



DEVELOPMENT OF A CANVA-BASED INTERACTIVE E-MODULE IN ARABIC LANGUAGE LEARNING ON THE TOPIC OF AL-SA'AH AT MTSN 2 SINJAI

Nurhikmah Rahing ^{1*}, Hamka Ilyas ², Azizul Hakim ³
^{1,2,3} Universitas Islam Negeri Alauddin Makassar, Indonesia

Abstract

This research aims to analyze student's needs for interactive e-module teaching materials based on Canva in the Arabic language subject focusing on the topic of al-sa'ah for Grade VIII at MTsN 2 Sinjai, describe the development procedures of Canva-based interactive e-module teaching materials, and assess the validity and practicality of these teaching materials. This study is a type of research and development (R&D) designed to produce Canva-based interactive e-modules. The research design employs the 4D model by Thiagarajan, Semmel, and Semmel, which includes the stages of define, design, develop, and disseminate. The results of the research and development consist of a needs analysis showing the demand for Canva-based interactive e-modules. The validity analysis of the developed e-module falls into the "highly valid" category, with a validity percentage of 93.75% from material expert and 96.16% from media expert. Furthermore, the practicality test results indicate that the Canva-based interactive e-module is rated "highly practical" by teachers and students, making it suitable for use in Arabic language learning on the topic of al-sa'ah for Grade VIII. This study has implications for the availability of digital teaching materials for the Arabic language subject, specifically on the topic of al-sa'ah for Grade VIII, which meets validity and practicality requirements. The e-module supports self-regulated learning by allowing students to control their learning pace and practice independently through interactive features. However, this study has some limitations, namely that it has not yet tested the long-term effectiveness of the e-module, leaving room for further research on the impact of this e-module on improving student learning outcomes.

Keywords: Arabic as a Foreign Language (AFL), Arabic Language Subject, Canva, Digital Learning Materials, Educational Technology, Interactive E-Module

* Correspondence Address:	80400222045@student.uin-alauddin.ac.id			
Article History	Received	Revised	Accepted	Published
	2026-01-05	2026-01-29	2026-02-25	2026-03-15

INTRODUCTION

مقدمة

The emergence of the COVID-19 pandemic in 2020 significantly impacted various changes. One of these changes involved the education sector, with the implementation of online distance learning policies during the COVID-19 (Kemenag Sulsel, 2022). The pandemic is an adaptive challenge, making it essential to seize the opportunity for accelerated learning and sustainable development. However, in reality, online learning still faces various challenges, particularly the low level of digital literacy among teachers (Kholid, 2020). In response, improving teachers' digital competence and literacy became one of the programs promoted by the government in many regions during the pandemic (Zamjani et al., 2022).

Currently, even though COVID-19 has ended, digital learning continues to grow. The Ministry of Religious Affairs has actively supported the digital transformation of educational

institutions, including MTsN 2 Sinjai, which is now striving to become a digital madrasah (Kemenag Sulsel, 2022). A digital madrasah is a madrasah that manages its educational processes using digital applications (Hafiuluddin & Hanafi, 2023). However, based on initial observations conducted by the researcher at MTsN 2 Sinjai, the teaching materials used in Arabic language learning for Grade VIII are still in printed form. Therefore, the development of digital-based Arabic teaching materials is deemed necessary. This gap highlights the necessity for the development of digital-based Arabic teaching materials to align with the digital madrasah initiative.

According to the cognitive theory of multimedia learning, instructional materials integrating multiple formats can promote deeper understanding compared to materials presented in a single format (Mayer, 2009). An interactive electronic module is one that integrates two or more media, such as images, text, graphics, audio, video, or animations, designed to create two-way interaction between the module and the user, engaging both visual and auditory senses. This aims to encourage students to be more active, creative, and independent in the learning process (Hutahaean et al., 2019). Kustandi and Darmawan as cited in Prasetya et al. (2017) state that the advantages of interactive electronic modules, like other electronic media, are that they can make the learning process more engaging, interactive, and accessible anytime and anywhere. Additionally, they can help improve the quality of learning. Interactive electronic modules have also been proven to improve student motivation and learning outcomes compared to printed modules due to several advantages they offer. Among these, interactive e-modules are more engaging because they are equipped with multimedia features. Additionally, interactive exercises provide immediate feedback, which can enhance student motivation in learning (Wulandari et al., 2020).

The development of electronic modules can be done by utilizing various platforms. One of these platforms is Canva. Canva is a web-based platform that offers various editing options to help users design different types of visual content (Syahrir et al., 2023). Canva provides many creative templates so that it is quite practical to use and saves time (Tanjung & Faiza, 2019). Several studies have examined the effectiveness of using Canva in learning. For example, a study by Muhajir et al. (2024) found that Canva for Education, when integrated with appropriate teaching strategies, enhances both student motivation and learning effectiveness in vocational school. Similarly, Sulistiyowati & Fajrie (2023) reported that Canva positively impacts student interest in learning. Furthermore, the topic selected in this study is al-sa'ah because students often experience difficulties due to limited vocabulary, structural differences between Arabic and their native language, and insufficient understanding of time expressions used in daily contexts.

Given the increasing importance of digital learning and the observed gap in Arabic language teaching materials at MTsN 2 Sinjai, This research aims to analyze students' needs for interactive e-module teaching materials based on Canva in the Arabic language subject focusing on the topic of al-sa'ah for Grade VIII at MTsN 2 Sinjai, describe the development procedures of Canva-based interactive e-module teaching materials, and assess the validity and practicality of these teaching materials. This research seeks to address the existing gap by creating a digital learning resource that would enhance student engagement and at the same time aligns with the digital madrasah initiative. This research is significant as it not only supports the ongoing digital transformation in education but also provides empirical evidence on the integration of digital tools in Arabic language learning. The findings will contribute to the development of more effective teaching strategies, aligning with modern educational trends and technological advancements.

The population of this study consists of eighth-grade students at MTsN 2 Sinjai. The trial subjects include both small-scale and large-scale trial subjects. The small-scale trial was conducted on 10 students from class VIII B, while the large-scale trial was conducted on 20 students from classes VIII A and VIII B. The validators involved in this development study consisted of two experts, namely a media expert and a material expert, both of whom are Arabic lecturers at UIN Alauddin Makassar. The media evaluation of the Canva-based interactive e-module was conducted by a media expert with expertise in instructional media. Meanwhile, the content validation was carried out by a material expert who specializes in Arabic language and Arabic learning media. The instruments used in this study include a questionnaire/survey sheet, an observation sheet, an interview guide, and a documentation form. There are many types of research and development models, one of them is the 4D model proposed by Thiagarajan, Semmel, and Semmel. This development model consists of four main stages, which are described as follows:

Define

This stage is carried out to establish and define the requirements for development. In other models, this stage is often referred to as needs analysis. Each product requires a different type of analysis. In general, this definition process involves analyzing development needs, determining product development requirements that align with user needs, and selecting an appropriate research and development model for product development. There are five activities conducted at this stage:

- a. Front-end analysis, at this stage, the teacher conducts an initial diagnosis to enhance the efficiency and effectiveness of learning.
- b. Learner analysis, this stage examines the characteristics of students, such as their abilities, learning motivation, background experiences, and more.
- c. Task analysis, the teacher analyzes the essential tasks that students must master to achieve minimum competency.
- d. Concept analysis, the teacher analyzes the concepts to be taught and arranges rational steps for instruction.
- e. Specifying instructional objectives, the teacher formulates learning objectives and describes the expected behavioral changes after learning using operational verbs.

According to Thiagarajan, several aspects need to be analyzed in the student needs analysis, including subject matter competence, attitudes, language, and tool skills (Thiagarajan et al., 1974). However in this study, the aspects identified in the needs analysis stage are adapted from Brown's perspective in Lestari (2014), which states that needs analysis should identify aspects such as problems, priorities, capabilities, attitudes, and solutions.

Design

The design stage aims to develop learning materials. Thiagarajan et al. divide the design process into four steps that must be carried out at this stage (Thiagarajan et al., 1974):

- a. Criterion-test construction – Developing standardized tests to assess learning outcomes.

- b. Media selection – Choosing appropriate media that align with the characteristics of the material and learning objectives.
- c. Format selection – Reviewing existing instructional material formats and determining the format to be developed.
- d. Initial design – Creating an initial draft based on the selected format.

Develop

Thiagarajan, as cited in Slamet, divides the development stage into two activities: expert appraisal and developmental testing. Expert appraisal is a technique used to validate or assess the feasibility of a product design. This process involves expert evaluation to ensure that the developed product meets quality standards in terms of content, language, and presentation (Slamet, 2022). According to Neveen as cited in Prilianti et al. (2018), validity is assessed based on three aspects: content validity, language validity and media validity. Similarly, Widodo and Jasmadi as cited in Wati et al. (2022) state that instructional material validation is based on four aspects: content feasibility, presentation, language, and graphic elements. Further, Utami as cited in Latifah (2023) mentions that media development assessment includes appearance and usability aspects. Devi as cited in Kusumayanti (2021) highlights media design and its benefits as key evaluation criteria. Additionally, Rafi'y et al. (2022) suggest that the feasibility of an interactive module should be assessed based on appearance, content, media presentation, and instructional aspects.

Based on the perspectives mentioned above, the evaluation aspects to be used in the material expert assessment include language aspect, content aspect, and instructional aspect, while the media expert assessment covers appearance aspect, usability aspect, and functionality aspect. Furthermore, developmental testing is a product design trial conducted directly on target subjects to determine the practicality of the developed instructional materials. Jan as cited in Alwi et al. (2020) states that practicality should consider indicators of clarity, usefulness, and cost-effectiveness. Meanwhile, Fauzan as cited in Chandra & Amelia (2021) emphasizes that assessing the practicality of instructional materials should take into account whether the product is engaging and usable. Therefore, the practicality aspects in this study include usability, attractiveness, and benefits.

Disseminate

In the context of instructional material development, the dissemination stage is carried out by socializing the instructional materials through limited distribution to teachers and students. This distribution aims to gather responses and feedback on the developed materials. If the target users respond positively, the instructional materials will then be distributed for wider use.

RESULT | نتائج

Define

In this stage, the researcher defines and outlines the development needs. This stage is also referred to as the needs analysis phase. The activities carried out include conducting initial and final analysis, analyzing students, analyzing content, analyzing tasks, and specifying learning objectives. These stages are outlined as follows:

1. Front-End Analysis

The initial and final analysis aims to identify the problems faced by teachers and students in Grade VIII at MTsN 2 Sinjai, as the target group for the development of Canva-based interactive e-modules. This activity was carried out through observation and interviews with the teacher. Based on the interview with the teacher and the observations made, the researcher obtained the following data:

- a. The Arabic language learning uses teaching materials in the form of the Arabic Language Book with a Scientific Approach from the 2013 Curriculum, published by the Directorate of Madrasah Education, Directorate General of Islamic Education, Ministry of Religious Affairs of the Republic of Indonesia in 2015, and the Arabic Language Book with a Scientific Approach from the 2013 Curriculum, published by the Directorate of KSKK Madrasah, Directorate General of Islamic Education, Ministry of Religious Affairs of the Republic of Indonesia in 2020.
- b. Almost all students own a smartphone that can be brought to the madrasah when needed.
- c. Nearly all teachers have a Canva for Education account, which grants access to premium features available on Canva.
- d. Based on the results above, it can be concluded that interactive e-modules are highly needed as an innovative digital learning tool based on technology.

2. Learner Analysis

An overview of the analysis of student needs for Canva-based interactive e-modules in Grade VIII at MTsN 2 Sinjai was obtained through a questionnaire. The sample consisted of 10 students from Grade VIII B at MTsN 2 Sinjai. According to Thiagarajan, several aspects need to be analyzed in the student needs analysis, including the competencies of the subject matter, attitudes, language, and tool skills. In this study, the aspects identified during the needs analysis phase were adapted from Brown's views, as cited in Lestari, which state that the aspects to be identified in a needs analysis include problems, priorities, abilities, attitudes, and solutions (Lestari, 2014). There are 10 statements on the questionnaire given to students to obtain the results of the needs analysis for Canva-based interactive e-modules. The following table displays the results of the student needs analysis:

Table 1. Student's needs analysis

Statements	Yes	No
I am more interested in learning using audio and video than just reading text.	100%	0%
I prefer learning using technology, such as smartphones, compared to printed books.	80%	10%
I am interested in doing exercises/quizzes that provide immediate feedback after completing the questions.	100%	0%
I have basic skills in using technology to learn Arabic.	80%	20%
I believe that the al-sa'ah material is important for communication in Arabic.	100%	0%
I find learning Arabic more engaging if it can be accessed through a smartphone.	90%	10%
I want to learn Arabic material that includes images, audio, video, and interactive exercises.	100%	0%
I want quizzes that I can retake repeatedly until I understand the material.	100%	0%
I want to learn Arabic independently through a smartphone.	90%	10%
I agree if an interactive e-module based on Canva is developed for the Arabic language subject, particularly the al-sa'ah material.	100%	0%

Based on the results of the student's needs analysis, it can be concluded that the development of Canva-based interactive e-modules in Arabic language learning aligns with the needs and conditions of the students in Grade VIII at MTsN 2 Sinjai.

3. Concept Analysis

The activities conducted in this step involve identifying, detailing, and systematically organizing the material to be studied by the students. The lesson material in this research is the al-sa'ah (time) topic in the 2013 curriculum. The core competencies for this material are as follows:

3.1 Understanding the social function, text structure, and language elements (sound, words, and meaning) of simple texts related to the topic al-sa'ah, involving speech acts of giving and asking for information about time while paying attention to the grammatical structure of al-'adad al-tartibi (ordinal numbers).

3.2 Analyzing the ideas from simple narrative texts related to the topic al-sa'ah, focusing on the form, meaning, and function of the grammatical structure of al-'adad al-tartibi (ordinal numbers).

4. Specifying Instructional Objectives

The learning objectives formulated by the researcher are as follows:

- a. Students can pronounce words, phrases, or sentences according to the audio heard related to the al-sa'ah topic.
- b. Students can identify new vocabulary related to the al-sa'ah topic.
- c. Students can translate sentences related to the al-sa'ah topic.
- d. Students can explain the sound, meaning, and ideas behind words, phrases, and sentences in Arabic related to the al-sa'ah topic.
- e. Students can use vocabulary related to the al-sa'ah material in everyday conversations.

Design

Several steps in this phase include selecting media, choosing formats, and creating an initial design draft. The media utilized in developing the Canva-based interactive e-module include Canva as the primary platform for designing the e-modules. The e-module was developed using the Canva platform because, based on field findings, most teachers have a Canva for Education account, which allows them to access Canva's premium features.

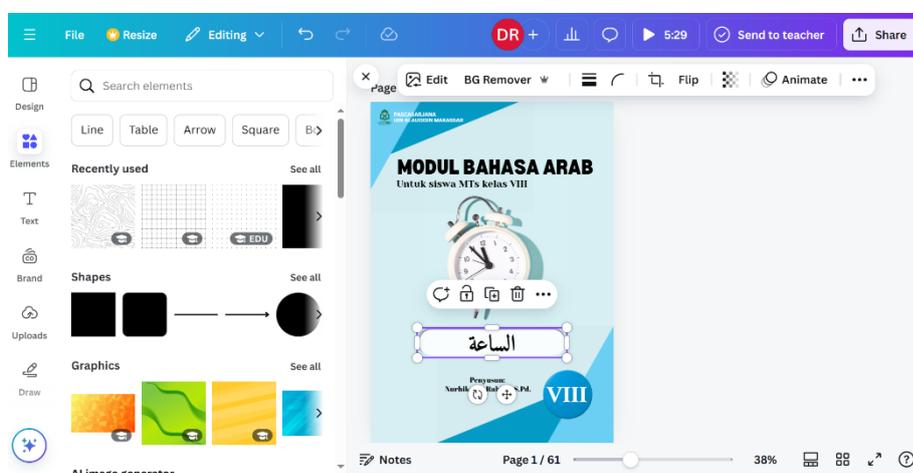


Figure 1. The process of designing module with Canva

Canva served as the main platform used in the development of the Canva-based interactive e-module. The use of templates and various design elements was facilitated by Canva features, including animation and hyperlink tools to construct interactive activities. Additionally, it is supported by other platforms, such as YouTube for video content, as well as platforms like Eleven Labs and Online-Convert for creating clickable audio features.



Figure 2. Initial design

There are several subtopics in this e-module, including vocabulary (*mufradat*), grammar (*qawā'id wa tarkīb*), listening and speaking (*istimā' wal hiwār*), reading (*qirā'ah*), and writing (*kitābah*). In the vocabulary (*mufradat*) section, as shown in the figure above, clock images are presented along with Arabic vocabulary. Students can click on each image to listen to audio pronunciations of the corresponding words. This feature allows students to practice their pronunciation. In addition, videos are provided to support students' understanding. Furthermore, several types of interactive exercises are provided for each sub-topic to enhance student engagement and learning.

Develop

During the development stage, the e-module is created based on the design formulated in the previous phase. After being drafted, the module undergoes validation by the material expert and the media expert to ensure its quality and effectiveness. Following this validation, necessary revisions are made to improve the content and presentation. According to Supardi, these revisions may involve removing unnecessary parts, clarifying specific topics, selecting simpler explanations, modifying the writing style, improving sentence structures, and adding various elements such as exercises, examples, analogies, illustrations, or case studies. Additionally, other supportive media may be incorporated to enhance student's learning experiences and ensure the e-module is more interactive and engaging (Supardi, 2020).

The product development phase is divided into two stages: product validation by the material expert and a media expert. After the product is declared valid, a practicality test is conducted in the field, which is further divided into two: a small group test and a large group test. The validity level intervals for the developed product are as follows:

Table 2. Validity Score

Total Score	Criteria
84,01% - 100%	Highly Valid
68,01% - 84,00%	Valid
52,01% - 68,00%	Quite Valid
36,01% - 52,00%	Less Valid
20,00% - 36,00%	Not Valid

The following table presents the results of the evaluation by the material expert:

Table 3. Results of the Material Expert Evaluation

No.	Assessment Aspects	Material Expert
1	Language	18
2	Content	26
3	Learning	16
Actual Score		60
Ideal Score		64
Validity Percentage		93,75%
Category		Highly Valid

The following table presents the results of the evaluation by the media expert:

Table 4. Results of the Media Expert Evaluation

No.	Assessment Aspects	Media Expert
1	Appearance	53
2	Usability	14
3	Utilization	7
Actual Score		74
Ideal Score		80
Validity Percentage		92.5%
Category		Highly Valid

The validation results from the material expert and media expert for the e-module show that the Canva-based interactive e-module is deemed suitable for use in Arabic language learning, with scores of 93.75% from the material expert and 96.16% from the media expert. This indicates that e-module meets the "highly valid" criteria in terms of both content and media appearance. Nevertheless, both experts provided constructive feedback for improvement. The media expert proposed several revisions, including the addition of a concept map at the beginning of the e-module and a glossary at the end. Meanwhile, the material expert recommended typographical improvements and revisions to the audio components.

The practicality test was conducted through field trials with eighth-grade students at MTsN 2 Sinjai, which included small group trials and large group trials. Additionally, the teacher's response to the e-module was also analyzed. The practicality of the Canva-based interactive e-module was calculated using the following formula:

$$\text{Percentage} = \frac{\text{Total Score}}{\text{Maximum Score}} \times 100\%$$

Table 5. Practicality Categories

No	Achievement Level (%)	Categories
1	81 – 100	Highly Practical
2	61 – 80	Practical
3	41 – 60	Quite Practical
4	21 – 40	Less Practical
5	0 – 20	Highly Impractical

The results of the small group testing on the practicality of the Canva-based interactive e-module, evaluated from the three aspects above, can be detailed as follows:

Table 6. Small Group Test Results

No.	Aspect	Practicality Percentage
1	Usability	96
2	Attractiveness	97.5
3	Usefulness	95
Average Score		96.16
Category		Highly Practical

Therefore, the results of the large group testing on the practicality of the Canva-based interactive e-module, evaluated from the three aspects above, can be detailed as follows:

Table 7. Large Group Test Results

No.	Aspect	Practicality Percentage
1	Usability	89.75
2	Attractiveness	88.75
3	Usefulness	87.91
Average Score		88.80
Category		Highly Practical

The results of the teacher's response to the practicality of the Canva-based interactive e-module, evaluated from the three aspects above, can be detailed as follows:

Table 8. Teacher's response Results

No.	Aspect	Practicality Percentage
1	Usability	100
2	Attractiveness	100
3	Usefulness	100
Average Score		100
Category		Highly Practical

The results of the practicality analysis from the student and teacher response questionnaires regarding the Canva-based interactive e-module show that the use of the e-module falls into the highly practical category, both in terms of usability, attractiveness, and usefulness. In the brief interview, one student shared, *"I like using this e-module because the visuals are colorful and nice to look at. The audio and videos can be played over and over again, which makes learning easier."* This indicates that the use of digital technology through platforms like Canva can provide innovative solutions in developing teaching materials.

Disseminate

Dissemination refers to two aspects: first, the publication of instructional materials by involving publishing houses, and second, the distribution of instructional materials to all relevant parties in need (Yaumi, 2018). At this stage, the dissemination is still limited to eight-grade students at MTsN 2 Sinjai. However, the e-module can also be accessed online through a link provided by the researcher.

DISCUSSION

مناقشة

The validation results showed that the Canva-based interactive e-module obtained scores of 93.75% from the material expert and 96.16% from the media expert, indicating that it meets the criteria of being "very valid" in terms of content and media appearance. In addition, the practicality analysis based on student and teacher responses categorized the e-module as "very

practical” in terms of usability, attractiveness, and usefulness. These findings provide strong empirical support for the effectiveness of Canva as a platform for developing digital teaching materials. This is consistent with previous studies reporting positive outcomes from the integration of Canva in learning, including research by Taufan et al. (2023), which found that the Canva-based e-module was categorized as “very good” and deemed feasible for implementation after validation by teaching material expert, material expert, and learning practitioner in senior high school geography learning. Moreover, another research by Sulistiyowati & Fajrie (2023) found that the use of Canva media in learning can enhance students’ learning interest. This confirms that integrating digital tools such as Canva into Arabic language learning can significantly increase student engagement and interest (Hidayat et al., 2024).

The strong validation and practicality results also reflect that the e-module design aligns with Mayer’s multimedia learning principles in which the integration of images, text, audio pronunciation, and videos supports dual-channel processing, allowing students to process information through both visual and auditory channels (Mayer, 2009). Because information is processed and stored simultaneously through two memory channels and encoded in dual forms, it offers multiple retrieval cues and as a result, combining verbal and visual elements enhances both comprehension and memory retention. In instructional software, the use of visual images can increase the clarity of learning materials, making them easier for learners to understand and recall (Ge & Lai, 2021). Furthermore, the interactive elements on the e-module could help reduce cognitive load and enhance students’ understanding, which is align with the research by Sipahutar that the use of interactive learning media can significantly improve students’ learning interests, engagement, and academic performance (Sipahutar & Harahap, 2025).

Based on the findings, this study demonstrates that Canva-based interactive e-modules have significant potential for the future development of digital Arabic teaching materials. The positive validation and practicality results indicate that technology integration can create more engaging and student-centered learning environments. Therefore, teachers are encouraged to develop similar digital resources to accommodate diverse learning styles and the characteristics of digital-native learners. However, this study was limited to assessing the validity and practicality of the developed product. As a result, its effectiveness in enhancing students’ learning outcomes has not yet been tested. Therefore, further studies are needed to explore the impact of this e-module on students’ academic performance. Moreover, the content of the e-module is still limited; hence, future research is encouraged to broaden its scope by incorporating more diverse and comprehensive learning materials.

CONCLUSSION

خاتمة

In general, the developed Canva-based interactive e-module is valid and practical for use in Arabic language learning in the eighth grade at MTsN 2 Sinjai. These findings reinforce the literature indicating that graphic design platforms such as Canva can be adapted as tools for developing engaging, interactive, and digitally relevant Arabic teaching materials that align with the characteristics of the digital generation. However, this study has some limitations, namely that it has not yet tested the long-term effectiveness of the e-module, leaving room for further research on the impact of this e-module on improving student learning outcomes. The content in this e-module is also still limited, so it is encouraged that future researchers can expand it by presenting more varied materials.

BIBLIOGRAPHY

مراجع

- Alwi, Z., Ernalida, E., & Lidyawati, Y. (2020). Kepraktisan Bahan ajar perencanaan pembelajaran berbasis pendidikan karakter dan saintifik. *Fon: Jurnal Pendidikan Bahasa Dan Sastra Indonesia*, 16(1), 12. <https://doi.org/10.25134/fjpbsi.v16i1.2312>
- Chandra, N. E., & Amelia, R. (2021). Analisis Kepraktisan Bahan Ajar Bahasa Indonesia Bagi Penutur Asing Berbasis Lingkungan Lahan Basah. *Prosiding Seminar Nasional Lingkungan Basah*, 6(2), 2. <https://snllb.ulm.ac.id/prosiding/index.php/snllb-lit/article/view/508>
- Ge, S., & Lai, X. (2021). Strategies for Information Design and Processing of Multimedia Instructional Software—Based on Richard E. Mayer's Multimedia Instructional Design Principles. *International Journal of Educational Technology and Learning*, 10(1), 41.
- Hafiuluddin, H., & Hanafi, A. (2023). Efektivitas Pembelajaran Madrasah Digital Berbasis Teknologi Informasi Pada MTs Negeri 1 Makassar. *Educandum*, 9(2), 165. <https://doi.org/10.31969/educandum.v9i2.1222>
- Hidayat, R., Rezi, M., Kadir, M. A., & Ulfiyati, N. S. (2024). Digital Transformation for Effective Arabic Learning. *Journal of Multidisciplinary Sustainability Asean*, 1(1), 43.
- Hutahaean, L. A., Siswandari, & Harini. (2019). Pemanfaatan E-Modul Interaktif sebagai Media Pembelajaran di Era Digital. *Prosiding Seminar Nasional Teknologi Pendidikan Pascasarjana UNIMED*, 303. <https://digilib.unimed.ac.id/id/eprint/38744/>
- Kemenag Sulsel. (2022). *Era Teknologi 4.0, MTsN 2 Sinjai Selangkah Demi Selangkah Maju Dengan Dunia Digital*. s Sulsel.kemenag.go.id. <https://s Sulsel.kemenag.go.id/daerah/era-teknologi-40-mtsn-2-sinjai-selangkah-demi-selangkah-maju-dengan-dunia-digital-ZX2GI>
- Kholid. (2020). Pentingnya Literasi Digital bagi Guru pada Lembaga Pendidikan Tingkat Dasar dan Implikasinya terhadap Penyelenggaraan Kegiatan Belajar Mengajar. *Jurnal Horizon Pedagogia*, 1(1), 27. <https://jurnal.untirta.ac.id/index.php/jhp/article/view/10422>
- Kusumayanti, N. P. M. (2021). *Pengembangan Media Pembelajaran Monopoli Edukatif pada Muatan IPA Topik Ekosistem Kelas V SD Negeri 2 Kalibukbuk*. (Undergraduate thesis: Universitas Pendidikan Ganesha).
- Latifah, I. R. R. (2023). *Pengembangan Media King Ludo Pada Pembelajaran IPS untuk Meningkatkan Partisipasi Belajar Siswa Sekolah Dasar* (p. 27). (Undergraduate thesis :Universitas Pendidikan Indonesia).
- Lestari, A. R. E. (2014). Analisis kebutuhan terhadap pembelajaran bahasa Inggris berbasis karakter. *Deiksis*, 6(3), 155. <http://dx.doi.org/10.30998/deiksis.v6i03.525>
- Mayer, R. E. (2009). *Multimedia Learning* (Second Edition). Cambridge University Press.
- Muhajir, M., Sarwendah, A., & Ibrahim, A. bin. (2024). Utilization of Canva for education to improve learning effectiveness of vocational students. *Research and Development in Education (RaDEn)*, 4(1), 705. <https://ejournal.umm.ac.id/index.php/raden/article/view/32808>
- Prasetya, I. G. A. S., Wirawan, I. M. A., & Sindu, I. G. P. (2017). Pengembangan E-Modul pada Mata Pelajaran Pemodelan Perangkat Lunak Kelas XI dengan Model Problem Based Learning Di SMK Negeri 2 Tabanan. *Jurnal Pendidikan Teknologi Dan Kejuruan*, 14(1), 98. <https://doi.org/10.23887/jptk-undiksha.v14i1.9885>
- Prilianti, L. D., Kurniasih, D., & Fitriani, F. (2018). Analisis Kevalidan Lks Berbasis Hierarki Konsep Pada Materi Kelarutan Dan Hasil Kali Kelarutan. *Jurnal Pendidikan Informatika Dan Sains*,

- 7(1), 70. <https://doi.org/10.31571/saintek.v7i1.769>
- Rafi'y, M., Lima, C. N. de, Irawan, F., Day, W. O. S. H., & Welerubun, P. (2022). Pengembangan Modul Pembelajaran Terpadu Untuk Mahasiswa Pg-Paud Universitas Musamus. *Jurnal Pendidikan Indonesia: Teori, Penelitian, Dan Inovasi*, 2(2), 120. <https://doi.org/10.59818/jpi.v2i6.395>
- Sipahutar, N., & Harahap, I. M. W. (2025). Effectiveness of Using Interactive Learning Media to Improve Students' Learning Interests at State Elementary School 0406 Aek Tinga In Islamic Education Learning. *ETNOPELAGOGI: Jurnal Pendidikan Dan Kebudayaan*, 2(1), 282–295.
- Slamet, F. A. (2022). Model Penelitian Pengembangan (R n D). *Malang: Institut Agama Islam Sunan Kalijogo Malang*.
- Sulistiyowati, S., & Fajrie, N. (2023). Efektivitas Media Canva terhadap Minat dan Hasil Belajar IPA Siswa Kelas V SDN Bakaran Wetan 03 Pati. *Journal on Education*, 5(3), 5883–5891. <https://doi.org/10.31004/joe.v5i3.1351>
- Supardi. (2020). *Landasan Pengembangan Bahan Ajar: Menuju Kemandirian Pendidik Mendesain Bahan ajar Berbasis Kontekstual*. Sanabil.
- Syahrir, A. P., Zahirah, S. P., & Salamah, U. (2023). Pemanfaatan Aplikasi Desain Grafis Canva dalam Pembelajaran Multimedia di SMA Negeri 1 Taman. *Prosiding Seminar Nasional Ilmu Ilmu Sosial (SNIIS)*, 2, 735. <https://proceeding.unesa.ac.id/index.php/sniis/article/view/851>
- Tanjung, R. E., & Faiza, D. (2019). Canva sebagai Media Pembelajaran pada Mata Pelajaran Dasar Listrik dan Elektronika. *Voteteknika (Vocational Teknik Elektronika Dan Informatika)*, 7(2), 80.
- Taufan, A., Astutik, S., Mujib, M. A., Nurdin, E. A., & Apriyanto, B. (2023). Pengembangan E-Modul Interaktif Berbasis Aplikasi Canva Pada Materi Pengelolaan Sumber Daya Alam Indonesia Siswa SMA. *Jurnal Pendidikan Geografi Undiksha*, 11(2), 133–143.
- Thiagarajan, S., Semmel, D. ., & Samuel, M. (1974). *Instructional development for training teachers of exceptional children: A sourcebook*. Indiana University Bloomington.
- Wati, D. K., Saragih, S., & Murni, A. (2022). Kevalidan dan Kepraktisan Bahan Ajar Matematika berbantuan Fliphtml5 untuk Memfasilitasi Kemampuan Pemahaman Matematis Siswa Kelas VIII SMP/MTs pada Materi Koordinat Kartesius. *JURING (Journal for Research in Mathematics Learning)*, 5(3), 180. <http://dx.doi.org/10.24014/juring.v5i3.17424>
- Wulandari, D. D., Adnyana, P. B., & Santiasa, I. M. P. A. (2020). Penerapan E-modul Interaktif terhadap Motivasi dan Hasil Belajar Siswa pada Pembelajaran Biologi kelas X. *Jurnal Pendidikan Biologi Undiksha*, 7(2), 77–78. <https://ejournal.undiksha.ac.id/index.php/JJPB/article/view/29681>
- Yaumi, M. (2018). *Media dan Teknologi Pembelajaran*. Kencana.
- Zamjani, I., Solihin, L., & Rakhmah, D. N. (2022). *Pembelajaran di Masa Pandemi dari Krisis Menuju Pemulihan*. Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi.

