



A META ANALYSIS STUDY: DIGITAL APPLICATIONS AS LEARNING MEDIA IN ISLAMIC RELIGIOUS EDUCATION

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Abstract

This research aimed to examine the effectiveness of digital application-based learning media in enhancing student learning outcomes in PAI subjects. A total of eleven studies were gathered and analyzed through SPSS 27 software. The research methodology employed was Meta-Analysis. Results indicated a notable improvement in learning outcomes, as the highest score before utilizing digital applications was 78.96, and the lowest was 44.69. Following the implementation of digital applications, the highest score rose to 91.84 and the lowest to 81.32. Statistical analyses, including paired sample t-test and correlation test, demonstrated a significant disparity in learning outcomes pre- and post-use digital applications, with a p-value <0.05. The findings suggest that digital applications effectively enhance students' learning outcomes, offering flexibility, interactivity, and appeal that heighten learner engagement.

Keywords: digital applications, learning media, meta analysis study, islamic religious education

Abstrak

Tujuan dari penelitian ini adalah untuk mengevaluasi penggunaan aplikasi digital sebagai media pembelajaran dalam meningkatkan hasil belajar peserta didik pada mata pelajaran PAI. Data yang terkumpul terdiri dari sebelas penelitian dan dianalisis menggunakan SPSS 27. Penelitian ini menggunakan metode Meta Analisis. Hasil Penelitian menunjukkan peningkatan hasil pembelajaran setelah penggunaan aplikasi digital. Sebelum penggunaan, nilai tertinggi adalah 78.96 dan terendah 44.69; setelah penggunaan, nilai tertinggi mencapai 91.84 dan terendah 81.32. Uji statistik paired sample t-test dan correlation test menunjukkan perbedaan signifikan dengan p-value <0.05. Analisis menyimpulkan bahwa aplikasi digital efektif meningkatkan hasil belajar siswa dengan memberikan fleksibilitas, interaktivitas, dan daya tarik yang meningkatkan keterlibatan siswa.

Kata Kunci: aplikasi digital, media pembelajaran, meta analisis, Pendidikan Agama Islam

INTRODUCTION

The choice of learning materials plays a crucial role in enhancing the learning experience within the classroom, irrespective of the instructional approach employed. An effective and interesting method is to use digital-based learning media

to provide a combination of learning (Dwiqi et al., 2020). This aims to increase students' independence in learning (Wijaya et al., 2021). Nowadays, education is needed to keep up with current developments according to (Farida, 2019) digital media is an alternative media that is very suitable and attractive to children in this century (Anwar et al., 2022). It has various features that make it easier for children to understand lessons, such as combining images, video, and audio. This condition inspires education practitioners to develop learning to be more meaningful and efficient but does not eliminate the essence of offline learning. The selection of appropriate learning media will run well if educators understand the value, function, usefulness, and benefits that can be obtained from the media (Magdalena et al., 2021). The use of technology and information has revolutionized digital-based learning in education. This shift has transformed the interaction between educators and students, promoting a more open and digitally literate student body (Azis, 2019). Technology-based tools now play a crucial role in expanding learning opportunities, enabling students to learn anytime and anywhere (Pratama & Sakti, 2020).

Digital applications have become one of the choices of various kinds of technology and information-based learning media that contain many features to become a bridge in learning transformation. Among the forms of digital learning is using an application in the process of learning activities. Digital application itself is a broad term that refers to any application software that can be used by computers, mobile devices, or tablets to perform useful tasks (Galustyan et al., 2020). This fact illustrates that digital applications are an alternative to accessing and utilizing media in learning. This will also get optimal results if the learning media can keep up with current technological developments (Humaidi et al., 2021). One of them is by creating learning media with new designs and innovations. Customized to fit the subject matter and the unique attributes of students to enhance their interest in the content. This could greatly influence student engagement in the long run

The alpha generation is different from the current generation, especially in terms of maximizing existing digital media to support learning. This generation is increasingly familiar with digital technology as they grow up and will continue to encounter more advanced technology in their lives in the future (Kotler et al., 2019).



Because something that comes suddenly will impact the understanding that media certainly has advantages and disadvantages, this generation has lived side by side with digital screens since childhood. So, this generation is also called the "glass generation" (McCrindle & Fell, 2020). This revolutionary era indirectly formed a generation with different characteristics from previous generations and encouraged parents to adapt when raising children (Fatmawati & Sholikin, 2019).

Islamic religious education learning on its axis will certainly not leave a shift from the media approach pattern used. The learning approach functions so that learning is aimed at the desired goal. This approach aims to explain the nature of problem-solving and explain to teachers the need to use systems in learning (Abrori et al., 2020). This fact shows that many media in learning must be suited to students' needs and seen to the extent of their usefulness. For this reason, PAI teachers must master learning design and remember that success begins with proper planning and design. Therefore, in facing these pedagogical challenges, PAI teachers must be sensitive, intelligent, and careful in dealing with problems that arise, especially when learning does not go as expected during the education process (Halibrata & Wirdati, 2023).

Furthermore, research related to the meta-analysis of digital applications as learning media for Islamic Religious Education has been carried out by many previous researchers. Regarding the author's observation, previous research is divided into three trends. First, mastery of the concept of affective domain guidance and psychomotor domain. Second, effective teaching methods in determining student learning outcomes. Third, project-based learning in technology education is very effective and appropriate to use in learning (Agâh & Korucu, 2019; Ai et al., 2020; Beksultanova et al., 2020; Fadillah et al., 2021; Faisol, 2021; Munajat, 2021; Nasution, 2021; Partono et al., 2021). If the previous research focused on three trends, then in this case, the author will add about the use of applications such as PAI learning media, the difference in learning outcomes before and after using digital media-based learning media, and then draw analysis from previous studies with a total of eleven (11) previous studies that have been selected in terms of

learning outcomes and the media used. so previous research and research on meta-analysis will be very complementary.

Literature reviews related to this theme and topic have been mentioned in the meta-analysis of related data regarding digital applications as a learning medium for Islamic religious education. So, this research will be much more complete and collect several previous studies as references in searching for data. This research will complement research based on meta-analysis of data. Therefore, this research is newer than before because it produces various data that look at what applications are used, what percentage of each use of learning media is, and the correlation between before and after using digital-based learning media.

This study aims to analyze the effect of learning media using digital applications with the SPSS V 27 application. and to describe previous studies that used several digital applications as learning media in the scope of PAI subjects. Therefore, this study considers it important to explore further a meta-analysis study with the use of digital applications in Islamic Education subjects so that it can be measured to what extent the success is in using digital applications as a medium of learning Islamic Education.

METHOD

The research adopts a quantitative approach utilizing a literature review method, while data collection techniques were conducted by searching for research in journals and final studies related to digital-based learning media in Islamic Religious Education to enhance student learning outcomes, through Google Scholar/internet. Then, for the data analysis techniques, meta-analysis to gather data from the literature by reading, recording, processing, and synthesizing it into a single study for data analysis. The meta-analysis technique involves several stages, starting with formulating research questions, searching for relevant literature, and then analyzing the selected literature. The research population comprises journals and final studies on the use of digital-based learning media within the scope of Islamic Religious Education, aimed at improving student learning outcomes, sourced from Google Scholar/internet. For the sample, the authors selected 11 articles and final



studies obtained online using a purposive sampling technique, aligned with the research topics discussed. The research also explores the development of learning design in Islamic Religious Education. The study instrument was a review table comparing student learning outcomes before (pretest) and after (posttest) the use of digital application-based learning media. The data is then analyzed to determine whether to accept or reject the hypothesis.

RESULTS AND DISCUSSION

The following eleven studies are introduced, all of which utilize digital applications as learning media within Islamic religious education subjects. These studies were selected based on an examination of student learning outcomes before (pre-test) and after (post-test) in the experimental groups. The enhancement of learning outcomes in each study is detailed as follows:

Table 1 Meta-Analysis of Islamic Religious Education Learning Outcomes of Students Before and After Using Digital Application-Based Learning Media

No	Research Title	Author	Improved Outcomes		Learning Improved
			Before	After	
1.	The Influence of Using Lectora Inspire Learning Media on Islamic Religious Education (PAI) Learning Outcomes for Class X TKJ Students at SMK 17 Agustus 1945 Genteng	(Fanani dkk., 2021)	58,14	81,32	23,18
2.	Reward Quiz Method to Improve Student Learning Outcomes in Islamic Religious Education Subjects in Class IV of SD Negeri 2 Banyukembar Watumalang Wonosobo	(Kahirunnis a, 2023)	65,59	82,94	17,35
3	The Effect of Using Application-Based Interactive Learning Media (Kahoot) on the Learning Outcomes of Class XI Students at SMAI Al-Maarif Singosari Malang	(Mafruhah dkk., 2019)	86, 65	91,84	5,19

4	Implementation of the Google Classroom and Edpuzzle Platforms to Improve Learning Independence and Student Learning Outcomes in Distance Learning on Islamic History Material	(Hidayat dkk., 2021)	77,03	84,67	7,64
5.	Quizizz Educational Game Media in Learning the History of Islamic Culture as an Effort to Improve Student Learning Outcomes	(Ulya & Arifi, 2021)	73,88	87,24	11,83
6	The Effect of Using Lectora Inspire Interactive Media on Student Learning Outcomes in Islamic Religious Education Subjects	(Sari dkk., 2021)	57,78	72,14	14,36
7	The Influence of Interactive Learning Media Using the Canva Application on the Learning Outcomes of Class VII Students in Islamic Religious Education Subjects at SMPN 1 NgrahoBojonegoro	(Fauziyah dkk., 2022)	64,53	82,34	17,81
8	The Influence of Canva Application-Based Learning Media on Islamic Religious Education Learning Outcomes	(Syarifudin, 2023)	78.96	85.68	6,72
9	The Influence of Edmodo Media on Islamic Religious Education Learning Outcomes for Class XI Students at SMKN 9 Bandar Lampung	(Saputra, 2017)	69.80	85	15,2
10	The Influence of the Blended Learning Model Assisted by Edmodo and Interest in Learning on Student Learning	(Nurjannah, 2022)	58.10	89.90	31,8



Outcomes in Islamic Religious Education and Character Subjects at SMAN 1 Leces Probolinggo			
11	The Influence of Quizizz Educational Game-Based Learning Media on Improving Student Learning Outcomes in Fiqh Class XI MAN 1 Trenggalek	(Afifah, 2022)	44,69 83,16 38,47

Table 1 outlines studies that use several digital applications as learning media within the scope of subjects in Islamic Religious Education. These applications include Lectora Inspire, Quizizz, Kahoot, Google Classroom, Ezpuzzle, Canva, and Edmodo. Similarly, as observed in Table 1, the highest student learning outcome before the implementation of digital application-based learning media is 78.96, while the lowest is 44.69. Meanwhile, the highest student learning outcome after utilizing digital application-based learning media is 91.84, with the lowest being 81.32. All studies demonstrate an improvement in student learning outcomes through the use of digital application-based learning media, showing an increase ranging from 5.19 to 38.47.

Additionally, to validate the meta-analysis results concerning the variations in learning outcomes before and after implementing digital application-based learning media, a statistical paired sample t-test will be conducted using SPSS 27. The process starts with a data normality test. The test results are as follows:

Table 2 Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Before	.134	11	.200*	.977	11	.948
After	.196	11	.200*	.914	11	.272

***. This represents the lower limit of the actual significance.**

a. Lilliefors's significance adjustment.

To interpret the normality test results shown in Table 2, refer to the decision-making guidelines: if the Sig value (significance or probability value) is less than

0.05, the data distribution is not normal. Conversely, if the Sig value (significance or probability value) is greater than 0.05, the data distribution is considered normal. It can be seen in the Komogorov-Smirnov and Shapiro-Wilk sections in Table 2, that all sig values before and after are greater than 0.05 (>0.05). Similarly, in the Shapiro-Wilk test, all significance values are greater than 0.05 (>0.05). Therefore, the data scores for learning outcomes before and after the use of digital application-based learning media are normally distributed.

After the assumption test, namely data normality is fulfilled, the next step is to test the hypothesis. The data in Table 1, was tested with a paired sample t-test using SPSS 27. The following presents the test results.

Table 3 Paired Samples Statistics

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Before	66.8318	11	11.97151	3.60955
	After	84.2027	11	5.12854	1.54631

Table 3 shows the summary statistics of the two samples for the scores before and after the utilization of digital application-based learning media. The average pre-application score is 66.83 and the post-application score is 84.20.

Furthermore, the output display below shows the relationship/correlation between the two variables:

Table 4 Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Before & After	11	.507	.111

Based on table 4, it is evident that the correlation between the two variables yields a Sig value of 0.111 ($\text{Sig} > 0.05$), indicating no significant relationship between them. Additionally, to assess the strength of this correlation coefficient, which stands at 0.507, a coefficient exceeding 0.90 would denote a nearly perfect relationship. This demonstrates a very strong correlation between Islamic Religious Education learning outcomes before and after employing digital application-based learning media, yet it is not statistically significant.



Meanwhile, the difference in scores before and after the application using digital application-based learning media can be seen in the table below:

Table 5 Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
				Paired Differences				
Pair1 Before - After	- 17.370 91	10.36186	3.12422	- 24.33210	- 10.40972	-5.560	10	.000

Sometime recently deciphering the test comes about in Table 5, to begin with, decide the theory, specifically in case the Sig esteem isn't noteworthy. $> 0,05$ at that point H_0 Acknowledged. In the interim, on the off chance that the Sig esteem $< 0,05$ at that point H_0 is rejected. Based on the Combined Tests Test yield shown in Table 6, it can be seen that the Sig esteem is 0.000. Since the Sig esteem $< 0,05$, at that point H_0 was rejected, H_1 acknowledged so it is concluded that there are contrasts within the learning results of Islamic Devout Instruction of understudies sometime recently and after the utilize of advanced application-based learning media or the learning results of Islamic Devout Instruction of understudies some time recently and after the utilize of advanced application-based learning media are altogether distinctive. In other words, the utilize of computerized application-based learning media is exceptionally compelling in progressing students' Islamic Devout Instruction learning results.

The research findings demonstrate the significant positive impact of digital application-based learning media on students' learning outcomes in Islamic Religious Education (PAI). Through a meta-analysis of eleven studies, a consistent improvement in student performance was observed when digital tools were integrated into the learning process. Specifically, the studies analyzed showed a range of improvement in learning outcomes from 5.19 to 38.47 points, with post-application scores consistently higher than pre-application scores. This suggests that digital tools such as Lectora Inspire, Quizizz, Kahoot, Google Classroom, Edpuzzle, Canva, and Edmodo effectively enhance student understanding.

Based on the by and large clarification of the test over, it can be concluded that the utilization of computerized application-based learning media is demonstrated to be able to create students' Islamic devout instruction learning results increment. The noteworthy impact of utilizing computerized applications on understudy learning results in Islamic devout instruction is due to the different focal points of this advanced application. Among them, digital applications have properties that are more flexible in their use and are not bound by space and time so that their use can be used properly for learning activities (Sarina, 2022). Therefore, utilizing digital applications as learning media can certainly lead to opportunities to increase learning efficiency, facilitate access to various educational resources, and build skills that are suitable for the digital era (Iskandar et al., 2023).

In expansion, computerized application-based learning media can increment the engaging quality of understudies in their learning exercises. This can be because computerized applications have intuitive properties (Riady, 2021). Interactive learning is essential to the efficiency of the learning process. (Korucu & Kabak, 2019). Advanced apps can bolster dynamic engagement with learning materials by implanting learning concepts into game-like exercises, building on children's learning through versatile learning innovations, giving input and rewards through play, and advancing rehashed hone of vital foundational abilities (Riady, 2021). The possibilities and openings advertised by computerized application-based learning cause an increment in understudy learning results in Islamic instruction learning and other learning in common.

When compared to conventional learning, digital application-based learning media makes students learn faster, students can easily access learning anywhere and anytime, and students will also feel interested in trying applications and using them, learning with digital applications makes learning more enjoyable, because enjoyable learning students do not feel burdened in learning and students will independently search for various other materials by simply accessing the application and can learn at any time (Rohinah, 2016). The utilization of computerized applications in learning moreover contains a positive effect. Among the positive impacts felt are that PAI learning exercises can run better than recently,



schools have other options within the learning media utilized, and instructors end up with less demanding instruction (Lisyawati et al., 2023). Furthermore, the research highlights the broader implications of digital learning tools in the educational landscape. By facilitating access to a wealth of resources and enabling personalized learning experiences, digital applications align well with the needs of the digital era, preparing students for future challenges. Additionally, the positive impact on student motivation and academic achievement underscores the potential for these tools to transform traditional educational practices

Research by Al-Azawi, Al-Faliti, and Al-Bushi (2016) highlights that game-based learning enhances student motivation and academic achievement (Al-Azawi et al., 2016). Consequently, incorporating digital applications in Islamic religious education (PAI) is a promising solution that could engage students more effectively (Rohinah, 2015). Teachers are encouraged to innovate in digital learning, share experiences with peers, and increase the use of these tools (Galustyan et al., 2021). Continuous professional development is essential for educators to adapt to technological advancements, making learning more engaging and relevant to modern students.

CONCLUSION

The use of digital application-based learning media has significantly improved students' outcomes in Islamic Religious Education (PAI). A meta-analysis of eleven studies showed that average scores increased from 66.83 to 84.20 after using these applications, with a significant difference of 17.37 (Sig = 0.000). The effectiveness of digital media lies in its flexibility, interactivity, and access to diverse learning resources, enhancing student engagement. This approach not only boosts learning efficiency but also prepares students for the digital era. PAI teachers are encouraged to continue developing their digital skills and innovate in their teaching methods.

REFERENCES

Abrori, F. M., Saputra, N. H., & Vlorensius, V. (2020). *Isolasi Digital: Sisi Gelap*

- Pembelajaran Daring. *Edukasia: Jurnal Pendidikan*, 7(2).
- Afifah, J. A. (2022). Pengaruh media pembelajaran berbasis game edukasi Quizizz terhadap peningkatan hasil belajar siswa mata pelajaran Fiqih Kelas XI MAN 1 Trenggalek [Undergraduate, Universitas Islam Negeri Maulana Malik Ibrahim]. <http://etheses.uin-malang.ac.id/35354/>
- Agâh, D., & Korucu, T. (2019). *Aplikasi Digital dalam Pendidikan dan Analisis Meta Pengaruhnya*. 19–33.
- Ai, B., Yu, V. O., & Ma, Y. (2020). *Penerapan Teknologi Digital dalam Pendidikan Proses*. 156(Iscde), 82–87.
- Al-Azawi, R., Al-Faliti, F., & Al-Blushi, M. (2016). Al-Azawi, R., Al-Faliti, F., & Al-Blushi, M. *Educational Gamification vs. Game Based Learning: Comparative Study*. *International Journal of Innovation*, 7(4), 132–136.
- Anwar, F., Pajariantanto, H., Herlina, E., Raharjo, T. D., Fajriyah, L., Astuti, I. A. D., Hardiansyah, A., & Suseni, K. A. (2022). *Pengembangan Media Pembelajaran Telaah Perspektif Pada Era Society 5.0*. Tohar Media.
- Azis, T. N. (2019). Strategi pembelajaran era digital. *The Annual Conference on Islamic Education and Social Science*, 1(2), 308–318.
- Beksultanova, A. I., Yu, V. O., & Yalmaeva, M. A. (2020). *Application of Digital Technologies in the Educational Process*. 156(Iscde), 82–87.
- Dwiqi, G. C. S., Sudatha, I. G. W., & Sukmana, A. I. W. I. Y. (2020). Pengembangan multimedia pembelajaran interaktif mata pelajaran IPA untuk siswa SD kelas V. *Jurnal Edutech Undiksha*, 8(2), 33–48.
- Fadillah, R., Ambiyar, A., Giatman, M., Fadhilah, F., Muskhir, M., & Effendi, H. (2021). Meta Analysis: Efektivitas Penggunaan Metode Proyect Based Learning Dalam Pendidikan Vokasi. *Jurnal Pedagogi Dan Pembelajaran*, 4(1), 138–146.
- Faisol, M. A. (2021). Efektivitas Metode Pengajaran dalam Meningkatkan Hasil Belajar PAI Siswa SD: Meta-Analisis. *Cendekia: Jurnal Pendidikan Dan Pembelajaran*, 15(1), 1–14.
- Fanani, A. A., Mashuri, I., & Wajdi, M. B. N. (2021). Pengaruh Penggunaan Media Pembelajaran Lectora Inspire Terhadap Hasil Belajar Pendidikan Agama



- Islam (PAI) Siswa Kelas X TKJ Di SMK 17 Agustus 1945 Genteng. *MUMTAZ : Jurnal Pendidikan Agama Islam*, 1(1), Article 1.
- Farida, E. (2019). Media pembelajaran teknologi digital untuk meningkatkan efektivitas belajar siswa pada abad-21. *Jurnal Didaktika Pendidikan Dasar*, 3(2), 457–476.
- Fatmawati, N. I., & Sholikin, A. (2019). Literasi Digital, mendidik anak di era digital bagi orang tua milenial. *Madani Jurnal Politik Dan Sosial Kemasyarakatan*, 11(2), 119–138.
- Fauziyah, Z., Shofiyuddin, A., & Sukmawati, I. (2022). Pengaruh Media Pembelajaran Interaktif Menggunakan Aplikasi Canva Terhadap Hasil Belajar Siswa Kelas VII Mata Pelajaran Pendidikan Agama Islam di SMPN 1 Ngraho Bojonegoro. *Salimiya: Jurnal Studi Ilmu Keagamaan Islam*, 3(4), Article 4.
- Galustyan, O. V., Solyankin, A. V., Skripkina, A. V., Shchurov, E. A., Semeshkina, T. V., & Ledeneva, A. V. (2020). Application of Blended Learning for Formation of Project Competence of Future Engineers. *Int. J. Eng. Pedagog.*, 10(3), 106–113.
- Galustyan, O. V., Kolbaya, I. G., & Borozdin, S. A. (2021). Application of Digital Technologies in the Educational Process of Higher School. *Известия Воронежского Государственного Педагогического Университета*, 156(1), 81–84. https://doi.org/10.47438/2309-7078_2021_1_81
- Halibrata, P. J. G., & Wirdati, W. (2023). Model Desain Pembelajaran PPSI Pada Mata Pelajaran Pendidikan Agama Islam. *An-Nuha*, 3(2), 253–265.
- Hidayat, E. S., Bisri, M. R. U., Basri, H., & Heris, H. A. (2021). Penerapan Platform Google Classroom dan Edpuzzle Untuk Meningkatkan Kemandirian Belajar Dan Hasil Belajar Siswa Dalam Pembelajaran Jarak Jauh Pada Materi Sejarah Islam. *Al-Hasanah : Jurnal Pendidikan Agama Islam*, 6(2), Article 2. <https://doi.org/10.51729/6245>
- Humaidi, H., Qohar, A., & Rahardjo, S. (2021). Respon siswa terhadap penggunaan video youtube sebagai media pembelajaran daring matematika. *JIPM (Jurnal Ilmiah Pendidikan Matematika)*, 10(2), 153–162.

- Iskandar, A., Winata, W., Haluti, F., Kurdi, M. S., Sitompul, S., P. H., Kurdi, M. S., Nurhayati, S., Hasanah, M., & Arisa, M. F. (2023). *Peran Teknologi dalam Dunia Pendidikan* (Cetakan 1). Cendekia Inovasi Digital Indonesia.
- Kahirunnisa, N. I. (2023). Metode Reward Quiz Untuk Meningkatkan Hasil Belajar Siswa Pada Mata Pelajaran Pendidikan Agama Islam Di Kelas IV SD Negeri 2 Banyukembar Watumalang Wonosobo. *Dar el-Ilmi: jurnal studi keagamaan, pendidikan dan humaniora*, 10(1), 76–84.
- Kotler, P., Kartajaya, H., & Setiawan, I. (2019). *Marketing 4.0: Bergerak dari Tradisional ke Digital*. Gramedia Pustaka Utama.
- Korucu, T. A., & Kabak, K. (2019). Digital Applications in Education and Its Effects Meta Analysis Study. *International Technology and Education Journal*, 3(2), 19–33.
- Lisyawati, E., Hidayati, U., & Abdurrahman Taufik, O. (2023). Digital Literacy Learning Islamic Religious Education At Ma Nurul Qur'an Bogor. *EDUKASI: Jurnal Penelitian Pendidikan Agama Dan Keagamaan*, 21(2), 224–242.
- Mafruhah, S., Sulistiani, I. R., & Mustafida, F. (2019). Pengaruh Penggunaan Media Pembelajaran Interaktif Berbasis Aplikasi (Kahoot) Terhadap Hasil Belajar Siswa Kelas XI Di SMAI Al-Maarif Singosari Malang. *Vicratina : Jurnal Ilmiah Keagamaan*, 4(7), Article 7.
- Magdalena, I., Shodikoh, A. F., Pebrianti, A. R., Jannah, A. W., & Susilawati, I. (2021). Pentingnya media pembelajaran untuk meningkatkan minat belajar siswa sdn meruya selatan 06 pagi. *Edisi*, 3(2), 312–325.
- McCrinkle, M., & Fell, A. (2020). *Understanding generation alpha*. McCrinkle Research.
- Munajat, N. (2021). Correlation Between Leadership Competencies of Islamic Religious Education Teachers and Students' Religiosity at SMK Muhammadiyah Prambanan Yogyakarta. *Edukasia: Jurnal Penelitian Pendidikan Islam*, 16(2), 233–248.
- Nasution, N. G. T. (2021). *Metode Dan Media Pembelajaran Pendidikan Agama Islam (PAI) Pada Sistem Pembelajaran Dalam Jaringan (DARING) Di Masa*



- Pandemi Covid-19 (Study Literature Review)*. UIN FAS Bengkulu.
- Nurjannah, R. H. (2022). Pengaruh Model Blended Learning Berbantuan Edmodo dan Minat Belajar Terhadap Hasil Belajar Peserta Didik Pada Mata Pelajaran Pendidikan Agama Islam dan Budi Pekerti di SMAN 1 Leces Probolinggo [PhD Thesis, UNIVERSITAS ISLAM NEGERI KIAI ACHMAD SIDDIQ JEMBER]. <http://digilib.uinkhas.ac.id/8581/1/tesis%20risiki.pdf>
- Partono, P., Jamaludin, D., Chamadi, M. R., & Fuadi, S. I. (2021). Education of Autis Students at Islamic Boarding School Al Achsanyah. *Edukasia: Jurnal Penelitian Pendidikan Islam*, 16(2), 311–324.
- Pratama, D. P. A., & Sakti, N. C. (2020). Pengembangan media pembelajaran handout digital berbasis Android. *Jurnal Pendidikan Ekonomi Undiksha*, 12(1), 15–28.
- Riady, A. (2021). Pendidikan Berkualitas di Era Digital: (Fokus: Aplikasi Sebagai Media Pembelajaran). *Jurnal Literasi Digital*, 1(2), 70–80. <https://doi.org/10.54065/jld.1.2.2021.15>
- Rohinah. (2015). Pengembangan Aplikasi Bahan Ajar Pendidikan Agama Islam Berbasis Android di Sekolah Menengah Atas. *Al Athfal: Jurnal Pendidikan Anak*, 1(2), 79–94.
- Rohinah, R. (2016). Pengembangan Aplikasi Bahan Ajar Pendidikan Agama Islam Berbasis Android di Sekolah Menengah Atas. *Al Athfal: Jurnal Pendidikan Anak*, 1(2), 79–94. <http://ejournal.uin-suka.ac.id/tarbiyah/index.php/alathfal/article/view/1090>
- Saputra, A. (2017). Peran Kepala Madrasah dalam Membangun Budaya Religius di MAN 1 Palembang [PhD Thesis]. UIN RADEN FATAH PALEMBANG.
- Sarina. (2022). *Kontribusi Orang Tua Siswa dalam Pemanfaatan Teknologi Pendidikan pada Masa Pandemi di SDN 239 Salu Minanga Kabupaten Luwu Timur*. Universitas Alauddin Makassar.
- Sari, N. S. A., Hamengkubuwono, H., & Pratama, M. I. L. (2021). Pengaruh Penggunaan Media Interaktif Lectora Inspire terhadap Hasil Belajar Siswa Pada Mata Pelajaran Pendidikan Agama Islam. *Jurnal Ilmiah Profesi Pendidikan*, 6(4), Article 4. <https://doi.org/10.29303/jipp.v6i4.290>

- Syarifudin, A. (2023). Pengaruh Media Pembelajaran Berbasis Aplikasi Canva terhadap Hasil Belajar Pendidikan Agama Islam. *Jurnal Ilmiah Edukatif*, 9(2), Article 2. <https://doi.org/10.37567/jie.v9i2.2474>
- Ulya, A., & Arifi, A. (2021). Media Game Edukasi Quizizz dalam Pembelajaran Sejarah Kebudayaan Islam Sebagai Upaya Meningkatkan Hasil Belajar Siswa. *EduLab : Majalah Ilmiah Laboratorium Pendidikan*, 6(1), Article 1. <https://doi.org/10.14421/edulab.2021.61.07>
- Wijaya, A. M., Arifin, I. F., & Badri, M. Il. (2021). Media pembelajaran digital sebagai sarana belajar mandiri di masa pandemi dalam mata pelajaran sejarah. *SANDHYAKALA Jurnal Pendidikan Sejarah, Sosial Dan Budaya*, 2(2), 1–10.