

## OPTIMIZING AUDIO-VISUAL MEDIA, NUMERACY, AND DIGITAL LITERACY

Nurajizah<sup>1</sup>, Kartika Solihat<sup>2</sup>, Supriyanto<sup>3</sup>, Jaka Wijaya Kusuma<sup>4</sup>

<sup>1,2,3,4</sup>Universitas Bina Bangsa

e-mail: [najizah18@gmail.com](mailto:najizah18@gmail.com)<sup>1</sup>, [kartikasolihat16@gmail.com](mailto:kartikasolihat16@gmail.com)<sup>2</sup>, [aingyanto80@gmail.com](mailto:aingyanto80@gmail.com)<sup>3</sup>,  
[jakawijayak@gmail.com](mailto:jakawijayak@gmail.com)

### Abstract

In the digital era, elementary education challenges are becoming more complex, especially in efforts to increase student learning interest and basic competencies. This study aims to analyze the optimization of audio-visual media, digital literacy, and numeracy skills through a systematic literature review. The method used is a Systematic Literature Review (SLR) by analyzing 18 relevant scientific articles. The results show that the use of audio-visual media such as Powtoon, Animaker, and educational films can increase the correlation of learning interest up to 0.886. However, this optimization requires strong digital literacy support from teachers and parents to filter information. In addition, the integration of interactive media and games (gamification) is proven effective in improving students' numeracy and mathematical problem-solving skills logically. The conclusion of this study is that the synergy between dynamic visualization, wise digital ethics, and sharp numeracy reasoning is the key to the success of educational transformation in the Independent Curriculum era.

**Keywords:** Audio-Visual Media, Digital Literacy, Numeracy, Literature Study.

### INTRODUCTION

The use of audiovisual media has been proven to significantly increase students' interest in learning, particularly in subjects considered difficult, such as Natural Sciences (IPA). Research at SDK Narang I revealed a very strong positive correlation between the use of audiovisual media and students' interest in learning, with a correlation coefficient of 0.886 and a variable contribution of 78%. The integration of visual and auditory elements helps simplify abstract concepts into more concrete ones, thereby making students feel more engaged in the learning process. The high percentage of influence from audio-visual media demonstrates that conventional lecture methods are no longer relevant for today's generation. The need for diverse sensory stimulation is the key to reigniting students' curiosity, which has begun to wane due to monotonous teaching methods. Once learning interest has been established through engaging media, the foundation for introducing more complex material—such as numeracy and digital literacy—becomes significantly easier for educators to implement.

Furthermore, the use of audio-visual media developed with modern applications like Animaker is effective in improving learning outcomes, particularly in listening skills within Indonesian language instruction. This animation-based media creates an interactive and enjoyable learning environment for elementary school students, making the delivery of curriculum content more effective. Focusing on listening skills through audio-visual means provides a strong foundation for students to communicate information more effectively, both orally and in writing.

Therefore, the effectiveness of media like Animaker demonstrates that technology should not merely be an afterthought but must be an integral part of pedagogy. Listening skills are the gateway to literacy, and when audio-visual technology can capture students' attention at this stage, cognitive barriers to understanding digital content can be minimized. This optimization

is not merely about the sophistication of the tools, but about how visualization can bridge the gaps in understanding that static text often fails to address.

The use of audio-visual media also plays a crucial role from an early age, particularly in the development of receptive language skills in children aged 5–6 years. Through careful lesson planning and the selection of appropriate media, teachers can enhance children’s ability to understand and retell the information they receive. Evaluations indicate that an interactive learning environment facilitated by audio-visual media systematically helps maximize the achievement of early childhood learning objectives. The development of receptive language during early childhood education through audiovisual media is an initial investment in children’s digital literacy. Children accustomed to processing information from structured audiovisual sources will have better mental preparedness to handle the future flood of information. Therefore, optimizing this media at the foundational level must be viewed as a strategic step to foster critical thinking from an early age, not merely as an entertainment tool within the classroom.

However, the success of technology integration in the classroom heavily depends on the educators’ own digital literacy competencies. Analysis at the Early Childhood Education level indicates that teachers’ digital literacy—which includes indicators such as accessing, selecting, understanding, and distributing information—currently falls into the “fairly good” category. Enhancing these competencies is crucial so that digital tools can be optimally utilized to support children’s holistic development. Given the significant urgency to standardize digital competencies for teachers if we truly wish to optimize students’ digital literacy, it is clear that teachers cannot teach what they do not master; if teachers’ understanding remains at a merely adequate level, educational innovation will be limited to the functional use of tools without educational substance. Strengthening educators’ digital literacy is non-negotiable to ensure that the audio-visual media used in the classroom can effectively stimulate children’s numeracy skills in a targeted manner.

The factors influencing digital literacy are highly complex, ranging from active use of online media to academic achievement and the role of the family environment. Digital literacy often develops within informal learning contexts, so collaboration between families and reading habits are closely linked to how well an individual can operate and understand digital information. This demonstrates that literacy is not merely a technical skill but the result of a supportive ecosystem. Fundamentally, digital literacy should no longer be viewed as the sole responsibility of schools. Synergy with parents is crucial because the most intense exposure to digital media occurs within the home environment. If schools strive to optimize audio-visual media but children do not receive supervision or synchronized literacy stimulation at home, their numeracy and digital literacy skills will be imbalanced. Digital literacy must become a culture embedded across all facets of the educational ecosystem.

On the other hand, in a broader context, digital literacy serves as a cornerstone in the development of “Smart Villages” (Desa Cerdas), which are oriented toward technological advancement and open access to information for the community. To build a digitally literate society, there is a need to enhance human resource capacity in community participation and accelerate the adoption of information technology. This demonstrates that digital literacy plays a systemic role in improving the quality of life for the broader community. Thus, the equitable distribution of digital literacy even to the remotest villages will serve as a catalyst for improving national numeracy. As communities become digitally literate, access to educational audio-visual media becomes unlimited, which in turn will boost the quality of education in frontline schools. The optimization we are discussing must not be merely urban-centric but must reach the grassroots level so that disparities in numeracy and literacy skills across regions can be addressed promptly.

Turning to the aspect of numeracy, a major challenge lies in students' ability to solve complex problems, such as those found in the Minimum Competency Assessment (AKM). Many students face limitations due to a lack of computational strategies and an inability to construct logical mathematical arguments to support the solutions to the problems they are working on. This indicates that students' understanding of numeracy remains limited to routine procedures without sufficient depth of analysis. This lack of computational strategies is clear evidence that our mathematics teaching methods remain stuck on memorizing formulas rather than understanding the logic of problem-solving. This is where audio-visual media should step in as a bridge to visualize the contextual AKM problems. Without the aid of dynamic visual media, students will continue to struggle to visualize mathematical scenarios in real life, which ultimately keeps our numeracy scores stagnant.

To overcome these numeracy barriers, the use of innovative teaching aids such as the Numeracy Clock is being implemented to improve elementary students' mastery of mathematical concepts. The use of teaching aids in the Merdeka Curriculum is strongly emphasized to help students deeply process information through a more concrete approach. This innovation is expected to have a significant impact on students' understanding of numeracy and literacy. The integration of physical teaching aids with audio-visual media represents the most ideal form of optimization. When students can physically hold the tool while simultaneously observing its operation through audio-visual simulations, their long-term memory is strengthened. We cannot rely on just one medium; the combination of digital technology and physical teaching aids is the key to addressing the challenges of the Merdeka Curriculum, which demands that students be more exploratory.

Moreover, numeracy skills are significantly influenced by each student's individual learning style and interests. A lack of adaptation in teaching methods to students' learning styles often results in poor numeracy skills and a decline in their interest in problem-solving material. Therefore, adjusting learning strategies to enhance active engagement is crucial for developing students' logical thinking abilities.

Consequently, the optimization of audiovisual media, numeracy, and digital literacy forms an inseparable unity. With diverse audiovisual media, every learning style—whether visual, auditory, or kinesthetic—can be accommodated simultaneously. Once interest is fostered through appropriate media, digital literacy will serve as a tool, and numeracy will emerge naturally as a competency from a meaningful learning process.

## **METHOD**

This study is a literature review that employs the Systematic Literature Review (SLR) method. This method was chosen to identify, evaluate, and interpret all relevant research findings related to the optimization of audiovisual media, numeracy, and digital literacy. The use of SLR allows the author to present a comprehensive and objective overview based on the existing literature database, ensuring that the findings are grounded in strong theoretical and empirical foundations.

Data collection was conducted by searching various electronic scientific journal databases, such as Google Scholar, university e-journal portals, and other platforms providing scientific articles. Keywords used in the literature search include audiovisual media, numeracy skills, digital literacy, and learning outcomes. From the initial search results, an initial screening was conducted based on titles and abstracts to ensure the articles' relevance to the topic of optimizing learning media and literacy in the digital age.

The inclusion criteria for this systematic review focused on articles published within a timeframe relevant to the latest curriculum developments, including research discussing the implementation of the Merdeka Curriculum. A total of 9 articles were selected as the primary analysis material because they covered various levels of education, ranging from Early

Childhood Education (PAUD) to higher education, and discussed crucial factors such as educator competencies, the role of parents, and the development of AKM-based numeracy instruments.

The data analysis stages in this SLR followed a systematic protocol, beginning with literature collection, data reduction to eliminate irrelevant information, data presentation in narrative form, and drawing conclusions. Each selected article was analyzed in depth to examine how the use of audio-visual media influences the improvement of students' interest and cognitive abilities in numeracy and digital literacy. Technically, the authors classified the literature findings into three main focuses: the effectiveness of audio-visual media use, factors supporting digital literacy, and challenges in numeracy development. Through this systematic approach, it is hoped that this article will not merely serve as a collection of journal summaries but will provide a new synthesis on how the integration of technology and educational content can be optimized to address future educational challenges.

## **RESULT AND DISCUSSION**

The use of audiovisual media such as slides and films in outreach or educational activities has proven effective in enhancing the capacity and motivation of both the general public and students. These media excel at inspiring motivation and changing attitudes, although they require thorough technical preparation to ensure information is conveyed effectively without technical glitches. This demonstrates that dynamic visualizations are far more effective at capturing attention than conventional verbal methods. The value of slides and films lies in their ability to simplify complex messages into a series of emotionally engaging visuals. In an educational context, optimizing these media is not merely about transferring text to a screen, but about creating narratives capable of stimulating learners' critical awareness. If technological infrastructure is well-established, barriers to delivering complex content—such as digital literacy—will diminish because the audience is visually engaged from the start.

At the elementary education level, the specific application of audiovisual media can enhance early childhood letter recognition skills through planned classroom activities. The use of this media at RA Amanah Amaliyah demonstrates that children find it easier to understand language symbols when presented through interactive images and sounds. This success reinforces the role of audiovisual media as the foundational step toward literacy. Introducing letters through audio-visual media serves as the first bridge toward broader digital literacy. Young children who are accustomed to processing information through screens in an educational manner will possess better information navigation skills in the future. We must recognize that optimization at this level is not merely play, but a systematic effort to mature children's cognition so they do not merely become content consumers, but also intelligent interpreters of symbols.

In addition to the national language, audio-visual media in the form of animated films are also highly effective in teaching foreign vocabulary, such as Mandarin, to elementary school students. This medium helps students remember vocabulary more easily due to the presence of enjoyable visual contexts, especially in online learning situations that demand greater creativity from teachers. This demonstrates the cross-disciplinary flexibility of audio-visual media. The use of animated films as a language learning tool demonstrates that entertainment can be transformed into a powerful educational instrument. Students no longer feel burdened by memorizing difficult vocabulary because the visualization of characters and story plots helps them build contextual memory. This is the essence of optimization: transforming technical language challenges into visual experiences that naturally embed themselves in students' minds.

In a broader context, digital literacy in the 21st century has become an essential competency for addressing modern learning challenges. The promotion of digital literacy among

elementary school students, as implemented at SD Mekar Mukti 02, demonstrates that fostering reading habits and the ability to analyze digital information are crucial for cultivating a culture of critical and reflective literacy from an early age. Digital literacy is no longer an option but a primary requirement for academic success. Digital literacy in elementary school must begin with strengthening reading habits alongside digital information filtering. Optimizing technology in the classroom will be in vain if students lack the analytical skills to distinguish valid information from junk. Therefore, the curriculum must explicitly integrate the use of audio-visual media with digital literacy guidance so that students are both protected and empowered in cyberspace.

However, the role of parents remains a decisive factor in educating children in this digital age, especially for the millennial generation who are already familiar with technology. Parents are expected to possess the skills to guide their children online, provide solutions to digital problems, and maintain their children's social and moral sensitivity so they do not become negatively immersed in the virtual world. Synergy between home and school is the key to the success of digital literacy. The burden of digital literacy actually rests on the shoulders of parents as the primary gatekeepers of technology at home. Millennial parents should not merely take pride in their children's proficiency with gadgets but must be able to serve as learning consultants for them. Without rational and honest guidance from parents, the effectiveness of educational media in schools will be undermined when children return to a home environment that lacks digital oversight.

Among university students, the implementation of digital literacy also faces serious challenges, such as the widespread practice of copy-paste in writing academic papers. As the dominant generation on social media, students need to exercise wisdom in using information technology so they do not merely become information disseminators but also creators of original and responsible content. This indicates that technical sophistication does not necessarily align with digital ethics. The copy-paste culture in higher education is a sign of the failure to internalize digital literacy at earlier levels. Digital literacy should not merely be taught as a means of operating devices, but as an ethical framework for thinking. If students cannot optimize digital reference sources to generate original thought, then the essence of higher education as a producer of intellectuals will be threatened by the instant convenience of technology.

Moving to the aspect of numeracy, efforts to improve students' mathematical skills can be carried out through creative media such as a numeracy snakes-and-ladders game. The Kampus Mengajar program at SDN 19 Lebong proves that game-based media can boost students' enthusiasm and learning outcomes in understanding numeracy concepts previously considered boring. This enjoyable approach is highly effective within the Merdeka Curriculum. The "Snakes and Ladders" game is an example of "gamification" that is highly relevant for breaking down the negative stigma surrounding mathematics. When numeracy is embedded within a game, students' psychological barriers toward numbers dissolve, allowing cognitive processes to flow more smoothly. Innovations like this demonstrate that optimization does not always require high-tech solutions, but rather creativity in integrating numeracy concepts into physical and social activities.

Furthermore, in-depth training for teachers on numeracy problems based on the Minimum Competency Assessment (AKM) is essential to transform mathematics teaching practices in elementary schools. Training that incorporates methods of presenting and demonstrating numeracy problems has proven to enhance teachers' ability to distinguish between routine math problems and numeracy problems that require reasoning. Creative teachers are the key to fostering numeracy-literate students. Improving teachers' competence in designing numeracy problems is a fundamental step that is often overlooked. If teachers cannot distinguish between pure mathematics and numeracy reasoning, then the optimization of

audio-visual media in the classroom will merely serve as a tool for calculation, not for critical thinking. Teachers must become architects of problems that challenge students' reasoning so that their numeracy skills are truly tested according to national standards.

As a complement, numeracy education can also be optimized through simple games combined with engaging material presentations. The intervention at SDN 16 Pakeng demonstrated that the combination of theoretical explanations and independent game practice significantly helped fourth and fifth-grade students master numeracy concepts deeply and independently. Evaluations showed that students' independence increased after being provided with appropriate game simulations.

The development of students' independence in numeracy is the ultimate goal of all media optimization processes. Simple games combined with audiovisual explanations provide students with a clear framework for thinking. Consequently, the digital literacy they possess can be used to seek out broader numeracy learning resources, creating a sustainable learning cycle that no longer relies entirely on the teacher's guidance in the classroom.

The use of Powtoon-based audiovisual media has proven effective in enhancing students' science representation skills, particularly with abstract topics like the human respiratory system. This innovation transforms concepts that are difficult to visualize into engaging animations, thereby motivating students to participate more actively in both online and in-person learning processes. The effectiveness of this media is evident in the significant improvement in students' representation skills scores following the intervention.

Choosing a platform like Powtoon is a smart move in media optimization because it combines storytelling with technical visualization. A major issue in science learning is often students' inability to visualize internal bodily processes; animations break down this imaginative barrier. This optimization demonstrates that digital technology is not merely a tool but a primary catalyst that clarifies the understanding of complex scientific concepts for elementary school students.

Innovations in audio-visual media also have a significant impact on overall learning outcomes at the elementary school level, as observed at SDN Rancaekek 02. Through the use of videos and animations, students demonstrate deeper engagement and better understanding of the material compared to conventional methods. The role of creative young teachers in operating this technology is a key factor in creating an interactive and enjoyable classroom atmosphere. The success at SDN Rancaekek underscores that the development of teachers' digital competencies is an absolute prerequisite for the success of audio-visual media. Teachers must not merely be device operators but must become content designers capable of aligning visualizations with students' emotional needs. When teachers have the creative freedom to innovate, audio-visual media will become an instrument that not only teaches but also inspires students to achieve higher accomplishments.

Furthermore, the consistent use of audio-visual media can stimulate students' emotions, attention, and willingness to learn independently. Research at SD Negeri 2 Nganganamala shows that this media acts as an effective message conveyor, which in turn automatically boosts the learning outcomes of fifth-grade students. This proves that the right visual stimuli can transform students' learning behavior into a more positive one.

The media's ability to stimulate emotions is an aspect of optimization that is often overlooked. Learning is not merely a cognitive process but also an affective one; if students feel happy and emotionally engaged with what they see on the screen, information is absorbed more easily. This is why the integration of audio-visual media must be viewed as an effort to build a connection between lesson content and students' personal enthusiasm in the classroom. In the context of digital citizenship, digital literacy is closely linked to the development of characteristics of active, critical, and responsible citizens. Digital citizenship demands that individuals not only be technologically literate but also possess the ethics to

discern information amidst the abundance of fake news. Digital literacy serves as both a shield and a tool for citizens to participate healthily in cyberspace.

Education in schools must begin integrating the concept of digital citizenship into every session involving the use of digital media. We cannot merely teach how to edit videos or search for data; we must also instill a sense of moral responsibility regarding what students consume and share. The optimization of audio-visual media must be accompanied by strong digital literacy so that students grow into a generation that is technically savvy yet remains steadfast in upholding ethics and integrity.

The implementation of digital literacy in schools, such as at SMPN 1 Lakbok, is carried out through systematic stages of familiarization, development, and implementation to enhance students' reading and writing skills. Through digital literacy, students are encouraged to be more creative in selecting information relevant to their coursework, which ultimately fosters a greater sense of curiosity. The synergy between conventional reading and writing literacy and digital literacy creates a more modern learning model. This digital literacy familiarization model is a crucial long-term strategy. Digital literacy cannot be taught in a single session but must become an integrated part of daily school culture within the curriculum. If schools can optimize the role of digital resources as a primary, trustworthy source of information, students' reliance on unverified instant information can be minimized from an early stage.

A new challenge in media literacy today is users' ability to consciously select and critically evaluate new media content. Digital literacy knowledge is essential as a foundation for the public to navigate the flood of information without confusion, enabling them to utilize content productively according to their needs. Digital competencies now encompass the ability to create and communicate messages based on ethical standards. The challenge of information overload stems from technology advancing faster than society's literacy capabilities. Optimizing educational media must prioritize strengthening these filtering skills. Students must be taught that behind the visual and audio-visual appeal lies a message that must be critically examined. Mature digital literacy will transform students from mere passive viewers into wise and selective content creators.

On the numeracy front, complex challenges arise for students with special needs (SDLB), where teachers' ability to design differentiated numeracy instruction using digital media remains relatively low. Training in digital media creation for SDLB teachers demonstrates that technology can help simplify numerical concepts for students with diverse learning styles and cognitive limitations. This innovation is crucial for realizing inclusive education, as the optimization of digital media in differentiated numeracy instruction is a tangible manifestation of educational equity. Technology enables teachers to instantly adjust the difficulty level of numeracy problems for each student, according to their individual abilities. If SDLB teachers can master these digital media, the numeracy gap between regular students and those with special needs can be narrowed through a more personalized visual approach.

The development of numeracy modules based on modern applications such as Kodular (Monupa) has also proven effective in improving length measurement skills among elementary school students. These modules offer contextual and interactive learning solutions that align with students' current digital habits, thereby enhancing their understanding of numbers in real-world situations. The high validity of these tools demonstrates that self-directed educational apps are highly suitable for classroom use; utilizing apps like Kodular for specific topics such as measurement represents a highly tactical form of numeracy optimization. Numeracy issues often arise because students do not see the relevance of numbers in daily life; with interactive applications, students can digitally simulate measurements before practicing them physically. This integration makes numeracy feel more accessible, modern, and no longer a daunting challenge for students.

Literature analysis indicates a very strong positive correlation between numeracy skills and mathematical problem-solving abilities. Numeracy is not merely a counting skill but a fundamental life skill that helps individuals make logical decisions in daily life. Therefore, efforts to improve numeracy must be fully supported by adequate media resources and government policies. All efforts to optimize audiovisual media and digital literacy must ultimately lead to the strengthening of numeracy. Numeracy is tangible proof that a student has developed the ability to think critically and solve problems using data. Without engaging visual media and digital literacy skills to explore new strategies, students' problem-solving abilities will remain at a basic level. It is the synergy of these three elements that will shape a future generation of excellence.

## **CONCLUSION**

Based on the results of a systematic review of relevant literature, it can be concluded that the optimization of audiovisual media, digital literacy, and numeracy skills are three pillars that interact symbiotically to enhance the quality of modern learning. Audio-visual media (such as Powtoon, Animaker, cartoons, and interactive slides) have been proven to significantly increase student interest, motivation, and learning outcomes across various levels of education. These media are effective in simplifying abstract concepts into concrete visualizations, which is particularly crucial in subjects such as Science, Language, and Mathematics.

However, the effectiveness of these audio-visual media cannot stand alone without being supported by robust digital literacy, both on the part of educators and students. Digital literacy is not merely the technical skill of operating devices, but rather the critical ability to filter information, digital citizenship ethics, and responsibility in the use of technology. Meanwhile, numeracy skills emerge as the final competency most impacted by these two elements. The use of creative media (such as the numeracy snakes and ladders game, the Kodular app, and digital teaching aids) has proven effective in breaking down students' psychological barriers toward mathematics and enhancing their ability to solve logical problems in daily life. The synergy between engaging visualizations, strong digital ethics, and sharp numeracy reasoning is the key to the successful implementation of the Merdeka Curriculum.

Based on the above conclusions, the following recommendations are suggested:

1. For Educators  
Teachers are expected to continuously improve their digital competencies through self-directed or formal training, particularly in designing differentiated and AKM-based learning media to accommodate students' diverse learning styles.
2. For Schools and Educational Institutions  
There is a need to strengthen information technology facilities and policies that integrate digital literacy into school culture, not merely as an additional subject but as a daily learning ethic.
3. For Parents  
Parents, particularly millennials, must take an active role as digital mentors at home to ensure that children's technology use remains controlled and educational.
4. For Future Researchers  
It is recommended to conduct further research on the technical and psychological challenges in the application of audio-visual media in inclusive education (students with special needs) so that this optimization concept can be equally experienced by all levels of students.

## REFERENCES

- Acoci, dkk. (2023). Pengaruh Penggunaan Media Audio Visual Terhadap Hasil Belajar pada Siswa Sekolah Dasar . *Jurnal Ilmiah Universitas Muhammadiyah Buton*, 761-768.
- Agus, Imamudin. (2023). IMPLEMENTASI LITERASI DIGITAL DI KALANGAN MAHASISWA. *Jurnal Eduscience (JES)* , 943-947.
- Andreas, Konstansia. (2025). PENGARUH GAYA DAN MINAT BELAJAR TERHADAP KEMAMPUAN NUMERASI DI SMP. *ARITMATIKA : Jurnal Riset Pendidikan Matematika* , 16-30.
- Diana, Alfonsius. (2024). Pengaruh Penggunaan Media Audio Visual terhadap Minat Belajar Ilmu Pegetahuan Alam (IPA) Siswa Kelas V SDK Narang I. *Jurnal Ilmiah Insan Mulia*, 35-39.
- Fitriyani, Arief. (2022). Literasi Digital di Era Pembelajaran Abad 21. *El-Mujtama: Jurnal Pengabdian Masyarakat*, 202-207.
- Hendaryan, dkk. (2022). PELAKSANAAN LITERASI DIGITAL DALAM MENINGKATKAN KEMAMPUAN LITERASI SISWA. *Jurnal Literasi*, 141-149.
- Khodijah, dkk. (2021). Penggunaan Media Audio Visual untuk Meningkatkan Kemampuan Mengenal Huruf Pada Anak Usia Dini di RA Amanah Amaliyah. *Jurnal Raudhah*, 2-14.
- Margaretha, dkk. (2025). PENDIDIKAN NUMERASI BERBANTUAN GAME SEDERHANA DI SEKOLAH DASAR. *Jurnal Pengabdian Masyarakat Sapangambe Manoktok Hitei* , 57-58.
- Max, Ahmad. (2024). Pengaruh Media Pembelajaran Berbasis Alat Peraga Jam Numerasi Terhadap Kemampuan Numerasi Siswa Kelas V SD Muhammadiyah Gembyang Kabupaten Lamongan. *Educatio: Jurnal Ilmu Kependidikan*, 211-215.
- Moch, dkk. (2024). Pelatihan Pembelajaran Numerasi Berdiferensiasi Menggunakan Media Digital bagi Guru Sekolah Dasar Luar Biasa (SDLB) . *Jurnal ABDINUS : Jurnal Pengabdian Nusantara*, 675-681.
- Nasrulloh. (2023). DESKRIPSI KEMAMPUAN NUMERASI SISWA DALAM MENYELESAIKAN MASALAH AKM. *Seminar Nasional Pendidikan Matematika* (pp. 43-48). Banjar Masin: Prosiding SENPIKA.
- Nur, Ahmad. (2019). LITERASI DIGITAL, MENDIDIK ANAK DI ERA DIGITAL BAGI ORANG TUA MILLENIAL. *MADANI: Jurnal Politik dan Sosial Kemasyarakatan* , 120-136.
- Nur, dkk. (2024). Penggunaan Media Audio Visual Dalam Pengembangan Bahasa Reseptif Anak Usia 5-6 Tahun. *Jurnal Pendidikan dan Pengajaran*, 115-119.
- Nurlaili, Dyah. (2025). Pengembangan Modul Numerasi Materi Pengukuran Panjang (Monupa) Berbantuan Kodular terhadap Kemampuan Numerasi Siswa Sekolah Dasar. *Diniyah: Jurnal Pendidikan Dasar*, 64-73.
- Pradana, Y. (2018). ATRIBUSI KEWARGAAN DIGITAL DALAM LITERASI DIGITAL. *Untirta Civic Education Journal* , 169-180.

- Rahmat, dkk. (2019). ANALISIS FAKTOR YANG MEMPENGARUHI KEMAMPUAN LITERASI DIGITAL. *Jurnal Akrab*, 61-68.
- Restianty, A. (2018). Literasi Digital, Sebuah Tantangan Baru Dalam Literasi Media. *Jurnal Kehumasan*, 74-86.
- Rina, Zulfadewina. (2022). PENGGUNAAN MEDIA AUDIO VISUAL BERBASIS ANIMAKER TERHADAP HASIL BELAJAR MENYIMAK PADA PEMBELAJARAN BAHASA INDONESIA DI SEKOLAH DASAR . *Jurnal Cakrawala Pendas*, 1248-1253.
- Ruliyatna, Eka. (2024). Inovasi Penggunaan Media Audio Visual Terhadap Hasil Belajar Siswa (Studi Kasus) di SDN Rancaekek 02 . *NUSRA: Jurnal Penelitian dan Ilmu Pendidikan*, 1536-1538.
- Siti, dkk. (2023). LITERASI DIGITAL PADA MASYARAKAT DESA . *Prosiding Seminar Nasional Teknologi dan Sistem Informasi* (pp. 44-46). Surabaya: SITASI.
- Susanti, S. A. (2024). Studi Literatur: Analisis Pentingnya Kemampuan Numerasi dalam Mendukung Pemecahan Masalah Matematis. *Jurnal Cakrawala : Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, 18-20.
- Syafuddin, K. (2023). Penggunaan Media Audio Visual (Slide, Film) Dan Media Rakyat Sebagai Alat Bantu Penyuluhan. *Sanskara Ilmu Sosial dan Humaniora*, 2-7.
- Syaiful, Amalia. (2021). PENGGUNAAN MEDIA AUDIO VISUAL BERBASIS POWTOON UNTUK MENINGKATKAN KEMAMPUAN REPRESENTASI IPA DI TENGAH PANDEMI COVID-19. *Jurnal Dimensi Pendidikan dan Pembelajaran*, 80-88.
- Try, dkk. (2022). PENGGUNAAN MEDIA AUDIO VISUAL FILM KARTUN DALAM PEMBELAJARAN KOSAKATA BAHASA MANDARIN PADA SISWA SD LKIA. *Journal Tunas Bangsa* , 2-8.
- Wilda, dkk. (2023). PEMBELAJARAN MATEMATIKA BERBASIS NUMERASI DI SEKOLAH DASAR (SD): CONTOH DAN BUKAN CONTOH SOAL NUMERASI. *GANESHA: Jurnal Pengabdian Kepada Masyarakat*, 187-191.
- Yesi, Mohammad. (2022). Analisis Literasi Digital Tenaga Pendidik pada Pendidikan Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 3571-3575.
- Yossudarso, dkk. (2025). Upaya Meningkatkan Numerasi Siswa SDN 19 Lebong Menggunakan Media Ular Tangga Numerasi . *JURPIKAT (Jurnal Pengabdian Kepada Masyarakat)*, 480-484.