

Islamic Religious Education Teachers' Readiness in Utilizing Infographics in the Digital Era

Sahro Wardil Lathif^{1*} Yulsifa Anissatun Nadhiroh², Evi Fatimatur Rusydiyah³

Universitas Negeri Sunan Ampel Surabaya^{*1, 2, 3}

^{*1}email: wardilart@gmail.com,

²email: yulsifa26@gmail.com

³email: evifatimatur@uinsa.ac.id

Abstract: This research aims to analyze the readiness of Islamic Religious Education (PAI) teachers in utilizing infographics as a learning medium in the digital era. With a case study-based qualitative approach, this research explores teachers' understanding, technical skills, and pedagogical awareness of the use of infographics. The research results show varying levels of readiness, influenced by minimal understanding of concepts, limited technical skills, and lack of confidence in the effectiveness of infographics. Apart from that, limited facilities and technological support also become obstacles in implementation. The proposed solution includes intensive training, improving technological facilities, as well as providing concrete examples of the use of infographics in learning. This research emphasizes the importance of infographics as a relevant medium in 21st century learning, especially for clarifying abstract concepts in PAI subjects.

Keywords: Islamic Religious Education Teacher; Digital Readiness; Learning Media; Infographics; Digital Era.

Abstrak: Penelitian ini bertujuan menganalisis kesiapan guru Pendidikan Agama Islam (PAI) dalam memanfaatkan infografis sebagai media pembelajaran di era digital. Dengan pendekatan kualitatif berbasis studi kasus, penelitian ini mengeksplorasi pemahaman, keterampilan teknis, serta kesadaran pedagogis guru terhadap penggunaan infografis. Hasil penelitian menunjukkan tingkat kesiapan yang beragam, dipengaruhi oleh pemahaman konsep yang minim, keterbatasan keterampilan teknis, serta kurangnya keyakinan terhadap efektivitas infografis. Selain itu, keterbatasan fasilitas dan dukungan teknologi turut menjadi kendala dalam implementasi. Solusi yang diusulkan mencakup pelatihan

Artikel Info

Received:

November 14, 2024

Revised:

December 17, 2024

Accepted:

January 21, 2025

Published:

February 10, 2025

intensif, peningkatan fasilitas teknologi, serta penyediaan contoh konkret penggunaan infografis dalam pembelajaran. Penelitian ini menekankan pentingnya infografis sebagai media yang relevan dalam pembelajaran abad ke-21, khususnya untuk memperjelas konsep abstrak dalam mata pelajaran PAI.

Kata Kunci: Guru Pendidikan Agama Islam; Kesiapan Digital; Media Pembelajaran; Infografis; Era Digital.

A. Introduction

In the increasingly rapid digital era, the use of technology in the world of education cannot be avoided (Mushir, Bostanci, & Koç, 2023). An increasingly popular form of technology use is the use of infographic learning media. Infographics can be a new choice for teachers in delivering lessons to their students. Because infographics are able to present complex information in a visual form that is simple and easy to digest. The combination of images, text and diagrams makes the subject matter more lively and interesting. Additionally, infographics can also help students build better connections between abstract concepts. This makes it easier for students to understand the lesson material completely.

In Indonesia, the use of infographics in the world of education is still relatively new (Mini, Sdn, Nurbaidah, & Wuryaningrum, 2024). Nevertheless, the potential for infographics to improve the quality of education in Indonesia is very large (Firdaus, Maryuni, & Nurhasanah, 2021). This is because there is a lot of learning material that is abstract and difficult for students to understand, as well as the diversity of learning styles of Indonesian students. Every student has a different learning style, some are visual, auditory, or kinesthetic. Infographics, with their strong visual component, are perfect for visual students. However, good infographics can also be supplemented with text or narrative elements to accommodate other learning styles.

Several previous studies have examined the use of infographics in learning. The infographic keyword in Scholar contains 3,340 document results (“Infografis in Google Scholar,” n.d.). The results of this research show that infographics have the potential to improve student learning outcomes (Priambodo, Satria Setiawan, & Pujiastuti, 2024). By presenting complex information in a simple visual form, infographics can help students understand difficult concepts, stimulate interest in learning, and improve memory. In addition, infographics can also facilitate visual and kinesthetic learning, which suits the learning styles of many students.

However, these studies also identify various barriers and challenges that need to be overcome. One major challenge in implementing infographics is the technical aspect (Slavik, Chapman, Smith, Coughlan, & Peters, 2024). Not all schools have adequate facilities to create and display infographics (Krishnan, Maamuujav, & Collins, 2020). Additionally, teachers, especially those who have been teaching for a long time, may not have received adequate training regarding the use of graphic design software. Teacher education curricula often focus more on pedagogical aspects and material content, while technical skills such as graphic design receive less attention.

For most teachers, the use of digital-based learning media is still difficult to do so learning is carried out only through lecture or discussion methods (Azizah & Susanti, 2023). This kind of learning is certainly not appropriate because the information given by educators to students is not always well received, because sometimes the messages that students receive do not match the intentions conveyed by the educators (Safar & Qasem, 2022). This is due to a lack of teacher awareness of the importance of infographics, limited access to technology, and a lack of training for teachers in creating and using infographics.

In addition to technical challenges, there are also pedagogical challenges in implementing infographics (Pratama & Syadza, 2024). Teachers need to have a deep understanding of how to integrate infographics into existing learning processes (Cohen, Manes Rossi, Mamakou, & Brusca, 2022). Apart from that, teachers also need to consider how infographics can be adapted to different

student characteristics. So it is necessary to determine indicators of success and evaluate the effectiveness of using infographics in learning. This is the same as determining the goals you want to achieve. This indicator functions as a benchmark to determine whether the use of infographics has had a significant impact on the learning process.

Another challenge that is no less important is related to the content of the infographic. Good infographics must have an attractive design, accurate information, and be relevant to the learning material (Alqahtani, 2024). Creating quality infographics requires time and special skills (González-Pérez & Marrero-Galván, 2023). Because creating effective infographics isn't just about randomly arranging images and text. Good infographics must be able to convey complex information in a simple, interesting and easy to understand way. Therefore, research is needed first so that the information conveyed is truly real. Apart from that, a teacher's design skills are also a determining factor in whether the infographics presented are attractive to students or not.

Based on the background above, this research aims to identify and analyze obstacles and challenges in implementing infographic learning media in schools. This research will also try to find the right solution to overcome these obstacles, so that infographics can be used optimally in improving the quality of learning in schools.

B. Methods

This research uses a qualitative approach with a case study type of research. This approach was chosen because it allows researchers to explore in depth the readiness of Islamic Religious Education (PAI) teachers in utilizing infographics in the digital era (Nartin, 2024). This case study focuses on the MMA level institution Darul Jannah Al-Ma'wa. The research subjects in this study were PAI teachers at the institution. The criteria for teachers who are respondents are those who have at least 2 years of teaching experience. The number of respondents who will be involved in this research is 2 teachers.

The data collection technique in this research is using in-depth interviews, observation and documentation instruments. Interviews were conducted with selected PAI teachers to dig deeper into their understanding of infographics, experiences in using infographics, and the obstacles they faced. The interview guide was prepared based on the theoretical framework and research objectives. Researchers will conduct direct observations of the learning process in class which involves the use of infographics. This observation aims to see directly how PAI teachers use infographics in delivering learning material. Researchers will collect relevant documents, such as syllabi, lesson plans, and examples of infographics that have been created by PAI teachers. These documents will be used as supporting data to enrich research results.

The data analysis technique used in this research is qualitative data analysis using the Miles and Huberman model. Data analysis stages include data reduction, data presentation, and drawing conclusions. Data obtained from interviews, observations and documentation will be reduced to data that is relevant to the research objectives. The reduced data will be presented in narrative, table or diagram form to facilitate understanding. Based on the data that has been analyzed, researchers will draw conclusions regarding the readiness of PAI teachers to utilize infographics in the digital era, as well as the factors that influence this readiness.

Table 1. Indicators of teacher readiness

No	Indicator	Sub Indicator
1	Understanding Infographic Concepts	<ol style="list-style-type: none"> 1. Understand what is meant by infographics. 2. Understand the function and purpose of infographics in PAI learning. <p>Recognize the various types of infographics that can be used in PAI learning (eg: static, dynamic, hierarchical, etc.).</p>
2	Technical Skills	<ol style="list-style-type: none"> 1. Master commonly used graphic design software such as Canva, Piktochart, Adobe Illustrator). 2. Able to search for and select infographic templates that suit PAI learning materials. 3. Able to edit and adapt infographic templates to PAI learning materials.

		Able to save and share infographics in various formats (eg: JPG, PNG, PDF).
3	Pedagogical Knowledge	<ol style="list-style-type: none"> 1. Able to design infographics that are interesting and easy for students to understand. 2. Able to integrate infographics into PAI learning plans. 3. Able to choose infographics that suit student characteristics (age, interests, learning style). 4. Able to evaluate the effectiveness of using infographics in PAI learning.

These indicators are broken down into instruments. Examples of observation instruments that have been developed are as follows.

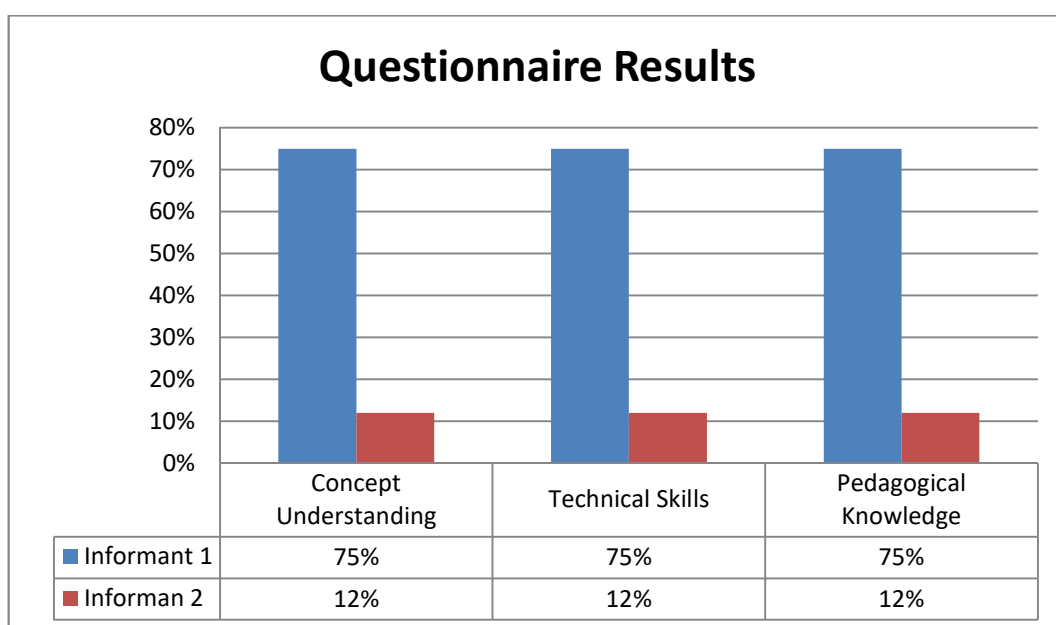
Table 2. Teacher readiness questionnaire

No	Criteria Assessed	Strongly Agree	Agree	Don't Agree	Strongly Disagree
1	I clearly understand what is meant by infographics				
2	I realize that infographics have an important role in conveying PAI information.				
3	I know several examples of infographics that can be used to explain the PAI concept.				
4	I feel proficient in using design applications such as Canva, Piktochart, or Adobe Illustrator, or others				
5	I often use design applications to create infographics.				
6	I feel more effective in conveying PAI material using infographics.				
7	I am confident that I will be able to design infographics that are interesting and easy for students to understand in PAI learning.				
8	I often integrate infographics into PAI lesson plans and find this effective.				
9	I often practice making infographics for PAI learning and the results are quite good.				

Meanwhile, the interview and documentation guidelines follow the indicators in table 1. From several of these instruments, a technical analysis of the Miles and Huberman model was carried out.

C. Result and Discussion

This research was carried out by distributing questionnaires, interviews and documentation to PAI class teachers at MMA Darul Jannah Al-Ma'wa. Respondents or resource persons were selected according to predetermined requirements, such as those who have at least 2 years of teaching experience. Then, researchers will also review documentation to support the results of observations and interviews.



Gambar 1. Grafik Hasil Angket Kesiapan Guru

The results of the questionnaire show that there are significant variations regarding the level of readiness of Islamic Religious Education (PAI) teachers in utilizing infographics in the digital era. Respondent 1, Yeni Fidiyanti, who only has two years of teaching experience, showed a very high level of readiness. Yeni gave an affirmative answer to all indicators, starting from understanding the concept of infographics, awareness of its role in conveying information, ability to

use design applications such as Canva or Piktochart, to the practice of integrating infographics in PAI learning. This shows that even though his teaching experience is not long, he has good technology skills and is confident in using digital media.

On the other hand, another respondent, Kholish Munfaati, who had more than two years of teaching experience, showed much lower readiness. He gave a response of disagreeing or strongly disagreeing with all aspects measured in the questionnaire. Kholish's answer indicated a lack of understanding of the concept of infographics, a lack of expertise in using design applications, and a low frequency of use and integration of infographics in learning. These findings illustrate the challenges some teachers face, particularly related to limited access, training, or motivation to adopt technology in learning.

However, although the questionnaire showed that some teachers, like Yeni, were ready to use infographics, the interview results gave a different picture. In in-depth interviews, informants actually expressed their unpreparedness to use infographics. They stated that the main obstacles include limited technical skills in using design applications, lack of time to prepare infographic-based materials, lack of relevant training from institutions, and limited tools that can be used. Teachers who previously gave positive answers in the questionnaire even admitted that they only had theoretical knowledge without sufficient practical skills.

Based on this analysis, several important aspects were found in PAI teachers' readiness to utilize infographics in learning. First, teachers felt they did not understand what was meant by infographics specifically. This gap can be seen in teachers' basic understanding of the concept of infographics, both in terms of visual structure and function in delivering PAI material. From the results of interviews, informants admitted that they were not familiar with infographics and sometimes had difficulty distinguishing them from other visual materials, such as posters or illustration images.

Furthermore, the findings show that informants are not fully aware of the important role of infographics in facilitating understanding of Islamic Religious Education (PAI) concepts. One informant stated,

“I know that infographics can be used for teaching, but I rarely use them because I don't know how to make them or connect them to PAI material.”

This is also supported by another statement which confirms,

“PAI material is mostly abstract, so I often explain directly rather than using additional media.”

Apart from that, another informant added,

“It seems like infographics can help students understand lessons better, but I've never tried them because I don't understand their benefits directly.”

This statement reflects teachers' lack of understanding regarding the potential of infographics as an effective medium for simplifying abstract concepts and linking them to students' daily lives. Therefore, efforts are needed to increase teacher awareness and skills in using infographics to enrich learning.

Another aspect that stands out is the teacher's skill in using design applications. They feel less able to operate applications such as Canva, Piktochart, or Adobe Illustrator. This lack of skills is reflected in the minimal frequency of using these applications to create infographics. In an interview, one informant stated,

“We actually know that apps like Canva are good, but when asked to use them, we often get confused about their features. So, in the end we rarely use it.”

Not understanding the application's features means they are not confident in using it, so they tend to rarely create infographic-based learning materials.

In terms of beliefs, informants expressed doubts about the effectiveness of infographics in increasing students' understanding. One informant stated,

“In my opinion, methods such as lectures are more suitable because they can directly direct students to the main point of the lesson, while infographics may lack depth.”

They believe more in traditional methods such as lectures and discussions, which are considered more relevant to the PAI curriculum. This shows the need to convey empirical evidence or real examples to increase teachers' confidence that infographics can play a significant role in clarifying PAI concepts.

Apart from that, informants felt less confident about their ability to design infographics that were attractive and in line with PAI learning characteristics. One informant stated,

“We are often confused about choosing the right visual elements. Sometimes the colors or icons we choose don't support the message we want to convey.”

Difficulty in choosing relevant visual elements, such as colors, icons and illustrations, makes them reluctant to use infographics regularly. This situation indicates the need for further training so that teachers are more confident and skilled in designing effective infographics.

Finally, documentation of lesson plans and field observations reveal that infographics are not often used as a medium in teaching. Teachers admit that they rarely integrate infographics into lesson plans and are still not used to practicing creating infographics for PAI material. This shows the need for a more proactive approach to encourage teachers to make infographics part of a PAI learning strategy that is relevant to the digital era.

The findings above indicate that PAI teachers' readiness to utilize infographics still needs to be improved from various aspects including conceptual understanding, awareness of the role, technical skills, and confidence in the effectiveness of this media in teaching. The gap in understanding and basic skills shows that PAI teachers do not understand infographics thoroughly, both in terms of function and practical application. This indicates the need for more intensive and comprehensive training. Training programs that focus on introducing

infographics, as well as examples of their use in religious learning contexts, will help PAI teachers gain a clearer picture of how infographics can be implemented to simplify complex information. Infographics have been proven effective in conveying learning material, especially on abstract or spiritual subjects such as Islamic Religious Education (PAI)(Khima Milidar, 2024).

Changes in teachers' perceptions of the effectiveness of infographics are also a challenge that needs to be considered. Teachers who do not fully believe that infographics can improve students' understanding of religious material. This distrust arises possibly due to a lack of exposure to concrete examples of how infographics can be used to explain PAI concepts in a way that is more interesting and easy for students to understand. To overcome this, providing practical examples and case studies of the use of infographics in the context of religious learning can help increase teachers' confidence that infographics are an effective tool. For example, training can present scenarios or simulations of the use of infographics in discussing complex topics such as Islamic history, moral values, or interpretation of the al-Qur'an.

In the context of moral values, infographics can be used to display various commendable traits and behavior recommended in Islam. By presenting this information visually, students can more easily remember and apply these values in everyday life. A study shows that the use of visual media in learning can increase students' information retention by up to 65% compared to traditional methods (Maharani et al., 2024).

In terms of technical skills, mastery of design applications is a top priority. PAI teachers who still feel they are not proficient in using applications such as Canva, Piktochart, or Adobe Illustrator. In fact, mastering this is important so that they can design infographics that are relevant and interesting to use in the learning process. Developing these skills requires an inclusive and practical training approach, where teachers are invited directly to practice making infographics using design applications. (Pujosusanto & Dosen, 2024). Additionally, training

can include simple steps in the effective use of visual elements, color choices, and icons to improve teachers' technical skills and increase their confidence.

The use of infographics in education has been proven to be effective in increasing student engagement. With an attractive design, infographics can clarify complex concepts and make material easier to understand. Previous research shows almost two-thirds of people identify themselves as visual learners, so the use of visual elements in teaching is very important. Infographics can also increase students' attention span, which is a crucial factor in the teaching and learning process.

Increasing teacher capacity in these aspects will also impact their ability to consistently integrate infographics into lesson plans. The integration of infographics in PAI lesson plans is still limited, and this shows that teachers need more support in designing visual-based materials. For example, they can be encouraged to create infographics as enrichment material or to support the main material, so that PAI learning becomes more dynamic and easier for students to understand.

Barriers and Challenges in Using Infographic Learning Media

In implementing infographic learning media in schools, there are a number of obstacles and challenges that need to be overcome so that infographics can be utilized optimally in improving the quality of learning. The main obstacle often faced is the lack of understanding and technical skills of teachers. Teachers who feel they don't quite understand what infographics are, and how to design infographics that are interesting and suit learning needs. This lack of skills often prevents teachers from utilizing infographics independently, so that infographics have not become part of commonly applied teaching strategies (Hikmatul Laily, 2024).

Another challenge is the lack of technological facilities and support in many schools (Saragih & Marpaung, 2024). Providing computer or tablet devices, as well as access to stable internet, is still an obstacle, especially in areas with limited facilities. Without access to adequate devices and connections, it is

difficult for teachers to use design applications such as Canva or Piktochart, which can help them create quality infographics.

Apart from that, teachers' perceptions of the effectiveness of infographics in learning are also a challenge. Some teachers still prefer traditional methods (Fitria Nur Anissa, 2024), such as lectures and discussions, because they feel that these methods are more appropriate to the curriculum or characteristics of the material they teach (Benedicta Dwi Adventyana, Euis Nur Amanah Asdiniah, Mae Afriliani³, Magdalena, Siti Fadia Nurul Fitri, 2024). The perception that infographics are less relevant or effective in conveying learning material often arises from a lack of exposure to real examples of how infographics can clarify abstract concepts or help students understand material more quickly and interestingly.

To overcome these obstacles, this research seeks to find appropriate and sustainable solutions. One of the main solutions is to provide comprehensive training for teachers regarding the understanding and use of infographics in learning contexts (Siswanto, Kusmawan, Sukmayadi, & Abidin, Achmad Anwar, 2024). This training needs to include material on basic infographic concepts, selection of relevant visual elements, as well as guidelines for using design applications that are simple and easy to access. With this intensive training, it is hoped that teachers will be more confident and skilled in designing infographics that support learning.

Apart from training, technological support and infrastructure in schools must also be improved (Hasna, 2024). Providing adequate digital devices and stable internet access will really help teachers in accessing online resources and creating infographics independently. For this reason, collaboration with local governments or sponsors from third parties can be considered to improve facilities in schools that still lack infrastructure.

Another effort is to provide practical examples and case studies regarding the application of infographics in learning (Rina Paramita, Harmawati, 2024), so that teachers can see directly the benefits of infographics in increasing student

understanding. For example, the use of infographics to explain abstract concepts or material that requires visualization can be used as an example. By showing the effectiveness of infographics in a real context, it is hoped that teachers' perceptions of infographics as a learning medium can change to be more positive.

Overall, the results of this research indicate that the readiness of PAI teachers to utilize infographics is still in its early stages, but has great potential for development. It is important to provide ongoing training support that focuses not only on technical understanding and skills, but also on increasing awareness and belief in the benefits of infographics. Socialization regarding the potential of infographics as a learning medium that is suitable for the digital era must be carried out, so that teachers are able to adapt to today's learning needs and are better able to answer the needs of a generation of students who are more visual and digital-native.

D. Conclusion

The implementation of infographics as a learning medium in schools has main obstacles including teachers' lack of understanding and technical skills in using infographics, as well as low awareness of its benefits in supporting the delivery of material that is more interesting and easy for students to understand. Teachers feel less confident about the effectiveness of infographics compared to traditional learning methods. To overcome this obstacle, it is necessary to provide intensive training that focuses on understanding concepts, developing technical skills, and presenting concrete examples of the use of infographics in learning contexts. With this, it is hoped that infographics can be used optimally to improve the quality of learning in schools, support more interactive learning, and help students understand material in a more visual and contextual way.

E. References

Alqahtani, J. A. (2024). Effects of Motion Infographics on High School Students' Programming Skills. *Journal of Educational and Social Research*, 14(4), 233. <https://doi.org/10.36941/jesr-2024-0099>

- Azizah, I., & Susanti, R. (2023). Media Pembelajaran Berbasis Canva Dengan Desain Infografis Dalam Mata Pelajaran Sejarah di Sekolah Menengah Atas. *Jurnal Educatio FKIP UNMA*, 9(2), 458–464. <https://doi.org/10.31949/educatio.v9i2.4798>
- Benedicta Dwi Adventyana, Euis Nur Amanah Asdiniah, Mae Afriliani³, Magdalena, Siti Fadia Nurul Fitri, P. (2024). Dampak Kebijakan Perubahan Kurikulum Merdeka di Sekolah Dasar Bagi Guru dan Peserta Didik. *Journal on Education*, 6(2).
- Cohen, S., Manes Rossi, F., Mamakou, X., & Brusca, I. (2022). Financial accounting information presented with infographics: does it improve financial reporting understandability? *Journal of Public Budgeting, Accounting and Financial Management*, 34(6), 263–295. <https://doi.org/10.1108/JPBAFM-11-2021-0163>
- Firdaus, A. F., Maryuni, Y., & Nurhasanah, A. (2021). Pengembangan Infografis Berbasis Android Sebagai Media Pembelajaran Sejarah (Materi Sejarah Revolusi Indonesia). *Jurnal Pendidikan Dan Sejarah E*, 7(1), 2477–8241.
- Fitria Nur Anissa, A. M. N. L. (2024). Penggunaan Media Pembelajaran Interaktif Berbasis Canva untuk Meningkatkan Hasil Belajar Siswa Kelas VII di SMP Islam Tambora. *JLET: Journal of Learning and Educational Technology*, 1(1), 33–43.
- González-Pérez, P., & Marrero-Galván, J. J. (2023). Development of a Formative Sequence for Prospective Science Teachers: the Challenge of Improving Teaching With Analogies Through the Integration of Infographics and Augmented Reality. *Journal of Technology and Science Education*, 13(1), 159–177. <https://doi.org/10.3926/jotse.1919>
- Hasna, M. (2024). Digitalisasi Pengelolaan Sekolah Dasar Negeri Kota Banjarmasin: Tinjauan Analisis SWOT Dalam Strategi Pengembangan Sekolah Digital. *Jurnal Pendidikan Moder*, 10(1).
- Hikmatul Laily, A. M. (2024). Implementasi Active Learning Berbasis Video Animasi Infografis Pada Pelajaran Bahasa Indonesia di MI Al Urwatul Wutsqo 1. *Al-Adawat: Jurnal Pendidikan Madrasah Ibtidaiyah*, 3(2). Retrieved from <http://ejournal.unhasy.ac.id/index.php/aladawat>
- Infografis in Google Scholar. (n.d.). Retrieved from https://scholar.google.com/scholar?hl=id&as_sdt=0%2C5&as_ylo=2024&q

=infografis&btnG=

- Khima Milidar. (2024). Inovasi Pembelajaran Pai Dengan Pendekatan Interaktif Untuk Generasi Milenial. *Jurnal Review Pendidikan Dan Pengajaran*, 7(2).
- Krishnan, J., Maamuujav, U., & Collins, P. (2020). Multiple utilities of infographics in undergraduate students' process-based writing1. *Writing and Pedagogy*, 12(2–3), 369–394. <https://doi.org/10.1558/wap.18814>
- Maharani, D., Wahyuni, R., Rahmadea, S. A., Nugraini, M. L., Fakhriyah, F., & Fajrie, N. (2024). Systematic Literature Review: Upaya Meningkatkan Hasil Belajar Melalui Penggunaan Media Audio-Visual. *Jurnal Strategi Pembelajaran*, 1(2), 65–72.
- Mini, S., Sdn, D. I., Nurbaidah, R., & Wuryaningrum, R. (2024). *Model Pjbl Berbantuan Media Infografis Dalam Pembelajaran P5 Tema Kearifan Lokal Melalui Kebun. 09.*
- Mushir, T., Bostanci, H. B., & Koç, S. (2023). The impact of integrating infographics into English language instruction on mother tongue use and reading/writing performance: A systematic literature survey. *Research Journal in Advanced Humanities*, 4(1), 16–32. <https://doi.org/10.58256/rjah.v4i1.995>
- Nartin, D. (2024). *Metode Penelitian Kualitatif*. Yayasan Cendikia Mulia Mandiri. Retrieved from https://books.google.co.id/books?hl=id&lr=&id=43EJEQAAQBAJ&oi=fnd&pg=PA71&dq=kualitatif&ots=DD9MTQUzRA&sig=L8PfIV_JcvecHLgTs114N6QYF24&redir_esc=y#v=onepage&q=kualitatif&f=false
- Pratama, R. A., & Syadza, A. (2024). Pengaruh Media Infografis dalam Penulisan Teks Pidato Persuasif Berdasarkan Gender Kelas IX SMPIT Ibnu Khaldun. *GHANCARAN: Jurnal Pendidikan Bahasa Dan Sastra Indonesia*, 5(2), 398–416. <https://doi.org/10.19105/ghancaran.v5i2.10663>
- Priambodo, C. G., Satria Setiawan, H., & Pujiastuti, P. (2024). Penerapan Literasi Digital Tentang Kiat Membuat Infografis Keren Dan Berkualitas Baik Kepada Guru Di Sdn Kunciran 9 Kota Tangerang Guna Mendukung Pembelajaran Siswa. *Jurnal Pengabdian Masyarakat Indonesia (JPMI)*, 1(4), 1–6. <https://doi.org/10.62017/jpmi.v1i4.1113>
- Pujosusanto, A., & Dosen. (2024). Pengembangan Infografis Interaktif Tema

Schule Dengan Aplikasi Adobe XD Sebagai Media Pembelajaran Bahasa Jerman Fase F. *E-JOURNAL LATERNE*, 13(2).

Rina Paramita, Harmawati, T. L. S. (2024). Analisis Penggunaan Media Infografis Dalam Pemahaman Siswa Terhadap Pembelajaran IPAS di Sekolah Dasar. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, 9(4), 301–316. <https://doi.org/10.15797/concom.2019..23.009>

Safar, A., & Qasem, M. (2022). The Level of Acceptance of Preservice Teachers at Kuwait University for Infographics Applications in Light of the Information and Communication Technology Acceptance Model “ICTAM.” *Information Sciences Letters*, 11(5), 1545–1560. <https://doi.org/10.18576/isl/110519>

Saragih, O., & Marpaung, R. (2024). Tantangan dan Peluang: Studi Kasus Penerapan Kurikulum Merdeka di Sekolah Mandiri Berubah Kabupaten Tapanuli Utara. *Jurnal Pendidikan Dan Pembelajaran Indonesia (JPPI)*, 4(3), 888–903. <https://doi.org/10.53299/jppi.v4i3.632>

Siswanto, R., Kusmawan, U., Sukmayadi, D., & Abidin, Achmad Anwar, K. (2024). Pemanfaatan Artificial Intelligence Dalam Perencanaan, Pelaksanaan, Dan Evaluasi Pembelajaran Oleh Mahasiswa Calon Guru Universitas Terbuka. *API: Jurnal Administrasi Pendidikan Islam*, 06(02), 143–155. <https://doi.org/10.15642/JAPI.2024.6.2.143-155>

Slavik, C. E., Chapman, D. A., Smith, H., Coughlan, M., & Peters, E. (2024). Motivating parents to protect their children from wildfire smoke: the impact of air quality index infographics. *Environmental Research Communications*, 6(7). <https://doi.org/10.1088/2515-7620/ad5931>