BIOSFER: Jurnal Tadris Biologi Vol. 15 No. 1 (2024) 101-109

BIOSFER: JURNAL TADRIS BIOLOGI
p-ISSN: 2086-5945 (print), e-ISSN: 2580-4960 (online), DOI 10.24042/biosfer.v15i1.19424
http://ejournal.radenintan.ac.id/index.php/biosfer/index

Development Of Google Site As An Interactive Learning Media Integrated With Islamic Values

Dyah Retno Wulandari[1], Neng Sholihat [2], Hadi Purwanto [3*], Nurulhuda Jehloh[4]

[1, 2, 3] Universitas Muhammadiyah Riau, Indonesia
[4] Suratthani Rajabhat University, Thailand

ARTICLE INFO

Article History
Received : 05-01-2024
Accepted : 28-05-2024
Published : 30-06-2024

Keywords:
Google site; Integration of Islamic values; learning medi; science education.

***Correspondence email:**
hadipurwanto@umri.ac.id

ABSTRACT

The research of the study was to determine the feasibility of Google Site learning media integrated Islamic values by utilizing advances in technology and student perceptions. The type of research is R&D using the ADDIE model design. The subjects of this study were researchers, material, religious, and media experts, as well as 61 seventh-grade students of junior high school. The data collection technique is to use the interview method, observation and validation sheet, and response questionnaire. Data analysis is quantitative according to the ADDIE model development procedure. The results showed that the feasibility of the product from material expert validation obtained a score of 97%, religious expert validation 100%, media expert validation with a score of 96%, and educator practicality obtained 91% and 95% learner response. Based on the results obtained, the interactive learning media of the integrated solar system of Islamic values is feasible and practical to be used to help learn and add insight into the relationship of material with Islamic values at junior high school.

Pengembangan Google Site Sebagai Media Pembelajaran Interaktif yang Terintegrasi Dengan Nilai-Nilai Islam

ABSTRAK: *Tujuan penelitian adalah untuk mengetahui kelayakan media pembelajaran google site diintegrasikan nilai-nilai islam dengan memanfaatkan kemajuan teknolog dan persepsi peserta didik. Jenis penelitian adalah R&D dengan menggunakan desain model ADDIE. Subjek penelitian ini yaitu peneliti, ahli materi, agama dan media, serta 61 peserta didik kelas VII sekolah menengah pertama. Teknik pengumpulan data adalah dengan menggunakan metode wawancara, observasi dan lembar validasi serta angket persepsi. Analisis data yaitu menggunakan deskriptif kuantitatif sesuai prosedur pengembangan model ADDIE. Hasil penelitian menunjukkan bahwa kelayakan produk dari validasi ahli materi memperoleh skor 97%, validasi ahli agama 100%, validasi ahli media dengan skor 96%, prktikalitas pendidik memperoleh 91% dan respon perserta didik 95%. Berdasarkan hasil yang diperoleh maka media pembelajaran interaktif sistem tata surya terintegrasi nilai-nilai islam layak dan praktis digunakan untuk membantu belajar dan menambah wawasan keterkaitan materi dengan nilai-nilai islam di sekolah menengah pertama.*

INTRODUCTION

Education according to Constitution Number 20 of 2003, namely business conscious and planned for realize atmosphere learning and potential himself for own religious spiritual power (Widodo et al., 2023);(Harahap et al., 2024). Enhancement quality education become challenge for educator for more creative and innovative in the learning process (Puspita, Rakhmawati, et al., 2023);(Annisa & Simbolon, 2018). So, that it is created atmosphere interactive and interesting learning in foster curiosity natural, trained For think systematic and objective as well as participant educate Study solve problem to be achieved expected success (Putra,2022);(Vitasari, 2017) .

One key success in study that is optimal results , to be obtained optimal results in the learning process teach an educator expected capable master variation appropriate learning with condition participant educate (Handoko et al., 2024);(Agusminarti, 2020). Apart from that, educators own contribution to quality education and requires educator control component learning that includes method learning and the media used in learning (Hamka & Shobayar, 2021);(Haka et al., 2020). So, that need exists a learning strategy that can used participant educate For understand material in accordance with need curriculum (Andriyani & Apriantoro, 2023);(Selviani 2018).

2013 curriculum is something policy new government in field expected education capable answer challenges and problems that will arise faced by the world of education (Wulandari, 2020);(Sinambela, 2013). Ministry of Education and Culture emit regulation about 2013 curriculum in schools Intermediate First or Madrasah Tsanawiyah number 58 of 2014. The 2013 curriculum has designed core competencies each other related, namely : spiritual, social, knowledge, and skills competence basic and must developed in every incident learning in a way integrated (Wulandari, 2021); (Anggila, W. (2022).

Role curriculum in unit education that is For realize people who are knowledgeable, cultured, pious as well as capable face challenges in the era of globalization (Sholiha et al., 2021);(Raihany et al., 2022). Impact globalization not only influence knowledge and technology, but also characteristics morals and style study the modern generation in the 4.0 era is bound with technology (Annisa & Simbolon, 2018);(Aisyah, 2022).

Currently smartphones are one product lots of technology used. About 1.7 billion Smartphones are used all over the world, with a total world population of 6 billion (Amirullah & Susilo, 2018); (Melissa, 2022). Based on results interview with one educator Mrs. Emilawati, S. Pi and several participants educate, moment At Muhammadiyah 1 Middle School, there are already 95% participants educate own smartphones individual who can brought to school. A number of educators also provide explanation that participant educate can using a smartphone during class time If required, and facilities Wi-Fi at school is available makes it easier participant educate in access network internet. This thing potential for developing learning media with use smartphones.

Learning media is one means main requirements for support success from a learning process (Windari et al., 2023);(Ginting et al., 2022), appropriate with National Higher Education Standards in Regulation Government No. 32 of 2013 at 19 paragraph 1 states in Study must can push participant educate for learn. As well as regulations The Minister of National Education No. 41 of 2007 demands educator for planning and developing material learning (Saifulloh & Darwis, 2020);(Nadia, 2020).

According to results observations made from July to October 2022, author found the science learning process at JUNIOR HIGH SCHOOL Muhammadiyah 1 using method expository, where participant educate more listen explanation material and accept it so

just from educator. This thing because participant educate easy bored and thinking science learning is difficult. On the situation This writer find innovation for develop learning media that can make it easier participant educate with existing potential.

Learning media based website is innovation that has influence Enough big to transformation changes in the learning process (Pradana & Apriadji, 2021); (Ratama et al., 2021). Learning media Google sites still Not yet Lots used , especially in Indonesia which discusses about science material (Pradana & Apriadji, 2021). Neither has Muhammadiyah 1 Middle School Pekanbaru apply learning with google site. This thing make writer want to develop google site as a learning medium that has recency from google site previously is load guide method use google site on the page initial, integrated values Islam along with Al-Quran verses that can be read and heard participant educate, update with information about incident natural latest, quiz that contains a number of type questions, as well own appearance attractively designed with canva. Besides being easy accessed by participants educate, designed google site writer packed in One web site that contains several interesting menus, as well fill sourced teaching materials from relevant books and articles.

Tree discussion developed science material writer through learning media google site that is solar system class VII semester 2. Discussion material solar system. Enough broad and difficult observed in a way direct (abstract). So that need studied through visualization and animation in learning media with involvement technology in education (Nadzif et al., 2022); (Rosiyana, 2021). Solar system material tightly relationship with life area that must be is known participant educate in a way draft religious theories and concepts with integration values Islam in accordance with the 1945 Constitution Article 31, paragraph 5 which states Government advance knowledge and technology with uphold tall religious values and unity nation for progress civilization as well as well-being people human.

Integration values Islam on Google site designed based on the Al- Quran , hadith and sunnah which are in line with KI as formulation competence a spiritual attitude of respect and appreciation the religious teachings he adheres to (Shofa et al., 2020);(Nadzif, 2022). That thing expected can make it easier educator in integrate values Islam. According to Abas (2020) and Sidik & Fahyuni (2021) development of learning media that contains integration between science learning with the Qur'an, and religious values to form a generation that doesn't only superior in a way academic (cognitive) but also physically attitude and spirituality to achieve it optimal education .

Deep integration science learning has objective for remove dichotomy between knowledge general and religious knowledge, so each other strengthen it, support it knowledge general and Islamic religious teachings. This thing in line with the religion adhered to participant Muhammadiyah 1 Middle School students are Islamic. So that integration can make an outline draft integration in eye science lessons especially on topics creation natural universe material solar system presented in learning media interactive (Rahmawati & Bakhtiar, 2019);(Lia,2022). The novelty of this research is in the form of solar system material that is integrated with Islamic values. The existence of natural phenomena related to Qur'anic verses and inserting images in each sub-material, animations and learning videos that are in accordance with the material, and audio that can be heard by users.

METHOD

This type of research is development research or Research and development (R&D), following the ADDIE model which includes five process stages, namely Analysis, Design, Development, Implementation and Evaluation.

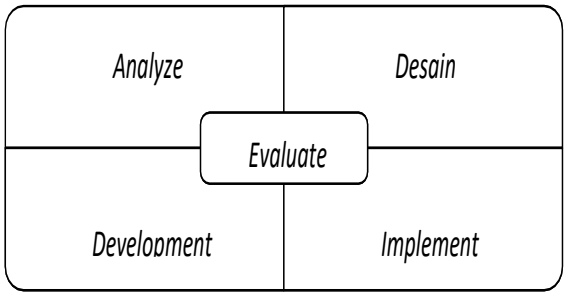

Figure 1. Addie's stages
Source: (Priadi,2020)

The product developed in this research is interactive learning media integrated with Islamic values. Research & Development is a research method used to produce certain products and test the effectiveness of these products (Raihan, 2017);(Hidayat,2021). In this research, the population was 140 class VII students at Junior High School, then 61 samples were obtained for the even semester of the 2023 academic year who would use interactive modules. The sampling technique used is Simple Random Sampling. Data collection techniques in this study are non-test techniques using questionnaires consisting of material expert validation questionnaires, media expert validation questionnaires, practicality test questionnaires, and student response questionnaires. Data obtained from validation sheets and questionnaires were further analyzed using Likert scales.

$$\text{Percentage} = \frac{\text{Number of scores obtained}}{\text{Maximum number of score}} \times 100\%$$

Source : (Widodo, 2023)

On research for present the data obtained from results validation expert material nor media experts and practicality test questionnaires as well as response participant educate converted in category mark as following :

Table 1. Criteria Appropriateness

Valuation (%)	Criterion
76%-100 %	Very Worth It
56% - 75 %	Proper
40% - 55 %	Decent Enough
0% - 39 %	Not feasible

Source: (Arikunto, 2021)

Table 2. Practicality Test Criteria

Valuation (%)	Criterion
0% - 25%	Not practical
26% - 50%	Enough Practical
51% - 75%	Practical
76% - 100%	Very Practical

Source: (Arikunto, 2021)

Table 3. Criteria for Response Results Learners

Valuation (%)	Criterion
76% - 100 %	Tall
56% - 75 %	Currently
40% - 55 %	Low

Source: (Arikunto, 2021)

RESULTS AND DISCUSSION

Validation results expert material and validation media experts do before module interactive used. Purpose of learning media interactive integrated values Islam. Puspita et al. (2023) argue, this done validation is for see appropriateness module interactive this. Validation results have been obtained carried out by the validator is as following:

Validation results expert material 97 % of Google sites are used as learning media interactive solar system integrated values Islam declared very worthy for used.

Table 4. Results expert material

No	Aspect Evaluation	Total Score	Percentage (%)	Category
1	Introduction	12	100	Very worthy
2	Contents	30	94	Very worthy
3	Evaluation	20	100	Very worthy
4	Closing	4	100	Very worthy
	Amount	66	97	Very worthy

Validation results religious experts by 100% Google site as a learning medium interactive solar system integrated values Islam declared very worthy for used. This is in line with Larasati et al. (2020), the fact that media with integrated materials with Islamic values will foster religious character, honesty, and being able to think logically to produce new ways.

Table 5. Results religious expert

No	Indicator	Total Score	Percentage (%)	Category
1	Suitability use verses of the Koran	12	100	Very worthy
2	Integration	8	100	Very worthy
3	Religiosity	4	100	Very worthy
Amount		24	100	Very worthy

Validation results media experts account for 97% *of* the Google site as a learning medium interactive solar system integrated values Islam declared very worthy for used. Berlin et al., (2022) and Subarkah et al. (2021) argued that the purpose of providing material with Islamic values in the media is to provide provisions to students as a guideline for life and religion as a solid foundation.

Table 6. Media validation results

No	Aspect Evaluation	Total Score	Percentage (%)	Category
1	Device soft	18	80	Very worthy
2	Learning media	20	100	Very worthy
3	Audio visual communication	20	100	Very worthy
Amount		57	97	Very worthy

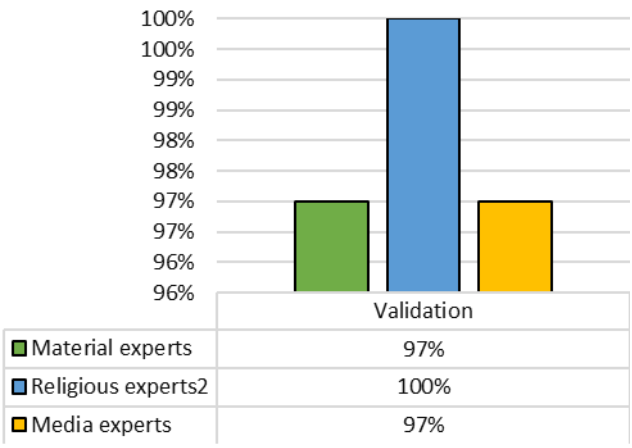

Figure 2. Graph Material, Religion and Media Expert Validation

Based on the validation results obtained from 3 experts, namely the validation of material experts getting 97%, religious experts 100%, media experts 97%. Practicality test results done to use for see practicality of learning media interactive integrated Islamic values that have used or during used in the learning process. Mega & Sari (2021) and Ariyanti et al. (2023) argue, the integration of science and technology with Islam in the context of modern science can be as professionalism in a worldly science accompanied by the foundation of divine consciousness. Following this practicality test results by educators:

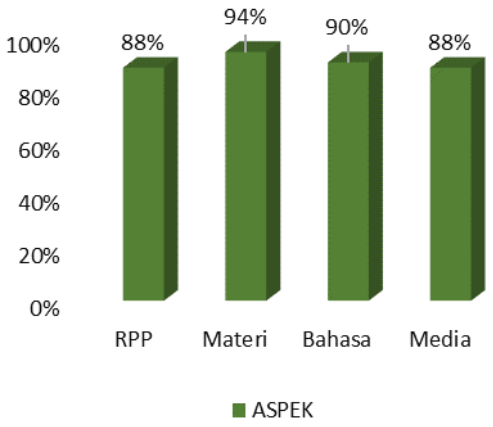

Figure 3. Aspect Practicality

Practicality test results by educators in a way whole obtain mark percentage 91% with very practical criteria. Educators really appreciate it on very innovative product. This for implemented to participant educate and acquire impression positive. This is in line with Fahmi et al. (2021) and Nafiah (2020) media with interesting learning materials and advanced technology that will motivate students in the learning process.

Response results obtained from 61 students of class VII 1 Junior High School chosen by the researcher as classes that use learning media interactive in the learning process. Results response are described as follows:

Feeling aspect like in the students' responses, they obtained a percentage score of 90 %, which means they have the criteria of high interest in learning. Meanwhile, the attention aspect obtained a percentage value of 89.20%, so it is included in the high criteria. The final aspect is involvement, in this aspect the percentage value obtained is 89 %, which means it is included in the

criteria high. So, the overall percentage score obtained is 87 %.

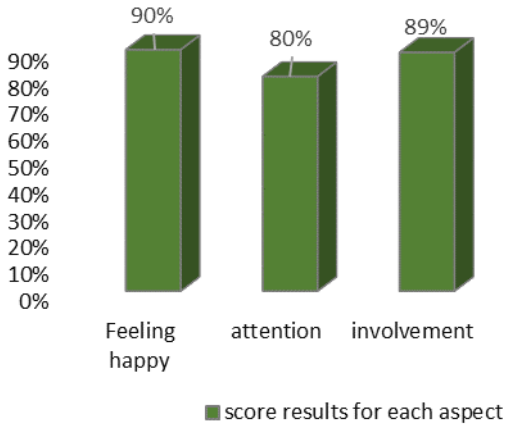

Figure 4. Response Students Per Aspect Evaluation

Qur'an verses motivate students to be directly involved in learning with the help of technology, contain an outline of the interrelation of Islamic material and values, so that students are easy to learn the subject matter (Diena et al., 2016). Products with integrated Islamic character values make a student good moral and get to know his god more and more, namely Allah SWT. Islamic education is a perfect method in an effort to create a generation with noble character (Andriyani & Apriantoro, 2023). Meilinda & Hakim (2024) argue, the achievement indicator regarding this material is so that students can understand the order and greatness of God's creation so that they have religious character values, namely honesty, discipline, environmental care and health.

CONCLUSIONS AND SUGGESTIONS

Based on data analysis as well discussion can conclude that (1) Learning media products the resulting google site already tested worthy based on results validation by expert validators materials, religious experts, and media experts. Percentage eligibility obtained from results validation expert material by 97% with very worthy category, religious experts obtained by 100% with very worthy category and media expert 97% with Very worthy category. (2) Products that have been stated eligible by the next validator tried out to educators and participants educate. Percentage yield practicality gained from practicality educator by 91% with very practical and responsive category participant educate obtain score percentage 87% with category interest high learning. (3) The suggestions for further researchers are can develop the Google site as a learning medium for other materials and It is hoped that future researchers can add a more complete collection of solar system events.

REFERENCES

Abas, S. W. (2020). Integrasi Pendidikan Al-Qur'an Dalam Pembelajaran IPA. 1–12.

Agusminarti, A & Hudi, I. (2020). Developing Android-Based Team Games Tournament (TGT) Type Cooperative Learning For Students Academic Achievement In Biology. *Jurnal Pajar (Pendidikan dan Pengajaran)*, *4*(6), 1277–1286.

Amirullah, G., & Susilo, S. (2018). Pengembangan Media Pembelajaran Interaktif Pada Konsep Monera Berbasis Smartphone Android. *Wacana Akademika: Majalah Ilmiah Kependidikan*, *2*(1), 38. https://doi.org/10.30738/wa.v2i1.2555

Andriyani, N., & Apriantoro, M. S. (2023). Enhancing Students Cognitive Abilities in Integrated Islamic High Schools: A Need-Based Analysis for Developing Chemistry Modules Infused with Islamic Values. *International Journal of Humanities and Social Science Studies*, *1*(1), 1–10.

Annisa, N., & Simbolon, N. (2018). Pengembangan Media Pembelajaran Interaktif IPA Berbasis Model Pembelajaran Guided Inquiry Pada Materi Gaya Di Kelas IV SD Negeri 101776 Sampali. *School Education Journal Pgsd Fip Unimed*, *8*(2), 217–229. https://doi.org/10.24114/sejpgsd.v8i2.10199

Arikunto, S. (2021). *Dasar-Dasar Evaluasi Pendidikan Edisi 3*. Jawa Barat : Bumi Aksara.

Ariyanti, N., Taurusta, C., & Farihah, A. (2023). Integrating Al-Islam Kemuhammadiyahan Values into Linear Algebra E-Module: Analysis of Development Needs. *Indonesian Journal of Innovation Studies*, *14*(2), 1–12.

Berlin, A. W., Apriliaswati, R., & Rezeki, Y. S. (2022). Developing E-Module of Islamic Reading Text Materials. *Journal of Foreign Language Teaching and Learning*, *7*(1), 24–40. https://doi.org/10.18196/ftl.v7i1.13210

Diena, S. A., Sopyan, A., & Masturi. (2016). Pengembangan Bahan Ajar Ipa Berbasis Komplementasi Ayat-Ayat Sains Quran Pada Pokok Bahasan Sistem Tata Surya. *UPEJ Unnes Physics Education Journal*, *6*(1), 44–54.

Fahmi, A. N., Yusuf, M., & Muchtarom, M. (2021). Integration of Technology in Learning Activities: E-Module on Islamic Religious Education Learning for Vocational High School Students. *Journal of Education Technology*, *5*(2), 282–290. https://doi.org/10.23887/jet.v5i2.35313

Haka, N. B., Anggoro, B. S., Hamid, A., Novitasari, A., Handoko, A., & Puspita, L. (2020). The Development of Biology Module Based on Local Wisdom of West Lampung: Study of Ecosystem Material. *Journal of Physics: Conference Series*, *1467*(1). https://doi.org/10.1088/1742-6596/1467/1/012013

Hamka, D., & Sholihat, N. (2021). Faktor-Faktor Penentu Perilaku Guru Junior High School Menggunakan Teknologi Dalam Pembelajaran Online: Studi Kasus Di Provinsi Riau. *Jurnal Pendidikan*, *22*(2), 123–133. https://doi.org/10.33830/jp.v22i2.1934.2021

Handoko, A., Pratama, A. O. S., Haka, N. B., Puspita, L., Wulandari, E., Marzuki, Z. A. W., & Anggoro, B. S. (2024). Creative thinking: The Effect of Green School-Based Project Based Learning (PjBL) Model. *E3S Web of Conferences*, *482*. https://doi.org/10.1051/e3sconf/202448204016

Harahap, F., Sihombing, J. G. M., Suriani, C., Nusyirwan, N., Edi, S., Daulae, A. H., & Nursamsu, N. (2024). Development of Pocket Book of Tissue Culture Based on Case Method. *Biosfer: Jurnal Tadris Biologi*, *14*(2), 149. https://doi.org/10.24042/biosfer.v14i2.17305

Larasati, A. D., Lepiyanto, A., Sutanto, A., & Asih, T. (2020). Pengembangan E-Modul Terintegrasi Nilai-Nilai Islam Pada Materi Sistem Respirasi. *Jurnal Penelitian Pendidikan Biologi*, *4*(1), 1–9. http://jurnal.um-palembang.ac.id/index.php/dikbio

Mega, I. R., & Sari, W. P. (2021). Need Assesment of English E-Module Integrated to Islamic Value Development for the Eighth Grade Students at Islamic Schools. *Ethical Lingua*, *8*(2), 493–500. https://doi.org/10.30605/25409190.314

Meilinda, F., & Hakim, M. A. R. (2024). The Development of Islamic Scouting Education Teaching Module for Islamic Religious Education Study Program in Indonesia. *International Journal of Multicultural and Multireligious Understanding*, *11*(7), 164–175.

Melissa Ananda Tambunan1, P. S. (2022). Pengembangan Media Pembelajaran Interaktif Berbasis Website (Google Sites) Pada Materi Fungsi Di SMA Negeri 15 Medan. *Jurnal Ilmiah Multi Disiplin Indonesia*, *2*(1), 163–173.

Nadia, F. A. (2020). Ringkasan Kebijakan | Mengkaji Hambatan Pembelajaran Jarak Jauh di Indonesia di Masa Covid-19.

CIPS Indonesia, *19*(2), 1–9.

Nadzif, M., Irhasyuarna, Y., & Sauqina, S. (2022). Pengembangan Media Pembelajaran Interaktif IPA Berbasis Articulate Storyline Pada Materi Sistem Tata Surya JUNIOR HIGH SCHOOL. *JUPEIS : Jurnal Pendidikan Dan Ilmu Sosial*, *1*(3), 17–27. https://doi.org/10.55784/jupeis.vol1.iss3.69

Nafiah, U. (2020). Developing english modules with integrated islamic values and jambi local wisdom. *Studies in English Language and Education*, *7*(1), 96–112. https://doi.org/10.24815/siele.v7i1.15138

Pradana, T., & Apriadji, A. R. (2021). Pengembangan Media Pembelajaran Interaktif Sistem Tata Surya Berbasis Virtual Reality Box 360˚ Untuk Platform Android. *Spirit*, *13*(2), 13–17. https://doi.org/10.53567/spirit.v13i2.213

Puspita, L., Rakhmawati, I., & Komarudin, K. (2023). Developing Student Worksheet Based on Islamic, Science, Environment, Technology, and Society on Junior High School Students' Critical Thinking Skills. *BIOSFER: Jurnal Tadris Biologi*, *14*(2), 273–284. https://doi.org/10.24042/b

Puspita, L., Rosa, V. A., Hidayah, N., & Velina, Y. (2023). Flipped classroom learning model assisted by the experimentation method : the impact on problem-solving skills and learning independence. *International Journal of Mathematics and Science Education Research*, *1*(2), 1–12.

Raihan, M. (2017). *Metodologi Penelitian*. Universitas Islam Negeri Syarif Hidayatullah : Jakarta.

Rahmawati, R. D., & Bakhtiar, N. (2019). Pembelajaran IPA Berbasis Integrasi Islam-Sains pada Pokok Bahasan Penciptaan Alam Semesta dan Tata Surya. *Journal of Natural Science and Integration*, *1*(2), 195. https://doi.org/10.24014/jnsi.v1i2.6599

Raihany, V., Widjaya, S. D., Meliya, R., & Andi, A. (2022). Problematika Guru Dalam Pengembangan Media Pembelajaran Sejarah. *Jurnal Pendidikan Sejarah Indonesia*, *5*(2), 122. https://doi.org/10.17977/um0330v5i2p122-128

Saifulloh, A. M., & Darwis, M. (2020). Manajemen Pembelajaran dalam Meningkatkan Efektivitas Proses Belajar Mengajar di Masa Pandemi Covid-19. *Bidayatuna: Jurnal Pendidikan Guru Mandrasah Ibtidaiyah*, *3*(2), 285. https://doi.org/10.36835/bidayatuna.v3i2.638

Selviani, S., & Anggraini, W. (2018). Pengembangan Media Pembelajaran Majalah Fisika. *Indonesian Journal of Science and Mathematics Education*, *01*(1), 79–87.

Shofa, M., Nailufa, L. E., & Haqiqi, A. K. (2020). Pembelajaran IPA Terintegrasi Al-Quran dan Nilai-Nilai Pesantren. *IJIS Edu : Indonesian Journal of Integrated Science Education*, *2*(1), 81. https://doi.org/10.29300/ijisedu.v2i1.1928

Sholiha, D. A., Ramdani, A., & Merta, I. W. (2021). Difficulties of Biology Teachers in Planning and Implementing Authentic Assessments in the 2013 Curriculum: Descriptive Studies on Biology Teachers in Senior High Schools. *Prisma Sains : Jurnal Pengkajian Ilmu Dan Pembelajaran Matematika Dan IPA IKIP Mataram*, *9*(2), 163. https://doi.org/10.33394/j-ps.v9i2.4117

Sidik, M. F., & Fahyuni, E. F. (2021). Development of a Digital Live Worksheet in the Religion Subject to Improve Student Learning Outcomes at Junior High School. *Academia Open*, *6*,

1–11. https://doi.org/10.21070/acopen.6.2022.2247

Sinambela, P. N. J. M. (2013). Kurikulum 2013 dan implementasinya dalam pembelajaran. *E-Journal Universitas Negeri Medan*, *6*, 17–29.

Subarkah, C. Z., Alhak, A. A., Sari, S., Ruswandi, U., & Rochman, C. (2021). Developing E-module on the Topic of Integrated Addictive Substances with Islamic Values. *JTK (Jurnal Tadris Kimiya)*, *6*(1), 16–25. https://doi.org/10.15575/jtk.v6i1.9802

Vitasari, S. D. (2017). Hakikat IPA dalam Penilaian Kemampuan Literasi IPA Peserta Didik JUNIOR HIGH SCHOOL. *Pros. Seminar Pend. IPA Pascasarjana UM*, *2*, 71–77.

Widodo, W., Purwanto, H., Sholihat, N., Jehloh, N., & Suryanti, S. (2023). Development of Integrated Interactive Modules Education for Sustainable Development (ESD) Global Warming Material Junior High School Muhammadiyah Pekanbaru. *Biosfer : Jurnal Tadris Biologi*, *14*(2), 141–148. https://doi.org/10.24042/b

Windari, M. R., Prihatin, J., & Fikri, K. (2023). The Effectiveness of Digital Textbooks on Brain-based Learning assisted by Animated Videos and Maze Chase-Wordwall on Science Literacy Skills and Student Learning Outcomes. *Biosfer: Jurnal Tadris Biologi*, *14*(1), 79–88. https://doi.org/10.24042/biosfer.v14i1.16891

Wulandari, A. (2020). Implementation of the 2013 Curriculum Based on a Scientific Approach (Case Study at SD Cluster II Kintamani). *International Journal of Elementary Education*, *4*(3), 422. https://doi.org/10.23887/ijee.v4i3.28172

WulandarI, A. S. (2021). Pengembangan E-Modul Ipa JUNIOR HIGH SCHOOL/MTS Terintegrasi Ayat-Ayat Al-Quran Berbantuan Simulasi Virtual Pada Materi Tata Surya. *Pesquisa Veterinaria Brasileira*, *26*(2), 173–180.