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Interactive Media Training for Teaching Explanatory Text Writing in Tanjung Jabung Timur Junior High School

Sophia Rahmawati[1*], Kartini Aboo Talib @ Khalid[2], Siti Enik Mukhoiyaroh Bambang[3], Yusra D[4], Akhyaruddin[5], Deri Rachmad Pratama[6], Dimas Anugrah Adiyadmo[7], Ade Bayu Saputra[8], David Iqroni[9], Anggel Hardi Yanto[10]

[1,3,4,5,6,7,8]Department of Indonesian Language and Literature Education Study, Universitas Jambi, Jambi, Indonesia
[2]Institute of Ethic Studies, Universiti Kebangsaan Malaysia, Selangor, Malaysia
[9,10]Department of Sports Coaching Education, Universitas Jambi, Jambi, Indonesia
*Email: sophia.rahmawati89@unja.ac.id

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Abstract

Indonesian language teachers at junior high schools in Tanjung Jabung Timur Regency face challenges in teaching explanatory text writing due to limited use of interactive digital learning media and inadequate integration of technology into pedagogy. This community engagement program aimed to enhance teachers' competence through training based on the Technological Pedagogical Content Knowledge (TPACK) framework, with a focus on the Canva platform. The program involved 30 Indonesian language teachers from several junior high schools and was implemented through structured activities, including needs assessment, material delivery, collaborative discussions, hands-on media development, and evaluation using pretest and posttest instruments. The results showed a significant improvement in teacher competence, indicated by a mean score difference of −15.433, a significance value of 0.000 ($p < 0.05$), and a very large effect size (Cohen's $d = 2.648$). These findings confirm that the training effectively improved teachers' ability to design creative, interactive, and curriculum-aligned digital learning media for teaching explanatory texts. The novelty of this program lies in the contextual integration of the TPACK framework with digital media training oriented toward explanatory writing and local content, supporting the technology-enhanced implementation of the Merdeka Curriculum and providing a replicable model for similar teacher training initiatives.

Keywords: Digital Learning Media, Explanatory Text, Merdeka Curriculum, Teacher Training, TPACK.

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INTRODUCTION

The Tanjung Jabung Timur Regency Education Office plays a strategic role in improving the quality of learning at the junior high school (SMP) level, particularly in Indonesian language subjects. According to data from the Jambi Province Central Statistics Agency (Jambi., n.d.), there are 1,145 junior high school teachers assigned

to teach, with approximately 217 of them being Indonesian language teachers. Although some teachers have participated in the Independent Curriculum training and others have become leading teachers, real challenges remain in implementing interactive and effective learning methods, particularly in teaching explanatory text writing. This problem is closely related to the limited use of relevant and engaging learning media, which can support students' optimal mastery of writing skills (Oktarina et al., 2022; Praheto et al., 2020; Qerimi et al., 2023).

According to data from the Jambi Province Central Statistics Agency (Jambi., n.d.), there are 1,145 junior high school teachers assigned to teach, with approximately 217 of them being Indonesian language teachers. Although some teachers have participated in Independent Curriculum training, their digital competence remains varied, particularly in the pedagogical integration of technology. Previous ICT initiatives in the region have focused more on basic infrastructure and general software usage, yet real challenges remain in implementing interactive and effective learning methods for specific subject matter, such as explanatory text writing (Alemu, 2015; Nye, 2015). This lack of targeted training in media development leaves teachers without adequate support to align learning technology with the specific characteristics of the curriculum and student needs (Grimus, 2020; Nilson & Goodson, 2021; Shonfeld et al., 2021). Consequently, there is a clear gap between the availability of digital tools and the teachers' ability to utilize them creatively in the classroom.

The urgency of this community service initiative stems from the persistent gap between the demands of the Merdeka Curriculum and the current instructional practices in Tanjung Jabung Timur. While writing explanatory texts requires students to logically process phenomena, many teachers still rely on one-way, textual methods that fail to engage digital-native students (McDonough, 2023; Kirkwood, 2023; Horning, 2024). This reliance on conventional media often leads to student boredom and a lack of motivation, as evidenced by common difficulties in applying complex linguistic rules like causal conjunctions and coherent sentence structures (Adedokun & Adedokun, 2024; Naini & Ulya, 2025). To bridge this gap, teacher creativity must be channeled into developing interactive digital media such as animations, simulations, and interactive quizzes which allows for more active, independent, and differentiated learning experiences (McKoy & Merry, 2023; Qian, 2024; Das, 2024).

This is primarily due to a lack of adequate training in the use of learning technology and media development relevant to explanatory text material (Bigirwa et al., 2020; Septiani, 2020). To address this, there is an urgent need to adopt the Technological Pedagogical Content Knowledge (TPACK) framework, which ensures that the integration of digital media is not merely a technical addition but is grounded in the synergy between subject content, effective teaching strategies, and technology (Tseng et al., 2020; Jibril & Adedokun-Shittu, 2024). By introducing TPACK at this stage, the development of interactive media particularly through platforms like Canva becomes a purposeful pedagogical tool designed to improve students' conceptual understanding and writing skills in alignment with the Merdeka Curriculum (Hafiz et al., 2024; Kosakoy et al., 2025; Hamzah et al., 2025).

Digital-based learning media is one solution to address these challenges. Digital media can present material in various formats, such as text, images, audio, and video, simultaneously. This advantage makes digital media more capable of capturing students' attention and helping them understand learning concepts more fully (Purwanto et al., 2023; Almusaed et al., 2023) One digital platform currently widely used in education is Canva. Canva is an online graphic design platform that offers a variety of attractive and easy-to-use templates, even for beginners.

This ease of use makes Canva not only easier for teachers to apply interactive teaching materials in creative visual forms, but also provides a convenient learning experience (Christiani et al., 2024).

Through this training, teachers are expected to be able to develop learning media that comprehensively address the characteristics of explanatory texts and student needs (Badriyah et al., 2020; Fitriyah et al., 2024). The novelty of this program lies in its specific integration of the TPACK framework with localized Jambi content and writing pedagogy, shifting beyond general digital literacy to a specialized model that bridges technical Canva skills with the structural and linguistic complexities of explanatory texts. This approach is expected to help teachers overcome existing challenges and produce truly effective and innovative interactive digital learning media.

Training that enables teachers to learn practically and collaboratively in designing applicable interactive digital media (Lesta et al., 2025; Purba et al., 2021). In addition, the Technological Pedagogical Content Knowledge (TPACK) concept will also be applied to integrate material content, teaching techniques, and technology harmoniously (Marwah & Susanti, 2023; Bernsteiner et al., 2025) . With this approach, teachers not only master technology but also understand how it can be utilized to effectively support the achievement of explanatory text writing competency. Teachers will be encouraged to design digital learning media using various popular platforms, such as Canva, which can enrich the learning process.

The main focus of this community service activity is to provide comprehensive training to Indonesian language teachers at junior high schools in East Tanjung Jabung Regency, covering three main aspects. First, strengthening understanding of the concept of writing explanatory texts in accordance with the demands of the Independent Curriculum. Second, an introduction and technical training in developing applicable and easily accessible interactive digital learning media. Third, conducting trials, evaluations, and follow-up on the use of digital media in teaching explanatory text writing. This activity is expected to significantly improve the quality of writing instruction and encourage teachers to continue innovating in technology-based learning.

The primary objective of this initiative is to elevate the professional standards of Indonesian language teachers by synthesizing theoretical insights on interactive digital media with the practical complexities of teaching explanatory text writing (Indriyani, 2025). This program seeks to bridge the gap between technical proficiency and pedagogical strategy through the Technological Pedagogical Content Knowledge (TPACK) approach, ensuring that digital tools are not merely decorative but are deeply integrated into the structural and linguistic requirements of the Merdeka Curriculum. By fostering these competencies, the training holds significant academic value in contributing to technology-based language education models and practical significance in creating a more innovative, engaging, and outcome-oriented learning environment for students in Tanjung Jabung Timur.

The objectives of this community service activity are (a) to increase the insight of Indonesian language teachers about the concept of developing effective and applicable interactive digital media for learning to write explanatory texts, (b) to improve teachers' skills in developing interactive digital media that are appropriate to the structure and characteristics of explanatory texts, and (c) to improve teachers' competence in integrating interactive digital media into the learning process with the Technological Pedagogical Content Knowledge (TPACK) approach so that learning becomes more interesting, innovative, and able to improve students' writing skills in accordance with the Merdeka curriculum.

This training not only aims to improve teachers' technical skills in creating digital learning media but also strengthens their pedagogical understanding of teaching strategies for writing explanatory texts. Through this training, teachers are expected to be able to develop learning media that comprehensively address the characteristics of explanatory texts and student needs. This training is expected to help teachers overcome these challenges and produce effective and innovative interactive digital learning media. Furthermore, the training will provide a space for teachers to share experiences, discuss topics, and support each other in developing quality learning media.

METHODS

This community service activity applied a training-based approach aimed at developing interactive digital learning media to support the teaching of explanatory text writing at junior high schools in Tanjung Jabung Timur Regency. The training targeted Indonesian language teachers and was designed to improve their pedagogical, content, and technological competencies through the Technological Pedagogical Content Knowledge (TPACK) framework.

The training method was implemented in four main stages. First, a needs analysis was conducted through observations and group discussions to identify teachers' challenges in teaching explanatory text writing and integrating digital media. This stage focused on understanding pedagogical and technical constraints faced by teachers in aligning learning media with the structure and linguistic characteristics of explanatory texts.

Second, teachers received guided training on the instructional characteristics of explanatory texts, including text structure and key linguistic features, as well as strategies for integrating interactive digital media into the learning process. At this stage, the TPACK approach was emphasized to ensure balanced integration of content knowledge, pedagogical strategies, and technology in teaching explanatory text writing.

Third, teachers collaboratively designed and developed interactive digital media prototypes that accommodated explanatory text elements such as phenomenon identification, cause-and-effect relationships, and sequential explanations. The development process incorporated interactive features, including animations, quizzes, and explanatory videos, to support student engagement and understanding. Limited trials were conducted with small groups of students to obtain feedback on usability and instructional effectiveness.

Fourth, the developed media were revised based on trial results and subsequently implemented in classroom learning. Teachers were guided to evaluate the use of interactive digital media through observation and reflection on student responses and learning outcomes, enabling continuous improvement of instructional practices.

The outputs of this activity included increased teacher competence in developing and implementing interactive digital learning media, the production of tested digital media prototypes for explanatory text writing, and strengthened teacher capacity to integrate technology effectively in accordance with the TPACK framework.

Data Collection Instrument and Techniques

In order to evaluate the effectiveness of interactive digital media development training conducted for Indonesian language teachers at junior high schools in East Tanjung Jabung Regency, the implementation team developed a set of assessment instruments consisting of three main components: the technical quality and design of digital media, teacher competence in using digital tools, and the relevance of media content to the structure and characteristics of explanatory texts. Each indicator in this instrument is designed to comprehensively capture the technical, pedagogical, and substantive aspects of the material produced by the training participants.

The assessment of the teachers' work in this Community Service activity covers several important aspects that serve as indicators of the training's success. First, teachers' understanding of the training material is assessed through pre- and post-tests. These tests aim to measure the teachers' understanding of the concept of explanatory text and how to develop interactive digital media before and after the training.

Furthermore, interactive digital media products developed by teachers were also assessed. The community service team assessed the work based on several criteria, such as the media's content's suitability to the core competencies (KD) or learning outcomes (CP) in the curriculum, the quality of the visual design and interactivity, innovation in presentation, and the media's potential for effective use in classroom learning activities.

Table 1. Assessment Instrument

Construct	Code	Assessment Indicators	Score (1-5)	References
Technical Quality and Digital Media Design	KTMD1	Text Readability:The use of fonts and color contrast makes it easier for students to read the explanatory text material.		
	KTMD2	Layout:The placement of elements is neat, structured, and visually effective.		
	KTMD3	Visualization of Material:The use of images/illustrations/animations is relevant and helps explain the concept of the Explanatory Text.		
	KTMD4	Interactivity:Media has navigation buttons, quizzes, or elements that require students to interact.		
	KTMD5	Navigation Efficiency:Transitions between slides are smooth and the media navigation system is made logical.		
	KTMD6	Digital Aesthetics:The product has high artistic and professional value (consistent and harmonious).		
	KTMD7	Student Target Suitability:Visual design and language are appropriate for junior high school students (Phase D)		
	KTMD8	Using Advanced Features:Teachers utilize platform-specific features (e.g., custom animations, links, video embeds) effectively.		
Teacher Digital Tools Competency and Expertise	KKADG1	Able to export media in the right format (e.g. MP4 video, presentation link).		
	KKADG2	Able to use collaboration or media sharing features effectively.		
	KKADG3	Able to perform basic analysis and troubleshooting (overcoming formatting or error problems).		

	KKADG4	Able to manage project files systematically and with clear naming.
	KKADG5	The level of speed and independence of teachers in the media creation process
	KKADG6	Able to explain the technical process of making the media clearly.
	KKADG7	Using external resources (video, audio) without violating copyright.
	KKADG8	Able to create custom elements (not just relying on existing templates) to increase appeal.
Relevance of Explanatory Text Content and Locality	KMKL1	The media explicitly presents the Learning Objectives (CP/TP) of writing Explanatory Text.
	KMKL2	The media contains material about the Definition and Social Function of Explanatory Text.
	KMKL3	The media explains the complete structure of the explanatory text (general statement, series of explanations, interpretation).
	KMKL4	The media explains the linguistic rules of explanatory texts (conjunctions, technical words) accurately.
	KMKL5	The media contains examples of explanatory texts that are relevant to curriculum material.
	KMKL6	The media contains examples of explanatory texts that are relevant to the local wisdom of Jambi/East Tanjung Jabung.
	KMKL7	The media presents practical and sequential steps for students to write explanatory texts.
	KMKL8	The media contains challenging Writing Activities and provides Instant Feedback or answer keys.

Seen from Table 1, In the first aspect, namely the technical quality and design of digital media (KTMD), this instrument evaluates the extent to which the developed media meets the principles of readability, layout, visualization, interactivity, navigation, aesthetics, and suitability to the characteristics of junior high school students. This aspect is important because the appearance and ease of use of media greatly influence students' interest and understanding of the learning material. For example, indicators such as the use of legible fonts and appropriate color contrast (KTMD1), as well as the structured placement of visual elements (KTMD2), are initial determinants of user comfort in accessing learning content.

Meanwhile, the second aspect, teacher competence and expertise in using digital tools (KKADG), focuses on teachers' technical abilities during the media development process. These include the ability to export media to the appropriate format (KKADG1), use collaboration features (KKADG2), perform simple troubleshooting (KKADG3), and create custom design elements that do not rely solely on built-in templates (KKADG8). This assessment aims to determine the extent to which teachers are able to adapt to learning technology and independently develop digital-based teaching materials professionally.

The third, equally important aspect is the relevance of the explanatory text content and locality (KMKL). In this section, assessment indicators are aimed at assessing the integration of media content with learning outcomes, the structure of the explanatory text, the use of linguistic rules, and the integration of local or contextual values in Jambi. This aims to ensure that the developed media is not only visually appealing but also rich in content and

aligned with student characteristics and local culture. With this approach, digital media becomes not only a technical tool but also an educational vehicle with contextual and pedagogical value.

Data Anlysis Techniques

The data analysis technique used in this study aims to evaluate the effectiveness of interactive digital media development training in improving Indonesian language teachers' competencies, particularly in teaching explanatory text writing. The data analyzed were quantitative data obtained from the pretest and posttest results of the training participants.

Before conducting inferential analysis, the data was first analyzed descriptively to determine the mean, standard deviation, minimum, and maximum values of the pretest and posttest scores. This descriptive analysis was used to obtain a general overview of the participants' improvement in skills after the training.

Next, to determine whether there was a significant difference between pre- and post-training scores, a paired sample t-test was used. This test was chosen because it is appropriate for a pretest-posttest research design with the same subjects. The test was conducted assuming that the data were normally distributed, therefore, a normality test was first performed using the Kolmogorov-Smirnov and Shapiro-Wilk methods. If the significance value is greater than 0.05, the data are considered normally distributed, and parametric tests can be used.

After obtaining the t-test results, the analysis continued with effect size calculations using two approaches, namely Cohen's d and Hedges' g, to determine the extent of the training's practical impact. The effect size value provides an interpretation of the strength of the intervention's influence on the observed variables, with interpretation criteria: small ($d = 0.2$), medium ($d = 0.5$), and large ($d \geq 0.8$). Values above 2.0 indicate a very large effect.

The entire data analysis process was conducted using SPSS version 26 or equivalent software. The results are presented in tables, graphs, and descriptive narratives to facilitate interpretation and drawing conclusions about the effectiveness of the training program.

RESULTS AND DISCUSSION

The implementation of this community service activity was conducted in two main stages: the pre-implementation (pre-PPM) stage and the implementation and evaluation stage. The pre-PPM stage focused on preliminary needs assessment to ensure the relevance and effectiveness of the program. This stage involved an initial field survey at partner institutions, including the Tanjung Jabung Timur Regency Education Office and selected junior high schools, to identify general conditions related to digital infrastructure readiness, teachers' familiarity with interactive learning media, and key challenges in teaching explanatory text writing.

After collecting field data and information, the implementation team then developed the Community Service Program (PPM) instruments, including training material scripts, post-test evaluation tools, and observation sheet formats for the implementation process. These instruments were developed based on the partners' needs and aligned with the applicable Indonesian language learning standards at the junior high school level. Furthermore,

responsibilities within the implementation team were clearly allocated, including material development, discussion facilitation, activity documentation, and evaluation of training outcomes, to ensure a more focused, effective, and efficient implementation. The activity documentation is presented in Figure 1.

Figure 1. Implementation of Community Service Program

In the implementation phase, the activity began with the provision of materials to the training participants consisting of Indonesian Language teachers at junior high schools in East Tanjung Jabung Regency. The materials presented were adjusted to the pre-PPM pre-test information regarding the concepts, principles, and practices of developing interactive digital media in learning to write explanatory texts. After that, the core activity was carried out in the form of counseling, where the implementing team provided a systematic presentation of further material on the urgency of digital media in learning, the types of interactive media that can be used in the classroom, and practical steps to develop these media according to the characteristics of explanatory texts. This activity can be seen in Figure 2.

Figure 2. Presentation of Training Materials

Following the briefing, participants engaged in collaborative group discussions to deepen their understanding of the material and design interactive digital media concepts. These discussions were followed by hands-on implementation, during which each group developed and demonstrated their media designs to other participants and the facilitator team, providing practical experience in applying the training content.

After completing all core activities, participants were given another post-test to gauge their understanding and skills compared to their pre-test results. This evaluation was conducted to gauge the impact felt by the Tanjung Jabung Timur Middle School teachers on the objectives of this community service program. The results of the pretest and posttest can be seen in Figure 3.

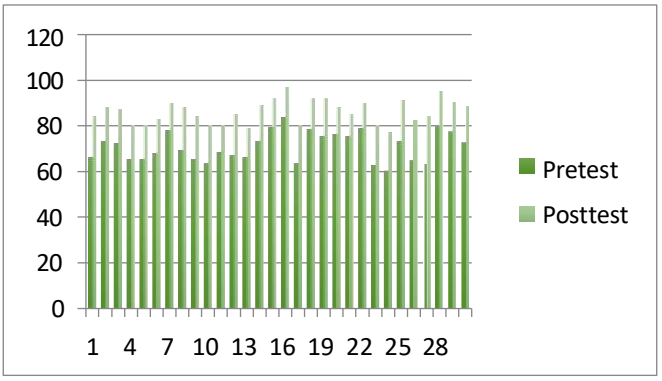

Figure 3. Distribution of Pretest and Posttest Results

Instrument validity testing was conducted to ensure that the indicators used in the training accurately reflected the intended competency aspects. The results of the analysis indicated that all instrument indicators met the validity criteria, meaning that all questions were considered valid and suitable for use in evaluating the training outcomes.

For example, the KKADG2 indicator, which measures teachers' ability to use digital media collaboration features, achieved the highest r-value of 0.886, indicating a strong relationship between the indicator and the construct of teacher technological competence. Similarly, other indicators, such as KKADG6 (r = 0.833) and KMKL1 (r = 0.875), also demonstrated significant contributions in forming a representative instrument construct. These findings confirm that the entire instrument is suitable for use as an evaluation tool in training activities, both in terms of content validity and its construction structure. Table 2 shows the results of the instrument validity test.

Table 2. Results of Instrument Validity Test

Indicator	r Count	r Table	Information
KKADG2	0.886	0.361	Valid
KKADG3	0.785	0.361	Valid
KKADG4	0.850	0.361	Valid
KKADG5	0.809	0.361	Valid
KKADG6	0.833	0.361	Valid
KKADG7	0.846	0.361	Valid
KKADG8	0.865	0.361	Valid
KMKL1	0.875	0.361	Valid
KMKL2	0.764	0.361	Valid
KMKL3	0.869	0.361	Valid
KMKL4	0.736	0.361	Valid
KMKL5	0.764	0.361	Valid

KMKL6	0.830	0.361	Valid
KMKL7	0.723	0.361	Valid
KMKL8	0.585	0.361	Valid

In addition to validity, the reliability of the instrument was also examined to ensure consistent measurement. The reliability test using Cronbach's Alpha showed very high reliability for both the pretest (α = 0.982) and posttest (α = 0.980), indicating that the instrument was highly consistent and appropriate for evaluating teacher competency before and after the training. The reliability results are presented in the Table 3.

Table 3. Reliability Test Results

Test Types	Number of Indicators	Cronbach Alpha	Information
Pretest	24	0.982	Strong
Posttest	24	0.980	Strong

To ensure that the pretest and posttest data were normally distributed (an essential requirement before conducting parametric tests such as the paired t-test), normality tests were performed using two statistical approaches: the Kolmogorov-Smirnov (K-S) and the Shapiro-Wilk (S-W). Both tests were used to test the null hypothesis that the data were normally distributed. The results of the normality tests for the pretest and posttest scores are presented in Table 4:

Table 4. Normality Test Results

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	Df	Sig.
Pretest	.131	30	.197	.946	30	.132
Posttest	.141	30	.133	.957	30	.260

Prior to further analysis, the data were tested to ensure that the normality assumption was satisfied. The results indicated that both pretest and posttest score data were normally distributed. Therefore, the data met the requirements for conducting subsequent analysis to evaluate the effectiveness of the implemented training program.

In addition to cognitive aspects and work results, the team also assessed teachers' professional attitudes during the training process. This included discipline in attending each training session, active participation in group discussions and practical activities, openness to new technologies, and a collaborative spirit among participants. This assessment is crucial for evaluating teachers' commitment to self-development and improving the quality of learning in their respective schools.

After the data was declared normally distributed based on the Kolmogorov-Smirnov and Shapiro-Wilk tests, the analysis was continued with a parametric test using a paired sample t-test to determine the significant differences between pretest and posttest scores.

Table 5. Paired Sample T-Test Results and Effect Size

Measured Aspects	Mean Difference	t (df)	Sig. (2-tailed)	Cohen's d	Hedges' g	Interpretation
Pretest - Posttest	-15,433	-31,921 (29)	0.000	2,648	2,683	Very big effect

In Table 5 shows the test results showed an average difference of -15.433 points between the pretest and posttest scores, with a standard deviation of 2.648 and a standard error of the mean of 0.483. The 95% confidence interval for the mean difference ranged from -16.422 to -14.445, which did not cross zero, indicating a statistically significant difference. The t-value of -31.921 with 29 degrees of freedom (df) and a significance value (Sig. 2-tailed) of 0.000 < 0.05 indicated that there was a very significant increase between the scores before and after the training. In other words, the interactive digital media development training had a significant impact on improving the competence of Indonesian language teachers in designing technology-based learning media, especially in learning to write explanatory texts. This finding strengthens the effectiveness of the intervention carried out in community service activities, as well as providing empirical justification for the sustainability of similar training programs in the future.

To further assess the effectiveness of the training, the magnitude of its impact on participants' performance was examined. The results indicate that the training had a very large effect on improving teachers' scores, demonstrating that the program was highly effective in enhancing participants' skills and achieving the objectives of the community service activity.

These findings provide strong evidence that interactive digital media development training not only has a statistically significant impact ($p < 0.001$) but also has a significant practical impact on teachers' ability to design and implement technology-based learning. With this very high effect size, the training is not only theoretically effective but also makes a significant contribution to improving the quality of learning, particularly in contextualizing explanatory texts according to the demands of the Independent Curriculum.

The results of the interactive digital media development training showed a very significant impact on improving the competence of Indonesian language teachers at junior high schools in East Tanjung Jabung Regency, especially in learning to write explanatory texts. This is evidenced by a significant increase in posttest scores compared to the pretest, based on the results of the paired sample t-test which showed a significance value of 0.000 ($p < 0.05$). The average difference of -15.433 with a t value of -31.921 indicates a strong change, which is strengthened by the calculation of the effect size using Cohen's d of 2.648 and Hedges' g of 2.683. This value is included in the category of very large effects, so it can be concluded that the training has succeeded in providing a real influence practically and statistically.

This improvement is inseparable from the training approach that integrates teachers' conceptual understanding of explanatory texts with hands-on practice in developing digital learning media. Teachers are guided to recognize the structure and linguistic rules of explanatory texts, such as the use of causal and temporal

conjunctions, and scientific passive sentences. They are then directed to translate this understanding into interactive visual media using the Canva platform. Observations show that teachers are capable of designing media that is not only aesthetically appealing but also information-dense, systematic, and aligned with the learning material.

Furthermore, this training broadened teachers' understanding of the importance of utilizing technology as an integral part of the learning process. Most teachers previously relied on conventional methods, which were one-way and less engaging for students. After the training, they demonstrated improved skills in integrating multimedia elements such as animations, interactive quizzes, and explanatory videos into their teaching materials. This finding aligns with a study by Christina and Ganing (2021), which found that digital-based interactive media can enhance learning engagement and strengthen students' conceptual understanding.

The application of the Technological Pedagogical Content Knowledge (TPACK) approach during training has also proven effective in helping teachers align teaching materials, teaching methods, and learning technology. Through TPACK, teachers are not only taught how to use digital tools but also how to adapt them to appropriate teaching content and strategies. This aligns with the findings of Bernsteiner et al. (2025) who stated that TPACK integration encourages teachers to be more reflective, adaptive, and innovative in designing learning.

Furthermore, this training also demonstrated the critical importance of collaboration and discussion among teachers in developing competencies. Group discussions and collaborative practice activities enabled teachers to exchange experiences, share strategies, and provide constructive feedback on the media being developed. This aspect not only encouraged improvements in the quality of instructional media but also strengthened teachers' confidence in implementing technology effectively in the classroom. This aligns with the findings of Mu'awanah et al. (2024), who stated that collaboration-based training can improve both technical skills and teachers' mental readiness to face the challenges of 21st-century learning.

While the results were very positive, there are several important caveats to consider. One is the persistence of a gap in technological skills among participants, with some teachers requiring longer adaptation time to master digital features. Furthermore, limited devices and internet access in some schools pose challenges to the comprehensive implementation of digital media. Therefore, the success of this training needs to be followed up with more sustainable and contextual mentoring or follow-up training programs.

Overall, this training has proven to significantly improve teacher competency, both in understanding teaching materials and technical skills in using interactive digital media. This activity also demonstrates that strengthening teacher capacity through technology-based training can be an effective strategy in supporting the implementation of the Independent Curriculum in a more applicable and innovative manner in the field.

Finally, the assessment will also focus on the actual implementation of the training results in each school. Teachers are expected to apply the developed interactive digital media in their teaching activities. The community service team will monitor this practice, both through in-person visits and through written reports and learning documentation. Thus, the assessment will focus not only on the training results but also on the tangible impact and sustainability of these activities on student learning at school.

The activity concluded with a reflection session, conducted jointly by participants and the implementation team. At this stage, participants were asked to provide feedback on the entire training process, including the benefits of the activity, challenges encountered, and input for implementing similar activities in the future. This reflection also forms a crucial part of the program evaluation, the results of which will be summarized in a community service report and used to develop follow-up activities.

CONCLUSION

Conclusion The interactive digital media development training conducted for Indonesian language teachers at junior high schools in East Tanjung Jabung Regency has proven to have a significant impact on improving teacher competency, especially in teaching writing explanatory texts. The main findings of this activity indicate that teachers experienced a significant increase in conceptual understanding and technical skills, as indicated by the statistically significant difference in pretest and posttest scores ($p < 0.001$) and supported by a very large effect size value (Cohen's $d = 2.648$; Hedges' $g = 2.683$). This indicates that the training, which is designed in a structured, contextual, and applicable manner, is able to address the challenges faced by teachers in developing technology-based teaching media. This activity also confirmed that integrating understanding of teaching materials (content), pedagogical approaches, and technology utilization (TPACK) is key to successfully improving the quality of learning based on the Independent Curriculum. Teachers were not only able to design engaging digital media but also relevant ones that addressed the structure of explanatory texts and student characteristics. Furthermore, this training fostered a collaborative culture among teachers, sharing ideas, developing media collaboratively, and supporting each other in the learning process. As a recommendation, similar activities need to be continued with regular follow-up mentoring to ensure the consistent implementation of the developed digital media in teaching and learning activities. Local governments and higher education institutions are expected to build sustainable partnerships to provide similar training in other schools facing similar challenges. Furthermore, developing training based on local contexts and teacher needs in the field is also a crucial strategy to ensure that the training is not merely general in nature but truly addresses

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YD: Validation and Resources;
A: Data Collection and Investigation;
DRP: Writing-Original Draft;
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REFERENCES

Adedokun, E. T., & Adedokun, T. A. (2024). Avoidance of complex grammar by senior high school L2 english students: Motivations and cognition: Avoidance of complex grammar by senior high school. *International Journal of Curriculum and Instruction*, *16*(2), 287-307. https://ijci.net/index.php/IJCI/article/view/1469

Alemu, B. M. (2015). Integrating ICT into teaching-learning practices: promise, challenges and future directions of higher educational institutes. *Universal journal of educational research*, *3*(3), 170-189. https://doi.org/10.13189/ujer.2015.030303

Almusaed, A., Almssad, A., Yitmen, I., & Homod, R. Z. (2023). Enhancing student engagement: Harnessing "AIED"'s power in hybrid education–A review analysis. *Education Sciences*, *13*(7), 632. https://doi.org/10.3390/educsci13070632

Badriyah, N., Zulaeha, I., & Wagiran, W. (2020). Characteristics of writing explanation text enrichment book containing 21st century competence for senior high school students. *Seloka: Jurnal Pendidikan Bahasa Dan Sastra Indonesia*, *9*(3), 239-246. https://doi.org/10.15294/seloka.v9i3.40460

Bernsteiner, A., Haagen-Schützenhöfer, C., & Schubatzky, T. (2025). Teacher education in the age of digitality: conclusions from a design-based research project. *European Journal of Education*, *60*(1). https://doi.org/10.1111/ejed.12904

Bigirwa, J. P., Ndawula, S., & Naluwemba, E. F. (2020). E-learning adoption: Does the instructional design model matter? An explanatory sequential study on midwifery schools in Uganda. *E-Learning and Digital Media*, *17*(6), 460-481. https://doi.org/10.1177/204275302094628

Christiani, Y. H., Karim, A., Ratnawati, R. E., Warneri, W., & Enawaty, E. (2024). Exploring the use of the canva application to improve learning message design [in Bahasa]. *Journal on Education*, *6*(4), 19895-19904. https://doi.org/10.31004/joe.v6i4.5785

Christina, N. M. A., & Ganing, N. N. (2021). Multimedia interactive learning on Indonesian language content. *Indonesian Journal Of Educational Research and Review*, *4*(2), 191. https://doi.org/10.23887/ijerr.v4i2.39434

Das, M. K. (2024). Teacher education with ICT tools and techniques. Academic Guru Publishing House.

Fitriyah, A., Ayatin, R., Sugiarti, R., Rozak, A., & Pujiatna, T. (2024). Instructional design of problem-based learning models: A strategy for improving students' critical thinking abilities in learning news texts. *JOLLT Journal of Languages and Language Teaching*, *12*(4), 2088-2099. https://doi.org/10.33394/jollt.v12i4.11675

Grimus, M. (2020). Emerging technologies: Impacting learning, pedagogy and curriculum development. *Emerging technologies and pedagogies in the curriculum*, 127-151. https://doi.org/10.1007/978-981-15-0618-5_8

Hafiz, A., Brsihannor, & Arifin, M. F. (2024). Learning media technological competence for teachers using the canva application. *Communautaire: Journal of Community Service*, *03*(02), 228-239. https://doi.org/https://doi.org/10.61987/communautaire.v3i2.529

Hamzah, M. I., Napu, N., & Badu, H. (2025). Pre-Service English Language Teachers' Digital Competence in Developing Interactive Learning Media. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, *13*(2), 6831-6851. https://doi.org/10.24256/ideas.v13i2.8429

Horning, A. S. (2024). *The case for critical literacy: A history of reading in writing studies*. University Press of Colorado.

Indriyani, N. (2025). From policy frameworks to classrooms: Efl challenges in Indonesia. *Acceleration: Multidisciplinary Research Journal*, *3*(2), 73-83. https://doi.org/10.70210/amrj.v3i2.138

Jambi., B. P. S. P. (n.d.). Junior High School Teacher 2021-2022.

Jibril, M., & Adedokun-Shittu, N. A. (2024). Enhancing education: A comprehensive framework for integrating technological pedagogical content knowledge (TPACK) into teaching and learning. *Indonesian Journal of Multidiciplinary Research*, *4*(1), 181-188. https://doi.org/10.17509/ijomr.v4i1.72044

Kirkwood, K. (2023). The pedagogical potential of digital games to enhance the learning of spelling for English second language learners in a Persian Gulf state. *Doctoral dissertation, Deakin University*.

Kosakoy, N. V., Paat, M., & Tumbel, F. M. (2025). Developing a canva-based blended learning model to improve science learning outcomes at SMP Negeri 4 Ratahan, Indonesia. Journal of Advanced Education and Sciences, 5(2), 41-46. https://www.dzarc.com/education/article/view/651

Lesta, A. D. D., Murniviyanti, L., & Irawan, D. B. (2025). Canva interactive media development in improving learning outcomes using serial image media. *Journal of Dynamics Elementary School*, *1*(02), 49-65.

Marwah, S. S., & Susanti, S. (2023). Literature study: Canva as a medium. *Jurnal PGMI UNIGA (JPU)*, *02*(02), 97-104.

McDonough, K. M. (2023). *Using texting and internet languages (TAILs) to help students get ahead in school: a mixed-method study about finding the balance between two competing discourses*. Notre Dame of Maryland University.

McKoy, S., & Merry, K. E. (2023). Engaging advanced learners with differentiated online learning. *Gifted Child Today*, *46*(1), 48-56. https://doi.org/10.1177/10762175221131068

Mu'awanah, U., Rizal, R., Murtafiah, M., & Syahbudin, M. (2024). Development of interactive video media to improve skill in writing simple sentences of Serang Java language local content subjects. *AL-ISHLAH: Jurnal Pendidikan*, *16*(2), 2220-2233. https://doi.org/10.35445/alishlah.v16i2.4771

Naini, I., & Ulya, R. H. (2025). Reasoning patterns and sentence construction errors in students' scholarly articles: a content analysis of academic writing in padang city. *AL-ISHLAH: Jurnal Pendidikan*, *17*(2). https://doi.org/10.35445/alishlah.v17i2.7447

Nilson, L. B., & Goodson, L. A. (2021). *Online teaching at its best: Merging instructional design with teaching and learning research*. John Wiley & Sons.

Nye, B. D. (2015). Intelligent tutoring systems by and for the developing world: A review of trends and approaches for educational technology in a global context. *International Journal of Artificial Intelligence in Education*, *25*(2), 177-203. https://link.springer.com/article/10.1007/s40593-014-0028-6

Oktarina, S., Indrawati, S., & Slamet, A. (2022). Students' and lecturers' perceptions toward interactive multimedia in teaching academic writing. *Journal of Education Research and Evaluation*, *6*(2), 377-384. https://doi.org/10.23887/jere.v6i2.44002

Praheto, B. E., Andayani, Rohmadi, M., & Wardani, N. E. (2020). The effectiveness of interactive multimedia in learning Indonesian language skills in higher education. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, *12*(1), 1-11. https://doi.org/10.21659/rupkatha.v12n1.34

Purba, M., Purnamasari, N., Soetantyo, S., Suwarma, I. R., & Susanti, E. I. (2021). Principles of Differentiated Instruction Development [in Bahasa]. In Pusat Kurikulum dan Pembelajaran Badan Standar, Kurikulum, dan Asesmen Pendidikan Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi.

Purwanto, A., Fahmi, K., & Cahyono, Y. (2023). The benefits of using social media in the learning process of students in the digital literacy era and the education 4.0 era. *Journal of Information Systems and Management (JISMA)*, *2*(2), 1-7. https://doi.org/10.4444/jisma.v2i2.296

Qerimi, G., Jahiri, M., Ujkani, B., & Zeneli, A. (2023). Media literacy and young people's digital skills. *International Journal of Emerging Technologies in Learning*, *18*(7), 50-61. https://doi.org/https://doi.org/10.3991/ijet.v18i07.37081

Qian, T. O. N. G. (2024). Creativity in the digital canvas: a comprehensive analysis of art and design education pedagogy. *International Journal of Advanced Computer Science & Applications* , *15*(6). https://doi.org/10.14569/ijacsa.2024.0150696

Septiani, A. N. N. S. I., & Rejekiningsih, T. (2020). Development of interactive multimedia learning courseware to strengthen students' character. *European Journal of Educational Research*, *9*(3), 1267-1280. https://eric.ed.gov/?id=EJ1262371

Shonfeld, M., Cotnam-Kappel, M., Judge, M., Ng, C. Y., Ntebutse, J. G., Williamson-Leadley, S., & Yildiz, M. N. (2021). Learning in digital environments: a model for cross-cultural alignment. *Educational Technology Research and Development*, *69*(4), 2151-2170. https://doi.org/10.1007/s11423-021-09967-6

Tseng, J. J., Chai, C. S., Tan, L., & Park, M. (2022). A critical review of research on technological pedagogical and content knowledge (TPACK) in language teaching. Computer Assisted Language Learning, 35(4), 948-971. https://doi.org/10.1080/09588221.2020.1868531