The Effect of the Use of Interactive Media in Arabic Language Learning on Students' Learning Outcomes at Nurul Ilmi Integrated Islamic Elementary School, Jambi

Abstract

Interactive media is one of the essential elements in improving the quality of education. This study aims to determine the effect of the use of interactive media in Arabic language learning on the learning outcomes of class 2A students at the Nurul Ilmi Integrated Islamic Elementary School in Jambi. The approach used in this study is quantitative with a quasi-experimental design. The population in this study was the entire second grade, totalling 236 people, divided into 10 study group classes. The sample used in this study was 20 class 2A students, who were taken randomly. The data in this study were collected using test techniques (pretest and post-test) from the perspective of Arabic language learning. The data analysis used was the N-gain test and the T-test. The study results showed that the use of interactive media in Arabic language learning in class 2A of the Nurul Ilmi Integrated Islamic Elementary School positively and significantly affected learning outcomes. The increase in Arabic language learning outcomes was average in the "high" category. The results of the T-test showed that the increase in learning outcomes was significant. Thus, it is recommended that interactive multimedia-based Arabic language teaching materials be developed to support the implementation of more professional and quality Arabic language learning.

Keywords: Interactive Media, Arabic Language Learning, Learning Outcomes

Introduction

Education is a real effort to form a quality generation with broad insight, able to think at a high level and act by the rules and norms that apply in society. In other words, education is intended to create better education. Buchanan et al. (2022) and Aflah et al. (2023) state that education is an effort to change life to be more focused and better. Moon & Kong (2023) and Rahma Taher (2023) state that education aims to create a generation of intelligent and noble successors. Therefore, various efforts are made to create a quality education process.

One effort to create a quality education process by the times is by using interactive media. Interactive media is an essential element in improving the quality of education. According to Hermawan et al. (2023) and Rizal (2024), interactive learning media is defined as learning media that facilitates interaction between students and learning materials. Hossain (2023), Lister et al. (2024), and Munawir et al. (2024) explain that interactive learning media is a learning approach that utilizes technology to enable two-way interaction between teachers and students, as well as between students and learning materials. Thus, the keyword of interactive learning media is the use of technology to improve the quality of education. This is as stated by Guzdial (2019), Dignam (2023) and Listyawan et al. (2023), who state that the use of technology in education is one way to encourage the quality of education. Interactive learning media has various forms. Some forms of interactive learning media include videos, animations, simulations, and educational games. According to Gunawan et al. (2023), Ulla et al. (2024), and Munawir et al. (2024), interactive learning media provides various tools and resources such as videos, computer simulations, educational games, and online platforms that allow students to learn actively and be involved in the learning process. Several other types of interactive learning media are also mentioned by Cahyono (2019) and Listyawan et al. (2023), namely animation, comics, videos/YouTube, PowerPoint, Kahoot, Edmodo, Google Classroom, Google Meet, quizzes, e-books on electronic reading modules and so on. Thus, there are many choices that teachers can make when using interactive learning media.

The use of interactive learning media has many advantages and benefits. Putra & Salsabila (2021) and Izquierdo-Domenech et al. (2024) stated that this interactive media has various advantages compared to conventional media, including two-way information flow, the information obtained can be in the form of highly stimulating audio-visuals. Bartlett & Camba (2024) and Munawir et al. (2024) stated that interactive media can provide a more exciting and enjoyable learning experience and foster student enthusiasm for learning. Thus, interactive learning media can improve the quality of education in general, both in terms of the potential for

material development and student learning motivation. The results of previous studies related to the use of interactive learning media stated that these learning media play a role in realizing a quality education process.

Interactive media use in learning can potentially increase the effectiveness and efficiency of learning (Elindasari et al., 2024). According to Luma'ul (2023), Orbit Thomas et al. (2024), and Aulia et al. (2024), interactive learning media has a significant impact on increasing student learning motivation and facilitating a deeper understanding of concepts through interactive and participatory learning experiences. In addition, Elindasari et al. (2024) also said that interactive learning media can help students find alternative information other than textbooks that are sometimes difficult to understand and improve concept mastery, learning achievement, and critical thinking skills. Even Made Rajendra and Made Sudana (2018) stated that interactive media can improve students' practical skills. As described above, the urgency and potential of using interactive media have yet to be fully implemented in SD Islam Terpadu Nurul Ilmi Jambi.

Based on the results of observations, the use of interactive learning media still needs to be improved. Namely, it is only used in certain subjects and needs to be more comprehensive. Some subjects that have used interactive media include Computer Information Technology (ICT), science and sports. In addition, interactive media has only been introduced in high schools, namely classes 4,5 and 6. The lower classes, namely classes 1,2 and 3, have never used this interactive media. Thus, this study aims to determine the effect of the use of interactive media in Arabic language learning on the learning outcomes of class 2A students at the integrated Islamic Elementary School Nurul Ilmi Jambi. This is one of the breakthroughs in introducing interactive learning media to students in lower grades and Arabic language subjects.

Methodology:

This study uses a quantitative approach with a quasi-experimental design (Hastjarjo, 2019). The population in this study were all second-grade students, totalling 236 people, who were divided into 10 study group classes. The sample used in this study was 29 class 2D students, who were taken randomly. The data in this study were collected using test techniques (pretest and post-test) from the perspective of mathematics learning.

The instrument used in this study was in the form of Arabic language learning outcome test questions. The total number of test questions used in the instrument was 40 multiple-choice questions. Thus, the maximum score for each variable is 40, and the minimum score is 0. Data analysis was carried out in several stages of the study. The first stage is the classification of scores into "high", "medium" and "low" groups. The classification was decided based on the scores obtained with the criteria in Table 1 below:

Table 1. Classification of Learning Outcome categories

Classification	Range of score	Category
1	31-40	High
2	21-30	Moderate
3	0-20	Low

After the data is classified in Table 1 above, it is analyzed using the N-gain and T-tests. The N-gain test is used to determine the increase in Arabic learning outcomes before and after the implementation of learning. The T-test determines the significance of the increase in learning outcomes. The T-test in this study was carried out with the help of SPSS 25 software. N-gain decision-making is based on the following Table 2:

Table 2. N-gain Classification.

N-Gain	Classification of Improvement
$g > 0,70$	High
$0,30 < g \leq 0,70$	Moderate
$g \leq 0,30$	Low

Result and Discussion

Based on the data that has been obtained, namely the learning outcome test of class 2A students in Arabic language subjects using interactive media, the data obtained are as shown in Table 3 below:

Table 3. Frequency and Percentage of Arabic Language Learning Results Using Interactive Media

Variable	Range of Score	Category	Number of respondents	Percentage
Arabic Language Results	31-40	High	17	56,7
	21-30	Medium	8	26,7
	0-20	Low	5	16,6
Total			30	100
Average	33,78	High		

Based on Table 3 above, it is known that the Arabic language learning outcomes with a score range of 31-40, namely the "high" category, amounted to 17 people or around 56.7%. As for students who obtained a score range between 21-30 in the "Medium" category, there were eight people or around 26.7%, while students who obtained a score between 0-20 in the "low" category were five people or around 16.6%. The average classical score was 33.78, with the "high" category.

Furthermore, an N-gain test was conducted to determine the increase in learning outcomes before and after participating in learning using interactive media in Arabic language subjects. Based on the results of the N-gain test on the pretest and post-test scores of each student, categorization was carried out; then the data was obtained as in Table 4 below:

Table 4. Frequency and Percentage of Increased Learning Outcomes Based on the N-gain Test

Variable	Range of Score	Category	Number of respondents	Percentage
Arabic Language Results	$g > 0,70$	High	13	43,3
	$0,30 < g \leq 0,70$	Medium	14	46,7
	$g \leq 0,30$	Low	3	10
Total			29	100
Average	0,67	Medium		

Based on Table 4 above, it is known that the results of the N-gain test on Arabic language learning outcomes with a score range of g> 0.70, namely the "high" category, amounted to 13 people or around 43.3%. As for students who obtained a score range between $0.30 < g \leq 0.70$ with the "Medium" category, there were 14 people or around 46.7%, while students who obtained a score between $g \leq 0.30$ with the "low" category were three people or around 10%. The average classical score was 33.78, with the "high" category. The average increase in classical was 0.67 with the "medium" category. Furthermore, a one-sample T-test was conducted to determine the significance of the increase in learning outcomes before and after participating in learning using interactive media in Arabic subjects. Based on the results of the T-test on the pretest and post-test scores of each student, then categorization was carried out; the data obtained were as in Table 5 below:

Table 5. One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	T	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Pretest	10.052	29	.000	51.462	32.84	39.14
Posttest	17.881	29	.000	67.782	54.67	67.61

Based on Table 5 above, it can be seen that the Arabic learning outcome variable obtained a sig. (2-tailed) value of 0.000 <0.05. This means a significant difference in the average value between Arabic learning outcomes' pretest and post-test values . In other words, it can be said that the increase in students' Arabic learning outcomes after participating in learning with the application of interactive media is significant.

The study's results prove that using interactive media in Arabic learning positively impacts student learning outcomes. This study also proves that interactive media has advantages in improving education quality, as experts previously mentioned. Arini's research (2024) shows that using interactive multimedia in learning can help students receive and understand lesson materials optimally. Khoir et al. (2024) also stated that interactive media increases early childhood motivation, involvement, vocabulary mastery, and speaking skills.

In addition, the arguments in the study are also strengthened by the opinions of Gouhar & Mahapatra (2016), Soybatul et al. (2023) and Halimatusyadiah & Disman (2023) that the use of interactive media using websites has many benefits for students. The study's results also show that an in-depth literature review found that interactive media helps create a more immersive and enjoyable learning environment, making it easier for children to understand language concepts more contextually. Thus, it is clear that interactive learning media, both in theory and practice, positively impact student learning outcomes.

As mentioned by Setiadi & Khairunnisa (2023) and Isbah (2023), Arabic language learning has different characteristics from other subjects. The characteristics and uniqueness of Arabic include derivational language (ishtiqa'q), rich in sounds, language rich in forms (sigh ah), tariff language, grab, language rich in expressions, various sentence techniques, language that is rich in syntax (nahw) and others (Isbah, 2023). Meanwhile, Jaunanto & Mahliatussikah (2020) and Fadhilah & Aprillia (2023) state that the characteristics of Arabic include four language skills that are taught integrally, namely asthma, kalam, qira'ah, and ketubah. Thus, interactive learning media can adapt to the characteristics of Arabic language learning itself. Therefore, the improvement of learning outcomes in this study that one of the main factors is the suitability between the characteristics of the Arabic language and the characteristics of the interactive media used. From the learning outcomes perspective, the learning outcomes in this study focus on cognitive abilities. Therefore, learning outcomes in other domains, namely attitudes (affective) and skills (psychomotor), have yet to be observed or measured. Therefore, future research similar to this study can focus on affective and cognitive learning outcomes. This aims to develop comprehensive learning outcomes in Arabic language learning using interactive media. This is to the opinions of Alyasin et al. (2023), Zainudin (2023) and González, et al. (2024) that there are three types of domains inherent in students, namely: (1) The domain of thinking processes (cognitive domain), (2) The domain of values or attitudes (affective domain), and (3) The domain of skills (psychomotor domain). Supportive teaching materials are needed to ensure and perfect the implementation of learning using interactive media. The supporting teaching materials referred to in this study are interactive media-based teaching materials. This is based on Harry's suggestion (2023) that interactive teaching materials support learning. Simbolon & Purba (2023) also stated that interactive teaching materials are teaching materials that are active with a particular design to give users (students) feedback and carry out activities so that students are involved in two-way interactions with the teaching materials being studied. Thus, the availability of interactive teaching materials can potentially improve the quality of the learning process and students' outcomes. Unfortunately, at SD Islam Terpadu Nurul Ilmi, there are no interactive Arabic teaching materials.

Based on the description above, the study's results indicate that the use of interactive media in Arabic language learning in class 2A of SD Islam Terpadu Nurul Ilmi positively and significantly affects Arabic language learning outcomes. The increase in Arabic language learning outcomes is, on average, in the "high" category. The results of the T-test show that the increase in learning outcomes is significant. Thus, it is recommended that interactive multimedia-based Arabic language teaching materials be developed to support the implementation of more professional and quality Arabic language learning.

Conclusion

The study's results indicate that the use of interactive media in Arabic language learning in class 2A of SD Islam Terpadu Nurul Ilmi has a positive and significant effect on Arabic language learning outcomes. The increase in Arabic language learning outcomes is, on average, in the "high" category. The results of the T-test show that the increase in learning outcomes is significant. Thus, it is recommended that interactive multimedia-based Arabic language teaching materials be developed to support the implementation of more professional and quality Arabic language learning.

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

References

Aflah, A. N., Ananda, R., Surya, Y. F., Syafari, O., & Sutiyan, J. (2023). Efforts to Improve Creative Thinking Skills Using Interactive Media. Authentic: Journal of Elementary Education Development, 7(2), 57–69.

Alyasin, A., Nasser, R., El Hajj, M., & Harb, H. (2023). Assessing Learning Outcomes in Higher Education: From Practice to Systematization. TEM Journal, 12(3), 159–1604. https://doi.org/10.18421/TEM123-41

Arini Putri Fitriya. (2024). Utilization of Interactive Multimedia as an Innovation of Technology-Based Learning Media in Pancasila Education Learning for Grade IV Elementary Schools. NUSRA: Journal of Research and Educational Sciences, 5(3), 1512–1522.

Aulia, H., Hafeez, M., Mashwani, H. U., Careemdeen, J. D., Mirzapour, M., & Syaharuddin. (2024). The Role of Interactive Learning Media in Enhancing Student Engagement and Academic Achievement. International Seminar on Student Research in Education, Science, and Technology, pp. 1, 57–67. http://journal.ummat.ac.id/index.php/issrestec

Bartlett, K. A., & Camba, J. D. (2024). Generative Artificial Intelligence in Product Design Education: Navigating Concerns of Originality and Ethics. International Journal of Interactive Multimedia and Artificial Intelligence, 8(5), 55–64. https://doi.org/10.9781/ijimai.2024.02.006

Buchanan, S., Eady, M. J., & Dean, B. A. (2022). Exploring the importance of intentional learning goals on work-integrated learning placement. International Journal of Work-Integrated Learning, 23(1), 113–127.

Cahyono, G. (2019). Interactive Media Development of Procedures for Prayer (Tara Shalat) Based on Adobe Flash in Improving the Skills of Madrasah Ibtidaiyah Prayers. MUDARRISA: Jurnal Kajian Pendidikan Islam, 11(2), 159–182. https://doi.org/10.18326/mdr.v11i2.159-182

Dignam, C. (2023). Current Academic Studies in Technology and Education 2023 (Issue December 2023). https://www.researchgate.net/publication/377018522

Elindasari, D. A., Woro Sri Hastuti, Setiawan Edi Wibowo, & Suyitno. (2024). Technology-Based Interactive Learning Media for PGSD Students in Elementary School PPKN Learning. Journal of Educational Research and Development, 8(1), 60–68. https://doi.org/10.23887/jppp.v8i1.62994

Fadhilah, F., & Aprillia, F. (2023). Characteristics of Arabic Language Learning (Characteristics of Arabic Language Teaching Materials in Madrasah Aliyah). Jurnal Global Ilmiah, 1(3).

González, J., Melgoza, E., Cabeza, L., & Okoye, K. (2024). Assessment of Students' Learning Outcome and Competency through a Blend of Knowledge and Practical Ability. International Journal of Instruction, 17(2), 561–582. https://doi.org/10.29333/iji.2024.17231a

Gouhar, A., & Mahapatra, B. C. (2016). Review Article Interactive Media and Its Impact on Education. International Journal of Current Research, 8(12), 43964–43966.

Gunawan, W., Atiqoh, Wiyarno, Y., Suharti, & Mastoah, I. (2023). Development Of Interactive Media For English Learning. Journal on Education, 05(03), 7747–7755. http://jonedu.org/index.php/joe

Guzdial, M. (2019). Computing education as a foundation for 21st-century literacy. SIGCSE 2019 - Proceedings of the 50th ACM Technical Symposium on Computer Science Education. https://doi.org/10.1145/3287324.3290953

Halimatusyadiah, H., & Disman, D. (2023). The Benefits of Interactive Media Websites Through Google Sites on Learning Outcomes of Elementary School Students. Jurnal Lingua Idea, 14(1), 92. https://doi.org/10.20884/1.jli.2023.14.1.8305

Harry Prataman Figna. (2023). Training in Making Interactive Teaching Materials Based on E-Learning at SMK Al-Ma'sum Stabat. Jurnal Pengabdian Kepada Masyarakat (JPKM), 4(1).

Hastjarjo, T. D. (2019). Quasi-Experimental Design. Bulletin of Psychology.

Hermawan, H., Wardani, S., & Haryani, S. (2023). Development of Website-Based Interactive Media in Natural and Social Science Subjects for Fourth Grade Students. International Journal of Education and Research, 11(5), 1–10. www.ijern.com

Hossain, M. R. (2023). A Review of Interactive Multimedia Systems for Education. Journal of Innovative Technology Convergence, 5(2), 11–22. https://doi.org/10.69478/jitc2023v5n2a02 Isbah, F. (2023). Understanding the Characteristics of Arabic for Learning Faliqul Isbah 1. Basrah, 03(April), 1–10.

Izquierdo-Domenech, J., Linares-Pellicer, J., & Ferri-Molla, I. (2024). Virtual Reality and Language Models, a New Frontier in Learning. International Journal of Interactive Multimedia and Artificial Intelligence, 8(5), 46–54. https://doi.org/10.9781/ijimai.2024.02.007

Jaunanto, A., & Mahliatussikah, H. (2020). Characteristic of Evaluation in Learning Arabic Language at Islamic Boarding School Anwarul Huda Malang. Alsuna: Journal of Arabic and English Language, 3(2), 179–186. https://doi.org/10.31538/alsuna.v3i2.721

Khoir, A., Bahasa, P., Dini, A. U., & Belajar, M. (2024). The Influence of Using Interactive Media in Language Learning for Early Childhood. Jurnal Review Pendidikan Dan Pengajar, 7(3), 12002–12008.

Lister, K., Riva, E., Hartley, A., Waterhouse, P., Moller, N., Downes, L., Coughlan, T., Kukulska-Hulme, A., McPherson, E., Macdonald, I., Jones-Tinsley, S., Brown, C., & Tudor, R. (2024). Positive Digital Practices: Supporting Positive Learner Identities and Student Mental Wellbeing in Technology-Enhanced Higher Education. Journal of Interactive Media in Education, 2024(1), 1–20. https://doi.org/10.5334/jime.831

Listyawan, E. A., Karlina, I., & Ayushandra, V. (2023). The Use of Interactive Media as Digital Literacy Materials in the 21st Era for Learning in Elementary Schools. Elementary: Journal of Elementary Education, 3(1), 1–7. https://doi.org/10.15408/elementar.v3i1.25199

Luma'ul 'Adilah Hayya. (2023). The Impact of Interactive Learning Media in Education. Exponent Journal, 13(2), 66–76.

Made Rajendra, I., & Made Sudana, I. (2018). The Influence of Interactive Multimedia Technology to Enhance Students' Achievement on Practice Skills in Mechanical Technology. Journal of Physics: Conference Series, 953(1). https://doi.org/10.1088/1742-6596/953/1/012104

Moon, P. J., & Kong, H. S. (2023). Effects of a firefight safety education when applied metaverse in Korea: Focusing on the construction industry. Journal of Education and E-Learning Research, 10(3), 344–351. https://doi.org/10.20448/jeelr.v10i3.4636

Munawir, M., Rofiqoh, A., & Khairani, I. (2024). The Role of Interactive Media in Increasing Student Learning Motivation in SKI Subjects in Elementary Madrasahs. AL-AZHAR INDONESIA HUMANIORA SERIES Journal, 9(1), 63–71. http://dx.doi.org/10.36722/sh.v9i1.2828

Orbit Thomas, Nani Setiawati, Rahman, Store, Alexandro, R., & Wibowo. (2024). Interactive Media Based on Adobe Animate CC Increases Student Participation in History Learning. Journal of Education Research and Evaluation, 8(2), 214–222. https://doi.org/10.23887/jere.v8i2.66675

Putra, A. D., & Salsabila, H. (2021). The Influence of Interactive Media in the Development of Learning Activities in Educational Institutions. Curriculum Innovation, 18(2), 231–241.

Rahma Taher. (2023). The Objectives of Independent Learning Education Against the View of Humanist Philosophy. Journal of Education and Counseling, p. 5, 1766–1771.

Rizal Faturrokhman. (2024). Interactive Learning Media Increases Engagement. Journal of Educational Sciences (JIP), 2(4), 713–721.

Setiadi, F. M., & Khairunnisa. (2023). Arabic Language Learning: An In-Depth Examination of Students' Challenges and Solutions. The Progress: Journal of Language and Ethnicity, 2(2), 63–74.

Simbolon, G. S., & Purba, G. I. D. (2023). Development of Interactive Teaching Materials Based on Contextual Approach to Improve Students' Mathematical Problem Solving Ability. Journal of Student Research (JSR), 1(2), 422–438.

Soybatul Aslamiah Ritonga, Sahbuki Ritonga, Uswatun Hasanah Masra Tangse, Dwina Putri, Amaliah Ritonga, & Wahyu Azhar Ritonga. (2023). The Effect of ClassPoint Learning Media as Interactive and Fun Learning. International Journal Of Humanities Education and Social Sciences (IJHESS), 2(6), 2206–2212. https://doi.org/10.55227/ijhess.v2i6.554

Ulla, M. B., Lemana, H. E., & Kohnke, L. (2024). Unveiling the TikTok Teacher: The Construction of Teacher Identity in the Digital Spotlight. Journal of Interactive Media in Education, 2024(1), 1–14. https://doi.org/10.5334/jime.845

Zainudin. (2023). Cognitive, Affective and Psychomotor Domains as Objects of Student Learning Outcome Evaluation. ILJ: Islamic Learning Journal (Jurnal Pendidikan Islam), 1(3), 915–931