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## Development of powtoon learning media and literacy skills among elementary school students

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### Abstract

This research aims to develop Powtoon-based learning media to enhance literacy in grade IV elementary students. This research used research and development with the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model. This research employed several data collection techniques such as observation, interviews, documentation, and questionnaires. Additionally, the results indicate that the Powtoon-based media is valid, feasible, and practical, significantly improving student motivation. In addition, this medium can be used by teachers in the learning process applied to students, especially at the elementary school level. This Powtoon-based learning media gets very practical results. material understanding, and literacy skills. Positive student responses further support its application. Furthermore, this research recommends Powtoon-based media as an innovative solution for literacy learning in elementary schools.

### Keywords

Elementary school, interactive learning, literacy, media development, Powtoon

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## Introduction

According to the findings of a survey conducted in 2019 by the Programmes for International Student Assessment (PISA), Indonesia's proficiency in literacy and reading was positioned in a low decile, specifically ranking 62<sup>nd</sup> out of 70 countries (Sajidan et al., 2023). Similarly, research conducted in 2016, Most Literate Countries Worldwide, revealed that Indonesia ranked 60<sup>th</sup> out of 61 countries collected (Bella et al., 2023). Rosmawati and Rohana (2023) explained that reading and writing are still problematic in elementary schools. Low grades cannot read; reading is still spelling, and even writing is slow. In high grades, many students are still reading by spelling and writing slowly, not by what is expected.

Literacy is the ability to read, write, calculate, speak, and find information to use (Aktaş & Bakkaloğlu, 2021). Gabriel and Mpofo (2024) defined reading literacy as the capacity of students to understand and engage with written text by decoding words, understanding meaning, understanding context, and interpreting information across a range of reading materials. Literacy is the ability to read and write functionally by encoding and translating meaning in the symbols of reading materials (Kasna et al., 2023).

According to Rosmawati and Rohana (2022), literacy is a person's ability to understand, evaluate, and use information in written form, including reading, writing, and understanding skills and effective language use. With the advancement of technology, digital-based learning media is an effective alternative to engaging students' interest in learning (Annisa & Marlina, 2019).

Several studies in the past decade have explored learning media, such as educational games and research and development of animated media based on local wisdom in elementary schools (Mar'atussolichah et al., 2024). Based on the results of observations at SDN 09 Korong Gadang, SDN 40 Korong Gadang, and SDN 42 Korong Gadang, Kuranji District, Indonesian language learning still does not use IT-based learning media or videos in the classroom; teachers still often use reading media in the form of text in books. Therefore, students' interest in acquiring knowledge gradually decreases. The absence of active student involvement indicates a lack of motivation for learning (Marlina et al., 2022).

Kasna et al. (2023) explained that the low student learning outcomes are caused by teachers who still do not use interesting and technology-based learning media. This situation causes students to experience boredom, lack enthusiasm for learning, and lack interest in learning materials. Sukma et al. (2017) revealed that students will understand the concepts and remember more information through visual and verbal means. Learning difficulties can be seen directly from the learning process and the results children obtain during and after learning (Marlina & Afrianti, 2020).

One of the goals of the Merdeka curriculum is to create a more enjoyable learning environment where teachers and students can interact more casually so that conventional learning is no longer used, namely, only listening to explanations from the teacher (Marlina, 2023). The learning process needs to pay attention to students' characteristics, interests, readiness, and learning profiles so that teachers can provide a learning environment that responds to differences and can develop students' abilities (Marlina et al., 2020).

Types of learning media, such as audio, visual, or audio-visual learning media, play an important role in educational settings (Rozie, 2018). The types of learning media can be categorized based on the shape of the object, the device used, the sense of reception, how they operate, their nature, and their intended use group (Rahmandani et al., 2022; Riswan, 2022). Media that can be customized to accommodate individual learning styles play an important role in educational settings (Swastyastu, 2020). In today's era of rapid technological advancement, a wide array of media tools that facilitate highly sophisticated learning and teaching experiences (Rahmi & Samsudi, 2020).

In addition, according to Fadilah et al. (2023), the purpose of learning media in the learning process is to use tools like digital learning media to increase clear and unambiguous verbal messages for students, thereby reducing obstacles related to limited space, time, and sensory capacity. Jediut et al. (2021) explained that the advantage of utilizing learning media in education is that it serves as a platform to increase interaction between students and between students and educational materials, thus fostering a more communicative learning environment.

Today, there are many applications catering to the field of multimedia learning. Among them is the Powtoon application, which facilitates the creation of animated video presentations through an online platform (Astika et al., 2020). Powtoon can be easily reached through the website [www.Powtoon.com](http://www.Powtoon.com), which offers educators a versatile presentation platform (Ilahi & Desyandri, 2020).

Powtoon offers many overarching benefits, in particular, effectively presenting topics in an engaging way to share with others, capturing students' interest, facilitating more profound understanding, leading to improved information retention, combining different formats and media types to enhance the blend of visual, auditory, and kinetic elements, and providing a free basic version for unlimited use (Apriliani et al., 2021).

Using straightforward features, students and teachers can package teaching materials innovatively (Febrita & Ulfah, 2023). Media that has elements of image and sound (sight and hearing) will increase the level of retention (memory) of students in the subject matter delivered through video (Swastyastu, 2020). This will evoke the thought process of the subject being conducted so that it can produce active learning activities.

Based on the description above, the authors are interested in developing learning media using Powtoon by adding innovation in packaging that can be accessed via the web that has been provided and contains learning videos, quizzes, and learning evaluations for grade IV elementary school.

## Literature Review

### *Learning media*

The term “media” comes from the Latin word “medius,” which carries the literal connotation of “middle,” “intermediary,” or “conveyor.” According to the Association for Educational and Communications Technology (AECT), media includes any mode or platform to disseminate and share information with a broader audience (Arief, 2021).

Learning media is a tool used to improve the efficiency and effectiveness of one's educational journey. In today's era, acquiring knowledge has evolved beyond relying solely on textbooks and blackboards. With the vast selection of media available today, educators have many tools to facilitate learning. Teachers can utilize these resources to create engaging and interactive learning experiences for their students (Fadilah et al., 2023).

### *Powtoon learning media*

Powtoon is an online service that provides animation features to create exposure to teaching materials. The animation features include handwriting, cartoons, livelier transition effects, and elementary timeline settings. Using straightforward features benefits students and teaching staff because they can package teaching materials innovatively. Media with elements of image and sound will increase student retention of the lesson material delivered through video (Qurrotaini et al., 2020).

According to Rangkuti et al. (2022), Powtoon has functions including providing concrete experience for students, helping variation in learning, generating interest and motivation, improving teaching and learning references, and utilizing time effectively and efficiently. In many studies, Powtoon-based videos have been shown to increase learning effectiveness, improve learner motivation and achievement, and hone teachers' skills in managing learning. The appeal of this app lies in its practicality, offering a variety of templates, backgrounds, animated content, fonts, and transition effects. In addition, it provides the convenience of saving creations (Hidayati & Fatmawati, 2022).

### *Literacy in primary school*

Literacy in primary schools is defined as the ability of individuals or students to understand and manage information in reading and writing. The term literacy covers many areas, including literacy, numeracy, science literacy, digital literacy, financial literacy, and cultural and civic literacy (Fahrianur et al., 2021). Rosmawati and Rohana (2022) stated that literacy is a person's ability to understand, evaluate, and use information contained in written form, which includes reading, writing, and understanding skills and effective use of language.

Reading and writing are requirements or basic knowledge to continue to other learning; if students can read and write, the following learning process will be understood easily because reading and writing are the main steps in learning (Nuraeni & Samsudin, 2023). Reading can be interpreted as an activity that involves receiving and translating and seeing and understanding the contents of books, magazines, newspapers, and other materials written in reading (Rinawati et al., 2020; Widyahening, 2018). The teacher's responsibility is enormous. In addition to helping improve students' cognitive abilities, teachers also help the student development process. The material the teacher presents is a series of dynamic learning processes at each phase and process of student development (Atikah et al., 2021).

Reading and writing literacy has a fundamental position, function, and role to become the central pillar and foundation for mastering other literacy skills. Reading in the current era of globalization is a fundamental ability in shaping one's behavior. Reading can add information and expand knowledge and culture (Sholikhah et al., 2023). Reading and writing

can be defined as the ability of individuals to process and understand information so that they can analyze, respond to, and use literature when reading and writing (Ningsih et al., 2021).

## Methodology

This research used research and development with the ADDIE model, which includes analysis, design, development, implementation and evaluation (Rustandi & Rismayanti, 2021). This model is based on the characteristics of students who are packaged effectively, efficiently, and systematically (Wulandari et al., 2022). The ADDIE instructional design process is a widely used approach in development, and this method provides sound and clear stages for educators to implement instruction effectively (Marlina et al., 2023).

### *Data collection and analysis*

This research used several data collection techniques: observation, interviews, documentation, and questionnaires. Observation is used to collect data to support the research to be carried out (Marlina & Kusumastuti, 2019). Researchers conducted observations in three schools: SDN 09 Korong Gadang, SDN 40 Korong Gadang, and SDN 42 Korong Gadang. Meanwhile, researchers conducted interviews with teachers about the problem. An interview involves several parties engaging in structured or semi-structured dialogue to obtain specific information from respondents (Marlina et al., 2020).

Questionnaires are used to collect information related to specific issues from respondents, which relate to the focal point of the research, and documentation is carried out to complement the results of the implementation of learning media. The subjects in this research were fourth-grade students at SDN Percobaan, SDN 09 Korong Gadang, and SDN 11 Lubuk Buaya, West Sumatra Province. The research instrument is a validation sheet from a curriculum expert, material expert, language expert, media expert, and teacher and student practicality instruments (Latip, 2022). The data analysis techniques of this research include,

*Media validation*, the calculation and final value of the validity results are used as follows:

$$\text{Final percentage} = \frac{\text{Gained score}}{\text{Maximum score}} \times 100\%$$

The conversion of the five scales uses the percentage category reference in the following table:

**Table 1.** *The conversion of the percentage category*

Percentage	Criteria
81% - 100%	Very high validity
61% - 80%	High validity
41% - 60%	Moderate validity
21% - 40%	Low validity
1% - 20%	Very low validity

Modification (Irnanda et al., 2022)

*Media practicality*, the practicality analysis technique aims to analyze the implementation of teacher and student response questionnaires to learning media.

$$\text{Final percentage} = \frac{\text{Gained score}}{\text{Maximum score}} \times 100\%$$

Furthermore, the value is converted according to the categorization using the table as follows:

**Table 2.** *The conversion of the percentage category*

Percentage (%)	Criteria
76% - 100%	Very practical
51% - 75%	Practical
36% - 50%	Moderately practical
<35%	Less practical

Source: Firmansyah and Rusimamto (2020)

**Media effectiveness**, analysis of learning media can be done using test validity, test reliability, level of difficulty of the questions, differentiation test questions, pre-test and post-test results, and data analysis of pre-test and post-test results tested using the following formula:

$$S = \frac{SB}{SM} \times 100$$

Description

- S : Score of each student's test results
- SB : Total score obtained
- SM : Maximum score of all students

Furthermore, the results of the analysis of the question evaluation sheet and the N-Gain test with the following assessment criteria:

**Table 3.** *The analysis results of the media effectiveness*

N-Gain scores	Criteria
N-Gain $\geq$ 0.7	High
0.7 > N-Gain $\geq$ 0.3	Moderate
N-Gain < 0.3	Low

Modification: Kurniaman et al. (2022)

### Findings and Discussion

**Analysis**, at this stage of the analysis, observations and interviews were used. The learning needs focused on students' literacy were identified during observation. The aspects

observed were initial activities, learning methods, teaching materials, learning strategies, management of learning resources and use of learning media, and reflection and evaluation.

Literacy is very important for students. Therefore, Powtoon-based learning media is designed to help students understand these concepts visually and interactively. The observation and interview analysis show that the learning experience tends to be conventional with the dominance of textbooks and blackboards, and teachers do not use technology-based learning media in the learning process.

In addition, children's characteristics were analyzed to ensure that the media development was based on their cognitive, affective, and motor development. This research was conducted at SDN 09 Korong Gadang and SDN 11 Lubuk Buaya with a focus on children aged 9-10 years. The analysis results show that learning media must be designed by considering the need for attractive visuals because students can think abstractly, put forward hypotheses, and identify problem variables. An analysis of the children's education curriculum related to literacy was also conducted to ensure that the learning media is by the competencies needed at this level of education, with adequate technological support available at school and home.

**Design**, in the design stage, there is some planning in developing learning media by designing several components, such as designing learning media components, preparing learning media materials, and designing instruments. Researchers design web application-based Powtoon learning media by developing application structures using Laravel to manage data (model), display material (view), and manage application flow (controller). The learning structure is designed systematically, covering the presentation of grade IV Indonesian language material to the evaluation stage. The visual design is child-friendly with intuitive navigation, utilizing attractive visual elements such as characters, backgrounds, and animations matching the learning topic. The selection of fonts and other graphic elements is adjusted to the age of the learners. In addition, each Powtoon segment is organized with a logical flow, from introduction and core explanation to evaluation, with sufficient duration so that learners can understand the material in depth.

To enhance comprehension, this learning media is equipped with narration and supporting music designed to create a fun learning atmosphere. Interactive elements such as discussions and practice questions are also included to engage students and help them understand the concepts better actively. Regarding security, Laravel ensures that user authentication and authorization are secure. Materials, discussion results, and student evaluations are stored in a structured and efficient database. All these designs support the preparation of learning materials that suit the needs of students, making Powtoon an effective medium to improve the learning process.

**Development**, in the development stage, the primary process is the development of applications and their supporting content. Application development includes creating an application that can display learning materials created through Powtoon. This application is designed to be easy to use by learner users with a simple but attractive appearance. The primary development focus includes videos, interactive animations, quizzes, and evaluation questions. Each feature is tested regularly to ensure the application runs stably and optimally on various devices. The application can be presented on the web at [www.jendelaliterasi.com](http://www.jendelaliterasi.com).

In addition, the practicality test is also carried out by students to assess the practicality of product users. By following the structured stages in the ADDIE model, researchers can

ensure that the learning media produced not only complies with educational standards but also effectively improves students' academic achievement. The development stage has two stages: the validity test and the practicality test.

**Product validation**, the first validator validated the curriculum content validation test results on aspects of the content of the curriculum material based on the assessment aspects provided by the researcher for validation. The score obtained was 93%, which is very valid for use in learning and can be applied. The results of the language validation test on the linguistic aspects consist of text readability, straightforwardness, conformity with language rules, and effective and efficient use of language. Furthermore, the second validator carried out the validation process based on the assessment aspects that researchers provide, and the score obtained is 99%, which is very valid and applicable.

Next is the material validation test, namely the content/material expert aspect, which consists of introductory, learning, content, and evaluation aspects. The third validator validated the content/material aspect. Based on the assessment aspects that researchers provide for validation, the score obtained is 97% with very valid criteria, and the last comment can be applied to learning.

The media expert aspect consists of the initial appearance, content design, programming, and media's ease of use. Validation was carried out by the fourth validator based on the assessment aspects provided by researchers for validation, the score obtained was 88%, which is a very valid category.

**Table 5.** *Learning media validation results*

Validators	Average	Categories	Validity	Categories
Curriculum content expert	93%	Very high validity	93,75%	Very high validity
Language Expert	97%	Very high validity		
Material Expert	97%	Very high validity		
Media Expert	88%	Very high validity		

From the overall validation results, the validity results with an average of 93.75% are in a very valid category.

**Product practicality**, testing the practicality of this Powtoon-based learning media can be seen from the teacher's response and student learning outcomes. Product practicality based on student and teacher responses is as follows:

**Table 6.** *Product practicality test results*

No	Practitioners	Average	Categories	Average	Categories
1.	Students	95.14%	Very practical	93.93%	Very practical
2.	Students	93.71%	Very practical		
3.	Students	92.95%	Very practical		
4.	Teacher	95.29%	Very practical	94.9%	Very practical
5.	Teacher	92.94%	Very practical		
6.	Teacher	96.47%	Very practical		

From the results of the practicality test by students, with an average of 93.93%, and by teachers, 94.9%, the learning media is very practical.

**Product revision**, powtoon-based learning media products are revised with suggestions and input from curriculum content experts, language material experts, and media experts. Teachers must consult experts before the learning media is used to get the content that suits their learning needs. If the consultation has been done, the module receiving expert review can be considered valid. Improvements made by linguists on the use of capital letters and repeated words in learning media before and after revision are as follows:

**Table 7.** *Media validation revision*

No	Suggestions	Revisions
1	Use of varied animations	Fixed
2	Supplementing with relevant images	Fixed

Furthermore, the suggestions given by media expert validators need to be revised by researchers. The suggestions include using varied animations and complementing the images used for learning media.

**Table 8.** *Content/ material validator revisions*

No	Suggestions	Revisions
1	Complete learning outcomes	Fixed
2	Learning objectives revised	Learning objectives are adjusted to the learning outcomes
3	Core activities are adjusted to the learning objectives	Learning objectives are adjusted to the learning outcomes

Suggestions given by material experts that need to be improved by researchers are completing learning outcomes, improving learning objectives, and core activities by learning objectives.

**Table 9.** *Revision of linguist validation*

No	Suggestions	Revisions
1	Look out for the use of punctuation	Punctuation has been adjusted
2	Look out for repetitive words	Rephrasing has been adjusted
3	Pay attention to the capital letters used	Capital letters have been adjusted

The suggestions given by linguists that need to be improved by researchers are to complete the use of punctuation marks, pay attention to repetitive words, and improve the capital letters used.

**Implementation**, at the implementation stage, the first step is a field trial using the learning media on students from SDN Percobaan Padang. This test evaluates how effectively Powtoon-based media can be used to learn the Indonesian language. During the trial, students were allowed to use the learning media directly, and observations were made to see how

children responded to using this technology in learning Indonesian language concepts. This trial also helps to identify any weaknesses or technical obstacles that may arise during media usage. In addition, training is also provided to teachers to ensure they can maximize the use of Powtoon-based learning media in daily learning activities. This training includes using the Powtoon-based learning application, guiding students in using the media, and integrating PBL-based learning methods to make learning more interactive and explorative. During implementation, data was collected through direct observation, and questionnaires were given to teachers and students. The trial consisted of 3 groups: individual, small, and large group trials. Before filling out the questionnaire, the researcher explained the instructions. After the learning was complete, the researcher gave an assessment sheet and questionnaire to be filled in by the students.

**Table 10.** *Learning media trial results*

No	Practicality	Average	Categories	Average	Categories
1.	Individual group trial	94.7.%	Very practical	95,06%	Very practical
2.	Small group trial	95.2%	Very practical		
3.	Large group trial	95.3%	Very practical		

Based on the average student practicality test of 95.06% with the category “very practical”.

**Evaluation**, the evaluation results of the development and implementation of learning media are carried out using pre-test-post-test to ensure the effectiveness and quality of the media developed. Analysis of evaluation sheets regarding the effectiveness of student knowledge competitions by giving pre-test and post-test questions related to learning media.

**Table 11.** *N-Gain calculation results*

School name	Pre-test average	Post-test average	N-gain score	Category	N-gain score (%)	Categories
SDN 09 Korong Gadang	43.85	85.42	0.71	High	71.75	Moderately effective
SDN 11 Lubuk Buaya	52.80	83.04	0.61	Moderate	61.49	Moderately effective

Based on the table above, the average SDN 09 Korong Gadang N-Gain score is 71.75%, with a high category. For the results of the SDN 11 Lubuk Buaya N-Gain score, there is 61.49% with a moderate category, so the questions available and the results are quite effective in improving learning outcomes.

The test results obtained state that SDN 09 Korong Gadang and SDN 11 Lubuk Buaya have results that are 95% scores above the KKM. After using this Powtoon-based learning media effectively to improve learning outcomes, another way to calculate pre-test and post-test with the N-Gain test is to find the average N-Gain score of SDN 09 Korong Gadang, which is 71.75, with the "high" category. SDN 11 Lubuk Buaya, the average N-Gain Score is 0.61 with the "Moderate" category. Therefore, the questions are moderate, and the results effectively improve learning outcomes.

## Conclusion and Recommendations

The conclusion of this research is that the Powtoon-based learning media that has been developed is very valid and can be used by teachers in the learning process applied to students, especially at the elementary school level. This Powtoon-based learning media gets very practical results. This means that fourth-grade elementary school students are greatly helped in understanding the material by Powtoon-based learning media, and teachers are helped in making learning media. This Powtoon-based learning media is quite effective. This is known from the results of student pre-tests and post-tests.

It is recommended for the teachers use Powtoon-based learning media related to technology, especially in Indonesian language learning for elementary school students, so that it can be more effective in improving learning outcomes so that the learning process is not tedious. Further research suggestions can be carried out to develop technology-based learning media in Indonesian language learning in grade IV elementary schools to improve student learning outcomes with a broader scope and different conditions.

## Declaration of Conflicting Interests

The authors declared no potential conflicts of interest.

## References

- Aktaş, N., & Bakkaloğlu, S. (2021). How well do first grade students, learning to read and write by distance education during the pandemic period, write?. *International Journal of Modern Education Studies*, 5(2), 418-444. <https://doi.org/10.51383/ijonmes.2021.140>
- Annisa, F., & Marlina, M. (2019). Penerapan model pembelajaran kooperatif tipe index card match terhadap aktivitas dan hasil belajar matematika peserta didik (Application of the index card match type cooperative learning model to students' mathematics learning activities and outcomes). *Jurnal Basicedu*, 3(4), 1047-1054. <https://doi.org/10.31004/basicedu.v3i4.209>
- Apriliani, M. A., Maksum, A., Wardhani, P. A., Yuniar, S., & Setyowati, S. (2021). Pengembangan media pembelajaran PPKn SD berbasis Powtoon untuk mengembangkan karakter tanggung jawab (Development of PPKn SD learning media based on Powtoon to develop responsible character). *Jurnal Ilmiah Pendidikan Dasar*, 8(2), 129-145. <https://doi.org/10.30659/pendas.8.2.129-145>
- Arief, M. M. (2021). Media pembelajaran ipa di sd/mi (tujuan penggunaan, fungsi, prinsip pemilihan, penggunaan, dan jenis media pembelajaran) (Science learning media in elementary schools/Islamic elementary schools (purpose of use, function, principles of selection, use, and types of learning media)). *Jurnal Tarbiyah Darussalam*, 5(8), 13-28.
- Astika, R. Y., Anggoro, B. S., & Andriani, S. (2019). Pengembangan video media pembelajaran matematika dengan bantuan Powtoon (Developing mathematics learning media videos with the help of Powtoon). *Jurnal Pemikiran dan Penelitian Pendidikan Matematika (JP3M)*, 2(2), 85-96. <https://doi.org/10.36765/jp3m.v2i2.29>

- Atikah, N., Marlina, M., & Desyandri, D. (2021). Analisis hasil belajar siswa ditinjau dari peran orang tua (Analysis of student learning outcomes viewed from the role of parents.). *Jurnal Pendidikan Tambusai*, 5(1), 2052–2062. <https://doi.org/https://jurnal.ranahresearch.com/>
- Bella, Z. I. B. A., Sriwijayanti, R. P., & Qomariyah, R. S. (2023). Implementasi gerakan literasi sekolah dalam meningkatkan minat baca peserta didik di SDN Mangunharjo I Kota Probolinggo. *Jurnal PEDAGOGY*, 10(2), 38-47.
- Fadilah, A., Nurzakiah, K. R., Kanya, N. A., Hidayat, S. P., & Setiawan, U. (2023). Pengertian media, tujuan, fungsi, manfaat dan urgensi media pembelajaran (Understanding media, goals, functions, benefits and urgency of learning media). *Journal of Student Research (JSR)*, 1(2), 1–17.
- Fahrianur, F., Monica, R., Wawan, K., Misnawati, M., Nurachmana, A., Veniaty, S., & Ramadhan, I. Y. (2021). Implementasi literasi di sekolah dasar (implementation of literacy in elementary schools). *Journal of Student Research*, 1(1), 102-113.
- Febrita, Y., & Ulfah, M. (2023). Peranan manajemen media pembelajaran untuk meningkatkan motivasi belajar siswa (The role of learning media management to increase student learning motivation). *AL-MIKRAJ Jurnal Studi Islam dan Humaniora*, 4(1), 981–990. <https://doi.org/10.37680/almikraj.v4i1.4273>
- Firmansyah, R. S., & Rusimamto, P. W. (2020). Validitas dan kepraktisan modul pembelajaran human machine interface pada mata pelajaran instalasi motor listrik di SMK Negeri 3 Jombang (Validity and practicality of human machine interface learning module on electric motor installation subject at SMK Negeri 3 Jombang). *Jurnal Pendidikan Teknik Elektro*, 9(2), 395–403. <https://doi.org/https://jurnalmahasiswa.unesa.ac.id/index.php/jurnal-pendidikan-teknik-elektro/article/view/34784>
- Gabriel, N., & Mpofu, N. (2024). Learning activities used for reading literacy instruction in selected Namibian primary schools. *South African Journal of Childhood Education*, 14(1), 1–10. <https://doi.org/10.4102/sajce.v14i1.1393>
- Hidayati, F. N., & Fatmawati, N. L. (2022). Pengembangan video animasi powtoon sebagai media pembelajaran linguistik jarak jauh (Development of animated powtoon videos as a distance learning medium for linguistics). *JINoP (Jurnal Inovasi Pembelajaran)*, 8(1), 55–67. <https://doi.org/10.22219/jinop.v8i1.19284>
- Ibda, H., Al-Hakim, M. F., Faizah, F., Aniqoh, A., & Mahsun, M. (2024). " Benkangen" game: digital media in elementary school Indonesian language. *Journal of Education and Learning (EduLearn)*, 18(2), 480-488. <https://doi.org/10.11591/edulearn.v18i2.21091>
- Ilahi, L. R., & Desyandri, D. (2020). Pengembangan media pembelajaran tematik terpadu berbasis powtoon di kelas iii sekolah dasar (Development of integrated thematic learning media based on powtoon in grade III elementary school). *Journal of Basic Education Studies*, 3(2), 1058–1077.
- Irnanda, E., Kurniaman, O., & Mulyani, E. A. (2022). Pengembangan blog literasi membaca untuk meningkatkan literasi membaca siswa sekolah dasar (Development of a reading literacy blog to improve reading literacy of elementary school students). *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(5), 5113–5126. <https://doi.org/10.31004/obsesi.v6i5.2659>

- Jediut, M., Sennen, E., & Ameli, C. V. (2021). Manfaat media pembelajaran digital dalam meningkatkan motivasi belajar siswa sd selama pandemi covid-19 (The benefits of digital learning media in increasing elementary school students' learning motivation during the Covid-19 pandemic). *Jurnal Literasi Pendidikan Dasar*, 2(2), 1–5.
- Kasna, R. L., Syafril, S., & Novrianti, N. (2023). The development of interactive multimedia using smart apps creator applications in class vii junior high school informatics subjects. *Indonesian Journal of Education and Mathematical Science*, 4(3), 149-152.
- Kasna, R. L., Syafril, S., & Novrianti, N. (2023). The development of interactive multimedia using smart apps creator applications in class vii junior high school informatics subjects. *Indonesian Journal of Education and Mathematical Science*, 4(3), 149-152. <https://doi.org/10.30596/ijems.v4i3.16337>
- Kurniaman, O., Mulyani, E. A., Noviana, E., Sari, I. K., Permana, D., Irnanda, E., & Nanda, D. W. (2022). Development of study room blog in learning reading literacy in elementary school. *AL-ISHLAH: Jurnal Pendidikan*, 14(2), 1815–1826. <https://doi.org/10.35445/alishlah.v14i2.1896>
- Latip, A. (2022). Penerapan model addie dalam pengembangan multimedia pembelajaran berbasis literasi sains (Application of the Addie model in the development of multimedia learning based on scientific literacy). *DIKSAINS: Jurnal Ilmiah Pendidikan Sains*, 2(2), 102–108. <https://doi.org/10.33369/diksains.2.2.102-108>
- Mardita, M., Alim, J. A., Hermita, N., & Wijaya, T. T. (2022). Pengembangan LKPD STEM berbasis Mikir Materi Periskop (Development of Mikir Materi Periskop-based STEM LKPD). *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 11(1), 398-406. <https://doi.org/10.24127/ajpm.v11i1.4676>
- Marlina, M., & Afrianti, M. N. (2020). Peningkatan kemampuan membaca pemahaman melalui strategi probing-prompting bagi anak berkesulitan belajar (Improving reading comprehension skills through probing-prompting strategies for children with learning difficulties). *Jurnal Basicedu*, 5(1), 272–279. <https://doi.org/10.31004/basicedu.v5i1.653>
- Marlina, M., & Kusumastuti, G. (2019). Social participation of students with special educational needs in inclusive elementary schools. *Specialusis Ugdymas*, 1(39), 121–132. <https://doi.org/10.21277/se.v1i39.412>
- Marlina, M., Efrina, E., & Kusumastuti, G. (2020). Model asesmen pembelajaran berdiferensiasi bagi siswa berkebutuhan khusus di sekolah inklusif (Differentiated learning assessment model for students with special needs in inclusive schools). *Jurnal Orthopedagogik*, 1(03), 1–20.
- Marlina, M., Kusumastuti, G., & Ediyanto, E. (2023). Differentiated learning assessment model to improve involvement of special needs students in inclusive schools. *International Journal of Instruction*, 16(4), 423–440. <https://doi.org/10.29333/iji.2023.16425a>
- Marlina, M., Kusumastuti, G., Makmur, N. A., & Nabila, I. (2022). Peningkatan keterampilan sosial anak berkebutuhan khusus melalui strategi pembelajaran station rotation berbasis tiered task (Studi eksperimen di sekolah inklusif Sumatera Barat) (Improving social skills of children with special needs through a tiered task-based station rotation learning strategy (Experimental study in an inclusive school in West Sumatra). *JPK (Jurnal Pendidikan Khusus)*, 18(1), 31–42. <https://doi.org/10.21831/jpk.v18i1.45776>

- Ningsih, T., Yuwono, D. M., Sholehuddin, M. S., & Suharto, A. W. B. (2021). The significant of e-assessment for Indonesian literacy with character education in pandemic era. *Journal of Social Studies Education Research*, 12(4), 231–256.
- Nuraeni, S. H., & Samsudin, A. (2023). Penggunaan metode picture and picture untuk meningkatkan kemampuan literasi baca tulis pada sisea kelas 1 sekolah dasar (The use of the picture and picture method to improve reading and writing literacy skills in grade 1 elementary school students). *Didaktik: Jurnal Ilmiah PGSD FIKIP Universitas Mandiri*, 9(1), 835–842. <https://bnr.bg/post/101787017/bsp-za-balgaria-e-pod-nomer-1-v-buletinata-za-vota-gerb-s-nomer-2-pp-db-s-nomer-12>
- Qurrotaini, L., Sari, T. W., & Sudi, V. H. (2020). Efektivitas penggunaan media video berbasis powtoon dalam pembelajaran daring (The effectiveness of using powtoon-based video media in online learning). *Prosiding Seminar Nasional Penelitian LPPM UMJ*, 2(7), 1–7. <https://doi.org/https://jurnal.umj.ac.id/index.php/semnaslit/article/view/7869>
- Rahmandani, S. N., Idris, M., & Ayurachmawati, P. (2022). Pengembangan video pembelajaran membaca permulaan untuk siswa kelas i sd negeri 90 Palembang (Development of early reading learning videos for grade I students of State Elementary School 90 Palembang). *Jurnal Pendidikan Dan Konseling*, 4(4), 1545–1550. <https://doi.org/http://journal.universitaspahlawan.ac.id>
- Rahmi, M. N., & Samsudi, M. A. (2020). Pemanfaatan media pembelajaran berbasis teknologi sesuai dengan karakteristik gaya belajar (Utilization of technology-based learning media according to learning style characteristics). *Edumaspul: Jurnal Pendidikan*, 4(2), 355–363. <https://doi.org/10.33487/edumaspul.v4i2.439>
- Rangkuti, Y. M., Landong, A., Mayasari, F., & Sagala, A. F. H. (2022). Pengembangan media video pembelajaran berbasis powtoon pada materi fungsi komposisi (Development of powtoon-based learning video media on composition function material). *Paradikma Jurnal Pendidikan Matematika*, 15(1), 53–60.
- Rinawati, A., Mirnawati, L. B., & Setiawan, F. (2020). Analisis hubungan keterampilan membaca dengan keterampilan menulis siswa sekolah dasar (Analysis of the relationship between reading skills and writing skills of elementary school students). *Education Journal: Journal Educational Research and Development*, 4(2), 85–96. <https://doi.org/10.31537/ej.v4i2.343>
- Riswan., R.(2022). Persepsi guru terhadap penerapan konsep calitung (baca, tulis, hitung) di TK Ar-Raudha Desa Kace Timur, Kec. Mendo Barat dan TPA Ceria SPNF SKB Kota Pangkalpinang Desa Tua Tunu, Kec. Gerunggung (Teachers' perceptions of the implementation of the calitung (reading, writing, and arithmetic) concept in Ar-Raudha Kindergarten, East Kace Village, West Mendo District and Ceria SPNF SKB TPA, Pangkalpinang City, Tua Tunu Village, Gerunggung District). *Jurnal Pendidikan Islam Anak Usia Dini*, 1(2), 14–21. <https://doi.org/https://jurnal.Ip2msasbabel.ac.id/index.php/tar>
- Rosmawati, F., & Rohana, R. (2022). Potret literasi baca tulis sebagai salah satu keterampilan siswa sekolah dasar (Portrait of reading and writing literacy as one of the skills of elementary school students). *Jurnal Ilmiah Pendidikan Profesi Guru*, 5(3), 525–532. <https://doi.org/10.23887/jippg.v5i3.55854>

- Rozie, F. (2018). Persepsi guru sekolah dasar tentang penggunaan media pembelajaran sebagai alat bantu pencapaian tujuan pembelajaran (Elementary school teachers' perceptions of the use of learning media as a tool to help achieve learning objectives). *Widyagogik: Jurnal Pendidikan dan Pembelajaran Sekolah Dasar*, 5(2), 1–12.
- Rustandi, A., & Rismayanti, R. (2021). Penerapan model ADDIE dalam pengembangan media pembelajaran di SMPN 22 Kota Samarinda (Implementation of ADDIE model in developing learning media at SMPN 22 Samarinda City). *Jurnal Fasilkom*, 11(2), 57–60. <https://doi.org/10.37859/jf.v11i2.2546>
- Sajidan, S., Atmojo, I. R. W., Ardiansyah, R., Chumdari, C., Adi, F. P., & Wulandari, W. (2023). The level of classroom teacher digital literacy in the technology dimension of the instant digital competence assessment (IDCA). *Mimbar Sekolah Dasar*, 10(1), 165–180. <https://doi.org/10.53400/mimbar-sd.v10i1.55680>
- Sholikhah, U. A., Markhamah, M., Rahmawati, L. E., & Fauziati, E. (2023). Habituasi literasi baca tulis siswa di sekolah dasar (Literational habituation of students to read write in elementary school). *Indonesian Language Education and Literature*, 8(2), 245. <https://doi.org/10.24235/ileal.v8i2.11052>
- Sukma, E., Mahjuddin, R., & Amelia, R. (2017). Literacy media development in improving reading and writing skill of early class students in elementary school Padang Utara. *Journal Advances in Social Science, Education and Humanities Research*, 118(9), 145–150. <https://doi.org/10.2991/icset-17.2017.25>
- Swastyastu, L. T. J. (2020). Manfaat media pembelajaran dalam pemerolehan bahasa kedua anak usia dini (The benefits of learning media in early childhood second language acquisition). *Pratama Widya: Jurnal Pendidikan Anak Usia Dini*, 5(1), 52–59. <https://doi.org/https://www.ejournal.ihtn.ac.id/index.php/PW/issue/archive>
- Widyahening, C. E. T. (2018). Penggunaan teknik pembelajaran fishbone diagram dalam meningkatkan keterampilan membaca siswa (The use of fishbone diagram learning techniques to improve students' reading skills). *Jurnal Komunikasi Pendidikan*, 2(1), 11–19. <https://doi.org/http://journal.komunikasi.pendidikam.ac.id>
- Wulandari, I., Alim, J. A., & Putra, M. J. A. (2022). Pengembangan video animasi materi pengukuran panjang dan berat untuk siswa kelas ii sekolah dasar (Development of animated videos on length and weight measurement material for grade II elementary school students). *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(6), 7078–7092. <https://doi.org/10.31004/obsesi.v6i6.2633>
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