teaching media (McDougall, 2021).

This activity was carried out at SDN Citaringgul 04, Babakan Madang District on November 29, 2025. Based on the results of initial interviews and completion of the needs assessment sheet, most teachers already have ICT devices, such as laptops and smartphones, but have not yet mastered the use of interactive learning applications, such as Book Creator and Seesaw. This became the basis for designing a training program that emphasizes the development of practical skills through project-based activities.

The activity design comprises three main stages, implemented over three months. The first stage is needs analysis and planning, conducted through classroom observations and interviews with partner teachers to map initial capabilities in the use of learning technology. The analysis data is used to develop training modules and determine realistic achievement targets. The second stage is intensive training and mentoring, where participants are introduced to the concept of digital learning and given hands-on practice in creating teaching media using the Book Creator and Seesaw applications. In this stage, participants are guided to produce digital storybooks and designs for interactive storytelling activities. The third stage is the evaluation of results and reflection, which includes assessing teachers' products and the level of success of digital media implementation in the classroom.

To ensure the targets were achieved, this activity utilized several measurement tools at each stage. First, a teacher activity observation sheet was used to assess improvements in technical skills in operating digital applications and designing learning materials during the training process. This instrument consisted of an observation sheet with a rating scale and a checklist, allowing assessors to

record participants' skill levels across several indicators, such as the ability to access applications, manage key features, and systematically organize digital learning materials.

Second, a digital product assessment sheet was used to evaluate the quality of the work produced by participants after the practical session. This instrument consisted of an analytical rubric that included several assessment aspects, such as the quality of visual design, the accuracy and clarity of learning content, and the level of interactivity of the media created. Each aspect was assessed using specific achievement criteria, making it easier for evaluators to provide a more objective assessment of the products.

Third, a participant reflection sheet was used to identify teachers' perceptions, experiences, and understanding after participating in the training. This instrument consisted of a written reflection sheet with a combination of open-ended questions and a simple response scale, allowing participants to express their opinions regarding the benefits of the activity, challenges encountered during the training, and plans to apply the skills acquired in classroom practice. Through this instrument, an overview of the participants' learning experiences and feedback for improving future activities are obtained. These three measurement tools were developed based on the principles of performance assessment as suggested by (Pan et al., 2021) in their research on project-based teacher training.

With this approach, it is hoped that this community service activity will not only result in short-term improvements in technical competency but also foster a culture of sustainable digital literacy among elementary school teachers. This practice-based, participatory, and reflective approach is believed to enhance teacher independence in utilizing ICT as a means of developing creative, innovative, and relevant learning to meet the needs of today's digital generation (Yusupova et al., 2025).

## FINDINGS AND DISCUSSION

### Needs Analysis and Planning

The first phase of the activity focused on observing teacher activities during training sessions on the use of digital applications to design learning materials. The instrument used in this phase was a teacher activity observation sheet designed to assess technical skills and teacher participation during the training. The observation sheet was structured as an observation checklist with a rating scale, allowing observers to record the presence of activities and assess their quality of implementation. The observation instrument uses a 5-level Likert scale with a score of 5 for the very good category, a score of 4 for the good category, a score of 3 for the sufficient category, a score of 2 for the less category, and a score of 1 for the very least category.

Data collection was conducted through direct observation during the training activities. Prior to implementation, the implementation team prepared an observation sheet containing several skill indicators to be observed, particularly those related to teachers' ability to operate digital applications and develop learning materials. During the practical sessions, observers observed participants' activities and assigned scores to each indicator according to the demonstrated level of proficiency. After the activity was completed, all scores were summarized to determine each indicator's achievement. The observation data were then analyzed using a quantitative descriptive approach. Analysis was performed by calculating the score for each indicator, summing all scores, and determining the average using the formula $\bar{X} = \frac{\sum X}{N}$, where $\bar{X}$ represents the average, $\sum X$ is the total score, and $N$ is the number of indicators assessed. The average value in the table below was then converted into qualitative categories to facilitate the interpretation of the observation results and to illustrate participants' skill levels during the training activities.

**Table 2 Results of Teacher Activity Observation during Digital Media Training**

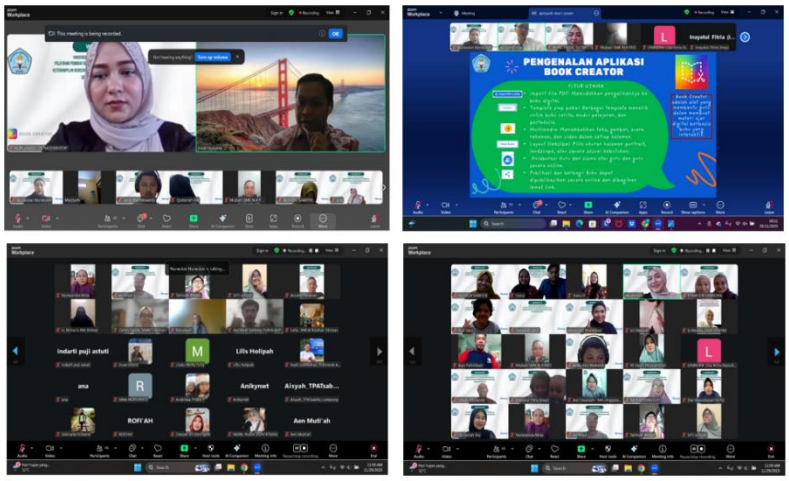
| No | Observation Indicator | Average Score | Category |
|---|---|---|---|
| 1 | Ability to access and open digital applications | 4.2 | Good |
| 2 | Ability to understand basic application features | 3.8 | Good |
| 3 | Ability to operate main menus and tools | 3.6 | Good |
| 4 | Ability to design digital learning materials | 3.4 | Fairly Good |
| 5 | Ability to integrate text, images, and visual elements | 3.3 | Fairly Good |
| 6 | Ability to organize the structure of learning materials | 3.2 | Fairly Good |
| 7 | Ability to save and share digital products | 3.9 | Good |

Based on observations, the average score was 3.63, which is in the good category. This indicates that most teachers were able to use digital applications and participated in the training process effectively. However, several indicators showed relatively lower scores, particularly in the following aspects: designing digital learning materials, integrating visual elements, and structuring learning materials. This indicates that although teachers are technically proficient in using applications, their ability to design effective digital learning materials still needs improvement.

Based on observations, several aspects still require attention for further development. Participants still need more focused guidance in designing digital learning materials to ensure a more systematic presentation structure. Furthermore, providing a wider variety of digital product examples can help participants understand how to combine text, images, and visual elements more effectively. Practical activities also need to be expanded to provide participants with hands-on experience using the applications they are learning. These efforts are expected to support teachers' ability to produce more creative, interactive, and relevant digital learning materials for use in the learning process.

**Intensive Training and Mentoring**

Intensive training and mentoring are key steps in ensuring participants are able to apply the skills they have acquired in real-world settings. This ongoing mentoring ensures each participant can overcome any technical and pedagogical difficulties that arise in the field. Active interaction between facilitators and participants also encourages the exchange of ideas and strengthens conceptual understanding. Through this approach, participants not only understand the material but are also able to produce work that meets their learning needs. The following image shows participant participation during the training and mentoring sessions.




**Picture 1 Participants were introduced to the Book Creator and Seesaw**

This training and mentoring also includes an assessment of products made by participants. Product assessment is carried out using an analytical rubric, namely an assessment instrument that assesses each aspect of the product separately, thus providing a more detailed picture of the quality of the work produced. The table below is a Digital Learning Products assessment rubric that will be created by participants and the assessment was conducted by a team of evaluators using a five-point Likert scale, with a total score of 25.

**Table 3 Rubric for Assessing Digital Learning Products**

| No | Assessment Aspect | Indicator | Maximum Score |
|---|---|---|---|
| 1 | Visual Design | Layout arrangement, use of colors, text readability, and display consistency | 5 |
| 2 | Content Quality | Alignment of the material with learning objectives, clarity of information, and conceptual accuracy | 5 |
| 3 | Content Structure | Sequence of material presentation and coherence between sections | 5 |
| 4 | Interactivity | Use of interactive elements such as buttons, navigation, or learning activities | 5 |
| 5 | Media Integration | Use of images, audio, video, or other supporting visual elements | 5 |

Based on the assessment of the products produced by the training participants, the following results were obtained in the table below

**Table 4 Results of Digital Learning Product Assessment**

| No | Assessment Aspect | Average Score | Category |
|---|---|---|---|
| 1 | Visual Design | 3.9 | Good |
| 2 | Content Quality | 4.1 | Good |
| 3 | Content Structure | 3.7 | Good |
| 4 | Interactivity | 3.3 | Fairly Good |
| 5 | Media Integration | 3.6 | Good |

The assessment results showed that the participants' digital products were in the good category, with an average score of 3.72. The aspect that received the highest score was content quality, indicating that most participants compiled learning materials that were relevant to the learning objectives and presented them clearly. However, the interactivity aspect received a lower score than the other aspects, indicating that the use of interactive features and the integration of multimedia elements, such as images or videos, were still not optimal. In general, these results indicate that the training has had a positive impact on teachers' ability to develop digital-based learning media. However, in subsequent activities, more targeted assistance is needed to develop interactive designs and use various

multimedia elements to make the resulting media more engaging and increase student engagement in the learning process.

**Evaluation of Results and Reflection**

In the last stage, an evaluation assesses the success of the activities and the extent to which the program's objectives have been achieved. This evaluation is conducted using three main instruments developed based on the performance assessment principles proposed by (Pan et al., 2021). Reflection data was collected through a reflection sheet containing several closed-ended statements using a response scale, as well as open-ended questions that allowed participants to share their experiences and opinions in greater depth, which are presented in the table below.

**Table 5 Participants' Reflections on the Training Program**

| No | Reflection Statement | Agreement Percentage (%) | Category |
|---|---|---|---|
| 1 | The training helped improve my understanding of using digital applications in teaching and learning | 92% | Very Positive |
| 2 | The training materials are relevant to classroom learning needs | 89% | Very Positive |
| 3 | The practical activities helped me understand how to develop digital learning media | 94% | Very Positive |
| 4 | The digital learning media introduced in the training can be applied in classroom instruction | 90% | Very Positive |
| 5 | This training increased my motivation to use technology in teaching | 91% | Very Positive |

Based on the reflection results, the majority of participants expressed a very positive perception of the training. The high percentage of agreement across almost all indicators indicates that the training was deemed relevant to teachers' needs in developing technology-based learning. Participants perceived that the training not only provided a conceptual understanding of the use of digital applications but also provided practical experience that helped them develop learning media directly. These findings demonstrate that a training approach that emphasizes practical

activities plays a significant role in improving teachers' competency in utilizing learning technology. Through hands-on experience in creating digital products, participants gained a more concrete understanding of how technology can be used to support the learning process in the classroom.

Based on participants' responses on the reflection sheet, this training provided a number of significant benefits for teacher competency development. This activity not only improved participants' digital literacy, particularly in utilizing applications to develop learning media, but also encouraged creativity in developing more varied learning materials through the use of visual and multimedia elements. Furthermore, this training increased teachers' motivation to utilize technology in the learning process and provided hands-on practical experience that helped participants understand the stages of digital learning media development more systematically. These findings indicate that the training's impact extended beyond increased knowledge to include changes in teachers' attitudes, confidence, and readiness to integrate technology into their learning practices. However, several participants felt that similar activities needed to be further developed for a more sustainable impact. Therefore, implementing more in-depth follow-up training, increasing the duration of practical sessions, and providing ongoing mentoring through learning communities or forums for sharing good practices are important steps to strengthen the implementation of acquired skills. Furthermore, training outcomes need to be effectively integrated into classroom learning practices so that the resulting media products are not merely exercises but are actually utilized in teaching and learning activities.

More broadly, the results of this reflection confirm that practice-based training has strong potential in improving teacher readiness to face the demands of learning in the digital era, because through direct experience in designing learning media, teachers not only acquire technical skills but also develop pedagogical awareness of the importance of innovation in the learning process. Therefore, teacher competency development programs that focus on technology integration need to be designed in a sustainable, contextual, and aligned with real needs in schools to make a more tangible contribution to improving the quality of learning.

The results of this study can be strengthened by experiential learning theory, which asserts that hands-on, experiential learning can enhance deeper understanding and skills through practice and reflection (Kgosi et al., 2026). The positive impact on teacher motivation and confidence is further reinforced by the concept of a community of practice, which emphasizes the importance of collaboration and experience sharing in ongoing professional development (Mahlo & Waghid, 2025). Thus, the combination of a hands-on approach, technology integration, and community support has proven effective in enhancing teacher readiness to face the demands of digital learning.

One important aspect of this activity is the effort to build sustainability by forming a digital community of practice within the KKG Cluster 3 Citaringgul environment. This community serves as a forum for sharing experiences, updating digital teaching materials, and training new teachers, ensuring continued innovation. This model aligns with the concept of a sustainable digital learning community proposed by (Sundgren et al., 2023), which emphasizes the importance of social collaboration and professional support to maintain the sustainability of digital learning innovation.

In the long term, this PKM activity will not only enhance teachers' technical skills but also foster a sustainable culture of digital literacy. Students gain a more contextual and engaging learning experience, while schools gain an image as institutions that adapt to changes in educational technology. Thus, this activity has strategic relevance in supporting the national education vision of producing students who are adaptive, creative, and possess 21st-century skills (Ajani, 2024; Yusupova et al., 2025).

## CONCLUSION

This training activity was conducted to improve elementary school teachers' competence in using interactive digital media, specifically Book Creator and Seesaw, to support writing and storytelling learning. The implementation results showed an increase in teachers' technical skills in designing digital learning media and a strengthening of pedagogical competence in developing project-based

learning through a digital storytelling approach. In addition to producing digital books suitable for classroom use, this activity also fostered teachers' confidence and awareness of integrating technology more effectively and meaningfully. Thus, this program not only addresses the need to improve teachers' digital literacy but also helps strengthen more creative, participatory, and sustainable learning practices within the KKG Gugus 3 Citaringgul environment.

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