



Evaluation Effectiveness of Implementation Training on Making ICT-Based Learning Media for Teachers

***Dian Anatalia Sulistianingtyas, Andi Mariono, Bachtiar Syaiful Bachri**

Education Technology Postgraduate Program, Universitas Negeri Surabaya Jl. Lidah Wetan, Surabaya, Jawa Timur 60213, Indonesia

*Corresponding Author e-mail: dian.17070905002@mhs.unesa.ac.id

Received: April 2022; Revised: April 2022; Published: April 2022

Abstract

This research aims to determine the effectiveness implementation of training in making ICT-based learning media for teachers. This evaluation research uses the CIPP evaluation model from Stufflebeam with quantitative and qualitative approaches. The subjects of this study were participants, instructors and training providers, with the object of research being documentation of the implementation of ICT-based media creation training, the instructor's performance, and the work and impact reports of the training participants. Based on the results of the research evaluation of the effectiveness of the implementation of training in making ICT-based learning media for teachers at LPMP West Sulawesi, it can be results (1) Context Aspect is the suitability of the objectives of the implementation of the training program for making ICT-based learning media with the Vision and Mission of the LPMP West Sulawesi. The training service was considered very satisfactory at 93% and declared effective at 7%. (3) In the process aspect, the trainees assessed that the performance of the training instructor was very effective, 95% of the respondents gave an assessment of being very effective and the remaining 5% gave an effective assessment of the instructor's performance. (4) Product Aspect, the percentage of teachers who can fulfill the assignment requirements is 95% for video work or about 40 teachers from a total of 42 participants, while for impacting there are 39 teachers who submit impact reports or around 93%. The implementation of training on making ICT-based learning media for teachers at the West Sulawesi LPMP is running effectively.

Keywords: effectiveness evaluation; media creation training; CIPP model

How to Cite: Sulistianingtyas, D., Mariono, A., & Bachri, B. (2022). Evaluation Effectiveness of Implementation Training on Making ICT-Based Learning Media for Teachers. *Prisma Sains : Jurnal Pengkajian Ilmu dan Pembelajaran Matematika dan IPA IKIP Mataram*, 10(2), 334-344. doi:<https://doi.org/10.33394/j-ps.v10i2.4899>



<https://doi.org/10.33394/j-ps.v10i2.4899>

Copyright© 2022, Sulistianingtyas et al

This is an open-access article under the [CC-BY](https://creativecommons.org/licenses/by/4.0/) License.



INTRODUCTION

Learning media in general is a tool for teaching and learning process. Learning media itself is very important in its position in teaching and learning activities, but unfortunately not all teachers can create or even use the available learning media. This situation is very inversely proportional to the rapid development of information technology, but there are still teachers who have not been able to create learning media, especially those based on ICT. Some teachers argue that they still cannot make ICT-based learning media because they have never received training on how to make ICT-based learning media (Muslem et al., 2018; Rohman & Susilo, 2019; Semerci Aydin, 2018). In addition, the ICT skills of teachers are still limited to using computers to type learning tools and make reports on teaching and learning activities. There are still very few teachers / education personnel who have received training on how to use and make learning media well (Mailizar & fan, 2020; Kamaruddin et al., 2017). This condition makes teachers / educators one of the reasons why the available learning media cannot be maximized or even teachers do not have the ability to make learning media related to their subjects (Rahardjanto & Fauzi, 2019).

The Head of the Center for Information and Communication Technology for Education and Culture (Pustekkom) of the Ministry of Education and Culture (Kemendikbud) said that currently out of the total teachers in Indonesia, only 40 percent are literate with information and communication technology (ICT) (Astini, 2019). The rest, 60 percent of teachers still stutter about progress in this digital era. This fact is based on the results of a 2018 survey conducted by Pustekkom which is now transforming Education into Pusdatin (Technology and Information Data Center) of the Ministry of Education and Culture. If the total number of teachers in Indonesia reaches three million people, it means that only 1.2 million are literate with information technology. The remaining 1.8 million teachers still stutter or are not ready with the times.

There are several reasons, if it is reduced to three factors, namely because the competence of teachers in Indonesia is very low in the world of ICT. It can be realized that 30 percent in Indonesia are over 45 years old, and are even about to enter retirement. So, this ICT competence cannot be fully mastered properly. The second factor is because the content of educational technology is still minimal and the third factor is the need for adequate facilities and infrastructure in the regions.

Education and Training is a program designed to increase the knowledge, ability and understanding of workers (employees) to the entire work environment. Currently, many training bodies, both from government institutions and the private sector, organize training for teachers/educators, especially training with materials for making learning media. This makes it very easy for teachers / educators to add skills / expertise in making learning media (Tamrin et al., 2017; Syakur, 2020). Therefore, participating in and receiving training or training for a teacher is very important, not only to support self-development to be more professional but also to obtain credit points with respect to promotion (for ASN teachers).

However, in the implementation of the training itself, it cannot be carried out solely without knowing the extent of the success of the implementation of the activity itself, so an evaluation of the activity is needed to see the effectiveness of the implementation of the training activity. Evaluation is one of the important factors to measure the level of success of an institution in carrying out educational programs (Al-Fraihat et al., 2020). Evaluation is an activity carried out with respect to the process to determine the value of something (Hariri et al., 2021; Asiyah et al., 2021). This assessment can be neutral, positive or negative and or a combination of the two. When something is evaluated, it will usually be followed by making a decision on the object being evaluated.

Evaluation can also be interpreted as a systematic process of examining, determining, making decisions or providing information on programs that have been carried out and the extent to which a program has been achieved. Evaluation is more forward-looking than looking at past mistakes, and is aimed at increasing opportunities for program success (Yuliana, 2021). Thus, the mission of the evaluation is to improve or refine a program in the future. Based on the description above, it can be concluded that it is important to evaluate the effectiveness of implementing ICT-based learning media training for teachers in Indonesia in general and in West Sulawesi in particular. ICT-based learning for teachers at LPMP West Sulawesi”.

METHOD

Types of research

This type of research is evaluative research. Sugiyono (2013), states that evaluation research is an applied research which is a systematic way to determine the effectiveness of a program, action or policy or other object under study when compared to the goals or standards set. In this study the effectiveness of the program was analyzed using the model. evaluation of CIPP (Context-Input-Process-Product) in order to describe and explain the phenomena of the implementation of training in making ICT-based learning media for teachers.

Research methods

The research method used is a descriptive method, where researchers describe the implementation of training in making ICT-based learning media (Learning Video Production) for teachers at LPMP Sulbar Province in terms of context, input, process and product aspects. The flow of thought in this research is described as follows:

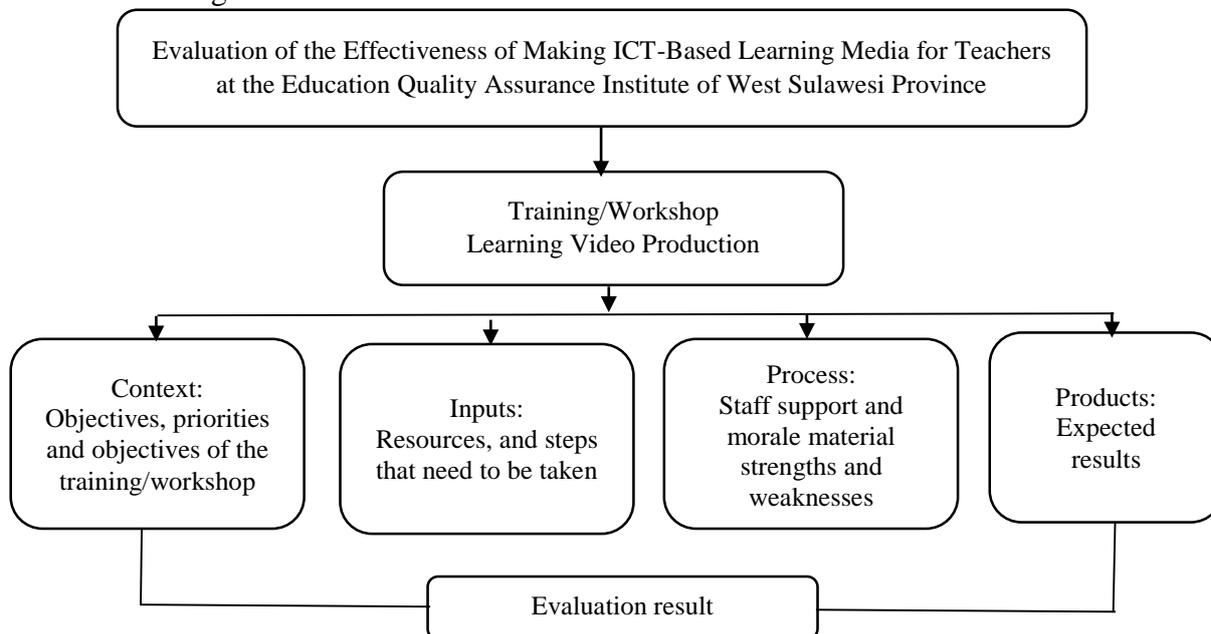


Figure 1. Research Framework

Research Subject

In research, the data sources that are targeted include two things, namely humans and non-humans. Human data sources consist of the training committee, instructors, and training participants (teachers). Meanwhile, non-human data sources consist of documents that support the research focus. The data sources in question are presented in the following Table 1.

Table 1. Research Data Source

Focus	Sub Focus	Data collection				Data source
		O	W	D	K	
Effectiveness of Training Implementation	Context		√	√		Executive Committee
	Input		√	√	√	Organizing Committee, Instructor
	Process	√	√	√	√	Organizing Committee, Instructors, Participants
	Product			√	√	Organizing Committee, Instructors, Training Participants

Data collection technique

Data collection techniques consisted of questionnaires, observations, documentation and interviews.

Questionnaire

In this study, to determine the performance of the instructor on his competence as a teaching staff, a Likert scale was used. The data that has been collected through the questionnaire is changed in quantitative form, namely by calculating the answer scores from the statements that have been answered by the respondents. The scale obtained is less with a score of 1, sufficient (2), good (3), very good (4), and satisfactory (5). Data collection by using a questionnaire was carried out on training participants to obtain instructor competence, while the aspects assessed were.

Table 2. Assessed aspects of the instructor

No.	Aspects assessed by the instructor/presenter
1.	Achievement of learning objectives;
2.	Systematic presentation;
3.	Ability to present/facilitate according to the training program;
4.	Punctuality and attendance;
5.	Use of training methods and facilities;
6.	Attitudes and behavior;
7.	How to answer questions from participants;
8.	use of language;
9.	Providing motivation to participants;
10.	Material mastery

Observation

The observation technique is carried out with several indicators in the Table 3. the scoring criteria are less with a score of 1, enough (2), good (3), very good (4), and satisfactory (5)

Table 3. Observation Guidelines

Component	1	2	3	4	5
Learning Service Aspect					
1. Timeliness of learning					
2. Completeness of modules/teaching materials					
3. Appropriateness of media/learning aids					
4. Instructor Quality					
5. Effectiveness of coaching/training					
Performance Aspects of the Implementing Committee					
1. Neatness Appearance					
2. Delivery of information related to training					
3. Courtesy					
4. Response to participant complaints					
5. Administration service					
Aspects of LPMP Facilities and Infrastructure					
1. Dormitory					
a. Room cleanliness					
b. Room lighting					
c. Toilet cleanliness					
d. Furniture/furniture (cupboards, tables, etc.)					
e. Supporting facilities (AC, Dispenser)					
2. Class/Building					
a. Class cleanliness					
b. Equipment (chair, table, LCD)					
c. Room lighting					
d. Supporting facilities (AC)					
e. Toilet cleanliness					
3. Dining Room					
a. Dining Room Cleanliness					
b. Cleaning utensils					
c. Variety of food menu					
d. setting					
e. Lighting					

Component	1	2	3	4	5
4. LPMP environmental lighting facilities					
5. Mosque facilities (only for Muslims)					
6. LPMP environmental cleanliness					
7. LPMP environmental safety					

Interview .

The data extracted by the interview technique in this study is related to the effectiveness of the implementation of training activities for making ICT-based learning media. Informants were selected purposively, meaning that the informants were selected according to the needs of the researcher, namely people who were considered to know about the focus of the research problem in depth and could be trusted to be used as data sources.

Documentation

Researchers conducted data through photos of activities, activity invitation letters, teacher's work, lists of training participants and other documents found during the research. Thus, all aspects that become written evidence related to research will be very useful for researchers as information or data that can be analyzed.

The research data is obtained from the results of the evaluation of research aspects based on research indicators which are compiled into research instruments. Before carrying out the research, it is necessary to combine standards or evaluation criteria to assess the instrument. The standards that have been formulated are based on empirical criteria developed in the field with criteria. In this study, the evaluator compiles and sets evaluation standards for each aspect or dimension of the evaluation. Furthermore, the standard evaluation instruments used in this study are presented in the Table 4 below.

Table 4. Standards (Aspects) of Evaluation

Aspect	Description	Standard
Context	a. Suitability of training program objectives	West Sulawesi Province LPMP work program for teachers in accordance with the vision and mission of LPMP's main functions
	Committee staff support for the implementation of the training	Head of LPMP Sulbar, committee and staff support the implementation of the training
	Instructor: a. Instructor Competence b. Instructor Motivation	Instructors have good competence and master the material to be delivered Have high work motivation in carrying out the task of delivering training materials
Input	Material: The substance of the training material	A training activity room equipped with the required facilities
	Supporting Facilities and Facilities	Availability of LCD and speakers as a means of supporting material delivery
	Classroom activities	Provision of dormitories as lodging facilities for trainees There is a mosque/mushola to carry out worship activities for training participants
		Dining room/canteen facilities for participants to get a meal

Aspect	Description	Standard
Process	Training Implementation:	The instructor delivers the material, fosters and guides the trainees
	<ul style="list-style-type: none"> • Carry out coaching or mentoring • Monitor the implementation of training activities • Carry out the assessment 	The committee needs to monitor the implementation of the training
		Participants evaluate the instructor's performance
		Evaluating the implementation of training activities
Results	Results of Training Implementation:	The committee makes a report on the implementation of activities
	Administration	
	Instructor performance	The instructor delivers all the material according to the planned program
	Participant performance	Participants follow the whole process of the activity well

Data analysis technique

Based on the selected evaluation model, namely CIPP (context, input, process, and input), the evaluation criteria used in this study refer to the criteria stated in Ridwan (2009: 89),

the steps are as follows:

- 1) Calculate the respondent's value and each aspect or sub variable.
- 2) Recap values.
- 3) Calculate the average value.
- 4) Calculate the percentage with the formula.

$$P = \frac{f}{N} \times 100\%$$

To find out the level of these criteria, then the score obtained in % by descriptive analysis of the percentage is consulted with the criteria Table 4.

Table 4. Descriptive Data Analysis Criteria Percentage

Range	Criteria
20% - 35%	Not enough
36% - 52%	Enough
53% - 68%	Good
69% - 84%	Very Good
85% - 100%	Satisfying

RESULTS AND DISCUSSION

Training on Making ICT-Based Learning Media

1. Aspects of context (context)

Table 5. Evaluation Standards (Context Aspect)

Standart	The situation in the field
a. Suitability of training program objectives: West Sulawesi Province LPMP work program for teachers in accordance with the vision and mission of LPMP's main functions	The purpose of this training program is of course in line with the Vision and Mission of the West Sulawesi LPMP main function which reads: "Implementing facilitation of improving the quality of basic education and secondary education in formal education in the province". Field staff and all committees work together to carry out their

b. Committee staff support for the implementation of the training Head of LPMP Sulbar, committee and staff support the implementation of the training	respective duties so that the training can be carried out properly.
--	---

2. Aspects of Input (input)

Table 6. Evaluation Standards (Input Aspect)

Standard	Field Conditions
a. Instructor Competence: Instructors have good competence and master the material to be delivered Have high work motivation in carrying out the task of delivering training materials	- Instructors have good competence, qualified and master the material well. The material is not only limited to theory but is taught in practice so that participants understand better. - Instructors have high work motivation, respond quickly to what are obstacles for participants and provide solutions. - Subtansi materi pelatihan : Aplikasi Camtasia, Animiez dan Adobe Ilustrator
b. Training Materials/Materials: Substance of training material	
c. Supporting Facilities and Facilities: <ul style="list-style-type: none"> • Classroom activities • LCD and speakers • Dormitory stay • Worship place • Dining room 	- Classrooms are very comfortable and clean, and AC is available as air conditioner - The condition of the LCD and speakers are functioning properly so it really helps the implementation of the training. - Rooms to stay and rest for participants and instructors are very good, with AC facilities, comfortable beds, clean toilets. - There is a large and clean mosque to worship (Muslims) comfortably, of course with AC facilities as air conditioning. - The LPMP dining room is very spacious and clean, the food menu provided is also very varied and delicious.

3. Process Aspect

Table 7. Evaluation Standards (Process Aspect)

Standard	Field Conditions
a. Implementation of Training: The instructor delivers the material, fosters and guides the trainees	<ul style="list-style-type: none"> • The instructor delivered material on how to create media (video production), compose video scripts, guide the shooting process, teach how to edit using the Camtasia application, then deliver Adobe Illustrator material to create media characters or assets, then Animize material, namely online-based animation video editing. • Participants receive a questionnaire distributed by the implementing committee, regarding the instructor's work appraisal • The committee always accompanies and monitors the implementation of the ICT-based learning media creation practice (Learning Video Production) • The committee evaluates the implementation of training activities by assessing the instruments distributed to participants regarding the performance of the instructor.
b. Participants evaluate the instructor's performance	
c. The committee needs to monitor the implementation of the training	
d. Evaluating the implementation of training activities	

4. Product Aspect (results)

The following is the result of the tabulation of the document evaluation instrument for the implementation of media creation training at LMPM West Sulawesi:

Table 8. Evaluation Standards (Outcome Aspect)

Standart	Keadaan Dilapangan
Results of the training:	The committee makes a report on the results of the training activities for making ICT-based learning media (Learning Video Production)
a. Administration :The committee makes a report on the implementation of activities	
b. Instructor performance: The instructor delivers all the material according to the planned program	Instructors can complete the planned material and assist participants in the video editing process Learning.
c. Participant Performance: Participants followed the entire activity process well.	Participants participated in the training well and enthusiastically Learning video works Influence on peers in their respective schools

From the results of the evaluation of the effectiveness of the Implementation of Learning Media Making Training above using the CIPP model, it can be obtained from the context aspect that the objectives of the training program are in line with the vision and mission of the LPMP West Sulawesi Province. The situation in the field is in accordance with what has become the standard for implementing the training. The input aspect that describes the instructor's competence, training material and infrastructure facilities can be said to be good and meet the existing standards according to which results in a satisfactory score of 93%. This percentage is stated to be very good and suitable for training (Jannah et al., 2020; Sahronih et al., 2019;). From the aspect of the process, the instructor can accommodate the wishes of the committee and participants in delivering previously planned material and has good work motivation, this can be seen from the results of the participants' assessment of the instructor's performance which reached 95% with a satisfactory score. And the aspect of results, it can also be said that the training participants participated well in this training with data from teachers who collected 40 people or 95% of the work and 39 people or 93% of the total teachers who participated in the training. Training from content, processes to inputs that produce a satisfactory percentage will improve the ICT curriculum and attitudes in competing in technological competencies will continue to be sustainable (Syahid et al., 2019). So that the learning process, practice and literacy of students and teachers continue to be improved so that they are technology literate (Purnomo, 2019).

The implementation of training on making ICT-based learning media (production of learning videos) for teachers at LPMP West Sulawesi Province can be said to have been carried out well and smoothly in accordance with the objectives of the vision and mission of the LPMP West Sulawesi Province, namely "Implementing facilitation of improving the quality of basic education and secondary education on track formal education in the province". In order to achieve good and equitable quality standards of education, LPMP is aware that facilitating the professional improvement of teachers to improve their abilities is one solution. The situation in the field is in accordance with the context, where the purpose of the implementation of this training is to improve the professionalism and ability of teachers, especially in the field of ICT. Strengthened by (Widianto & Purwandari, 2020) stating that seminars and training will be able to foster creativity and improve computer technology skills for young teachers and other teachers. Providing training related to ICT learning media to teachers is a solution for ranking teacher professionalism (Fernandez et al., 2020).

As an input aspect that is prepared by the organizers is to provide competent instructors, interesting learning materials and teachers desperately need during a pandemic like today. In addition, the organizers and committee prepare good facilities and infrastructure to support the implementation of the training (Rana & Rana, 2020; Behnamnia

et al., 2020). In accordance with the Guidelines for the Implementation of Development Training owned by the Education and Training Center of the Ministry of Education and Culture, the training service was considered very satisfactory at 93% and stated to be very good at 7%. In the process aspect, the training participants considered that the performance of the training instructor was satisfactory, 95% of respondents gave a satisfactory rating and the remaining 5% gave a very good assessment of the instructor's performance. The components of the assessment are 10 aspects of competence in accordance with the 2018 Guide to the Implementation of Development Training owned by the Education and Training Center of the Ministry of Education and Culture (Amri & Kurniawan, 2018).

We can also see the success of the implementation of this training at the end of the activity, because there are assignments for making works and incentives for the trainee teachers. The percentage of teachers who can fulfill the assignment requirements is 95% for video work or about 40 teachers out of a total of 42 participants, while for impacting there are 39 teachers who submit impact reports or around 93%. If we look at the outline of each aspect of the context, input, process and input, we can conclude that the implementation of training in making ICT-based learning media (production of learning videos) for teachers at LPMP West Sulawesi. The implementation of the CIPP curriculum improves the performance of employees and teachers in the world of education, especially being able to create superior products (Aziz et al., 201; Aslan & Uygun, 2019; Kurnia et al., 2019).

CONCLUSION

Based on the conclusions of the research results on the implementation of training in making ICT-based learning media, it can be recommended for training providers, namely the LPMP of West Sulawesi Province, which is expected to maintain a satisfactory assessment and performance on various supporting aspects such as selecting the right material, competent instructors, providing various clean facilities. and works fine. For instructors, it is hoped that they can maintain their work performance and motivation and do not forget to always improve their professional abilities so that they are not eroded by the rapid development of science, especially in the field of education.

RECOMMENDATION

. For training participants, namely teachers, it is hoped that they will be more serious and enthusiastic in participating in capacity building training, especially in the field of ICT, because along with the times and during a pandemic like today, teachers' ICT abilities are tested by themselves because they are not only used but are required to make it work. process of teaching and learning activities.

ACKNOWLEDGMENT

Thank you to all LPMP academics of West Sulawesi Province for supporting this research to completion.

REFERENCES

- Al-Fraihat, D., Joy, M., & Sinclair, J. (2020). Evaluating E-learning systems success: An empirical study. *Computers in human behavior*, 102, 67-86.
- Amri, R., & Kurniawan, D. (2018). Evaluasi implementasi kurikulum pada lembaga kursus dan pelatihan program menjahit di kabupaten Bandung Barat. *Diklus: Jurnal Pendidikan Luar Sekolah*, 2(2), 139-152.
- Asiyah, N., Karnadi, K., & Musthofa, M. (2021). Application of the CIPPO evaluation model in the islamic religious education study program. *At-Taqaddum*, 13(2), 137-156.
- Aslan, M., & Uygun, N. (2019). Evaluation of preschool curriculum by Stufflebeam's Context, Input, Process and Product (CIPP) Evaluation Model. *Education & Science/Egitim ve Bilim*, 44(200).

- Astini, N. K. S. (2019, August). Pentingnya literasi teknologi informasi dan komunikasi bagi guru sekolah dasar untuk menyiapkan generasi milenial. In *Prosiding Seminar Nasional Dharma Acarya* (Vol. 1, No. 1).
- Aziz, S., Mahmood, M., & Rehman, Z. (2018). Implementation of CIPP Model for quality evaluation at school level: A case study. *Journal of Education and Educational Development*, 5(1), 189-206.
- Behnamnia, N., Kamsin, A., Ismail, M. A. B., & Hayati, A. (2020). The effective components of creativity in digital game-based learning among young children: A case study. *Children and Youth Services Review*, 116, 105227.
- Fernández-Batanero, J. M., Montenegro-Rueda, M., Fernández-Cerero, J., & García-Martínez, I. (2020). Digital competences for teacher professional development. Systematic review. *European Journal of Teacher Education*, 1-19.
- Hariri, A., Muslim, S., Yundra, E., & Iswahyudi, P. (2021). Using CIPPO model to evaluate community empowerment education and training programs: A case study in East Java. *Ilkogretim Online*, 20(5).
- Hilman, I., & Dewi, S. Z. (2021). The analysis of primary school teachers ability in the application of ICT-based learning media in Tarogong Kidul District. *Naturalistic: Jurnal Kajian Penelitian Pendidikan dan Pembelajaran*, 5(2), 755-763.
- Jannah, M., Prasojo, L. D., & Jerusalem, M. A. (2020). Elementary school teachers' perceptions of digital technology based learning in the 21st century: promoting digital technology as the proponent learning tools. *Al Ibtida: Jurnal Pendidikan Guru MI*, 7(1), 1-18.
- Kamaruddin, K., Abdullah, C. A. C., Idris, M. N., & Nawi, M. N. M. (2017, October). Teachers' level of ICT integration in teaching and learning: A survey in Malaysian private preschool. In *AIP Conference Proceedings* (Vol. 1891, No. 1, p. 020075). AIP Publishing LLC.
- Kurnia, F., Rosana, D., & Supahar. (2017, August). Developing evaluation instrument based on CIPP models on the implementation of portfolio assessment. In *AIP Conference Proceedings* (Vol. 1868, No. 1, p. 080003). AIP Publishing LLC.
- Mailizar, M., & Fan, L. (2020). Indonesian teachers' knowledge of ICT and the use of ICT in secondary mathematics teaching. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(1).
- Muslem, A., Yusuf, Y. Q., & Juliana, R. (2018). Perceptions and barriers to ICT use among English teachers in Indonesia. *Teaching English with Technology*, 18(1), 3-23.
- Purnomo, J. (2019, October). ICT literacy of high school mathematics teacher: online learning competence with heutagogical approach. In *Journal of Physics: Conference Series* (Vol. 1321, No. 3, p. 032128). IOP Publishing.
- Rahardjanto, A., & Fauzi, A. (2019). Hybrid-PjBL: learning outcomes, creative thinking skills, and learning motivation of preservice Teacher. *International Journal of Instruction*, 12(2), 179-192.
- Rana, K., & Rana, K. (2020). ICT Integration in teaching and learning activities in higher education: a case study of nepal's teacher education. *Malaysian Online Journal of Educational Technology*, 8(1), 36-47.
- Rohman, M. G., & Susilo, P. H. (2019). Peran guru dalam penggunaan media pembelajaran berbasis teknologi informasi dan komunikasi (TIK) studi kasus di TK Muslimat NU Maslakul Huda. *Reforma: Jurnal Pendidikan dan Pembelajaran*, 8(1), 173-177.
- Sahronih, S., Purwanto, A., & Sumantri, M. S. (2019, March). The effect of interactive learning media on students' science learning outcomes. In *Proceedings of the 2019 7th International Conference on Information and Education Technology* (pp. 20-24).
- Semerci, A., & Aydin, M. K. (2018). examining high school teachers' attitudes towards ICT use in education. *International Journal of Progressive Education*, 14(2), 93-105.

- Syahid, A. A., Isrokatun, I., & Nugraha, D. (2019, October). ICT training curriculum for primary school teachers. In *Journal of Physics: Conference Series* (Vol. 1318, No. 1, p. 012147). IOP Publishing.
- Syakur, A. (2020). The effectiveness of english learning media through google classroom in Higher Education. *Britain International of Linguistics Arts and Education (BIO LAE) Journal*, 2(1), 475-483.
- Tamrin, M., Azkiya, H., & Sari, S. G. (2017). Problems faced by the teacher in maximizing the use of learning media in Padang. *Al-Ta Lim Journal*, 24(1), 60-66.
- Widianto, W. W., & Purwandari, S. (2020). Workshop optimalisasi teknologi informasi guna mendukung kinerja guru BK serta peningkatan pelayanan konseling kepada siswa SMA SMK. *Jurnal Sainstech*, 7(1), 69-76.
- Yuliana, Y. (2021). evaluasi pelaksanaan program pengembangan perumahan (studi pada kantor dinas perumahan dan kawasan permukiman Kota Palembang). *Jurnal Ilmu Administrasi dan Studi Kebijakan (JIASK)*, 3(2), 113-124.