JOURNAL OF BIOLOGY EDUCATION
J O B E
E-ISSN 2656-3436/ P-ISSN 2615-3947
IAIN KUDUS
http://journal.iainkudus.ac.id/index.php/jbe

Development *Slot Card* Learning Media in Classification of Living Things Material

Fitrianti [1*], Ahmad Ali[2], Muhammad Khalifah Mustami[3]
[123]Universitas Islam Negeri Alauddin Makasar, Indonesia
***corresponding author : ahmad.ali@uin-alauddin.ac.id**

ABSTRACT

The use of media in biology subjects is very important in terms of understanding the material, because biology is a subject that studies living things in a very broad area. Biology learning contains many concepts that are abstract, but there are also many concepts that can be observed and are close to everyday life. This research aims to: 1) determine the characteristics of the Slot card learning media in class VII living creature classification material at SMP Negeri 1 Liukang Tangaya 2) The level of validity, usefulness, and success of the slot card learning media in class VII living creature classification material at SMP Negeri 1 Liukang Tangaya. ADDIE development model (Analyze Design, Develop, Implement, and Evaluate) is the main emphasis of this research. Results tests are the tools used in this research. Statistical analysis: Descriptive analysis using the percentage formula is the data analysis method used. The percentage formula is the data analysis method used. The research subjects were 28 students of Class VII A of SMP Negeri 1 Liukang Tangaya. Based on the research results, slot cards created has a level of validity with an average value of 3.93 and is included in the very valid category. These slot cards also meet the basic requirements for slot card teaching materials. Then, based on the results of the questionnaire responses from educators and students, the level of practicality of the product has an average value of 87.5% with a very practical category. In addition, a slot card was developed which included the slot card in the highly effective category in the effectiveness test, with an average score of 77 (high) and a completeness rate of 93% among students. Based on the research results, it can be concluded that the slot card teaching materials made are suitable for use in the educational process.

Keywords : Learning Media, Research and development, Slot cards

INTRODUCTION

In essence, learning is a process, or, the process of preparing an environment for students to support and motivate them to learn. (Pane and Darwis, 2017). The single most important factor in achieving educational goals is the teacher (Mustami, 2017). Teachers have the capacity to create an engaging, stimulating and comfortable learning environment and curriculum in addition to providing space for students to engage in active, creative and innovative learning while completing tasks. After completing the tasks, teachers must be able to create more effective and entertaining teaching strategies so that students can be more engaged in learning (Mustami, 2017). Utilising learning media is the single most effective method.

The single most effective means of improving learning is learning media. In addition to helping the educational process, the media is also used to overcome student boredom in the classroom (Sakti, 2012). The tool used in learning activities is media, which helps teachers convey knowledge in an interesting way so that learning becomes more effective (Aryani et al., 2019). Learning media is a tool, method, or technique that is useful for conveying information, assisting in explaining certain topics, and instilling desire and motivation in students to participate in learning activities (Astuti et al., 2018). When media teaching media is used, students can understand the content more easily. When used, students can understand the content more easily. Eliminating the teacher's function completely is not always possible, especially when teaching. Teachers cannot always be completely carried out, especially when giving instructions. Media can help people learn more, convey information in a reliable and responsive way, make interpretation easier, and discover new knowledge. (Ningsih, 2020).

To improve student perception, learning media must follow certain rules. As a result of increased motivation and interest in learning, learning initiatives become more active (Sakti and Hamzah, 2020). The role of media in learning activities is one of the areas that highlights its effectiveness and relevance to the learning objectives to be implemented. Learning media has various functions, including encouraging learning, clarifying what has been learned, providing learning support, eliciting thoughtful responses from peers, and providing quick feedback. In addition, learning media is also influenced by the shift in emphasis in formal education, which previously transformed theoretical education into practical and functional education (Miftah, 2013). In addition, media can be used to increase understanding and awareness of educational goals (Mustami, 2009).

The only tool used in learning is slot card-based learning media (picture cards). Picture cards are small cards that contain images, text, or symbols that cue the reader that something related to the image is about to happen. According to Astuti et al (2013), the image on the picture card is a list of information or messages that are disseminated with a description of each image on the back of the card. The benefit of this media is that it can convey student understanding so that when the teacher speaks, students passively absorb what the teacher says (Noviyanti et al., 2013).

Utilising slot card media during teaching can increase student success and reduce teacher stress. Picture card media is a type of media that educators use to guide students through the learning process and help them increase their interest in the subject. Some criteria that need to be considered in selecting card media for learning include: recognition of the purpose of the card, quality of artwork, suitability of size and text, validity and completeness (Renny et al, 2014).
The use of media in biology subjects is very important in terms of understanding the material, because biology is a subject that studies living things that are very broad. In addition, there are many abstract concepts in biological material, but many concepts can be observed and are close to everyday life (Mustami, 2015). In addition, biology class is considered a boring class because it only contains basic material and the concepts have descriptions that are difficult to understand in Latin, so it is very disliked by students (Jayawardana, 2017).

Based on the researcher's interview with the science teacher at Liukang Tangaya State Junior High School, the problem is that the Biology Science learning process is not carried out optimally. Teachers more often provide subject matter using the lecture method and give assignments on printed books. In addition, the use of teaching media is still lacking, especially on material that is difficult for students to understand because of the use of a lot of Latin language and very different material, but limited time, so the teacher cannot convey certain material. The most widely used learning media is only in the form of package books. Therefore, researchers are encouraged to develop picture card teaching materials in the form of slot cards to overcome these problems which have the aim of knowing the characteristics, validity, practice, and effectiveness of slot card media on the classification of living things in class VII SMP Negeri 1 Liukang Tangaya.

The slot cards developed have two sides with one side including a definition, caption, glossary, or description that serves as a starting point or guide to learning. for anything related to the image on the card. The image on the picture card media (slot card) is a series of messages accompanied by including a caption on the back of each image.

METHOD

The research conducted was research and development based on the ADDIE development model. This research was conducted at SMP Negeri 1 Liukang Tangaya and the subjects were students of class VII A totalling 28 people. The ADDIE development model in this study was developed by Reiser and Mollenda, which has five stages (Analyze, Design, Develop, Implement, Evaluate) that are carried out systematically (Branch, 2009). the model consists of: 1) Analyze stage, which includes validating learning problems, determining learning objectives, conducting learner analysis, identifying things needed and preparing a development implementation plan; 2) Design stage, which includes designing the required components, compiling learning scenarios and compiling validation instruments; 3) The development stage (Develop) includes compiling the subject matter, determining and developing media complements, designing improvements to product usage instructions and conducting formative revisions; 4) At the implementation stage (Implement), the media developed at this stage is tested on teachers and students to see if there is a problem-solving process for students to overcome the problems encountered previously in learning activities and to ensure the growth of student skills after completing learning through the developed card map media; 5) At the evaluation stage (Evaluate), the aim is to evaluate the media development products developed and implemented in the classroom so as to produce competent, practical and effective products. Data collection techniques in this study are learning outcomes tests used to test the effectiveness of the media that has been developed and non-tests in the form of media characteristic sheets, validation sheets and questionnaires.

The instruments used in this study are 1) media characteristics sheet, which identifies the characteristics of the media after it has been developed and can be used as a benchmark to compare the media developed with other forms of media for learning; 2) validation sheet provides information about the validity of raw materials based on the results of the validator's assessment; 3) teacher and student response questionnaire, used to understand the practical

implications of the media developed and (4) the effectiveness of the practical implementation of the media is determined by the test results of the course. The data analysis technique in this research is media character analysis, validity, practicality and effectiveness which are analyzed using descriptive data analysis with the percentage formula.

RESULTS AND DISCUSSION

Slot card learning media characteristics

The characteristics of the slot card learning media are obtained based on the results of the assessment of the media characteristics sheet by the validator. This media characteristics assessment consists of five aspects of assessment. The five aspects of assessment are appearance, content, size, material and language.

The characteristics of slot card learning media are first, in appearance this media has an interesting colour variation. Second, this resource basically has clear learning objectives, displays material and images of living things classification material, the material used is in accordance with the needs of the KD given, and has clear instructions for use. Third, this media consists of 29 cards measuring 10 cm x 6 cm. Fourth, in terms of materials, this media is printed using PVC paper, and the rectangular box used is wood. Fifth, regarding language, this media uses language that is easy to understand. The characteristics of the slot card learning media developed can be used as a reference to distinguish it from other learning media. This is in accordance with the theory which states that the characteristics of the teaching materials developed are 1) clear learning objectives, 2) clear instructions for use, 3) clear learning process, 4) appropriate concepts, 5) cognitive, 6) there are examples, exercises with comments and conclusions, 7) assessment with results and discussion, 8) can increase student motivation, 9) easy to use language, 10) easy navigation, 11) interactive, 12) smooth, balanced text, animation, and colourful images, and 13) attractive intro guides (Cahdriyana & Rino, 2016)

Validity of Slot card Learning Media

The slot card learning media developed was obtained after passing through several stages of development. One of them is in the third stage of development, namely develop, there is a validation stage carried out by the validator. During this development phase, the prototype I and prototype II displays were obtained from the learning media display. Prototype I is a slot card learning media designed and developed by researchers before being tested by validators, which then becomes Prototype II, which is media that is ready to be implemented in the field.

Comparison of the results of prototype I and prototype II formed based on the recommendations and input of validator I and validator II can be seen in table 1 as follows:

Table 1. Comparison between prototype I and prototype II of slot card learning media

***Prototype* I**	***Prototype* II**
	
Still using written references	Already using references in the form of QR codes
	
Plain white background	Background has been replaced with the appropriate color
	
Design and color do not match the material	The design and color have been adjusted the material

The development aspects of the developed slot card learning media have been validated by two expert validators. The results of the slot card learning media validation can be seen in table 2.

Table 2. Validity of slot card learning media

Assessment Aspects	Rating result	Category
Appearance	4	Very good
Fill the media *card slot*	3.75	Very good
Technical quality	3.87	Very good
Size	4	Very good
Communicative language	4	Very good
Appropriate use of terms	4	Very good
Average	3.93	Very good

Consider validation by the validator above of the slot card learning media as a whole aspect which includes appearance, feasibility of material / content, technical quality, size, language and appropriateness of the use of terms obtained an average value of 3.93. This value is categorised as "Very Valid" based on the validity criteria. The aspects of appearance, material content, size, and language and the appropriateness of the use of terms obtained very valid results. The validity of this media means that it is suitable for use in research because all aspects contained in the media have been assessed by validators and all aspects are classified as valid. Thus, It has been determined that the slot card learning materials are suitable for educational use.

The first factor is that the slot card media has a visually attractive appearance supported by the right choice of colors, which will attract more students. This supports the idea that human emotions can be influenced by color. (Marsya & Anggraita, 2016). Furthermore, colors also influence psychology, causing changes in mood, changes in the heart, changes related to the emotional state, such as feelings of happiness, sadness, joy, or gloom (Rikard Kuller et all, 2009).

The second aspect is that the content in the slot machine media is in accordance with the learning objectives. The content in the slot machine media is in accordance with the learning objectives. educational purposes. The only criterion for media selection is whether or not the media fulfils the needs of the teaching process. In addition, the media is said to be useful if it contains educational material, the suitability of KD media with educational objectives, the suitability of students with media needs, the suitability of the material, and the suitability of teaching materials. Media convergence among major media. This is in accordance with the hypothesis that educational media becomes valid if it meets the standards of acceptability of evidence and construction (Akker et al., 1999: 127).

The third factor is technical quality, which refers to how easily the slot card media is damaged during use. Made of PVC material has high mechanical and physical quality and can be used for a long period of time supports this (Pitanova & Sagir, 2023). Then the slot card media box is made using wood which is connected using nails which are then painted to maintain the quality of the box. This is in line with the theory that one of the media selection criteria that needs to be considered is technical quality, meaning how the quality of the media and Selected medium longevity (Sungkono, 2008: 74).

The fourth aspect is that the media slot card is simple and not too big, so it is easier to read and easy to carry everywhere. In line with the theory, the size of the The media must comply physical size of the students, namely the teaching materials used are not too large and not too small. The media should be easy to see and feel by all students (Marlina, 2017).

The fifth factor is communicative language, which is communicative in how easy it is to understand and in accordance with the EYD of the language used in the slot card media. The sixth factor is the suitability of the language used, which shows that the provisions on the media slot card comply with the relevant regulations. According to this definition, the element The validity of language that needs to be considered is the idea, the necessary element of linguistic validity consisting of readability, clarity of information, following the correct rules for using the Indonesian language (Ministry of National Education, 2008).

The training materials developed have value due to many factors: great value due to many factors: 1) Curriculum demands are met by teaching materials that have been prepared, especially the only practitioner in creating material that will achieve the expected results when learning through media, and 2) Media can inspire students to learn because its development is in line with the students' developmental stages, and 3) learning activities are student-centred which makes it easier for students to rediscover a concept (Dwijayani, 2017).

Practicality of *Slot card* Learning Media

The practicality of slot card media was obtained based on the results of student and teacher response questionnaires. The questionnaire was distributed during the implementation stage, namely after the learning process was completed. The results of teacher and student questionnaires can be seen in table 3.

Table 3. Practicality of slot card learning media

Type of Assessment	Average	Assessment criteria
Student Response	4	Very efficient
Teacher Response	3.75	Very efficient

Based on the table, student results response survey gave an average score of 92.3 in the very practical category, and 82.8 in the teacher's response with a very practical category. Based on these data, it is known that slot card learning media is very practical to use in learning, therefore it is suitable for use in teaching. This is supported by the theory that media-based education qualifies as practical provided the results meet the criteria of the lowest practicable positive feedback from students and teachers (Syaiful, 2016). Development is the product of the process of creating things that are useful and people like and can be easily used in everyday situations.

The practicality of the media can be seen from the application of the media in learning activities, teacher and student responses to learning media. Practicality is obtained after implementing learning media by looking at teacher and student responses based on questionnaires (Hendi, et al, 2022). A number of factors, including features, language, appearance, materials, and ease of use, support the practicality assessment.

Slot card practicality indicators are reviewed in terms of their usefulness, namely the extent to which students can understand and master the material by utilising the media, because with the media students can be helped in learning both in groups and independently, making students interested in the material and making them learn more efficiently (Faiza, 2014). One of the prerequisites for the usefulness of the media created is ease of use. In order for this goal to be achieved, the media created must be able to facilitate the teaching and learning process for students so that students can immediately use it independently and not experience problems in understanding the material presented. The ease of using the media can also provide a positive response to the learning being carried out, one of which is that it can increase student attention during learning process (Annisa, 2020). Based on the questionnaire results, the average value of student answers is 84.9%. This shows that overall the slot cards developed bring positive benefits to students, make the material easier to understand, help students concentrate more and remember the material more easily.

The level of practicality of the slot card developed based on several practical considerations has been achieved, so that this slot card can be used in the learning process. The slot card developed has an attractive appearance, is comfortable to use, communicative language so that it is easily understood by students, and the material is presented according to the concept and easy to understand, and is equipped with techniques that make it easier to memorise the material.

There are five practical effects of the developed media, namely: 1) the role of the teacher shifts to a more constructive direction, 2) encourages positive student attitudes towards what is explained, 3) The quality of learning outcomes can be improved significantly, 4) learning becomes interactive and 5) learning becomes more fun. In addition, the practical aspect of product development refers to materials that are easy to use and help achieve learning objectives (Haviz, 2013).

Effectiveness of *Slot card* Learning Media

to determine the effectiveness of educational media in game cards based on the performance displayed at the top level. The assessment of the score results is to determine the level of understanding of the level, the evaluation is in accordance with the bias of the N gain formula and the assessment standard of 70. The percentage of student learning outcomes can be seen in table 4.

Table 4. The effectiveness of *slot card* learning media

Score	Student Completeness	Amount	Percentage (%)
70 – 100	Completed students	26 people	93%
0 – 69	Students who did not complete	2 persons	7%
	Amount		100%

Based on the table, it can be concluded that 26 students scored between 70-100 with a percentage of 93%, where 2 students scored between 0-69 with a percentage of 7%, which means that the category is above the minimum learning outcome of completeness with an average value of learning outcomes of 77 which indicates that students' mastery of material is in the high category. With this, it is concluded that learning with slot cards developed is effective for use in learning.

Utilising safe teaching materials is the first step and the most important principle in creating effective learning (Omenge and Mosol, 2016). Learning outcomes reflect the ability of students to realise the achievement of learning stages, to achieve the basic competencies of the material to be taught (Mustami, 2015).

Slot card media has been recognised as effective due to a number of factors that contribute to effectiveness, such as material, structure, and language. The first aspect is Utilization of playing cards for internships, and use of questions tailored to education. According to Havis' (2020) theory, the effectiveness of the development criteria is assumed if learning with the help of socialised media can achieve goal-oriented indicators; the achievement of these goal-oriented indicators can be determined from an individual and typical student point of view.

The second aspect is that the slot cards developed contain clear and legible material and images, and are used in the form of games to make it easier for students to understand the material on the classification of living things. This aspect is the single most important factor affecting students' learning ability. Games in learning are able to increase students' motivation and enthusiasm for learning, thus arousing curiosity and then continuing research activities, deepening learning, training cooperation and sharing opinions in discussion activities so as to improve students' learning abilities (Aini, 2018). In addition, games have a positive effect on learning, namely: improving student learning outcomes in cognitive, emotional and psychomotor aspects, overcoming learning problems such as daring to make decisions, being able to work together and think critically in problem solving, making it easier for students to understand the learning context (Rosalina et al, 2011).

The third aspect is the use of language in accordance with EYD This is in line with the theory that language must include, clarity of information, readability, correct application of Indonesian language rules and efficient and effective use of language (Department of National Education, 2008).

Apart from being seen from students' performance in learning, the effectiveness of learning media can be seen from students' reactions to the use of these media during learning. During the research, the students were very enthusiastic to follow the learning through slot card media as seen from their active conversation with the teacher and other students. This is because the media used is very biased; specifically, media that denies the existence of certain ideologies in the surrounding area that are often communicated to women in everyday life.

CONCLUSION

After knowing the results obtained, it can be concluded that the game slot card developed fulfils the basic characteristics of the slot card and its validity level averages 3.93 with a very valid category. Then, based on the results of the teacher and student responses, the practicality

level of the product got an average of 87.5 with extreme practical category. In addition, these cards are very classy and very effective in terms of effectiveness assessment., with a student completeness rate of 93% and an average of 77 (high). Thus, slot card teaching materials are useful because they meet the criteria of valid, effective and practical.

This research should further improve the quality of teaching materials developed both from the display strategy or the contents of the slot card and be tested widely..

REFERENCES

Aini, F,N. (2018). Pengaruh Game Based Learning Terhadap Minat dan Hasil Belajar pada Mata Pelajaran Ekonomi Siswa Kelas XI IPS. *JUPE*, 6(3), 249-255.

Akker, J,V,D. et al. 1999. *Design Approaches and Tools in Education and Training*. London: Kluwer Academic Plubishers.

Annisa, A,R., Aminuddi, P,P., & Dharmono. (2020). Kepraktisan Media Pembelajaran Daya Antibakteri Ekstrak Buah Sawo Berbasis Macromedia Flash. *Quantum: Jurnal Inovasi Pendidikan*, 11(1), 72-80.

Aryani, N.D., Amelia, L., Ardina, D.I., & Yunita, K. (2019). Pengembangan Media Pembelajaran Monopoli Pada Materi Sel (Monosel). *Jurnal Biotek*, 7(1), 27-36.

Astuti, F.K., Edy, C., Supartono., Ngic, C.V., & Nguyen, T.D. (2018). Effectiveness of Elements Periodic Table Interactive Multimedia in Nguyen Tat Thanh High School. *IJIET*, 2(1), 1-10.

Astuti, W., Laili, F.Y., & Eka, A. (2013). Pengaruh Media Kartu Bergambar Terhadap Hasil Belajar Peserta didik Pada Materi Jamur Di SMA. *Jurnal Pendidikan dan Pembelajaran Khatulistiwa*, 2(9), 1-9.

Branch, R,M. (2009). *Instructional Design: The ADDIE Approach*, New York: Springer Science Business Media.

Cahdriyana, R.A., & Rino, R. (2016). Karakteristik Media Pembelajaran Berbasis Komputer untuk Siswa SMP. *Alphamath: Journal of Mathematics Education*, 2(2), 1-11.

Departemen Pendidikan Nasional. (2008). *Panduan Pengembangan Bahan Ajar*. Jakarta: Direktorat Jenderal Manajemen Pendidikan Dasar dan Menengah.

Dwijayani, N.M. (2017). Pengembangan media pembelajaran ICARE. *Jurnal Matematika Kreatif Inovatif*, 8(2), 126-132.

Eliyanti, M. (2017). Pengembangan Pembelajaran Aktif Menggunakan Media Pembelajaran pada Mata Pelajaran Bahasa Indonesia di Kelas Rendah. *Pedagogi: Jurnal Penelitian Pendidikan*, 4(1), 129-143.

Haviz, M. (2013). Research and Development; Penelitian Dibidang Kependidikan yang Inovatif Produktif dan Bermakna. *Jurnal Ta'dib*, 16(1), 28-43.

Huddi, M,W,H., & Achmad, L. (2020). Permainan Hydrocarbon Adventures Sebagai Media Pembelajaran Senyawa Hidrokarbon. *Unesa Jurnal of Chemical Education*, 9(1), 43-52.

Indriastuti, F., & Wawan, T,S. (2014). Podcast Sebagai Sumber Belajar Berbasis Audio. *Jurnal Teknodik*, 18(2), 304-314.

Jayawardana, H,B,A. (2017). Paradigma Pembelajaran Biologi Di Era Digital. *Jurnal Bioedukatika*, 5(1), 12-17.

Kuller, R., Byron, M., & Jan, J. (2009). Color, Arousal, and Performance-A Comparison of Three Experiments. *Color Research & Application*, 34(2), 141-152).

Marsya, I,H., & Anggraeni, A,W. (2016). Studi Pengaruh Warna pada Interior terhadap Psikologis Penggunanya, Studi Kasus pada UTD Kota X. *Jurnal Desain Interior*, 1(1), 41-50.

Miftah, M. (2013). Fungsi, dan Peran Media Pembelajaran Sebagai Upaya Peningkatan Kemampuan Belajar Peserta didik. *Jurnal Teknologi Pendidikan*, 1(2), 95-105.

Milala, H,F., Joko., Endryansyah., & Achmad, I,A. (2022). Keefektifan dan Kepraktisan Media Pembelajaran Menggunakan Adobe Flash Player. *Jurnal Pendidikan Teknik Elektro*, 11(2), 195-202.

Mustami, M,K. (2016). Profil Guru/Dosen dan Tentangnya dalam Era Pengetahuan. *Lentera Pendidikan*, 19(2), 163-171.

Mustami, K,M., Mardiana, S., & Maryam. (2017). Validitas, Kepraktisan, dan Evektivitas Perangkat Pembelajaran Biologi Integrasi Spritual Islam. *Jurnal Al-Qalam*, 23(1), 70-77.

Mustami, K,M. (2009). Inovasi Model-Model Pembelajaran Bidang Sains untuk Meningkatkan Hasil Belajar Peserta didik. *Lentera Pendidikan*, 12(2), 125-137.

Mustami, K,M. (2015). Model SM2CL untuk Pembelajaran Biologi yang Inovatif. *Jurnal Biotek*, 3(1), 1-15.

Mustami, M,K., & Gufran, D,D. (2015). Development Of worksheet Student Oriented Scientific Aproach At Subjct Of Biology. *Man in India*, 95 (4), 917-925.

Nasution, S,H., Lathiful, A., Sudirman., & Susiswo. (2016). Pengembangan Media Pembelajaran untuk Mendukung Kemampuan Penalaran Spesial Peserta didik pada Topik Dimensi Tiga Kelas X. *Jurnal KIP*, 4(2), 903-913.

Ningsih, A.S., Khalifah, M.M., & Ainul, U.T. (2020). Pengembangan Media *Game Ludo* Materi *Animalia* pada Peserta didik Kelas X SMA Islam Darussalam Pannyangkalang Gowa. *Jurnal Al-Ahya*, 2(2), 115-128.

Noviyanti, L., Kukuh, S., & Noor, A.H. (2013). Keefektifan Penggunaan Kartu bergambar Berbentuk Pop Up Card Pada Pembelajaran Peserta didik SMP. *Lembaran Ilmu Kependidikan*, 42(2), 76-83.

Omenge, O,R., & Mosol, J,P. (2016). Understanding the Utilization of Intructional Media in Training Health Profesionals. *Jurnal of Nursing and Health Science*, 5(3), 1-8.

Pane, A., Muhammad, D.D. (2017). Belajar dan Pembelajaran. *Jurnal Kajian Ilmu-ilmu Keislaman*, 3(2), 333-352.

Pitanova, T., & Sagir, A. (2023). Karakteristik Mekanikal Material PolimerPVC dengan Variasi Konsentrasi Vco (Virgin Coconut Oil). *Jurnal Pendidikan dan Konseling*, 5(1), 4422-4435.

Renny, I.W., Pramudiyanti., & Rini, R.T.M. (2014). Pengaruh Penggunaan Media Kartu Bergambar Terhadap Keterampilan Berfikir Kritis Peserta didik. *Jurnal BIOTERDIDIK Wahana Ekspresi Ilmiah*, 2(1), 1-11.

Sakti, H,G., & Hamzah, F. (2020). Pengaruh Medua Papan Flanel Terhadap Minat Belajar Siswa. *Jurnal Paedagogy: Jurnal Penelitian dan Pengembangan Pendidikan*, 7(3), 226-231.

Sakti, I., Yuniar, M,P., & Eko, R. (2012). Pengaruh Model Pembelajaran Langsung (*Direct Intruction*) melalui Media Animasi Berbasis Macromedia Flash terhadap Minat Belajar dan Pemahaman Konsep Fisika Peserta didik di SMA Plus Negeri 7 Kota Bengkulu. *Jurnal Exacta*, 10(1), 1-10.

Sungkono. (2008). Pemilihan dan Penggunaan Media dalam Proses Pembelajaran. *Majalah Ilmiah Pembelajaran*, 4(1), 71-80.

.