



Moderation of Locus of Control in the Development of Android-Based Google Site Interactive Learning Media to Improve Learning Outcomes

Edy Syahputra^{1*}, Saidun Hutasuht², Hasyim³

Department of Educational Economy, Universitas Negeri Medan, Deli Serdang, Indonesia¹

E-mail: ¹pakedpaked@gmail.com, ²saidun@unimed.ac.id, ³hasyimesty@unimed.ac.id

*Corresponding Author

Received: April 29, 2024; Accepted: June 3, 2024; Published: July 31, 2024

ABSTRACT

This article is based on the lack of learning outcomes, internal control, and the use of interactive media. The purpose of this study is to understand the worthiness and effectiveness of the Android-based Google Site interactive learning media, as well as the interaction of locus of control with the Android-based Google Site interactive learning media on student learning outcomes. This thesis is a development using the Four-D model. The information collection instrument uses expert validation questionnaires, teacher, and student feedback. The research population was class XI students. The results reveal that the interactive learning media Google Site based on Android is worth using. based on the validation of material experts at 46.20 in the very valid group, media experts at 4.60 in the very valid group, teaching material design experts at 4.63 in the very feasible category, and learning design experts at 4.72 in the very feasible category. The economics teacher's assessment was 4.76 in the very decent category, the results of the individual trial were 4.67 in the very decent category, the small group test was 4.79 in the very decent category, and the field trial was 4.72 in the very decent category. The Android-based Google Site interactive teaching media is effectively used in improving learning outcomes in line with the t-test results, where the 2-tailed sig value is $0.000 < 0.05$. Based on the two-way ANOVA test, there is no locus of control interaction on the Google Site interactive learning media, namely the 2-tailed sig value is $0.001 < 0.05$. In conclusion, there is an interaction between locus of control and learning media on student learning outcomes. This research implies that schools can use the Android-based interactive learning media Google Site "Melani Si Andro" which was developed as a student learning facility to develop learning outcomes.

Keywords: *Android, Google Site, Learning Outcomes, Locus of Control*



Copyright © 2024 The Author(s)

This is an open-access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

INTRODUCTION

Teachers are educational actors who must be prepared for the development and utilization of technology, especially educational technology. Educators must be prepared for current obstacles. As a step to overcoming obstacles, every educator must have the right

strategy by utilizing learning resources that do not make things difficult for students. (Fathuddin et al., 2023). Learning is organized to empower students to meet complex challenges. Learning is an activity that requires communication between educators and students in educational communication.

In addition, the form of learning that has been conventional with a teacher-centered mindset is expected to change. The change in question is the utilization of information and communication technology (Amitkumar Dudhat & Ardi, 2023). The mindset of learning can change towards independent learning (Aljermawi et al., 2024). Teachers are required to have Information and Communication Technology (ICT) skills to develop learning media that lead to interactive media (Sulistiani et al., 2023). Interactive learning media will make learning more effective, efficient, and interesting (Daryanes et al., 2023). This learning is expected to develop student learning outcomes.

Learning outcomes are a component of education. Student learning outcomes are students' achievements and understanding of the learning that has been realized (Fatimah et al., 2023). This agrees with Yunitasari et al., (2023), that learning outcomes show student success in improving the quality of education. Then emphasized again by Karno (2023), Learning outcomes are also a measuring tool used to assess how well students understand certain topics. The economic learning outcomes of XI social studies students in the odd semester of 2023 are presented in the following table.

No.	Class	Number of Students	Score ≥ 70	Score < 70
1	XI IPS 1	30	8	22
2	XI IPS 2	30	7	23
3	XI IPS 3	31	10	21
4	XI IPS 4	32	11	21
	Amount	123	36	87
	Percentage....		29%	71%

Table 1. Economic Learning Outcomes

The learning outcomes table above shows that students' economic learning outcomes are still not very high. From the acquisition of the value of XI IPS 1 with a total of 30 students whose scores are below the minimum completeness criteria as many as 22 people, class XI IPS 2 as many as 23 people, class XI IPS 3 as many as 21 people, and class XI IPS 4 as many as 21 people. If averaged throughout the class whose scores are below KK as much as 71% or 87 people. The Minimum Completion Criteria (KKM) for class economics subjects is 70.

The 2 influential aspects are internal and external. This is following the income from Hasmirati et al., (2023) that in general the factors that affect student learning outcomes can be divided into three parts, namely internal factors, external factors, and learning approach factors. locus of control factor that has a significant effect on economic learning outcomes. This is following the research from Musa et al., (2023), that economic learning outcomes are influenced by self-control. Student learning outcomes have an impact on the internal and external conditions of students, so learning outcomes have a significant effect on their learning outcomes (Tuzzakiyah et al., 2023).

Syahputra, E., Hutasuhut, S., & Hasyim. (2024). *Moderation of Locus Of Control in the Development of Android-Based Google Site Interactive Learning Media to Improve Learning Outcomes*. *Jurnal Komunikasi Pendidikan*, 8(2), 245–256. <https://doi.org/10.32585/jurnalkomdik.v8i2.5126>

The conclusion of initial observations conducted at SMAN 1 Stabat, students' self-control during learning is still low. When distributing locus of control questionnaires, it was proven that 70% did not have good internal and external conditions. This was also seen when making direct observations during the learning and teaching process in the classroom. Student enthusiasm for learning is also still low. In teaching, the teacher still uses classical learning media, namely using PPT and printed books. Learning becomes monotonous if only showing PowerPoint Presentation (PPT) through an LCD projector in front of the class and also printed books (Rahmawati & Qamariah, 2023). So, interactive media is needed that can increase the locus of control and students' economic learning outcomes.

From the description above, it is necessary to make effective improvements to improve learning outcomes and build better student locus of control. An effort made to overcome this problem is the development of interactive learning media. interactive learning media is learning media that is built with the aim that the teaching and learning process runs effectively because it uses open-source-based media (Suwarti et al., 2019). This learning media utilizes an Android smartphone using Google Sites. Google Site Android learning media is believed to be able to improve student learning outcomes (Iqbal et al., 2023). Jumini emphasized that the learning model via websites can usually encourage students and improve learning outcomes. (Halimatusyadiah & Disman, 2023).

From the description above, research was conducted with the title "Moderation of Locus of Control in the Development of Android-Based Google Site Interactive Learning Media to Improve Learning Outcomes."

METHODS

This type of research includes development research with the Four-D model consisting of Define, Design, Develop, also Disseminate (Napaldi et al., 2024). The 4-D model is a development that can be used to improve various learning instruments (Riani Johan et al., 2023). The subject of this research is class XI SMAN 1 Stabat. The sample was class XI IPS 1 as an experimental class with a total of 30 people and XI IPS 2 as a control class with a total of 30 people. The study will be realized in February - April 2024.

The definition step (Define) has 5 steps that are applied, namely analysis of initial needs, students, tasks, concepts, and specifications of learning objectives. (Tora & Rino, 2023). The design stage (Design) consists of test preparation, media selection, format selection, also initial design (Aldera et al., 2024). The development step (Develop) includes validation from the material, media, learning design, and educator experts (Kurniawan et al., 2024). At the development stage, a development test is also carried out which consists of individual trials, small group tests, and field tests (Azka Azkiyah, Satrio Hadi Wijoyo, 2020). The dissemination stage is carried out by distributing products that are ready for use (Suratno, 2024).

Data analysis techniques utilize several types. Feasibility test through material, media, language, expert assessment sheets, also teacher assessments arranged on an interval scale of 1 to 5.

Table 2. Conversion of Validity Aspect Score

Score Interval	Category
Average > 4,2	Very Feasible
3,4 < Average ≤ 4,2	Feasible
2,6 < Average ≤ 3,4	Enough Feasible
1,8 < Average ≤ 2,6	Less Feasible

To find out whether the data in the regression model is normally distributed or not, use the normality test, while to test the data use the Kolmogorov-Smirnov test (Sugiyono, 2019). The criterion is that if the significance is $> \alpha$ which is determined, namely 0.05 then it is normally distributed, but if the significance is $\leq \alpha$ then it is not normally distributed.

Data analysis afterward is a homogeneity test. The results of the homogeneity of variance test for the experimental and control classes were tested with Levene's Test using SPSS version 25 for Windows. This test is used to find out whether the two samples have homogeneous variants or not with the test criteria: If F-count < F-table they are homogeneous, but if F-count > F-table then they are not homogeneous. The significance value is greater than 0.05 or 5%.

The follow-up test is a hypothesis test. Hypothesis 1 is that the interactive learning media Google Site based on Android is suitable for use in improving student learning outcomes at XI SMAN 1 Stabat. Testing is stated to use the results of validation analysis by material experts, media, learning design also educators. The second hypothesis is that the Android-based Google Site interactive teaching media is effectively used to improve the learning outcomes of students. Learning is declared effective if there is a significant difference in the average learning outcomes of the experimental class and the control class

Hypothesis testing is realized through the average difference test or independent sample t-test. Ho decision-making is accepted if the significance value is more than 0.05 or 5%. The third hypothesis is that there is an interaction between the locus of control and the Android-based Google Site interactive teaching media on the learning outcomes. The test uses two-way Anava with a significance criterion smaller than 0.05 or 5%, then there is an interaction of locus of control on interactive learning media Google Site based on Android.

RESULTS AND DISCUSSION

The study was realized in XI IPS 1 as an experimental and XI IPS 2 as a control class. Each class consisted of 30 people. The experimental class was treated using a product that had been developed, namely Android-based Google Site learning media. The control class used PPT books and printed books on economic subjects borrowed from the school.

Syahputra, E., Hutasuhut, S., & Hasyim. (2024). Moderation of Locus Of Control in the Development of Android-Based Google Site Interactive Learning Media to Improve Learning Outcomes. *Jurnal Komunikasi Pendidikan*, 8(2), 245–256. <https://doi.org/10.32585/jurnalkomdik.v8i2.5126>



Figure 1. Application Front Page



Figure 2. Application Menu Page

Interactive learning media is created using Google's open-source application, Google Site. Then, the APK-based application was rebuilt with the help of the AppGeyser application. The product developed was named "Melani Si Andro". The acronym of "Melani Si Andro" is Android-based Google Site Interactive Learning Media.

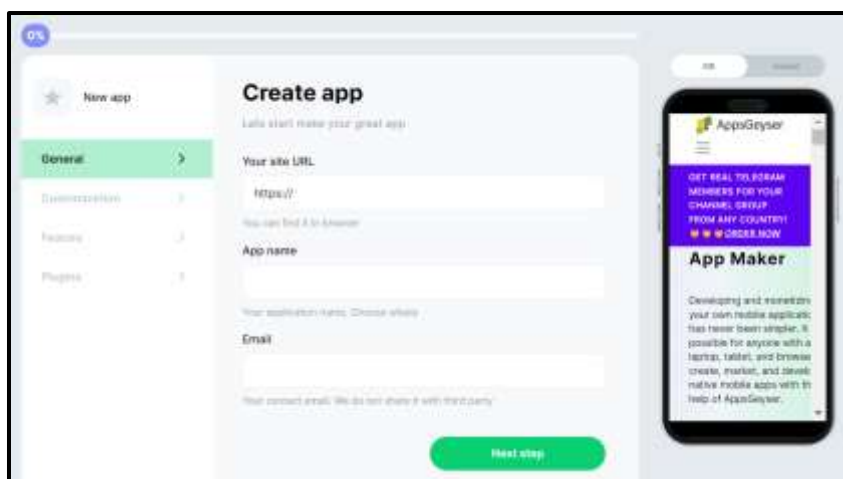


Figure 3. AppGeyser Application

AppGeyser is an online platform that allows the creation of Android and iOS applications. Using this website, users have the opportunity to design and structure their content in Android applications (Liesel L. Bien, 2023). Using AppGeyser, the distribution of content from websites, blogs, and certain files through Android apps is made easier (Nor et al., 2023). The AppGeyser Android app creation platform only takes a few minutes, so the process can be completed quickly (Rarasati, 2023). Currently, AppGeyser has experienced rapid development because this application can create HTML and iOS-based applications (Setyowati, 2020).

Normality Test

The pre and post-test normality test for the experimental also control classes used the Kolmogorove-Smirnov (K-S) SPSS Version 25 test.

Table 3. Normality Test of Pre-Test and Post-Test

Data	Sig.	Criteria Normal	Conclusion
Experiment Pre Test	0,200	>0,05	Normally Distributed
Experiment Post Test	0,057	>0,05	Normally Distributed
Control Pre Test	0,200	>0,05	Normally Distributed
Control Post Test	0,115	>0,05	Normally Distributed

Conclusions can be drawn if the experimental class shows pre-test data with a significant value of 0.200. This value is greater than 0.05 and is said to be normally distributed. Meanwhile, for the post-test, the significance value is 0.057, which is greater than 0.05, so the conclusion is that it is normally distributed. while the control class looked at pre-test data with a significant value of 0.200. This value is greater than 0.05 and is said to be normally distributed. Meanwhile, in the post-test, the significance value was 0.115, which was greater than 0.05, so it could be concluded that it was also normally distributed.

Homogeneity Test

The homogeneity test is used to understand the level of similarity of variance between two groups. Testing was done with Levene's test using the SPSS Version 25 program. Data can be said to be homogeneous if the sig value > 0.05.

	Levene	df1	df2	Sig.
	Statistic			
Based on Mean	,324	1	58	,572
Based on Median	,322	1	58	,573
Based on Median and with adjusted df	,322	1	56,9	,573
Based on trimmed mean	,322	1	58	,573

Table 4. Homogeneity Test

The pre-test homogeneity test results for the experimental and control classes were 0.572. From these results, it can be concluded that both data are considered to have the same variance (homogeneous).

Hypothesis Test

Feasibility of Android-based Google Site Interactive Learning Media

The result of the development of this study is interactive learning media. The material used is international trade developed, by looking at the material and media aspects. These two aspects will be used as the basis for designing learning in the classroom. This development

Syahputra, E., Hutasuhut, S., & Hasyim. (2024). Moderation of Locus Of Control in the Development of Android-Based Google Site Interactive Learning Media to Improve Learning Outcomes. *Jurnal Komunikasi Pendidikan*, 8(2), 245–256. <https://doi.org/10.32585/jurnalkomdik.v8i2.5126>

research was conducted to produce a product in the form of Android-based Google Site learning media "Melani Si Andro" on international trade material class XI SMAN 1 Stabat. Validation results from several experts are shown in the table below.

Table 5. Expert Validation Results

Validator	Rata-rata	Kategori
Material expert	4,60	Very Feasible
Media expert	4,63	Very Feasible
Learning design expert	4,72	Very Feasible
Teacher	4,76	Very Feasible

The results of the study are validation of material experts with an average score of 4.60, very feasible category, media experts with an average score of 4.63, very feasible category, learning design experts with an average score of 4.72, very feasible category, and from subject teachers economics lessons of 4.76 categories are also very feasible. Not only that, a field test of the main Android-based Google Site "Melani Si Andro" teaching media product was carried out.

Not only that but field testing of Google Site's main Android-based teaching media product "Melani Si Andro" was also carried out. Individual trials produced an average score of 4.67 in the very feasible category, small group tests had an average score of 4.79 in the very feasible category, also field tests had an average score of 4.72 which could be said to be very feasible.

This research is supported by research from (Qonita Putri Yuliananda, 2022), that many aspects can be used to assess the feasibility of learning media, including material, type of media used, ease of use, responses from students, evaluation process, and quality of questions presented. In his research, Google Sites website-based learning media was evaluated by a team of expert validators to assess its feasibility. The validation results concluded that the Google Site interactive learning media is feasible to use.

Other research results from (Firmansyah, Y., et al. 2023) on economic subjects are categorized as very feasible. Obtained an average percentage value from material and media experts of 80% with a decent category. Small group validation and field tests each with an average of 88.7% and 93% can be categorized as very feasible.

Effectiveness of Android-based Google Site Interactive Learning Media

The learning outcomes of XI students at SMAN 1 Stabat using the Android-based Google Site interactive teaching media were said to be very feasible. After using the media provided. The average value of learning outcomes can be seen. The average value of students before using the teaching media provided is 52.66. while after using it the average student score increased to 81.5. Based on the average value, the value saw an increase of 28.84. The average post-test score for the experimental class was 81.5 while for the control class, it was 61.16. There were 30 people in the experimental class whose scores reached KKM or 100%. There were only 6 students in the control class whose scores reached the KKM or 30%.

Syahputra, E., Hutasuhut, S., & Hasyim. (2024). Moderation of Locus Of Control in the Development of Android-Based Google Site Interactive Learning Media to Improve Learning Outcomes. *Jurnal Komunikasi Pendidikan*, 8(2), 245–256. <https://doi.org/10.32585/jurnalkomdik.v8i2.5126>

It can be concluded that Ho is rejected and Ha is accepted. because the t-test analysis carried out on independent samples showed a significance value of $0.00 < 0.05$. This means that there is a significant difference in the increase in student learning outcomes between classes that utilize the Android-based Google Site interactive learning media and those that do not utilize the Android-based Google Site interactive learning media.

This result goes according to (Suwarti et al., 2019) Site interactive learning media is an efficient learning media to build a good teaching and learning process atmosphere. Interactive learning media means that teaching and learning activities take place effectively, as well as the results achieved.

Research conducted by (Qonita Putri Yuliananda, 2022) also confirms that utilizing Google Sites-based learning media has a positive impact on student learning outcomes. With attractive design, relevant content, and high interactivity, this media is expected to increase the effectiveness of learning. Learning done with Google Site learning media is different from the results without using Google Site learning media.

The Interaction Between Locus of Control with the Development of Android-Based Google Site Interactive Learning Media on Student Learning Outcomes

Testing the interaction of locus of control with the development of interactive learning media Google Site on learning outcomes was analyzed using a two-way ANOVA, the results are below. It can be concluded that there is an interaction between locus of control and learning media on student learning outcomes. Based on the SPSS output, the results of the ANOVA calculation in the table obtained Fcount = 27,765 and a significant value of 0.000 with $\alpha = 0.05$. So you can see the sign value. $0.000 < 0.05$ so the hypothesis test rejects Ho and accepts Ha.

Table 6. Test of Between-Subjects Effects

Dependent Variable: Outcome Learning						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	
Corrected Model	3836,875 ^a	3	1278,958	52,173	,000	
Intercept	222755,625	1	222755,625	9086,915	,000	
LOC	180,625	1	180,625	7,368	,010	
Learning Media	2975,625	1	2975,625	121,385	,000	
LOC * Learning Media	680,625	1	680,625	27,765	,000	
Error	882,500	36	24,514			
Total	227475,000	40				
Corrected Total	4719,375	39				

a. R Squared = .813 (Adjusted R Squared = .797)

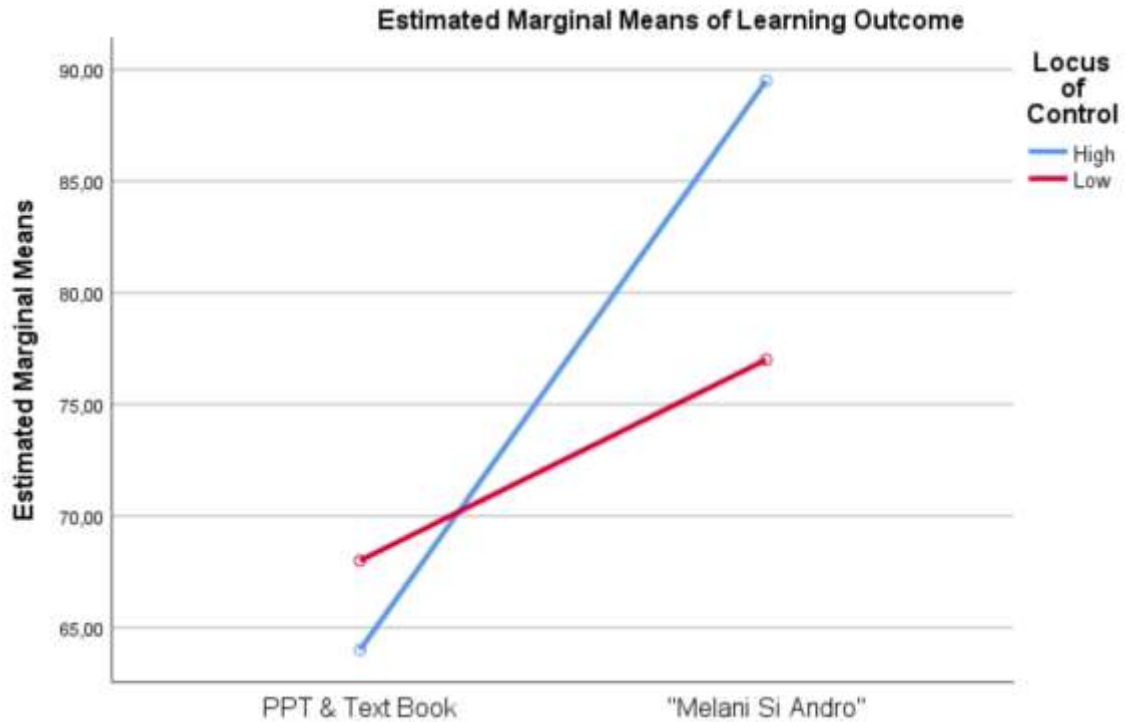


Figure 4. LOC Interaction with Melani Si Andro on Economic Learning Outcomes

CONCLUSION

The interactive teaching media provided, named "Melani Si Andro," is an Android-based Google Site interactive learning media for economics subjects, specifically focusing on international trade material. According to validation by material, media, learning design, and teacher experts, the developed teaching media is considered highly feasible. The individual, small group, and field tests also rated it as very feasible. Therefore, this Android-based Google Site interactive learning media is highly suitable for implementation in teaching and learning activities. Learning outcomes using this media have shown significant improvement, as evidenced by the pre- and post-test results. Hence, "Melani Si Andro" is effectively used in learning. However, the interaction of students' locus of control with the development of Google Site interactive learning media on the learning outcomes of class I students is not proven, aligning with the two-way ANOVA test result which produced a significance value of 0.979, greater than 0.05. Students can benefit from the Android-based Google Site interactive learning media by learning anywhere and anytime, thanks to its online nature, allowing for independent learning. The interactive learning media developed is also expected to attract the attention of schools and teachers, providing a foundation for the development of IT-based learning media for other subjects.

Future research should explore the long-term impact of using Android-based Google Site interactive learning media on student performance and engagement across different subjects and grade levels. It is also recommended to investigate the effectiveness of similar interactive learning media in diverse educational settings, including rural and underserved communities. Additionally, examining the potential for integrating other advanced technologies, such as

Syahputra, E., Hutasuhut, S., & Hasyim. (2024). Moderation of Locus Of Control in the Development of Android-Based Google Site Interactive Learning Media to Improve Learning Outcomes. *Jurnal Komunikasi Pendidikan*, 8(2), 245–256. <https://doi.org/10.32585/jurnalkomdik.v8i2.5126>

augmented reality or artificial intelligence, into interactive learning media could provide further insights into enhancing educational experiences.

REFERENCES

- Aldera, A., Arwansyah, A., & Fitrawaty, F. (2024). Development Media Learning Audio Visual Based on Web Blog for Increasing Economy Learning Result. *Randwick International of Education and Linguistics Science Journal*, 5(1), 244–252. <https://doi.org/10.47175/rielsj.v5i1.942>
- Aljermawi, H. N., Ayasrah, F. T. M., Al-Said, K., Abu-Alnadi, H. J., & Alhosani, Y. (2024). The effect of using flipped learning on student achievement and measuring their attitudes towards learning through it during the corona pandemic period. *International Journal of Data and Network Science*, 8(1), 243–254. <https://doi.org/10.5267/j.ijdns.2023.9.027>
- Amitkumar Dudhat, & Ardi. (2023). Application of Information Technology to Education in the Age of the Fourth Industrial Revolution. *International Transactions on Education Technology (ITEE)*, 1(2), 131–137. <https://doi.org/10.34306/itee.v1i2.319>
- Azka Azkiyah, Satrio Hadi Wijoyo, F. A. (2020). Development of Website-Based Learning Media in Basic Graphic Design Subjects Using the Four-D Development Model (Study at SMK Negeri 1 Rembang). *Jurnal Teknologi Informasi Dan Ilmu Komputer (JTIK)*, 9(4), 875–822. <https://doi.org/10.25126/jtiik.202295299>
- Daryanes, F., Darmadi, D., Fikri, K., Sayuti, I., Rusandi, M. A., & Situmorang, D. D. B. (2023). The development of articulate storyline interactive learning media based on case methods to train student's problem-solving ability. *Heliyon*, 9(4), e15082. <https://doi.org/10.1016/j.heliyon.2023.e15082>
- Fathuddin, F., Nurdin, N., & Rustina, R. (2023). The Challenges of Teaching Islamic Education In the Millennial Generation Era. *International Journal of Contemporary Islamic Education*, 5(1), 1–14. <https://doi.org/10.24239/ijcied.vol5.iss1.66>
- Fatimah, F. S., Asy'ari, H., Sandria, A., & Nasucha, J. A. (2023). Learning Fiqh Based on the TAPPS (Think Aloud Pair Problem Solving) Method in Improving Student Learning Outcomes. *At-Tadzkir: Islamic Education Journal*, 2(1), 1–15. <https://doi.org/10.59373/attadzkir.v2i1.13>
- Firmansyah, Y., Sudarman, S., Partha, M. N., & Rahayu, V. P. (2023). Development of Google Sites Web-Based Learning Media on Economics Subjects. *Jurnal Prospek: Pendidikan Ilmu Sosial Dan Ekonomi*, 5(1), 15–20. <https://doi.org/https://doi.org/10.30872/prospek.v5i1.2415>
- 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>
- Hasmirati, H., SY, N., Mustapa, M., Dermawan, H., & Hita, I. P. A. D. (2023). Motivation and Interest: Does It Have an Influence on Pjok Learning Outcomes in Elementary School Children? *Journal on Research and Review of Educational Innovation*, 1(2), 70–78. <https://doi.org/10.47668/jrrei.v1i2.785>
- Iqbal, M., Gusnardi, G., & Hendripides, H. (2023). The Effect of Utilizing the Google Site as a Learning Resource and Learning Motivation on Learning Outcomes in Economics Subject

- Syahputra, E., Hutasuhut, S., & Hasyim. (2024). Moderation of Locus Of Control in the Development of Android-Based Google Site Interactive Learning Media to Improve Learning Outcomes. *Jurnal Komunikasi Pendidikan*, 8(2), 245–256. <https://doi.org/10.32585/jurnalkomdik.v8i2.5126>
- at SMAN 1 Tembilahan Hulu. *JETISH: Journal of Education Technology Information Social Sciences and Health*, 2(2), 1563–1566. <https://doi.org/10.57235/jetish.v2i2.574>
- Karno, E. (2023). The Relationship of Student Learning Interests and Discipline to Economic Learning Outcomes: Case Study of Students in Class XI Madrasah Aliyah. *Journal for Educators, Teachers and Trainers*, 14(5), 172–183. <https://doi.org/10.47750/jett.2023.14.05.019>
- Kurniawan, R., Hamzah, S., Hiasa, F., & Yulistio, D. (2024). Developing android-based literature theory learning media using the MIT App inventor application. *JOALL (Journal of Applied Linguistics and Literature)*, 9(1), 72–83. <https://doi.org/10.33369/joall.v9i1.27716>
- Liesel L. Bien. (2023). utilization of mobile game application in assessing students' learning in economy. *Journal, Education A Multidisciplinary*, 577–586. <https://doi.org/10.5281/zenodo.8205780>
- Musa, M., Arifin, A., Sukmawati, E., Zulkifli, Z., & Mahendika, D. (2023). The Relationship between Students' Spiritual and Emotional Intelligence with Subjects Learning Outcomes. *Journal on Education*, 5(4), 11729–11733. <https://doi.org/10.31004/joe.v5i4.2128>
- Napaldi, R., Yusri, M. A. K., Syafril, S., & Supendra, D. (2024). Development of Android-Based Learning Media in Class X MA Arabic Language Subjects. *Jurnal Ilmiah Mandala Education*, 10(1), 158. <https://doi.org/10.58258/jime.v10i1.6584>
- Nor, M., Azman, A., Ruslan, S., Ab-latif, Z., & Pratama, H. (2023). *The Development of Mobile Application Software MyNutrient in Home Science Subject*. 19(1).
- Qonita Putri Yuliananda, N. C. S. (2022). Development of Website-Based Learning Media in The Form Of Google Sites for XI IPS Class Students. *Jurnal Pendidikan Ekonomi (JURKAMI)*, 7(2), 15–28. <https://doi.org/https://doi.org/10.31932/jpe.v7i2.1649>
- Rahmawati, S., & Qamariah, Z. (2023). A Preparation Of Format And Presentation Media For English Learning In Merdeka Curriculum. *Jurnal Ilmu Pendidikan Nasional*. 1, 103–110.
- Rarasati, N. (2023). Interactive Learning Media Development Based on Android Assisted by Google Sites on Building Static Calculation Element in 2nd Depok National Vocational High School. *Jurnal Pendidikan Teknik Sipil*. V(1), 14–30.
- Riani Johan, J., Iriani, T., & Maulana, A. (2023). Application of the Four-D Model in the Development of Video Media for Small Group and Individual Teaching Skills. *Jurnal Pendidikan West Science*, 01(06), 372–378.
- Setyowati, N. (2020). Use of the AppsGeyser application in the assessment of self-study activities in English for the equality education. *Journal of Community Service and Empowerment*, 1(3), 142–149. <https://doi.org/10.22219/jcse.v1i3.12698>
- Sugiyono. (2019). *Statistika untuk Penelitian*. Alfabeta.
- Sulistiani, I. R., Setyosari, P., Sa'dijah, C., & Praherdhiono, H. (2023). Technology integration through acceptance of e-learning among preservice teachers. *Indonesian Journal of Electrical Engineering and Computer Science*, 31(3), 1821–1828. <https://doi.org/10.11591/ijeecs.v31.i3.pp1821-1828>
- Suratno, S. (2024). Development of Student Worksheets for Economics Subjects Based on Learning by Doing. *Tekno - Pedagogi: Jurnal Teknologi Pendidikan*, 14(1), 33–41. <https://doi.org/10.22437/teknopedagogi.v14i1.32520>
- Suwarti, S., Restu, R., & Hidayat, H. (2019). Interactive Multimedia Development in Social

Syahputra, E., Hutasuhut, S., & Hasyim. (2024). Moderation of Locus Of Control in the Development of Android-Based Google Site Interactive Learning Media to Improve Learning Outcomes. *Jurnal Komunikasi Pendidikan*, 8(2), 245–256. <https://doi.org/10.32585/jurnalkomdik.v8i2.5126>

Sciences Subject of Disaster Material at Grade IV SDN. (Public Elementary School) No.024183 East Binjai on 2017/2018. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, 2(1), 216–232. <https://doi.org/10.33258/birle.v2i1.211>

Tora, T., & Rino. (2023). *E-Module: Online Learning Media for Economics Learning in Senior High School*. Atlantis Press International BV. https://doi.org/10.2991/978-94-6463-158-6_22

Tuzzakiyah, A., Faslah, R., & Yohana, C. (2023). The Influence of Locus of Control and Academic Stress on Academic Procrastination of Class XI Students at SMK Negeri 50 Jakarta. *International Journal of Social Science, Education, Communication and Economics (SINOMICS JOURNAL)*, 2(1), 103–118. <https://doi.org/10.54443/sj.v2i1.117>

Yunitasari, F., Sintawati, M., & Mastul, A.-R. H. (2023). The Application of Contextual Teaching and Learning for Increasing Learning Outcomes and Reducing Anxiety in Elementary School Mathematics. *International Journal of Learning Reformation in Elementary Education*, 2(02), 77–85. <https://doi.org/10.56741/ijlree.v2i02.283>