

## **Needs Analysis in Developing Digital Flashcards for Indonesian Language Learning in Elementary School**

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### **Abstract:**

This study aims to analyze the needs in developing digital flashcards in Indonesian language learning to increase reading interest. The analysis was conducted through a qualitative case study with the research subjects selected by purposive sampling, including the principal, curriculum deputy, grade 1 teacher, and 30 students. Data collection methods involved observation, interviews, documentation, and learner questionnaires, with analysis using triangulation techniques. The results showed a lack of utilization of digital learning media, especially digital flashcards, at MI Daru Falah Wirowongso Jember, especially in grade 1, to support learners' interest in reading. In response to these findings, researchers analyzed the needs that can be implemented in the development of digital media, especially digital flashcards. The implications of this research are expected to provide a more comprehensive view of the needs of Indonesian language learning in the digital era, as well as providing a foundation for further development in increasing students' interest in reading through relevant and effective learning media.

### **Keywords:**

Digital Flashcard; Indonesian Language Learning; Elementary School

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## Introduction

The lack of interest in reading among the public, including students, workers, and non-workers, reflects the underdeveloped literacy culture in Indonesia. In fact, reading provides great benefits such as new inspiration, additional knowledge, and the latest information, as well as opening up broad horizons. Reading allows us to explore the world without borders, opens the door to knowledge, and has a significant positive impact on our daily lives ([Ramadhan & Usriyah, 2021](#)).

According to ([Puspitasari, \(2023\)](#)) the lack of interest in reading among Indonesians is partly due to the lack of supporting facilities, such as an inadequate number of libraries compared to the population. In addition, the presence of television and other audiovisual media is developing rapidly and innovatively, which further dims the tradition of reading in Indonesian society.

Madrasah Ibtidaiyah places emphasis on language development, particularly in the context of basic education. The goal of language development in grade 1 is to enhance students' ability to communicate both orally and through symbols. To understand symbolic language, children need to master reading and writing skills ([Ulfa, 2020](#)). herefore, we often divide language learning into two aspects: learning language for communication and learning literacy, which encompasses reading and writing skills.

The role of reading in the learning process is very important. Reading is the main means for children to fulfil their curiosity. Children who have good reading skills tend to have good abilities in expressing thoughts, feelings, and interactive actions with the surrounding environment ([Ahmadi, 2010](#)). Reading is not only an entry point but also a window to open children's horizons. The reading process is a complex process, involving various aspects such as visual activity, thinking, psycholinguistics, and metacognition, all of which work in a complex manner during the reading process. Thus, reading is a thinking process that involves observation, comprehension, and complex mental activities ([Putri Harapani & Nurhasanah, 2022](#)).

In an effort to increase interest in reading, it is important to utilise media, especially in the context of Indonesian language learning. This is due to the natural tendency of learners to prefer things that are fun and avoid things that are difficult or confusing ([Wahyuni, 2020](#)). herefore, in the learning process for elementary school students such as Madrasah Ibtida'iyah in grade 1, it is important to introduce and apply reading theory using media so that children do not experience difficulties in reading.

Media acts as an intermediary between teachers and students, and teachers, as learning facilitators, must be able to choose appropriate media for the teaching and learning process. Media has the potential to influence students' attitudes, values, and emotions and can foster their interest in the learning process ([Wiratama, 2021](#)). he use of media can also help link new learning experiences with previous ones. Overall, educational media has the ability to stimulate and influence students' cognitive, affective, and psychomotor aspects ([Elan et al., 2023](#)).

The creation of attractive media has an important role in developing interest in reading, which in turn can stimulate children's interest in seeing and reading written symbols such as the letters of the alphabet ([Hidayat, 2022](#)). The media used does not need to be expensive or luxurious; the most important thing is its relevance to the learning process. Many types of media are available for use in learning, and it's crucial to select those that align with the needs and context of the learning process ([Fahira Arsyaf et al., 2022](#)). One example is flash card media. This flash card medium is a learning tool in the form of picture cards with a size of 25x30 cm. Teacher have the option to create the images manually, use photos, or apply pre-existing images to the flash card cards ([Utami et al., 2021](#)). Each picture on the flash card has a message

accompanied by a caption on the back. The use of flash cards can help improve reading skills.

The use of flash card media aims to improve reading skills in children aged 9–10 years by increasing their interest in reading through the provision of interesting learning media so that children can focus on the learning process ([Pratama & Hardini, 2022](#)). In order to spark children's interest in reading and enhance their reading skills, teacher create flash cards with interesting pictures and letters that form words that represent the image ([Hidayatullah et al., 2021](#)).

Digital advancements have led to the development of an electronic version of flashcard media, also known as a digital flashcard. This digital flashcard medium serves as an effective electronic learning card, incorporating images, text, or symbols to aid in memory retention and guide students towards concepts associated with the visual elements, text, or symbols on the card ([Safira, 2021](#)). In addition, this medium also stimulates students' thoughts and interests, which has an impact on the learning process. The use of digital flashcards in learning is an effective method, using electronic learning cards that contain visual elements, text, or symbols to facilitate understanding and arouse student interest, which in turn improves learning ability. Teacher can use digital flashcards to learn reading, writing, math, and other concepts ([Alwi & Aulia, 2023](#)).

The utilisation of digital flashcards to increase the reading interest of elementary school students can be a significant innovative step in supporting the learning process. By presenting interesting and interactive content, digital flashcards serve as a learning tool that enriches students' learning experiences. Digital flashcards have the ability to present learning materials in an interactive and engaging manner ([Kaplan Rakowski & Loranc Paszylk, 2017](#)). With a variety of features such as animations, sounds, and moving images, digital flashcards are able to provoke interest and maintain students' attention during the reading and learning process.

Digital flashcards can present content in an attractive visual form. With colourful images depicting various concepts or stories, students will be more interested in reading and interpreting the information presented. With digital flashcards, teachers can easily customise learning materials according to students' needs and interests. Teachers can customise the contents of flashcards with reading levels that are suitable for students' abilities so that the learning process becomes more focused and effective ([Oktaviani & Isdaryanti, 2024](#)). Digital flashcards allow students to access learning materials repeatedly in a fun way. With the repeat feature, students can continue practicing reading and repeating words or sentences that are difficult for them to understand. Through digital flashcards, students can be actively involved in the learning process. They can participate in activities such as matching words with pictures, filling in missing text, or solving puzzles presented in the flashcards, all of which can enhance their understanding of the learning material ([Tirtayani et al., 2017](#)).

Various electronic devices, such as computers, tablets, or smartphones, provide flexible access to digital flashcards. This allows students to learn anywhere and anytime according to their needs, both at school and at home. Students can also use digital flashcards as a tool to gauge their reading progress. Teachers can track students' learning activities and results through the evaluation features provided in digital flashcards, so they can provide appropriate feedback to improve students' reading skills ([Nurasyah et al., 2023](#)).

Primary schools expect to create a more interesting, interactive, and effective learning environment for students by utilising digital flashcards for reading

instruction. Digital flashcards can be an effective instrument for motivating students to be more active in learning to read and improving their understanding of learning materials ([Putri Wangi & Gede Agung, 2021](#)).

My observations at MI Darul Falah Wirongso Jember revealed a number of students who lacked full focus on the teacher's material. Additionally, during the comprehension process, students often struggle to recall the information they've received and lack confidence when asked to actively participate. Additionally, teachers often use a limited variety of engaging learning media, which can lead to a lack of stimulation in language and reading interest as well as difficulties in expanding vocabulary.

In this context, the choice of using Flash Card media becomes important to create a more enjoyable learning atmosphere and support the development of students' creativity ([Cahyanti et al., 2023](#)). A pleasant learning atmosphere has a positive impact on students' motivation, which is a key factor in achieving better learning outcomes. The observation reveals a low reading interest among students in class 1 at MI Darul Falah Wirongso Jember, potentially due to previous teachers' ineffective use of learning media.

This research focuses on needs analysis in the development of digital flashcards for Indonesian language learning in primary schools. Previous studies, like the one by [Cahyanti et al., \(2023\)](#), [Ally, \(2019\)](#) have demonstrated improvements in students' learning motivation through the development of digital learning media, primarily focusing on video media and interactive games. In contrast [Tirtayani et al. \(2017\)](#) examined the use of mobile apps in language learning, finding that although the apps increased student engagement, they were less effective in improving vocabulary comprehension due to limitations on interactivity and feedback aspects.

This study underscores the significance of conducting analysis specifically for digital flashcards, a topic that has not received much attention in prior research. [Cahyanti et al. \(2023\)](#) did not specifically study the effectiveness of digital flashcards, but instead focused on a broader range of digital media. This leaves a significant gap in the literature regarding the effectiveness of flashcards as an independent and interactive learning tool in the Indonesian language context. However [Tirtayani et al. \(2017\)](#) did not delve into the potential of digital flashcards, which offer offline access and easier integration into classroom activities.

Thus, this research seeks to fill the gap by focusing on the development of digital flashcards designed based on the analysis of the specific needs of elementary school students. This research not only creates innovative learning resources but also explores the integration of these resources into the curriculum to enhance Indonesian vocabulary acquisition and comprehension. We expect this approach to significantly contribute to the literature and practice of language learning at the primary level.

Based on this analysis, teachers can use various types of learning media, including digital flash card media, to improve learners' reading interest. Teachers design flash cards to assist students in identifying and associating pictures with their corresponding words. Therefore, this study chose a simple and fun approach using flash cards, which aligns with the developmental level of the students. Through the use of flash card media, students can describe the images they see, even without having to read the written text.

## Research Method

This research uses a qualitative method with a case study approach, which leads to the observation and investigation of a particular situation to explain how the event or situation occurred ([Sugiyono, 2013](#)). Qualitative research is an approach to exploring and understanding the meaning given by individuals or groups to social problems. The purpose of this research is to understand the needs of teachers and

learners in developing digital flashcard media for Indonesian language learning. One class at MI Darul Falah Wirongso Jember was the subject of this study. We selected the research subjects using the purposive sampling method, a selection based on special considerations to obtain the necessary data (Ramadhan et al., 2023).

The data collection techniques used included observation, interviews, questionnaires, and documentation. We conducted interviews to gain a deeper understanding of the problems that emerged in the field. Interview guides and instruments in this study are based on field investigations that include three main focuses, namely: (1) problem identification; (2) situation context; and (3) needs found (Sucipto, 2023). We administered questionnaires to Grade I students to identify the issues that emerged in the field. The questionnaire used was a Guttman scale questionnaire with yes-or-no answer options. We used documentation to support the results of interviews and questionnaires related to the analysis of the conducted research.

We used the Sugiyono, (2013) analysis technique, which consists of data reduction, presentation, conclusion, and verification, to analyze data from interviews and observations. We started the process with the data from interviews, proceeded to the observation results, and then provided further explanations. We ignored data deemed irrelevant and focused only on information relevant to the research objectives..

## Results and Discussion

Four elements will be the focus of the research: curriculum analysis, teacher analysis, student analysis, and problem-solving solution analysis. The results of the research

### Curriculum Analysis

We interviewed three resource persons, namely the principal, the head of curriculum, and the grade I teacher at MI Darul Falah Wirongso Jember, to identify problems in the field. The following table generalizes the results of their interviews.

No	Indicator	The Result of Interview
1.	Implementation of Indonesian language learning in accordance with the Merdeka curriculum	Has implemented Indonesian language learning in accordance with the independent curriculum
2.	Obstacles in teaching Indonesian language learning according to the Merdeka curriculum	The obstacle in teaching Indonesian language learning in the Merdeka curriculum is the lack of learning media that supports students' interest in reading, especially in grade 1.
3.	learning resources that are often used for class Indonesian language learning	Package book, worksheet book and LKPD
4.	Availability of digital media that supports the reading interest of grade 1 students	There is no digital media for Indonesian language learning that supports students' interest in reading.
5.	Teachers opinion regarding the development of digital flashcard media in Indonesian language learning to support the reading interest of grade 1 students	strongly agree, if there is digital media in the form of flashcards that can increase students' interest in reading, especially grade 1

Analysis of curriculum needs at MI Darul Falah Wirongso Jember demonstrates the implementation of the independent curriculum in the Indonesian language learning process. However, the lack of learning media that supports

students' interest in reading poses obstacles to Indonesian language learning, particularly in grade 1. This is in accordance with [Vygotsky, \(1980\)](#) theory of the zone of proximal learning (ZPD), where an inadequate learning environment can hinder students' development in understanding new material. In this case, the lack of interesting learning media that support reading interest can be an obstacle for students in achieving their maximum learning potential.

Despite the widespread use of traditional learning resources like textbooks, Student Worksheet (LKS) books, and Learner Worksheets (LKPD), there is a lack of digital media that can enhance Indonesian language learning and spark students' interest in reading, particularly in grade 1. This aligns with Piaget's theory clarify that early childhood tends to respond more strongly to concrete and visual learning experiences ([Juwantara, 2019](#)). Thus, the use of attractive digital media such as flashcards can provide a visual stimulus that can arouse students' interest in reading more effectively (Fitriani et al., 2021).

The data shows that most respondents agree with the need for digital media in the form of flashcards that can increase students' interest in reading, especially in grade 1. This supports [Maslow \(1943\)](#) theory of learning motivation, which places the need for self-actualization, including the development of self-potential, as a key factor in motivating students to learn. We anticipate that the use of digital flashcards will fulfill these needs, thereby increasing students' motivation to enhance their reading skills.

We expect the use of digital flashcards to overcome obstacles in learning Indonesian, such as students' lack of interest in reading, and to provide a more interesting and interactive learning experience for students. We expect the existence of more varied and interesting learning media, like digital flashcards, to foster a dynamic and effective learning environment for students, enhancing their understanding and skills in Indonesian from an early age.

### **Teacher Needs Analysis**

The teacher needs analysis related to the lack of utilization of digital media in learning Indonesian in the Merdeka Curriculum in grade 1, which highlights the challenges faced in creating an adequate and interesting learning environment for students. At MI Darul Falah Wirongso Jember, teachers tend to use textbooks and student worksheets (LKS) as the main learning resources for learning Indonesian. This shows that the utilization of digital media is still less integrated into the learning process.

One of the main reasons for the lack of digital media utilization may be due to limited access or training related to the use of technology in learning. Teachers accustomed to the traditional method of relying on printed books for learning may experience a decrease in confidence or skill when utilizing digital media. Lack of understanding of the potential and benefits of digital media in increasing students' interest in reading may also be a hindering factor.

Successful adoption of new technology in education necessitates an understanding of the innovation's characteristics, effective communication channels, the timing of adoption, and the social context of the system introducing the innovation ([Yowaboot & Sukying, 2022](#)). In this context, teachers who are not familiar with digital media need time and support to understand its benefits and how to use it ([Ally, 2019](#); [Alnajjar & Brick, 2018](#)).

Teacher needs intensive training and mentoring on the use of digital media to understand the needs of teachers who tend to use printed books as the main source

of learning (Ally, 2019; Song, 2021). This training can include learning about the different types of digital media available as well as how to integrate them effectively in the Indonesian language learning process. Furthermore, it is crucial to inform teachers about the advantages of digital media in boosting students' reading interest, as demonstrated by research findings and case studies.

With targeted mentoring and training efforts, it is expected that teachers will be more motivated and confident in utilizing digital media in Indonesian language learning. This can help create a more engaging and interactive learning environment for Grade 1 students, as well as increase their interest in reading through a more varied and modern learning experience.

### Students Need Analysis

The researcher gave several questions in the form of a guttman scale questionnaire with yes or no answer options given directly, which aims to determine the attractiveness or interest of reading students in learning Indonesian at MI Darul Falah Wirowongso Jember. Obtained data from several statements;

No	Indicator	Student who answering "No"	Student who answering "Yes"	Percentage
1	I enjoy learning to read using media	5	25	83%
2	I have never used digital flashcards when learning to read before	0	30	100%
3	I prefer to learn to read using digital flashcards that are colorful and have pictures.	2	28	93%
4	I want to learn to read using digitally presented flashcards	2	28	93%

Based on first question with indicator "I enjoy learning to read using media" Proved from the learner needs analysis questionnaire distributed by researchers at MI Darul Falah Wirowongso Jember, the majority of grade 1 students prefer the use of media in learning. Of the total 30 students who were respondents, 25 students or around 83% answered "Yes", while only 5 students or around 17% answered "No". This shows that there is a strong preference from students towards the use of media in the learning process.

Maslow (1943) theory of learning motivation can provide a relevant understanding of this phenomenon. According to this theory, the need for self-actualization, including the development of self-potential through interesting and meaningful learning experiences, is an important factor in motivating students to learn (Arifin et al., 2021; Sahetapy et al., 2023). herefore, we can interpret students' preference for media use in learning as an attempt to satisfy their desire for a more engaging and productive learning experience.

These data conclude that grade 1 students at MI Darul Falah Wirowongso Jember positively assess the use of media in learning. Therefore, it is important for schools and teachers to consider the use of media in designing and implementing learning to meet students' needs and preferences and motivate them to learn more effectively.

Researchers at MI Darul Falah Wirowongso Jember distributed a learner needs analysis questionnaire. The second question, "I have never used digital flashcards when learning to read before," indicates that all grade 1 students have never used

digital flashcards. Out of the total 30 students who responded, all of them, or approximately 100%, answered "yes," and none of them answered "no." This shows that there is no experience with using digital flashcards in the learning process for grade 1 students at MI Darul Falah Wirowongso Jember.

From these data, it can be concluded that the use of digital flashcards in learning has never been experienced by grade 1 students at MI Darul Falah Wirowongso Jember. Therefore, efforts need to be made to introduce and integrate the use of digital flashcards in the learning process, as part of a strategy to enhance students' learning experience and expand their Learning Proximal Zone.

Based on the data from the learner needs analysis questionnaire distributed by researchers at MI Darul Falah Wirowongso Jember, the majority of grade 1 students prefer to learn to read using digital flashcards. Of the total 30 students who were respondents, 28 students or around 93% answered "Yes", while only 2 students or around 6.67% answered "No". This shows a strong preference from students towards the use of digital flashcards in the reading learning process.

[Maslow \(1943\)](#) learning motivation theory can provide a relevant understanding of this phenomenon. According to this theory, the need for self-actualization, including the development of self-potential through interesting and meaningful learning experiences, is an important factor in motivating students to learn ([Susantini & Kristiantari, 2021](#); [Kaplan Rakowski & Loranc Paszylk, 2017](#)). Thus, students' preference for the use of digital flashcards in learning to read can be interpreted as an effort to fulfill the need for a more interesting and effective learning experience.

From these data, it can be concluded that the use of digital flashcards in learning to read is positively assessed by most grade 1 students at MI Darul Falah Wirowongso Jember. Therefore, it is important for schools and teachers to consider the use of digital flashcards in designing and implementing reading lessons, as an effort to meet students' needs and preferences and motivate them to learn more effectively.

Based on the data from the previous question, researchers at MI Darul Falah Wirowongso Jember distributed a questionnaire for learners to analyze. The majority of grade 1 students expressed a desire to learn to read using digitally presented flashcards. Of the total 30 students who responded, 28 students, or approximately 93%, answered "yes," while only 2 students, or approximately 7%, responded "no." This indicates a significant interest from students in the use of digital flashcards in the reading learning process.

These data indicate that most grade 1 students at MI Darul Falah Wirowongso Jember desire to use digital flashcards in their reading learning. Therefore, it is important for schools and teachers to consider the use of digital flashcards in designing and implementing reading learning to meet students' needs and preferences and motivate them to learn more effectively.

Based on the presented data and results, students strongly prefer the use of media in reading instruction. For the question "I like to learn reading using media," 25 students answered "yes," representing 85%, while only 5 students answered "no." This indicates that the majority of students are interested in the use of media in reading activities. According to [Yowaboot & Sukying, \(2022\)](#) and [Arifin et al., \(2021\)](#), the use of media in learning can enhance students' motivation and comprehension by utilizing multiple sensory channels.



Furthermore, when asked if they had never used digital flashcards before, all students (100%) answered "yes." This indicates that the use of digital flashcards is new to them, suggesting a significant opportunity to introduce and integrate this learning tool into the teaching process. [Kaplan Rakowski & Loranc Paszylk, 2017](#)) technology adoption theory posits that innovations like digital flashcards must undergo a phase of introduction and user acceptance prior to their widespread adoption.

The question about students' preference for colored digital flashcards with pictures received 28 "yes" responses (93.33%) and only 2 "no." This shows that the majority of students prefer visually appealing learning media. For the question "I want to learn reading using digital flashcards," 28 students (93%) answered "yes." This indicates a high level of enthusiasm for using digital flashcards as a learning tool. Referring to [Alnajjar & Brick, \(2018\)](#) learning motivation theory, the use of engaging and interactive technology can increase students' intrinsic motivation because it meets their needs for competence and autonomy in learning.

Overall, this survey data indicates a positive reception towards the use of digital media, particularly digital flashcards, in reading instruction. This provides a strong basis for the development and implementation of such learning media in elementary schools, in accordance with relevant learning and motivation theories.

### **Problem-Solving Solution Analysis**

The conducted curriculum analysis indicates that grade 1 students at MI Darul Falah Wirowongso Jember face challenges in utilizing digital learning media to enhance their reading interest. Teachers and students feel the need for more engaging and effective learning media to increase interest in reading. Through the development of digital flashcard media products, researchers are trying to provide solutions to overcome these problems.

One of the relevant learning theories is constructivism theory. This theory emphasises that effective learning occurs when learners are actively involved in the process of constructing their own knowledge. In the context of digital flashcard media development, learners can actively engage with learning materials, for example, by direct interaction with the images presented in flashcards ([Permata & Surmilasari, 2023](#)). Thus, learners can build their own understanding of learning materials, including reading, through interactive and immersive experiences.

You can also apply the media-social learning theory. This theory emphasises the importance of social interaction in the learning process. In the development of digital flashcards, interaction between learners and the media, as well as between fellow learners, can be an important aspect. For example, learners can discuss the images presented in the flashcards, exchange information, and help each other understand the learning material. This social interaction can increase learning motivation and strengthen understanding of the material ([Wahono & Afifah, 2022](#)).

We anticipate that the development of digital flashcard media will effectively address the issue of grade 1 students not using digital learning media to boost their reading interest. This media can provide a more interesting, interactive, and in-depth learning experience for students, in accordance with the principles of constructivism and learning through social media. Therefore, the development of digital flashcards can be a positive step in improving the quality of learning and students' interest in reading.

## Conclusion

In conclusion, the analysis of curriculum needs at MI reveals a gap in Indonesian language learning, particularly in grade 1, due to the absence of digital learning media supporting students' reading interest. Darul Falah Wirongso Jember reveals a gap in Indonesian language learning, particularly in grade 1, due to the absence of digital learning media supporting students' reading interests. This aligns with [Vygotsky's \(1980\)](#) Zone of Proximal Development, indicating that inadequate learning environments can hinder students' understanding of new material. Despite using traditional resources like textbooks and worksheets, the lack of engaging digital media impedes students' learning potential, reflecting theory on cognitive development stages favoring concrete and visual experiences. The majority of respondents express the need for digital flashcards to enhance reading interest, aligning with [Maslow \(1943\)](#) theory on learning motivation, which emphasizes self-actualization.

We expect students to be more motivated to develop their reading skills through digital flashcards, fostering a dynamic and effective learning environment. Additionally, teacher needs analysis highlights the necessity for intensive training and mentoring on digital media integration, emphasizing [Everett M. Rogers, \(1962\)](#) Diffusion of Innovation theory. Through the development of digital flashcards, informed by constructivism and media social learning theories, researchers aim to provide an effective solution to enhance students' learning experience and reading interest. Thus, integrating digital flashcards into the curriculum can be a positive step towards improving learning quality and students' engagement in reading at MI Darul Falah Wirongso Jember.

## References

- Ahmadi, F. (2010). Meningkatkan Minat Membaca Siswa Sekolah Dasar dengan Metode Glenn Doman Berbasis Multimedia. *Jurnal Penelitian Pendidikan Unnes*, 27(1), 64–70. <https://doi.org/10.15294/jpp.v27i1.194>
- Ally, M. (2019). Competency Profile of the Digital and Online Teacher in Future Education. *The International Review of Research in Open and Distributed Learning*, 20(2). <https://doi.org/10.19173/irrodl.v20i2.4206>
- Alnajjar, M., & Brick, B. (2018). Student-teachers' beliefs concerning the usability of digital flashcards in ELT. *Flipping the Blend through MOOCs, MALL and OIL – New Directions in CALL*, 2018, 67–74. <https://doi.org/10.14705/rpnet.2018.23.792>
- Arifin, Moch. B. U. B., Sholeh, M., Hafiz, A., Agustin, R. D., & Wardana, M. D. K. (2021). Developing Interactive Mobile Mathematics Inquiry to Enhance Students' Problem-solving Skill. *International Journal of Interactive Mobile Technologies (iJIM)*, 15(01), 24. <https://doi.org/10.3991/ijim.v15i01.20067>
- Alwi, Nur Azmi & Aulia. Desi. (2023). Digital Flash Card Media for Early Reading Learning in Elementary Schools. *Jurnal Ilmiah Sekolah Dasar*, 7(1), 8–17. <https://doi.org/10.23887/jisd.v7i1.56995>
- Cahyanti, N. R., William, N., & Nuralasari, W. (2023). Pengembangan Media Pembelajaran E-Flashcard Untuk Meningkatkan Keterampilan Membaca Permulaan Peserta Didik Kelas 1 Sekolah Dasar. *Jurnal Elementaria Edukasia*, 6(4), 2170–2182. <https://doi.org/10.31949/jee.v6i4.6160>
- Elan, E., Gandana, G., & Fauziah, D. E. (2023). Analisis Penggunaan Flashcard Berbasis Digital untuk Meningkatkan Kemampuan Bahasa Reseptif Anak Usia Dini. *Ceria: Jurnal Program Studi Pendidikan Anak Usia Dini*, 12(1), 63. <https://doi.org/10.31000/ceria.v12i1.9023>
- Everett M. Rogers. (1962). *Diffusion of Innovations* (3rd ed.). The Free Press.

- Fahira Arsyaf, Herlina Usman, Maryam Aunurrahim, & Sri Yulianingsih. (2022). Pengembangan Media Pembelajaran e-Flashcard Berbasis Website untuk Pembelajaran IPA SD. *Jurnal Pendidikan Dan Kebudayaan (JURDIKBUD)*, 2(3), 349–357. <https://doi.org/10.55606/jurdikbud.v2i3.756>
- Fitriani, W., Suwarjo, S., & Wangid, M. N. (2021). Berpikir Kritis dan Komputasi: Analisis Kebutuhan Media Pembelajaran di Sekolah Dasar. *Jurnal Pendidikan Sains Indonesia*, 9(2), 234–242. <https://doi.org/10.24815/jpsi.v9i2.19040>
- Hidayat, A. (2022). Pengembangan Media Flashcard untuk Meningkatkan Kosakata Bahasa Indonesia Pada Anak Usia Dini. *Journal on Teacher Education*, 3(2), 277–289. <https://doi.org/10.31004/jote.v3i2.3916>
- Hidayatullah, S., Syihabuddin, S., & Damayanti, V. (2021). Analisis Kebutuhan Media Literasi Berbasis Digital pada Anak Usia Dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(3), 1190–1196. <https://doi.org/10.31004/obsesi.v6i3.1183>
- Juwantara, R. A. (2019). Analisis Teori Perkembangan Kognitif Piaget pada Tahap Anak Usia Operasional Konkret 7-12 Tahun dalam Pembelajaran Matematika. *Al-Adzka: Jurnal Ilmiah Pendidikan Guru Madrasah Ibtidaiyah*, 9(1), 27. <https://doi.org/10.18592/aladzkapgmi.v9i1.3011>
- Kaplan-Rakowski, R., & Loranc-Paszylk, B. (2017). Students' views on the helpfulness of multimedia components of digital flashcards in mobile-assisted vocabulary learning. *CALL in a Climate of Change: Adapting to Turbulent Global Conditions – Short Papers from EUROCALL 2017*, 2017(2017), 170–176. <https://doi.org/10.14705/rpnet.2017.eurocall2017.708>
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396. <https://doi.org/10.1037/h0054346>
- Nurasyiah, R., Asmawati, L., Fadlullah, F., & Atikah, C. (2023). Pengembangan Multimedia Interaktif Flash Card Untuk Meningkatkan Kemampuan Membaca Anak Usia 4-5 Tahun. *JEA (Jurnal Edukasi AUD)*, 9(1), 17. <https://doi.org/10.18592/jea.v9i1.9287>
- Oktaviani, P., & Isdaryanti, B. (2024). Learning Media for Sound Picture Cards Based on E-Flashcard Quizlet Content for Elementary School IPAS Lessons. *Journal of Education Technology*, 7(4), 742–751. <https://doi.org/10.23887/jet.v7i4.69680>
- Permata, R., & Surmilasari, N. (2023). Pengembangan Pembelajaran E-Flashcard pada Materi Sistem Pencernaan Manusia Kelas V SD. *Jurnal Edukasi Matematika Dan Sains*, 11(2), 419–430. <https://doi.org/10.25273/jems.v11i2.15568>
- Pratama, A. P., & Hardini, A. T. A. (2022). Pengembangan Media Pembelajaran Flash Card Untuk Meningkatkan Kemampuan Membaca Lancar Siswa SD. *Jurnal Pendidikan Dan Konseling*, 4(6), 4570–4579. <https://doi.org/10.31004/jpdk.v4i6.8995>
- Puspitasari, P. (2023). Development of Kalibataku Fraction Board Media to Improve Student Learning Results and Interest in Fraction Material. *Al-Adzka: Jurnal Ilmiah Pendidikan Guru Madrasah Ibtidaiyah* 13(2), 99–109. <https://doi.org/10.18952/aladzkapgmi.v13i2.9364>
- Putri Harapani, M., & Nurhasanah, N. (2022). Penggunaan Media Pembelajaran Sebagai Pengembang Potensi Belajar Dalam Aspek Keterampilan Membaca Siswa. *Journal of Innovation in Primary Education*, 1(1), 22–32.
- Putri Wangi, I. D. A., & Gede Agung, A. (2021). Pengembangan Media Pembelajaran EFlashcard Pada Muatan Pelajaran IPA Kelas V. *MIMBAR PGSD Undiksha*, 9(1), 150. <https://doi.org/10.23887/jjpsd.v9i1.32355>
- Ramadhan, F. A., Muhith, A., Usriyah, L., Islam, U., Kiai, N., Achmad, H., & Jember, S. (2023). Design of Electronic-Based Handout Teaching Materials with

- Problem-Based Learning Nuances in Learning Mathematics. *EDUHUMANIORA: Jurnal Pendidikan Dasar*, 15(2), 121–134. <https://doi.org/10.17509/eh.v15i2.56031>
- Ramadhan, F. A., & Usriyah, L. (2021). Strategi Guru dalam Mengimplementasikan Pendidikan Multikultural pada Sekolah Dasar Pada Masa Pandemi Covid-19. *AKSELERASI: Jurnal Pendidikan Guru MI*, 2(2), 59–68. <https://doi.org/10.35719/akselerasi.v2i2.114>
- Safira, M. (2021). The Effect of Electronic Flashcard Learning Media on the English Vocabulary Mastery of Third Grade Students at SDN Tamansari II Pulomerak. *International Journal of Social and Management Studies (IJOSMAS)*, 02, 172–178. <https://doi.org/10.5555/ijosmas.v2i3.112>
- Sahetapy, M. A., Sumilat, J. M., & Tarusu, T. D. (2023). Pengembangan Media Flashcard Digital untuk Meningkatkan Keterampilan Berbicara dalam Bahasa Inggris di Sekolah Dasar. *Jurnal Ilmiah Wahana Pendidikan*, Oktober, 2023(19), 926–935. <https://doi.org/10.5281/zenodo.10047811>
- Song, M. J. (2021). Teacher professional development in integrating digital fabrication technologies into teaching and learning. *Educational Media International*, 58(4), 317–334. <https://doi.org/10.1080/09523987.2021.1989766>
- Sucipto, A. (2023). *Why is group physical activity better? Empirical Evidence from Indonesian Islamic Primary Students*. *Al-Adzka: Jurnal Ilmiah Pendidikan Guru MI*, 13(1), 52–64. <https://doi.org/10.18952/aladzkapgmi.v13i1.9134>
- Sugiyono. (2013). *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R&D)*. Alfabeta.
- Susantini, N. L. P., & Kristiantari, M. G. R. (2021). Media Flashcard Berbasis Multimedia Interaktif untuk Pengenalan Kosakata Bahasa Inggris pada Anak Usia Dini. *Jurnal Pendidikan Anak Usia Dini Undiksha*, 9(3), 439. <https://doi.org/10.23887/paud.v9i3.37606>
- Tirtayani, L. A., Magta, M., & Lestari, N. G. A. M. Y. (2017). Teacher Friendly E-Flashcard: A Development of Bilingual Learning Media for Young Learners. *Journal of Education Technology*, 1(1), 18. <https://doi.org/10.23887/jet.v1i1.10080>
- Ulfa, N. M. (2020). Analisis Media Pembelajaran Flash Card Untuk Anak Usia Dini. *Genius*, 1(1), 34–42. <https://doi.org/10.35719/gns.v1i1.4>
- Utami, F., Rukiyah, R., & Andika, W. D. (2021). Pengembangan Media Flashcard Berbasis Augmented Reality pada Materi Mengenal Binatang Laut. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(2), 1718–1728. <https://doi.org/10.31004/obsesi.v5i2.933>
- Vygotsky, L. S. (1980). *Mind in Society: Development of Higher Psychological Processes* (M. Cole, V. Jolm-Steiner, S. Scribner, & E. Souberman, Eds.). Harvard University Press. <https://doi.org/10.2307/j.ctvjf9vz4>
- Wahono, S. S., & Afifah, K. (2022). The Record of Using Picture Series To Develop Students' Writing Skills. *English Review: Journal of English Education*, 10(3), 965–974. <https://doi.org/10.23887/jisd.v4i1.23734>
- Wahyuni, S. (2020). Penerapan Media Flash Card untuk Meningkatkan Hasil Belajar Tema “Kegiatanku.” *Jurnal Ilmiah Sekolah Dasar*, 4(1), 9. <https://doi.org/10.23887/jisd.v4i1.23734>
- Wiratama, N. A. (2021). Pengembangan Media Flashcard Pada Siswa Kelas IV SDN Bendo 2 Kota Blitar Subtema Hewan Dan Tumbuhan. *Prosiding Seminar Nasional PGSD UNIKAMA*, 5(1), 509–516.
- Yowaboot, C., & Sukying, A. (2022). Using Digital Flashcards to Enhance Thai EFL Primary School Students. *Vocabulary Knowledge*, 15(7), 61–74. <https://doi.org/10.5539/elt.v15n7p61>