

# Media and Resources Development of Android Based Interactive Digital Textbook in Nonformal Education

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**Abstract.** The development of Android-based interactive digital textbooks is one of the means which is expected to help improve students' understanding of concepts in the learning process. Interactive digital books can be used as a tool by lecturers in the learning process in the classroom so that lecturers do not only use conventional learning methods in the learning process. In line with the times, many lecturers, students and even the public generally access all information via digital. This paper aims to create an Android-based interactive digital textbook as media and resources for Nonformal Education (PLS) learning tools. The ADDIE Model (Branch, 2009) is used in this study. It consists of five stages: analysis, design, development, implementation, and evaluation. The research starts with a literature review and need's assessment of 47 students for an Android-based interactive digital textbook, followed by a textbook draft. After compiling the Android-based interactive digital textbook, it is validated by three experts: content/material expert, presentation expert, and Indonesian language expert. After being evaluated by three experts, the draft of an Android-based interactive digital textbook is revised to accommodate individual and small group testing. In the outstanding category, interactive digital media textbooks and PLS learning resources based on Android received a total score of 146 (91.25%) from three expert validators. This research shows that interactive digital textbooks are very practical, with a practicality percentage of 83.33% for one-to-one and 83.16% for small groups. The android-based PLS media and learning resources are valid and valuable. Due to the lack of availability of media teaching materials and learning resources in out-of-school education, the presence of Android-based textbooks that can be accessed anywhere and at any time can help both lecturers and students understand media materials and learning resources outside of school.

**Key words:** interactive digital textbooks, media and PLS learning resource, android based

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## INTRODUCTION

Learning development in today's modern era always involves technology and information (Cloete, 2017; Hashim, 2018; Ratheeswari, 2018). The instructor is a critical component of the educational process's continuation. Educators as learning planners must be able to design learning that utilizes various types of media and appropriate learning resources to create an effective and efficient learning process (Lin & Chen, 2017; Sutarto et al., 2019). In Nonformal Education Department, the learning process carried out, especially in media development and learning resources, has been going quite well where an educator has designed the learning process well, utilizing available media and learning resources such as using general reference books, powerpoints, e-learning, and other learning resources from the internet (Elihami & Ibrahim, 2019; Hidayat et al., 2021).

However, the implementation of learning process still requires additional reference books or handbooks for students that are in accordance with the study of

nonformal education. There is still a lack of available textbooks to support the learning process, especially about media and learning resources used in Nonformal Education, so it is felt essential to develop interactive digital-based textbooks for media courses and learning resources for nonformal education (Tahir & Elihami, 2019; Fibrianti, & Suhanadji, 2020; Widiyanto, 2021). This textbook is designed digitally, which is interactive and contains writing, pictures, videos, and animations to increase students' understanding of the concept of media and learning resources that can be used in nonformal education context.

The Nonformal Education (PLS) Department at the Faculty of Teacher Training and Education University of Sriwijaya requires the study of media and learning materials for Nonformal Education. The goal of the two-credit learning media and PLS resources is to help students become more adept at selecting and utilizing learning resources outside of the classroom. So far, the community education study program has not developed many teaching materials for compulsory and elective courses. In the learning

process, the lecturer uses several media in media courses and PLS learning resources, one of the media often used is PowerPoint slides, e-learning and general knowledge books about media and learning resources.

According to Government Regulation No. 19 of 2005, educators are expected to develop instructional materials, which was later confirmed by Minister of National Education Regulation No. 41 of 2007 concerning process standards, which regulate, among other things, the planning of the learning process by requiring students to educators in education units to develop lesson plans. One of the elements in the lesson plan is a learning resource (Puspitarini & Hanif, 2019; Shofwan et al., 2021). The educators are expected to develop teaching materials as a source of learning (Avidov-Ungar & Forkosh-Baruch, 2018). Therefore, the learning resources used must be practical and selective in accordance with the subject being taught (Shofwan et al., 2019). The development of teaching materials is expected to help in solving problems in learning activities (Aydin & Aytakin, 2018; Darari & Firdaus, 2020; Risnawaty et al., 2021).

In terms of delivery of subject matter, sometimes the material is difficult to understand if only using printed books with the lecture method delivered by educators both classically and individually (Handrianto et al., 2020; Ramadhani et al., 2022). Alternatively, those who have been teaching that still often use conventional methods. The learning media used by educators are still categorized as minimal, mainly using PowerPoint media in delivering material, with learning resources that are still limited, especially discussing media and learning resources used in educational practice in education outside of school.

Several previous research related to interactive digital books have been conducted by researchers, including Kucirkova et al. (2021) with the title *An Empirical Investigation of Parent-Child Shared Reading of Digital Personalized Books*, Sari (2017) with the title *Book Development Digital through Sigil Applications in Cookies and Candys Courses*, Yaqin (2017) with the title *Development of Android-Based Digital Pocket Books as Supporting Teaching Materials for PPH Article 21*, Suyasa and Divayana (2018) with the title *Development of Digital Books for Assessment and Assessment Courses Evaluation Based on Kvisoft Flipbook Maker*, and Marselina & Muhtadi (2019) with the title *Development of Interactive Mathematics Digital Books on Geometry Materials*.

The similarity of this study with previous research is that they both develop digital books. Meanwhile,

the difference in each research lies in the software used and the object being the research target. Previous research used software or applications such as Adobe Creative Suite, Sigil Application, Android, Kvisoft Flipbook Maker (Ahmadi et al., 2022; Hazizah & Ismaniar, 2020). This research will use the execute format (.exe). The reason the researchers chose this format is that the interactive digital textbook media with the execute format (.exe) can be read offline via personal electronic devices in the form of particular media textbooks and PLS learning resources and will also be developed in the form of an Android-based interactive digital textbook application (Hediansah & Surjono, 2019; Hutabri & Putri, 2019; Humairah et al., 2020; Mudiartana, Margunayasa, & Divayana, 2021). For the targets or objects of previous research, primarily students and one of the materials, while this research will develop interactive digital textbooks on all materials in accordance with the lesson plans and the target or object of the research is the students of the Nonformal Education Department, Faculty of Teacher Training and Education University of Sriwijaya.

In addition, based on the observations and observations of researchers during their time as educators in the Nonformal Education Department, there are still not many educators or lecturers who develop textbooks both in print and digitally, so there is still a gap between expectations and reality which one to look for reference sources. Readings about PLS learning media and resources are still lacking, thus encouraging researchers to develop a product in the form of Android-based Interactive Digital Textbooks and Nonformal Education Learning Resources, which will later be accessible offline and online and equipped with supporting applications.

## METHOD

The research method used by the researcher is research and development. The products developed in this research are interactive digital textbooks on media courses and learning resources for Nonformal Education Department. This study uses the ADDIE development model (Analysis, Design, Develop, Implement, and Evaluate). According to Branch (2009), the ADDIE development model is that in its application, it can be modified in such a way as to suit research needs.

This research is to be carried out for one year, from January to December 2021, starting from identifying the problem, putting it in the form of a proposal to the stage of the final research report. The place of research is located in the Nonformal Education

Department, Faculty of Teacher Training and Education University of Sriwijaya.

In carrying out research and development of interactive digital textbook products based on Android, several methods are used, namely descriptive, evaluative and experimental methods. A descriptive research method was used in the initial research to collect data about the existing conditions. The evaluative method was used to evaluate the trial process for developing textbook products, and the experimental method was used to test the validity and practicality of the resulting product.

## RESULT AND DISCUSSION

The ADDIE model is used in this study to conduct development research in a development-oriented manner (Analyze, Design, Development, Implementation, Evaluation). The following sections explain the various steps of this investigation.

### Need Analysis

The analysis carried out in this development research is a needs analysis. A needs analysis was carried out to collect data on the basis for developing interactive digital media textbooks and PLS learning resources based on android, which consisted of analyzing problems in the field. Analysis of field problems was carried out by distributing questionnaires using google forms to 47 students. Student needs for teaching materials were determined through an analysis of student needs for teaching materials during the pandemic. The findings revealed that: first, during the pandemic, in online lectures, up to 91.5 percent of students expressed a preference for finding references or lecture materials digitally. As for the second reason, as many as 66.7 percent of students answered that they chose digital teaching resources because they were more convenient to use than traditional teaching materials. Third, digital instructional resources that are engaging for all students are required by law. Fourth, increasing student desire to study by as much as 76.6 percent is effective. Fifth, when it comes to the kind of educational materials that students need, as many as 82.6 percent of students require android-based interactive textbooks since they are easy to access from any location and simple to grasp. In the case of the epidemic, where lectures are done online, this demonstrates that students need instructional materials that assist the lecture process.

### Design

Based on the results of the descriptions presented at the analysis stage, after obtaining the results of the

needs analysis, the next step is to make a product design for developing interactive digital media and PLS learning resources based on android. After completing the preparation of the initial design of the textbook, the next step is to determine the involvement of related parties in the design of product implementation. From this design activity, the final form of the initial product design was obtained, namely interactive digital media textbooks and android-based PLS learning, which will be applied to students of the Nonformal Education Department, Faculty of Teacher Training and Education University of Sriwijaya.

### Development

Research products that have been designed are then developed to produce products before being tested. The development carried out is by validating experts and students as users of interactive digital book applications, media and PLS learning resources that have been designed. The validation carried out includes material validation, presentation validation and language validation. Based on the final results of the validation carried out, if the product has been declared valid by the 3 expert validators, the product can be continued to the trial stage. A limited trial was carried out to students of the Faculty of Teacher Training and Education University of Sriwijaya Nonformal Education Department for the 2021/2022 semester 3 (three).

### Validity Test

Three validators carry out the product validity test, and validation will be carried out on the material and design of the interactive digital textbook application, media and PLS learning resources consisting of material experts, namely Dr Azizah Husin, M.Pd., in the field of language, namely Armilia Sari, S.Pd., M.Pd., and in the field of presentation, Shomedran, S.Pd., M.Pd. The following table will present the results of the validation that has been carried out.

**Table 1.** Validation of Media Interactive Digital Textbook Materials and Android-Based PLS Learning Resources (By Content/Material Experts)

Indicators of Assessment	Items of Assessment	Assessment					Total Score
		1	2	3	4	5	
		V	B	M	G	V	
Conformity/Appropriateness	Completeness of lesson					√	13
	The breadth of lesson					√	
	Depth of lesson materials					√	
Accuracy of Materials	Accuracy of concepts and definitions					√	23
	Accuracy of data and					√	
	Accuracy of exercises					√	
	Accuracy of figures and illustration					√	
Types of	Accuracy of terms					√	8
	Using images that are easy to understand					√	

Material	Using videos that are interactive, interesting	√	
Encourage curiosity	Encourage curiosity	√	10
	Creating the ability to	√	
Total			54
Percentages			90%
Category			Valid

Based on the validation results from material experts, interactive digital media textbooks and Android-based PLS learning resources have a very good value with a 90% validity percentage. Although it has been declared very good, there are some comments from the validator to improve this android-based interactive digital textbook. Furthermore, the validation results from experts can be seen in table 2.

**Table 2.** Validation of Presentation of Interactive Digital Textbooks Media and Android-Based PLS Learning Resources (By Presentation Feasibility Expert)

Indicators of Assessment	Items of Assessment	Assessment					Total Score
		1	2	3	4	5	
		VB	B	M	G	VG	
Presentation	Conceptual Sequence					√	14
	Clearance of concepts					√	
Supports	Completeness of information				√		25
	The existence of learning indicators					√	
	instructions					√	
	Summary					√	
Media	Exercises					√	13
	Bibliography					√	
	Infographic instructions				√		
	Interaction/involvement of students					√	
	Availability of pictures/videos				√		
Total							52
Percentages							94,54%
Category							Valid

Based on the validation results from experts in presentation feasibility, interactive digital media textbooks and PLS learning resources based on Android can be categorized as having a very good value with a percentage of validity of 94.54%. However, even though it is in the very good category, there are still some comments from the validator for improving the interactive digital textbook. Furthermore, the validation results from Indonesian language experts can be seen in the following table:

**Table 3.** Language Validation of Interactive Digital Textbooks Media and PLS Learning Resources Based on Android (By Language Expert)

Indicators of Assessment	Items of Assessment	Assessment					Total Score
		1	2	3	4	5	
		VB	B	M	G	VG	
Straightforward	Sentence Structure					√	12
	Sentence effectiveness					√	
Communicative	Standard term					√	5
	Understanding of messages or					√	
Dialogic and Interactive	Ability to motivate students					√	5
	Conformity with the intellectual					√	
Conformity to the Development of Learners	Appropriateness to the level of emotional development					√	10
						√	

Conformity with Language Rules	Grammatical	√	8
	Spelling accuracy	√	
Total			40
Percentages			88,88%
Category			Valid

Based on the validation results from language experts, interactive digital media textbooks and PLS learning resources based on Android are categorized as having very good scores with a validity percentage of 88.88%. Even though it is in the very good category, there are still some comments from the validator to improve the interactive digital media textbooks and PLS learning resources based on Android.

**Table 4.** Recapitulation of Validation Results of Interactive Digital Media Textbooks and PLS Learning Resources Based on Android

Validators	Maximum Score	Score / Percentages Validation of -		Conclusion
		I	II	
Content/Material Expert	60	54 / 90%	-	Valid
Presentation Expert	55	52 / 94,54%	-	Valid
Language Expert	45	40/ 88,88%	-	Valid
Skor/ Rata-rata		146/ 91,25%		Valid

Based on the recapitulation table of the validation results above, it can be seen that the interactive digital media textbooks and PLS learning resources based on Android that has been validated by the validator team of material, presentation and Indonesian language experts are declared valid with an average score of 146 or 91.257%.

**Limited trial (One to One and Small Group)**

Students enrolled in the Nonformal Education Department at Faculty of Teacher Training and Education University of Sriwijaya participated in a limited trial of Android-based interactive digital textbooks and PLS learning resources in the form of questionnaires to determine the feasibility and usability of the digital textbooks that had been designed. Three students filled out the questionnaire sheet (one to one stage). Then from the questionnaire results, revisions will be made if difficulties are found or input from how to use it or others. Next, a questionnaire will be given to 10 (ten) students (small group stage) to measure the feasibility and usability of interactive digital textbooks, media again, and learning resources based on Android revised in the previous stage. The following table shows the results of the questionnaire that has been given to students of Nonformal Education Department to see the practicality and usability of interactive digital media and PLS learning resources based on Android.

**Table 5.** Student Questionnaire Results regarding Interactive Digital Media Textbooks and PLS Learning Resources Based on Android Phase One to One

Students Code Names	No. Item											
	1	2	3	4	5	6	7	8	9	10	11	12
PS	4	4	3	5	5	5	5	3	4	3	3	4
AS	5	4	5	5	5	5	5	4	5	4	5	5
AJ	3	3	4	4	4	5	4	4	3	4	3	4
Total	12	11	12	14	14	15	14	11	12	11	11	13
Total Score	Percentage						Practicality					
150	83,33%						Practical					

Based on the table above, it can be seen that the student response at the one-to-one stage to interactive digital media textbooks and PLS learning resources based on Android is 83.33%, which is in the very good category, implying that the developed interactive digital media and textbooks Android-based PLS learning resources can be used practically.

**Table 6.** Student Questionnaire Results regarding Interactive Digital Media Textbooks and PLS Learning Resources Based on Android Small Group Stage

Students Code Names	No. Item											
	1	2	3	4	5	6	7	8	9	10	11	12
EN	4	2	5	5	5	5	5	3	5	3	3	4
RHP	3	4	4	5	5	5	5	3	5	5	5	5
RR	4	4	4	4	4	4	4	3	4	3	4	4
AAZ	3	4	4	5	5	4	5	5	5	4	4	5
SP	3	2	3	3	4	3	4	3	4	3	4	2
FEU	3	4	5	5	5	4	4	4	5	5	5	5
FF	4	3	3	4	4	4	3	3	4	3	3	2
FV	5	4	5	5	5	5	5	4	5	4	5	5
AI	4	4	4	4	5	5	4	5	4	4	4	4
MSA	5	4	5	5	5	5	5	4	5	4	5	5
Total	38	35	42	45	47	44	44	37	46	38	42	41
Total Score	Percentage						Practicality					
499	83,16%						Practical					

Based on the table above, it can be seen that the student responses at the small group stage to interactive digital media textbooks and PLS learning resources based on Android are in the very good category with a percentage of 83.16%, meaning that interactive digital media textbooks and Android-based PLS learning resources were developed. It can be used practically by students of Nonformal Education Department, Faculty of Teacher Training and Education University of Sriwijaya.

Android-based interactive digital textbooks and PLS learning resources developed by the research team were carried out in three stages: a preliminary study or needs analysis, followed by product design and product trials. This interactive digital textbook has also gone through the expert review stage or expert validation involving three validators: material/content experts, presentation experts, and language experts (Darmawan et al., 2021). After the interactive digital media textbooks and PLS learning resources based on Android were declared valid and

feasible by the three validators, the next step was to conduct one-to-one and small group trial stages.

After the development of interactive digital textbooks, media and Android-based PLS learning resources have been completed, a team of experts will carry out validation, where there are three expert teams, namely content/material experts, presentation experts and language experts (Falim & Prestiliano, 2018). This is done to determine the level of validity of interactive digital media textbooks and Android-based PLS learning resources that have been compiled.

The validation results were obtained from 3 validators: content experts with a score of 54/90%, presentation experts with 52/94.54%, and Indonesian language experts 40/88.88%. As a result, the three validators' average validation evaluation is 146/91.25%, with a very excellent or valid category. During the validation assessment by the validator team, there were also comments or input for product improvement that was developed so that it became a reference by researchers to be revised before proceeding to the testing phase of Android-based PLS media textbooks and learning resources in one-to-one and small group trials (Arwin et al., 2022).

In the product trial stage, the stages that have been carried out are one to one and small group trials (Pernantah et al., 2022). In the one to one stage to 3 students, it was found that the interactive digital media textbooks and Android-based PLS learning resources had a very good level of practicality, with the percentage of student questionnaires amounting to 83.33%. After the one-to-one trial phase was completed, the next step was to conduct a small group trial with ten students. The practicality level of interactive digital media textbooks and Android-based PLS learning resources was 83.16%, with a very good category.

The testing of interactive digital media items and PLS learning materials has not yet been carried out in the field assessment trial stage. This trial stage is not the research goal, given the limited time in conducting product trials, but the field evaluation trials will still be carried out at the following research stage (Ibrahim et al., 2021; Nengsih et al., 2022). After completing all the series of stages in the research on the development of interactive digital textbooks for media and PLS learning resources based on Android, it can be said that the resulting product in the form of an interactive digital textbook application is in the valid and practical category for use by students in supporting the learning process in the eye. Media lectures and PLS learning resources.

## CONCLUSION

The findings of the research and discussion indicate that the interactive digital media textbooks and PLS learning resources based on Android that have been developed were declared valid by three validators, namely the content/material expert with a score of 54/90%, the presentation expert with a score of 52/94.54%, and Indonesian language experts with a score of 40/88.88%, resulting in an average validation assessment of a. The trial results in the one to one stage to 3 students obtained a very good practicality score with a percentage of 83.33%, and in the small group stage trial conducted on ten students obtained a percentage of 83.16% with a very good practicality category. So the results of this research product indicate that the interactive digital media textbooks and PLS learning resources based on Android have a very good level of validity and practicality.

## REFERENCES

- Ahmadi, F., Hapsari, I. P., & Artharina, F. P. (2022). Developing Android-based English Multimedia in Improving the Skill of Literary Criticism. *Journal of Nonformal Education*, 8(1), 60-65.
- Arwin, A., Kenedi, A. K., Anita, Y., & Handrianto, C. (2022, June). The Design of Covid-19 Disaster Mitigation E-Module for Students of Grades 1 in Primary School. In *6th International Conference of Early Childhood Education (ICECE-6 2021)* (pp. 173-176). Atlantis Press.
- Avidov-Ungar, O., & Forkosh-Baruch, A. (2018). Professional Identity of Teacher Educators in the Digital Era in Light of Demands of Pedagogical Innovation. *Teaching and Teacher Education*, 73, 183-191.
- Aydin, A., & Aytakin, C. (2018). Teaching Materials Development and Meeting the Needs of the Subject: A Sample Application. *International Education Studies*, 11(8), 27-38.
- Branch, R. M. (2009). *Instructional Design: The ADDIE Approach*. New York: Springer.
- Cloete, A. L. (2017). Technology and Education: Challenges and opportunities. *HTS: Theological Studies*, 73(3), 1-7.
- Darari, M. B., & Firdaus, M. (2020). Development of Teaching Materials Based "Activity or Resources" At Sipda Unimed to Enhance Students Learning Behavior. In *Journal of Physics: Conference Series* (Vol. 1462, No. 1, p. 012022). IOP Publishing.
- Darmawan, D., Kustandi, C., Syah, R., & Wasan, A. (2021). Implementation of Web-Based SECI Knowledge Management Model for Coastal Communities. *Journal of Nonformal Education*, 7(2), 166-172.
- Elihami, E., & Ibrahim, I. (2019). Teaching to Variation in Learning for Non Formal Education Department. *Jurnal Edukasi Nonformal*, 1(1), 29-40.
- Falim, A. S., & Prestiliano, J. (2018). The Use of Board Games as Learning Media of Project Time Management. *Journal of Nonformal Education*, 4(1), 69-78.
- Fibrianti, S., & Suhanadji, S. (2020). Analisis Penyelenggaraan "Setara Daring" Sebagai Media Pembelajaran Pendidikan Luar Sekolah di Satuan Pendidikan Non Formal (SPNF) SKB Gudo Kabupaten Jombang. *JPUS: Jurnal Pendidikan Untuk Semua*, 4(2), 36-45.
- Handrianto, C., Salleh, S. M., & Chedi, J. M. (2020). The Correlation between Teaching-Learning Quality and Students` Motivation to Study in Yogyakarta`s Bimbel. *Spektrum: Jurnal Pendidikan Luar Sekolah (PLS)*, 8(4), 527-537.
- Hashim, H. (2018). Application of Technology in the Digital Era Education. *International Journal of Research in Counseling and Education*, 2(1), 1-5.
- Hazizah, N., & Ismaniar, I. (2020). Teachers` Strategies in Preparing Online Learning Digital Media for Developing Children`s Literacy Skills. *Journal of Nonformal Education*, 6(2), 156-160.
- Hediansah, D., & Surjono, H. D. (2019). Building Motivation and Improving Learning Outcomes with Android-Based Physics Books: Education 4.0. *Anatolian Journal of Education*, 4(2), 1-10.
- Hidayat, Y., Syamsudin, T. A., Khoeriah, D., & Iriantara, Y. (2021). Strategy for Improving the Quality of Non-Formal Education in the Field of Equality Programs in the Context of Policy and Implementation. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 7(2), 137-148.
- Humairah, N., Muchtar, Z., & Sitorus, M. (2020). The Development of Android-Based Interactive Multimedia for High School Students. In *advances in social science education and humanities research, Proceedings of the 5th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2020)* (Vol. 488, pp. 113-119).
- Hutabri, E., & Putri, A. D. (2019). Perancangan Media Pembelajaran Interaktif Berbasis Android Pada Mata Pelajaran Ilmu Pengetahuan Sosial Untuk Anak Sekolah Dasar. *Jurnal Sustainable: Jurnal Hasil Penelitian dan Industri Terapan*, 8(2), 57-64.
- Ibrahim, R., Abdullah, N., Handrianto, C., Muliana, I. L., & Nykonenko, N. (2021). Development of In-

- formation and Communication Technology (ICT) Skills among Students with Learning Disabilities (SLD) in Malaysia and Ukraine. *International Journal of Educational Best Practices*, 5(2), 121-131.
- Kucirkova, N., Gattis, M., Spargo, T. P., de Vega, B. S., & Flewitt, R. (2021). An Empirical Investigation of Parent-Child Shared Reading of Digital Personalized Books. *International Journal of Educational Research*, 105, 101710.
- Lin, M. H., & Chen, H. G. (2017). A Study of the Effects of Digital Learning on Learning Motivation and Learning Outcome. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(7), 3553-3564.
- Marselina, V & Muhtadi, A. (2019). Pengembangan Buku Digital Interaktif Matematika Pada Materi Geometri. *Jurnal Inovasi Teknologi Pendidikan*, 6(2).
- Mawarni, S. (2016). *Pengembangan Buku Digital Mata Kuliah Pengembangan Multimedia Interaktif untuk Mahasiswa Teknologi Pendidikan FIP UNY*. Tesis Magister.
- Mudiartana, I. M., Margunayasa, I. G., & Divayana, D. G. H. (2021). How is the Development of Valid and Practical Android-Based Local Wisdom Teaching Materials? *Jurnal Ilmiah Sekolah Dasar*, 5(3), 403-414.
- Nengsih, Y. K., Handrianto, C., Pernantah, P. S., Kenedi, A. K., & Tannoubi, A. (2022). The Implementation of Interactive Learning Strategy to Formulating Learning Objectives in Package C Program. *Spektrum: Jurnal Pendidikan Luar Sekolah (PLS)*, 10(2), 311-317.
- Pernantah, P. S., Rizka, M., Handrianto, C., & Syaputra, E. (2022). Inovasi Bahan Ajar Pendidikan IPS Berbasis Digital Flipbook Terintegrasi Local Wisdom dalam Menunjang Perkuliahan Jarak Jauh. *J-PIPS (Jurnal Pendidikan Ilmu Pengetahuan Sosial)*, 8(2), 136-145.
- Puspitarini, Y. D., & Hanif, M. (2019). Using Learning Media to Increase Learning Motivation in Elementary School. *Anatolian Journal of Education*, 4(2), 53-60.
- Ramadhani, D., Kenedi, A. K., Rafli, M. F., & Handrianto, C. (2022). Advancement of STEM-Based Digital Module to Enhance HOTS of Prospective Elementary School Teachers. *Jurnal Pendidikan Progresif*, 12(2), 981-993.
- Ratheeswari, K. (2018). Information Communication Technology in Education. *Journal of Applied and Advanced Research*, 3(1), 45-47.
- Risnawaty, R., Arfanti, Y., Sembiring, M., Siregar, R., & Subagiharti, H. (2021). Development of Teaching Materials in Writing Descriptive Texts of Vocational School Students. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, 5(1), 106-116.
- Sari, A. S. (2017). Pengembangan Buku Digital Melalui Aplikasi Sigil Pada Mata Kuliah Cookies dan Candys. *Jurnal ScienceTech: Jurnal Ilmu Pengetahuan dan Teknologi*, 3(1).
- Shofwan, I., Santosa, I. W., Sutarto, J., Fakhruddin, F., & Soraya, F. (2021). Implementation of Cooperative Learning Model in Home-schooling as Equality Education. In *Proceedings of the International Conference on Industrial Engineering and Operations Management, Sao Paulo, Brazil, April 5 - 8, 2021*.
- Shofwan, I., Widhanarto, G. P., & Trisanti, T. (2019). Implementasi Pembelajaran Nonformal Pada Sekolah Dasar Quran Hanifah di Kota Semarang. *JPPM (Jurnal Pendidikan Dan Pemberdayaan Masyarakat)*, 6(1), 1-10.
- Sutarto, J., Mulyono, S. E., Shofwan, I., & Siswanto, Y. (2019). Determinants of Web-Based E-Training Model to Increase E-Training Effectiveness of Non-Formal Educators in Indonesia. *Journal of Education and Practice*, 10(24), 24-31.
- Suyasa, P. Wayan A & Divayana, D. G. H. (2018). Pengembangan Buku Digital Mata Kuliah Asesmen Dan Evaluasi Berbasis Kvisoft Flipbook Maker. *Jurnal Pendidikan Teknologi dan Kejuruan*, 15(2).
- Tahir, M., & Elihami, E. (2019). Peningkatan Variasi Mengajar Pada Proses Pembelajaran Mahasiswa Semester Tiga di Prodi Pendidikan Nonformal STKIP Muhammadiyah Enrekang. *Jurnal Edukasi Nonformal*, 1(1), 201-209.
- Widianto, E. (2021). Pemanfaatan Media Pembelajaran Berbasis Teknologi Informasi. *Journal of Education and Teaching*, 2(2), 213-224.
- Yaqin, A. (2017). Pengembangan Buku Saku Digital Berbasis Android Sebagai Pendukung Bahan Ajar Pada Materi PPH Pasal 21. *Jurnal Pendidikan Akuntansi (JPAK)*, 5(1).