

Development of website-based e-poster learning media on the digestive system material of class XI MA Madani Alauddin Pao-Pao students

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Article Information	Abstract
Keyword: Learning media; Website-based e-poster; Digestive system; Development research Kata Kunci: Media Pembelajaran; E-poster berbasis website; Sistem pencernaan; Penelitian pengembangan History: Received : 05/09/2022 Accepted : 27/10/2022	Rapid technological advances must be used optimally, especially in compiling learning media to create effective and efficient learning activities. This research aims to develop an e-poster learning media based on a website on digestion system material for grade XI of MA Madani Alauddin Pao-Pao that is valid, practical, and effective. This research uses the ADDIE development model's type of research and development. The developed product is tested through validity, practicality, and effectiveness tests. The subjects were 27 students of grade XI MIA MA Madani Alauddin Pao-Pao. The instruments used in the study were media validation sheets, student response questionnaires, educator response questionnaires, and learning outcomes test items. The results of the data analysis obtained a validity level of 3.60 (very valid), the practicality level of student responses is 3.18 (practical), and the educators' response is 3.06 (practical). Learning outcomes test students is 88.88% (effective). Based on the research, e-poster learning media based on a website on digestion system material deserves to be used. The result of the research is in the form of teaching media. Researchers hope that students can be motivated to learn independently and that teachers can make it easier to distribute the material being taught. Abstrak Kemajuan teknologi yang kian pesat perlu dimanfaatkan secara optimal, khususnya dalam menyusun media pembelajaran sehingga tercipta kegiatan belajar yang efektif dan efisien. Penelitian ini bertujuan untuk mengembangkan media pembelajaran e-poster berbasis website pada materi sistem pencernaan siswa kelas XI MA Madani Alauddin Pao-Pao yang bersifat valid, praktis, dan efektif. Penelitian ini menggunakan jenis penelitian dan pengembangan dengan model pengembangan ADDIE. Produk yang dikembangkan diuji melalui uji validitas, uji kepraktisan dan uji keefektifan. Subjek dalam penelitian ini adalah peserta didik kelas XI MIA MA Madani Alauddin Pao-Pao sebanyak 27 orang. Instrumen yang digunakan dalam penelitian adalah lembar validasi media, angket respon peserta didik, angket respon pendidik, dan butir-butir tes hasil belajar. Hasil penelitian menunjukkan bahwa media yang dikembangkan memiliki tingkat validitas yaitu 3.60 (sangat valid), tingkat kepraktisan berdasarkan penilaian respon peserta didik yaitu 3.18 (praktis) dan respon pendidik yaitu 3.06 (praktis). Tes hasil belajar peserta didik mencapai 88.88% (efektif), sehingga media pembelajaran e-poster berbasis website layak digunakan. Hasil penelitian berupa media ajar, peneliti berharap siswa termotivasi belajar secara mandiri dan bagi guru dapat memudahkan menyalurkan materi yang diajarkan.

A. Introduction

Education is a transformation of a generation's insights, cultures and values that develops for the next generation. Education not only talks about the transformation of insights but has come to the realm of transforming cultures and values that develop in people's lives. Education in this context has a broader meaning not only as a transformation of insights, but the culture in society is also inseparable from education (Sanusi & Rudi, 2018).

Teaching and learning activities in the classroom manifest the implementation of education by academic units on the formal path. The learning process in the classroom is a scholarly communication or interaction that involves teachers and students, respectively, as teachers and parties are taught to achieve educational goals (Hanafi et al., 2019).

Learning can take place well if you use good teaching methods as a strategy. The thing that cannot be separated from learning activities is the existence of media, methods and learning outcomes. As a means of the learning process, media is a tool in supporting teacher activities in deepening student knowledge (Nurrita, 2018). Creative and innovative media is needed to increase the effectiveness of learning. It aims that learning not to seem monotonous, less interesting and boring so that it can hinder the knowledge transfer process (Audie, 2019). Based on this, the media has an important position so that variations occur in learning. Media has many benefits, such as increasing motivation so that students' attention is increased.

Based on the observations at MA Madani Alauddin Pao-Pao, the main problem experienced in the learning process is that the learning media used by teachers is still monotonous, such as using only package books and LCDs so that students are less motivated and feel saturated when following the learning process. As a result, the material is difficult for students to understand, especially the digestive system material, which consists of several processes involving many organs. Thus the material is difficult to understand with existing learning media.

Material that is difficult for students to understand lies in abstract material because students' understanding becomes less than optimal after following the learning process (Hartanto et al., 2021). A case in point that researchers can take is the process of food digestion that occurs in the human body. This material needs to be studied in depth because it includes stages involving many digestive organs in humans. Nevertheless, it is difficult to do in the material exploration process

because the media is limited and does not support it.

One example of visual-based learning media dominated by colours and illustrations is e-poster (Udayani, 2021). E-poster is one of the visual learning media designed to overcome problems experienced by students. Posters are a powerful graphic medium for conveying information. This media provides information from a source to its recipient, becomes the centre of attention, clarifies an idea, and makes facts difficult to remember into graphic illustrations so that it is easy to remember and a simple manufacturing process (Megawati, 2017). Posters highlight elements of visual graphic design and colour. A website is something that can be seen in a web browser application. A website is a collection of pages containing explanations in the form of digital data covering writing, video, images or audio, and illustrations that can be viewed through an internet network connection (Yogananti, 2015).

E-poster media has several advantages, according to Sumartono & Astuti (2018), including (1) it can facilitate and speed up understanding of the message presented, (2) it is equipped with colours so that it attracts more students' attention and (3) simple shapes without the need for special equipment in its manufacture. Therefore, an e-poster has a very important role because it can make students not feel bored or bored and, with an attractive appearance, can make it easier for students to remember the material for a long period (Nurfadhillah et al., 2021). In addition, e-poster media improves students' cognitive abilities with attractive images and colours (Khotimah, Siti, & Eko, 2021).

This research is supported by several previous studies, including by Nursalam (2017), who examined e-posters designed with the Corel Draw X7 application and then uploaded to a blog. In the second research by Aspahani et al. (2020), the e-poster design in this research also still uses the Core Draw X5 application and is uploaded to a blog. Third research by Siswanto et al. (2021). The e-poster design in this research used the Adobe Photoshop application and was not uploaded to the website. This poster uses more bitmap images than vector images.

The thing that distinguishes or updates this research from previous research is that the posters made are e-poster using websites with a top-level domain type, namely ".com". Posters are designed using the Adobe Illustrator 2018 Creative Cloud design application by paying attention to the basic principles of graphic design, such as balance, unity,

rhythm, emphasis, and proportion. E-posters are also designed with attention to important elements in graphic design, such as lines, shapes, spaces, colours and typography.

The results of the media research developed can be a reference to create similar learning media that can later be collected into one scope of learning materials for one semester so that teachers in schools are no longer overwhelmed in looking for learning media that can overcome student saturation in the learning process at the MA Madani Alauddin Pao-Pao School. This study aims to develop a website-based e-poster learning media on the digestive system material of class XI MA Madani Alauddin Pao-Pao students that is valid, practical, and effective.

B. Material and Method

This research is included in the type of research and development (R&D) based on the ADDIE development model. This research model consists of five steps: Analysis, Design, Development, Implementation and Evaluation.

This research was conducted at MA Madani Alauddin Pao-Pao with the study's subject, class XI MIA 2, totalling 27 students. This research begins with the media and instrument validation stage involving two validators: media expert validators and material experts. After the validation stage, the media is implemented in the learning process to obtain practicality and effectiveness data. At the practicality test stage, response questionnaires were given to 1 teacher and 27 students. Finally, at the effectiveness test stage, 27 people were given a test of learning outcomes to students.

The instruments used in this study are validation sheets, teacher and student response questionnaires and learning outcomes tests. The data obtained from the validator's assessment is then analyzed descriptively. For example, the validity analysis stage uses the following Formula 1 from Prusdianto et al. (2019).

$$\bar{X} = \frac{\sum_{j=1}^n \bar{A}_{ij}}{n} \dots \dots \dots \text{Formula 1}$$

Description:

$\bar{X}$ = Total value average
 $\bar{A}_{ij}$ = Average value of the i-j aspect
N = Many aspects

Furthermore, determine the validity criteria of each category by equating the average of the categories, the average of the aspects and the average total with the predetermined validity

criteria. The validity criteria of each category are detailed in Table 1.

Table 1 Validity Analysis

Value Range	Criteria
$x > 3,4$	Very valid
$2,8 < x \leq 3,4$	Valid
$2,2 < x \leq 2,8$	Quite valid
$1,6 < x \leq 2,2$	Less valid
$x \leq 1,6$	Invalid

(Source: Hartanto, 2020)

Next, an analysis was launched to determine the criteria for media practicality from the data obtained from the response questionnaire of teachers and students. This data was calculated using Formula 1. The average value at intervals for determining the level of practicality media is in Table 2.

Table 2 Practicality Analysis

Value Range	Criteria
$3,5 \leq x \leq 4$	Very Practical
$2,5 \leq x \leq 3,5$	Practical
$1,5 \leq x \leq 2,5$	Quite Practical
$x < 1,5$	Impractical

(Source: Arsyad, 2007)

Student learning outcomes can be calculated using Formula 2 from Hasan et al. (2021). The effectiveness data from student learning outcomes calculated are categorized according to Table 3.

$$N = \frac{B}{n} \times 100\% \dots \dots \dots \text{Formula 2}$$

Description:

N = Obtained value
B = Number of correct answers
n = Number of question items

Table 3 Effectiveness Analysis

Effectiveness Rate	Criteria
$0 \leq \text{TPS} < 40$	Ineffective
$40 \leq \text{TPS} < 60$	Less Effective
$60 \leq \text{TPS} < 75$	Quite Effective
$75 \leq \text{TPS} < 90$	Effective
$90 \leq \text{TPS} < 100$	Very Effective

(Source: Widoyoko, 2011)

Description:

TPS = Student Mastery Level

C. Results and Discussion

Stages of Development of Website-Based E-Poster Learning Media

The development of website-based e-poster learning media uses the ADDIE development model, which consists of five stages. The ADDIE model is a structured development model where in

its preparation, it is based on the order in which it seeks to solve learning problems relevant to learning resources and adjusted to the learner's character. The ADDIE model is often used to

develop multimedia learning because it is iterative and cyclical, systematic from one stage to the next, and there is an evaluation stage at each stage (Hanafi et al., 2020).



Figure 1 Website Design (in Indonesia)



Figure 2

Contents of e-poster (a) Digestive process in humans (b) Stage of digestion in the mouth (c) Stage of digestion in the esophagus (d) Stage of digestion in the stomach (e) Stage of digestion in the small intestine and colon (f) Stage of digestion in the anus (in Indonesia)

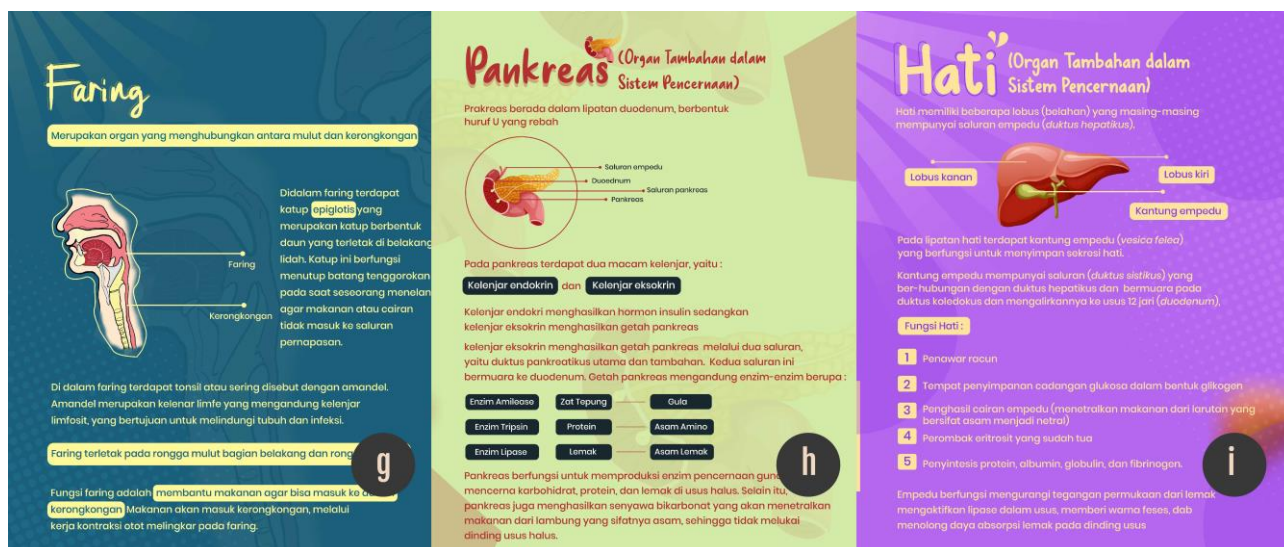


Figure 3
Contents of the advanced e-poster (g) Stage of digestion in the pharynx (h) Pancreas as an additional digestive organ (i) Liver as an additional digestive organ (in Indonesian)

The first stage is the analysis stage which is carried out by interviewing teachers and students. This stage consists of a needs analysis that aims to identify the problem and formulate a solution to the problem that has been obtained. After that, activities were carried out to obtain an overview of the characteristics of students during the learning process. After that, a material analysis was carried out to determine the material to be used in this learning media, namely the material of the digestive system. Researchers chose the material for the digestive system as a sub-material of the human digestive process because it has many stages and requires illustrations to clarify the contents of the material. Finally, the analysis results are used as a reference in the next stage.

The second stage involves making an initial design of the media in the form of a conceptual framework (prototype) following the analysis results in the previous stage. This stage consists of media selection activities to determine the media to be developed based on the problems found at the analysis stage. After that, the selection of media formats is carried out according to the characteristics of students, and the media format is visual learning media. The last activity is to make an initial design of the media (prototype) in Figure 1. Activities at this stage include determining the number and size of posters, selecting illustrations and colours, designing and exporting and uploading posters to the website. The poster is 1080 x 1350 pixels and is designed using the Adobe Illustrator CC 2018 application. The results at this stage are in the form of a preliminary draft of the media that will be submitted to the validator to be given an

assessment of the validity of the media developed. The contents can be seen in Figure 2 and Figure 3.

The development stage contains media design realization activities ready to be implemented from concepts that are still conceptual frameworks (prototypes). First, the media design (prototype) is submitted to validators to get suggestions and input and values based on several aspects in the media validation sheet. Media that get the "invalid" criteria are then corrected based on validators' suggestions and input until the media design is declared valid and ready to be implemented in the learning process.

The implementation stage contains activities to test learning media that have gone through a validation process until they are declared valid by validators. Then, the media was tested to determine the level of practicality based on the response questionnaire (educators and students) and the effectiveness of the media based on the learning outcomes test the media used in learning, as well as to see if the media had goals and objectives. Finally, the media application is carried out in a real situation, namely in the classroom but with a different time allocation because it is still in the Covid-19 pandemic. The implementation stage was carried out in class XI MIA 2 MA Madani Alauddin Pao-Pao with 27 students.

Level of Validity of Learning Media E-Poster Based Website

Media validity is obtained at the development stage based on the validator's assessment, as in Table 4. Based on the media validity level analysis, website-based e-poster learning media obtained an average score from all

aspects of 3.60 or is in a very valid category, so it can be concluded that website-based e-poster learning media on the digestive system material is suitable for use in the learning process.

In previous research, e-poster learning media received a very decent assessment.

However, in the previous study, it used a Blogspot website, while in this study, it used a .com domain website, so it did not have a more attractive appearance. In addition, the posters used in this study also predominantly used illustrative images and varied colors.

Table 4 Media Validity Analysis Results

Assessment Aspects	Valuation	Category
Display	3.5	Very Valid
Teaching Materials	3.5	Very Valid
Renewal	3.25	Valid
Scale	4	Very Valid
Technical Quality	3.75	Very Valid
Communicative Language	3.75	Very Valid
Average	3,60	Very Valid

Learning media is declared valid due to several factors, including having an attractive design appearance, teaching materials inserted following basic competencies and indicators, language used communicatively, and terms that do not cause double meanings. This result follows the opinion of Delfira & Ardi (2021) that learning media meets valid criteria by considering the linguistic component, the content feasibility component, the presentation component, and the graphic component.

Decent learning media needs to pay attention to the principle of "VISUALS" (Visible, Intersetting, Simple, Useful, Accurate, Legitimate, and Structured) to be said to be a good learning media. This principle consists of (1) being easily visible, (2) attractive, (3) simple, (4) having useful content, (5) valid, (6) logical, and (7) systematic (Nurseto, 2011).

Website-based e-poster learning media is a media that is following technological developments. In accordance with technological developments, media is used to increase effectiveness and efficiency in achieving learning goals (Gorgoretti, 2019). Good learning media has a visible appearance, has images and illustrations that make it interesting, is easy to operate, can support the achievement of learning objectives well, have reliable sources so that they can be accounted for, and is systematic.

Level of Practicality of Website-Based E-Poster Learning Media

The level of practicality of the media is known at the implementation stage by providing questionnaires for the responses of educators and students after being applied to the learning process in the classroom. Based on Table 5, the percentage of response results obtained from the educator response questionnaire is 3.18 with the practical

category, and the response results from the student response questionnaire are 3.06 with the practical category.

Table 5 Results of Analysis of Teacher and Student Responses to the Media

Types of Assessments	Average	Criteria Valuation
Teacher response	3,18	Practical
Student response	3,06	Practical

Based on the analysis results, it can be concluded that website-poster-based e-poster learning media is practically used in learning, so it is suitable for learning. However, in previous studies, the design of e-poster learning media was too dense, with many sentences or images, thus reducing the practical impression of e-posters. In contrast, this study highlighted illustrations and minimized the use of many sentences by making them into several posters.

Website-based e-poster learning media gets practical criteria because learning media gets a positive response from educators and students based on media display, ease of using media, and achievement of learning objectives. This result follows the theory of Pramita & Rudiana (2016) that learning media is in the practical category if the results of practicality respondents give good or very good responses. Furthermore, the above opinion is strengthened by Irawan & Arif (2021), that learning media is practical if teachers and students consider easy-to-use devices in the field (the material can be understood) and per the researcher's design plan.

Practical learning media is a medium that can clarify the presentation of information, improve and direct attention, and overcome the limitations of the senses, space, and time to

facilitate and improve student's learning process and outcomes. The level of practicality of this learning media is known through practicality test data obtained through the provision of questionnaires for the response of educators and students after the learning process using media at the implementation stage.

Level of Effectiveness of Website-Based E-Poster Learning Media

The level of effectiveness of the media is known at the implementation stage by giving tests after the learning process. Assessment of improving student learning outcomes to determine the effectiveness of media is measured based on the level of student understanding of the material taught using the media. The learning outcomes test consists of 25 questions with multiple choice types with research subjects as many as 27 students of class XI MIA 2 MA Madani Alauddin Pao-Pao.

Table 6 Percentage of Student Learning Outcomes

Score	Criteria	Total
73-100	Complete	24 students
0-72	Incomplete	3 students
Amount		27 students

Based on the results of the effectiveness test analysis (see Table 6) after calculating the learning outcomes test scores on 27 students who were used as research subjects, the percentage of completeness of student learning outcomes classically was 88%, with details of 24 students obtaining scores above KKM (complete) and three students obtaining scores below KKM (incomplete). The KKM score set in class XI MIA II MA Madani Alauddin Pao-Pao is 73. Therefore, based on the results of the percentage of completion of student learning outcomes, website-based e-poster learning media is effectively used in the learning process because the percentage of student learning completion is classically 88%. This result follows Hobri (2021) which states that a learning program is declared effective if 80% of students who take part in learning can reach a minimum moderate level of material mastery or at least 80% of students who take part in learning can achieve a minimum score of 60 (the maximum score is 100).

In previous research, the e-poster learning media developed could improve student learning outcomes with a moderate category (quite effective), while in this study, the learning completion of participants was at a value of 88% with an effective category. The website-based e-poster learning media is in the effective category because the learning media supports the success of

students in achieving learning goals, as seen from the number of students who score above the KKM (Minimum Completeness Criteria) as many as 24 students. This result follows the theory of McCrudden & Rapp (2017), which states that product development is said to be effective if the learning media design has attractive visuals that will excite students, increase understanding and help students in selecting, organizing, and integrating important information.

Website-based e-poster learning media has an attractive appearance with colours that can improve the quality of student learning because it affects memory performance in the brain. This result follows the theory of Nasution et al. (2019), which states that colour is a strong information channel for the human cognitive system. Furthermore, it has been found that colour has a significant role in improving memory performance. In addition to colour, illustration is the main factor of website-based e-poster learning media that can improve student learning outcomes because it can clarify the presentation of information and stimulate students' minds with visual effects. The theory of Ramiati et al. (2021) states that images enrich texts, concretize characters and narrative plots and are used as children's grasping power and imagination of text narratives which are still limited.

Effective learning media are media that can make students succeed in achieving the learning objectives that have been formulated, provide new experiences and shape student competencies optimally (Damopoli et al., 2019). The effectiveness of this learning media is known through the effectiveness test data obtained through the provision of learning outcomes tests at the implementation stage consisting of 25 multiple choice questions with a KKM value (Minimum Completeness Criteria) set at 73.

The research results are in the form of teaching media, where researchers hope that with the application of this media, students can learn independently and are more motivated to learn. For educators, it can make it easier to distribute and describe biology teaching materials, especially the digestive system material for class XI. In addition, website-based e-poster learning media on digestive system material is easy to apply and access in the learning process both offline or online.

D. Conclusion

Website-based e-poster learning media on the digestive system material for class XI MA Madani Alauddin Pao-Pao students was developed using the ADDIE development model, which consists of

five stages: analysis, design, development, implementation, and evaluation. The validity of the website-based e-poster learning media on the digestive system material for class XI, MA Madani Alauddin Pao-Pao students, has an average score of 3.60, with a very valid category. Furthermore, the level of practicality has an average value of 3.18 based on the educator response questionnaire and 3.06 based on the student response questionnaire in the practical category. Finally, the level of effectiveness has a percentage of student learning completeness of 88.88% with the effective category. Website-based e-posters can be a solution to facilitate student independent learning activities, are easy to implement by teachers, and can be accessed online and offline.

E. References

- Arsyad, N. (2007). *Model pembelajaran matematika yang menumbuhkan kemampuan metakognitif untuk menguasai bahan ajar*. (Disertasi. Tidak diterbitkan. Surabaya: Universitas Negeri Surabaya).
- Aspahani, E. L., Akhmad, N., & Rosarina, G. (2020). Rancangan media e-poster berbasis website pada pembelajaran IPA di sekolah dasar. *Pedadidaktika: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 7(2), 158-167. Retrieved from <https://ejournal.upi.edu/index.php/pedadidaktika/article/view/25458>
- Audie, N. (2019). Peran Media Pembelajaran Meningkatkan Hasil Belajar Peserta Didik. In *Prosiding Seminar Nasional Pendidikan FKIP*. (Vol. 2, No. 1, pp. 586-595), FKIP Universitas Sultan Ageng Tirtayasa, Banten. Retrieved from <https://jurnal.untirta.ac.id/index.php/psnp/article/view/5665>
- Damopoli, V., Nursiya, B. & Resmawan, R. (2019). Efektivitas media pembelajaran berbasis multimedia pada materi segiempat. *ALGORITMA Journal of Mathematics Education*, 1(2), 74-85. DOI: <https://doi.org/10.15408/ajme.v1i2.14069>
- Delfira, A. & Ardi, A. (2021). Validitas media pembelajaran e-learning berbasis edmodo pada pembelajaran biologi SMA. *Jurnal Biologi dan Pembelajarannya*, 8(1), 7-13. DOI: <https://doi.org/10.29407/jbp.v8i1.15781>
- Gorgoretti, B. (2019). The use of technology in music education in North Cyprus according to student music teachers. *South African Journal of Education*. 39(1), 1-10. DOI: <https://doi.org/10.15700/saje.v39n1a1436>
- Hanafi, H., La, A., & Muzakkir, M. (2019). *Profesionalisme guru dalam pengelolaan kegiatan pembelajaran di sekolah*. Sleman: Depublish.
- Hanafi, Y., Murtadho, N., & Ikhsan, M. A. (2020). Reinforcing public University student's worship education by developing and implementing mobile-learning management system in the ADDIE instructional design model. *International Journal of Interactive Mobile Technologies*, 14(2), 215-240. DOI: <https://doi.org/10.3991/ijim.v14i02.11380>
- Hartanto, P., Ilahi, W. B., Jamaluddin, J., & Syukur, A. (2021). Optimalisasi pembelajaran pada materi sistem pencernaan manusia melalui penggunaan video untuk meningkatkan minat belajar siswa pada masa pandemi Covid-19 di MTs. AL-Istiqomah Telagawaru. *Jurnal Ilmiah Profesi Pendidikan*, 6(2), 182-188. DOI: <https://doi.org/10.29303/jipp.v6i2.188>
- Hartanto, S. (2020). *Mobalean maning (Model pembelajaran berbasis Lean Manufacturing)*. Yogyakarta: Deepublish.
- Hasan, M., Khasanah, B. A., & Patriyani, M. P. R. E. H. (2021). *Pengembangan media pembelajaran*. Jakarta: Penerbit Tahta Media Group.
- Hobri, H. (2021). *Metodologi penelitian dan pengembangan*. Jember: Pena Salsabila.
- Irawan, A. & Muhammad, A. R. H. (2021). Kepraktisan media pembelajaran komik matematika pada materi himpunan kelas VII SMP/MTs. *PYTHAGORAS: Jurnal Program Studi Pendidikan Matematika*, 10(1), 90-100. DOI: <https://doi.org/10.33373/pythagoras.v10i1.2934>
- Khotimah, C., Siti, M., & Eko, D. D. (2021). Effect of educational poster media on the ability to recognize the concept of numbers and fine motorics in group a children in Kindergarten. *International Journal of Education and Social Science Research*, 4(5), 114-134. DOI: <http://dx.doi.org/10.37500/IJESSR.2021.4508>
- McCrudden, M. T., & Rapp, D. N. (2017). How visual displays affect cognitive processing. *Educational Psychology Review*, 29(3), 623-639. DOI: <https://doi.org/10.1007/s10648-015-9342-2>
- Megawati, M. (2017). Pengaruh media poster terhadap hasil belajar kosakata Bahasa Inggris (Eksperimen di SDIT Amal Mulia Tapos Kota Depok). *Getsempena English Education Journal (GEEJ)*, 4(2), 101-117. DOI: <https://doi.org/10.46244/geej.v4i2.738>
- Nasution, N., Putri, R. S. & Sastrian, S. (2019). Pengaruh warna terhadap short term memory pada anggota UKM Creative Minority. *Jurnal Psikologi Terapan*, 2(2), 1-7. DOI: <https://doi.org/10.29103/jpt.v2i2.3629>

- Nurfadhillah, S., Pertiwi, D., Pratiwi, D. I., Dewi, E. P., Saidah, M., & Nurhaliza, S. (2021). Pengembangan media poster dalam pembelajaran IPA kelas IVB SD Negeri Cikokol 3. *BINTANG*, 3(2), 313-322. DOI: <https://doi.org/10.36088/bintang.v3i2.1357>
- Nurrita, T. (2018). Pengembangan media pembelajaran untuk meningkatkan minat belajar siswa. *Misykat*, 3(1), 171-187. DOI: <https://doi.org/10.33511/misykat.v3i1.52>
- Nursalam, M. (2017). *Pengembangan media pembelajaran e-poster berbasis website untuk meningkatkan hasil belajar IPA materi sumber energi dan kegunaannya siswa kelas III SD Islam Al Madina Semarang*. (Skripsi, Tidak Dipublikasikan, Universitas Negeri Semarang, Semarang).
- Nurseto, T. (2011). Membuat media pembelajaran yang menarik. *Jurnal Ekonomi & Pendidikan*, 8(1), 19-35. DOI: <https://doi.org/10.21831/jep.v8i1.706>
- Pramita, A. & Rudiana, A. (2016). Pengembangan media permainan ular tangga pada materi senyawa hidrokarbon kelas XI SMA untuk meningkatkan pemahaman konsep siswa. *Unesa Journal of Chemical Education*, 5(2), 336-344. DOI: <https://doi.org/10.26740/ujced.v5n2.p%25p>
- Prusdianto, P., Samad, H., & Faisal, F. (2019). Perancangan perangkat pembelajaran drama radio/televisei berbasis cerita rakyat Sulawesi Selatan. *Jurnal Imajinasi*, 3(2), 53-66. DOI: <https://doi.org/10.26858/i.v3i2.10390>
- Ramiati, E., Imam, M., & Dewi, S. (2021). Efektivitas penggunaan media buku cerita bergambar dalam meningkatkan hasil belajar IPS pada siswa kelas 3 di MI An-Nidhom Kebonrejo Genteng. *INCARE: International Journal of Educational Resources*, 2(3), 255-268. Retrieved from <https://ejournal.ijshs.org/index.php/in-care/article/view/282>
- Sanusi, U & Rudi A. S. (2018). *Ilmu pendidikan Islam*. Sleman: CV. Budi Utama.
- Siswanto, A., Purnomo, B., & Indrayani, N. (2021). *Pengembangan media pembelajaran e-poster berbasis software adobe photoshop materi pertempuran 10 November 1945 siswa kelas XI IPS 3 SMA Negeri 1 Kota Jambi*. (Skripsi, Pendidikan Sejarah, Universitas Jambi). Retrieved from <https://repository.unja.ac.id/25779/>
- Sujarwo, S. & Rina, O. (2017) Pengaruh warna terhadap short term memory pada siswa kelas VIII SMPN No 37 Palembang. *Jurnal Psikologi Islami*, 3(1), 33-43. DOI: <https://doi.org/10.19109/psikis.v3i1.1391>
- Sumartono, S., & Astuti, H. (2018). Penggunaan poster sebagai media komunikasi kesehatan. *Komunikologi: Jurnal Ilmiah Ilmu Komunikasi*, 15(1), 8-14. Retrieved from <https://komunikologi.esaunggul.ac.id/index.php/KM/article/view/187>
- Udayani, L. M. (2021). Penggunaan media visual "Poster Bergambar" dalam pembelajaran bahasa inggris untuk anak usia dini. *LAMPUHYANG*, 12(2), 182-191. DOI: <https://doi.org/10.47730/jurnallampuhyang.v12i2.262>
- Widiyoko, E. P. (2013). *Evaluasi program pembelajaran: Panduan praktis bagi pendidik dan calon pendidik*. Yogyakarta: Pustaka Pelajar.
- Yogananti, A. F. (2015). Pengaruh psikologi kombinasi warna dalam website. *ANDHARUPA: Jurnal Desain Komunikasi Visual & Multimedia*, 1(1), 45-54. DOI: <https://doi.org/10.33633/andharupa.v1i01.956>