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DEVELOPMENT OF CANVA-BASED INTERACTIVE LEARNING MEDIA IN CLASS VIII SCIENCE SUBJECTS HUMAN BLOOD CIRCULATION SYSTEM

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ABSTRACT

IPA is a science group that explains natural phenomena, living things, systems in the body which are rather difficult to understand without using interactive media. The circulatory system in humans is one of the interesting subject matter for science class VIII which is interesting but difficult for students to understand because it involves the internal mechanisms that exist in the human body. One of the supporting factors in efforts to increase students' understanding of the material being taught is to use appropriate media and in accordance with the subject matter being taught. This research was conducted at SMPN 2 Sawang. The ultimate goal of this research is to produce Canva-based interactive learning media. The research method used is descriptive qualitative with qualitative and quantitative data analysis, data collection techniques by interviews, questionnaires and observation. The development of Canva-based interactive media uses the 3 stages of the IDI model, namely define is carried out by distributing questionnaires and interviews with students and educators to get a complete picture of the situation in the field. the develop stage is designing interactive learning media based on Canva using then validation by experts (validators), and the evaluation stage aims to find out the benefits, convenience, and time efficiency of using media by teachers and students. The validity value is 95.2% with very feasible criteria, practicality by the teacher is 95.8% with very feasible criteria and 97.19% students with very feasible criteria. The results of the study show that Canva-based learning media is valid and practical for learning

Keywords: *Interactive learning media, Canva, Science*

INTRODUCTION

Learning is something that is deliberately designed to support the learning process in students so that learning objectives can be conveyed properly. There are many components that influence the learning process, one of which is the media used in addition to internal factors such as student competency, interest, physical condition, and so on (Rahmatullah et al., 2020). Innovation in learning can be done, one of which is by designing learning media as attractive as possible so that it can increase students' understanding of the subject matter. (Fauziah et al., 2022).

Interactive learning media is a function that is able to combine the users of the application. Interactive media can provide an attractive display because it contains a combination of images, animations and audio. From this view it can reduce student boredom caused by boring learning, so students or students are more interested in observing the material or learning provided (Novitasari, 2016). Currently, there are many website-based interactive learning media that teachers have used because they can be used online and are able to deliver messages to students (Fitra & Maksum, 2021). Based on the results of interviews with teachers and class VIII students at SMP 2 Sawang, in the learning process students still have difficulty understanding the Blood Circulatory System material. This is because students feel bored, bored, unmotivated and unfocused because the media displayed is not attractive. The learning media displayed are usually only charts, PowerPoint, torso, environment, supporting books such as encyclopedias, YouTube videos. Therefore, an effective and efficient learning media is needed to increase students' understanding of the material being taught. Based on these conditions, the author wanted to find out how far the benefits of developing Canva-based interactive learning media in the Natural Sciences subject matter of the Human Circulatory System in fostering student learning motivation. This media has its own uniqueness, namely a more complete explanation of material, containing audio, pictures, fun animated videos so students don't get bored and bored when participating in learning using this media.

The results of the analysis of the observation sheets for Grade VIII students of SMP Negeri 2 Sawang regarding student learning methods stated that 56.56% of students learned visually, 26.08% of students learned audiovisually, and 17.39% of students learned by involving movement or kinesthetics. Based on the results of the questionnaire given, it shows that the Human Circulatory System material is said to be interesting for students, but this material is difficult to understand. Students have not fully applied the benefits of studying the Human Circulatory System material. Basically, the

material for the Human Circulatory System also discusses how to maintain circulatory devices such as the heart to stay healthy.

Based on the results of the analysis questionnaire filled out by the teacher, it was found that the visual learning media using Canva is very good for the material on the Human Circulatory System. (Noer et al., 2021). ased on these problems, learning media is needed that can increase students' understanding of the Human Circulatory System material because learning media is a driving factor that can stimulate students' attention and interest so that learning objectives can be achieved properly (Nillofa Ende et al., 2022). One of them is canva. Apart from providing attractive presentations, Canva also provides interactive features or templates in the form of videos that can increase the creativity of teachers in designing their teaching materials. This creative and innovative learning media can attract students' interest in learning to listen properly and optimally to the teacher's presentation (Rizanta & Arsanti, 2022). Some of the advantages this Canva design program has are: (1) it has a variety of attractive graphic designs, animations, templates, and page numbers, (2) it can design learning media anytime and anywhere without having to use a laptop, but can also use a mobile phone, and (3) on the Canva media, the results that we have made can be downloaded in various formats, both in pdf and jpg format (Marwadi & Sodiq, 2022). To apply the presentation, it can be done offline and in collaboration with other media. So, this visual learning media using Canva was created using the Canva application and assisted by Microsoft Power Point to add movement to the animation.

Previous research findings also prove that the use of Canva-based learning media is appropriate for use in learning activities (Kamila & Kowiyah, 2022; Fauziah et al., 2022). Other research findings also state that visual learning media using Canva can increase student learning motivation (Junaedi, 2021; Rainbow, 2020). The use of this media is very effective, both offline and online. The development of this visual learning media is also based on the reality on the ground. There has been no development of Canva-based interactive learning media used in Sawang 2 Public Middle School, so it is necessary to develop Canva-based interactive learning media that are valid and practical. The purpose of this research is to develop visual learning media using Canva which is used in SMP Negeri 2 Sawang. It is hoped that this learning media can be used in learning so that learning objectives can be achieved optimally.

METHODS

This type of research is development with the Instructional Development Institute (IDI) model which consists of three stages, namely the define, develop, and evaluate stages. At the define stage, a needs assessment

was carried out with the aim of obtaining an overview of the actual problems regarding the use of instructional media in the field by distributing questionnaires to students' responses to the use of instructional media and interviewing teachers at SMP Negeri 2 Sawang. The methods used to collect data are observation, interviews, and questionnaires. The instrument used in this study was a questionnaire. The techniques used in data analysis were qualitative and quantitative descriptive analysis. At the development stage, an initial design was made of Canva-based interactive learning media which was used as the basis for designing Canva-based interactive learning media.

The designed media is then consulted with media experts/experts as a media validator. Validation was carried out by experts (validators) consisting of two media experts and one science teacher. This validation uses a research instrument (questionnaire). Input from the validator is used to improve the media being developed. This media will be revised if declared invalid by the validator. Then trials are carried out on the products that have been developed or produced. The purpose of the trial is to collect data on practicality, after the validity test is then revised. After the new revision process, the media was tested in schools. Practicality tests were conducted to see the practicality of research products used by teachers and students in schools.

The method used to describe the results of the questionnaire sheet uses the following formula: (Mashuri & Budiyono, 2020)

$$P = \frac{Gain\ Score}{Maximun\ Score}\ x\ 100$$

After obtaining the data results using the formula above, they are then interpreted in the following table: (Azizah, 2019)

Table 1. Criteria for Validity Results

Presentase	**Katergori**
81% - 100%	Very Eligible
61% - 80%	Decent
41% - 60%	Less Eligible
21% - 40%	Not Eligible

RESULTS AND DISCUSSION

Analysis of learning media needs in accordance with student learning methods based on observations and interviews regarding the availability of media and media used to assist the learning process at SMP Negeri 2 Sawang in the form of Power Points, laboratory equipment, torso, environment, supporting books such as encyclopedias , videos from Youtube, whiteboards,

and LKPD, the available learning media are not all practical and effective for teachers to use to help students understand science lessons, especially the Human Circulatory System. teachers use more learning media in the form of Power Point and LKPD, so that the learning process seems monotonous, less interesting which causes low student interest and motivation where the final impact is low student learning outcomes. Students are identified and analyzed regarding the needs of learning media that are in accordance with the way students learn. This analysis was carried out through the distribution of questionnaires on student learning methods. The data obtained were that students generally had a visual learning method with a percentage of 56.56%.

Curriculum analysis was carried out to identify weaknesses in the learning process in basic competencies and indicators of achievement of science learning competencies in terms of learning media aspects. This analysis was carried out from the results of teacher interviews and student observation sheets.

From the results of interviews with teachers and the results of analysis of student observation sheets, the science learning material that was difficult to understand in class VIII material was the Human Circulatory System with a percentage of 69.56%. This statement is supported by most of the students' reasons for having difficulty understanding the material on the Human Circulatory System because it involves internal processes in the body that cannot be seen directly and involves many organs. In the development stage, the activities carried out were designing learning media using Canva's design on motion system material, designing media displays, collecting material, compiling media storyboards, making visual learning media on motion system material. The next stage is to test the validity of the media. Testing the validity of visual learning media using Canva on the Human Circulatory System material was carried out by a validator consisting of two experts through a validation questionnaire. At the validation stage, there were suggestions from the validators which became the basis for consideration for revising Canva-based interactive learning media on the Human Circulatory System material. The results of the questionnaire data analysis validating Canva-based interactive learning media can be seen in the following table.

Table 1. Material Expert Validation Results

Aspect	Score	Percentage	Category
Curriculum	5	100%	Very Eligible
Materials	20	100%	Very Eligible
Evaluation	22	88%	Very Eligible
Percentage Average		**96%**	**Very Eligible**

Table 2. Media Expert Validation Results

Aspect	Score	Percentage	Category
Media Physical Display	14	93%	Very Eligible
Media Contents	14	93%	Very Eligible
Language in Media	14	93%	Very Eligible
Menu correlation with contents	14	93%	Very Eligible
Innovation	15	100%	Very Eligible
Percentage Average		**94,4%**	**Very Eligible**

Table 3. Teacher Validation Results

Aspect	Score	Percentage	Category
Media Physical Display	15	100%	Very Eligible
Media Contents	14	93%	Very Eligible
Language in Media	14	93%	Very Eligible
Menu correlation with contents	14	93%	Very Eligible
Efficiency	15	100%	Very Eligible
Percentage Average		**95,8%**	**Very Eligible**

Table 4. Student Validation Results

Aspect	Score	Percentage	Category
Media view	15	97,33%	Very Eligible
Media Contents	14	97,06%	Very Eligible
Percentage Average		**97,19%**	**Very Eligible**

This media has been validated by material experts and media experts to determine whether this product is suitable for use or not. The results of the assessment of material experts with a score of 96% indicate that this category is very feasible, and media experts with a score of 94.4% with an average percentage of expert validity of 95.2% which states, vaidation by teachers 95.8% is included in the very feasible category and the percentage student validation of 97.19% also shows a very feasible category. The results of the validation from the following material experts and media experts show the conclusion that canva-based interactive learning media in the Natural Sciences subject on the Human Circulatory System can already be used for the learning process in class VIII students.

Based on the results of data analysis regarding the development of Canva-based interactive learning media for the Human Circulatory System material, this was declared valid. This is in line with previous research findings which show that conformity with competencies based on the applicable curriculum is important when creating learning media (Gever et al., 2021; Megawati & Utami, 2020; Saripudin et al., 2018). Interactive learning media using Canva on the Human Circulatory System Material has a very valid

category and a very high validity value in terms of content feasibility. This shows that the use of Canva in the Human Circulatory System Material as a visual learning medium is in accordance with the 2013 Curriculum. This is in accordance with the demands of basic competencies, indicators of achievement of competencies, and learning objectives. Students who have clear competencies and achievement indicators will find it easier to learn (Anggraini et al., 2018)

This shows that the material for the Human Circulatory System developed through Canva-based interactive learning media has precise, clear, and simple sentence structure in accordance with good and correct writing rules. The arrangement of sentences written in this way will help students understand the learning material in accordance with the expected goals (Liu et al., 2021; Pratono et al., 2018; Subarkah et al., 2021). Visual learning media that uses Canva for the Human Circulatory System material are classified as very valid in terms of presentation. Presenting attractive media can increase students' motivation to learn (Irwansyah et al., 2017; Neppala et al., 2018).

This shows that the visual learning media using Canva on the Human Circulatory System material is in accordance with the indicators and learning objectives. In addition, teaching materials are complete with a sequence of indicators so that students can learn systematically and purposefully. This shows that the design of the visual learning media used in the Human Circulatory System material has been well developed and interesting, including using the right font shape and size, interesting and relevant pictures, videos and animations, and choosing attractive colors can increase motivation. student. (Aufa et al., 2021).

In addition, previous research has found that interesting learning media can make students more motivated to learn (Astalini et al., 2019; Fonda & Sumargiyani, 2018; Hamzah & Mentari, 2017). Previous research has also found that interactive learning media can help students learn (Agung et al., 2017; Ambarsari & Hartono, 2017). It is clear that visual media is very suitable for use in learning. Visual learning media using Canva for materials on the Human Circulatory System are considered very practical because they are easy to use.

CONCLUSION

The results of this research and development resulted in an interactive learning media based on Canva in the subject of Natural Sciences Materials on the Human Circulatory System which is very feasible and can be used for the learning process of the Human Circulatory System. It can be seen from the presentation of the validation results of the material expert who obtained a score

of 96% with very decent results and the validation results of the media expert who received a score of 94.4% in the very feasible category to be applied to science learning activities. Based on the results of the student response questionnaire after the experiment, Canva-based interactive learning media received a score of 89% in the very appropriate category as a learning medium that can support learning activities.

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REFERENCES

Agung, A. A. G., Widiana, I. W., & Indrasuari, N. K. S. (2017). Development of Associating Learning Activities Based on Serial Picture Media in Improving Students' Cognitive Processes. Journal of Elementary School Science, 1(3), 138. https://doi.org/10.23887/jisd.v1i3.10323.

Anggraini, D., Relmasira, S., & Tyas Asri Hardini, A. (2018). Application of the Student Teams Achievement Division (STAD) Learning Model Through Snakes and Ladders Learning Media to Improve Critical Thinking Ability and Social Studies Learning Outcomes in Grade 2 Elementary School Students. Pendekar: Journal of Character Education, 1(1), 324. https://doi.org/10.31764/ Shorts.v1i1.379.

Astalini, A., Darmaji, D., Kurniawan, W., Anwar, K., & Kurniawan, D. A. (2019). Effectivenes of Using E-Module and E-Assessment. International Journal of Interactive Mobile Technologies (IJIM), 13(09), 21–39. https://doi.org/10.3991/ijim.v13i09.11016.

Aufa, M. N., Rusmansyah, R., Hasbie, M., Jaidie, A., & Yunita, A. (2021). The Effect of Using E-Module Model Problem Based Learning (PBL) Based on Wetland Environment on Critical Thinking Skills and Environmental Care Attitudes. Journal of Science Education Research, 7(3), 401–407. https://doi.org/10.29303/jppipa.v7i3.732

Fauziah, Z., Shofiyuddin, A., & Rofiana, H. (2022). Implementation of Canva Application-Based Interactive Learning Media in

Islamic Cultural History Subjects. Medina: Journal of Islamic Studies, 9(1), 7–18. https://doi.org/10.58518/madinah.v9i1.1356

Fonda, A., & Sumargiyani, S. (2018). The Developing Math Electronic Module with Scientific Approach Using Kvisoft Flipbook Maker Pro for Xi Grade of Senior High School Students. Infinity Journal, 7(2), 109–122. https://doi.org/10.22460/infinity.v7i2.p109-122.

Gever, V. C., Tunca, E. A., Boluwatife, A. A., Nwogbo, V. C., & Chinweobo-Onuoha, B. N. (2021). Visual Media and Learning: Effects of Interactive Television Instruction as an Intervention Strategy for Improving the Critical Thinking Skills and Disposition of Out-of-School Nomadic Children in Nigeria. Learning and Motivation, 76. https://doi.org/10.1016/j.lmot.2021.101767.

Hamzah, I., & Mentari, S. (2017). Development of Accounting E-Module to Support the Scientific Approach of Students Grade X Vocational High School. Journal of Accounting and Business Education, 1(1), 78. https://doi.org/10.26675/jabe.v1i1.9751.

Irwansyah, F. S., Lubab, I., Farida, I., & Ramdhani, M. A. (2017). Designing Interactive Electronic Module in Chemistry Lessons. Journal of Physics: Conference Series, 895(1). https://doi.org/10.1088/1742-6596/895/1/012009.

Junaedi, S. (2021). The Canva Application as an Online Learning Media to Improve Student Creativity in the English for Information Communication and Technology Course. Build Rekaprima, 7(2). https://doi.org/10.32497/bangunrekaprima.v7i2,% 20Oktober.3000.

Kamelia, K. (2019). Using Video as Media of Teaching in English Language Classroom: Expressing Congratulation and Hopes. Utamax : Journal of Ultimate Research and Trends in Education, 1(1), 34–38. https://doi.org/10.31849/utamax.v1i1.2742.

Liu, X., Kong, J., Jiang, M., & Li, S. (2021). Interactive Information Module for Person Re-Identification. Journal of Visual Communication an Imag Representation, 75. https://doi.org/10.1016/j.jvcir.2021.103033

Marwadi, N., & Sodiq, S. (2022). Utilization of the Canva Application in Learning to Compose Ad Text Class XII Dkv 2 Smkn 13 Surabaya. Bapala, 9(8), 198–207.

Megawati, & Utami. (2020). English Learning with Powtoon Animation Video. Journal of Education Technology, 4(2), 110. https://doi.org/10.23887/jet.v4i2.25096.

Neppala, P., Sherer, M. V., Larson, G., Bryant, A. K., Panjwani, N., Murphy, J. D., & Gillespie, E. F. (2018). An Interactive Contouring Module Improves Engagement and Interest in Radiation Oncology Among Preclinical Medical Students: Results of a Randomized Trial. Practical Radiation Oncology, 8(4), e190–e198. https://doi.org/10.1016/j.prro.2018.01.001

Nillofa Ende, A. M., Jasril, I. R., & Jaya, P. (2022). Design and Manufacture of Canva-Based Interactive E-Modules in Basic Electrical and Electronics Subjects. JTEV (Journal of Electrical and Vocational Engineering), 8(2), 193. https://doi.org/10.24036/jtev.v8i2.117118

Noer, R. Z., Wahid, S. M. Al, & Febriyanti, R. (2021). Online Lectures : An Implementation of Full E-Learning Action Research. Prima Edukasia Journal, 9(1), 65–74. https://doi.org/10.21831/jpe.v9i1.35030.

Pelangi, G. (2020). Utilization of the Canva Application as a Media for Learning Indonesian Language and Literature SMA/MA level. Journal of Sasindo Unpam, 8(2). https://doi.org/10.32493/sasindo.v8i2.79-96.

Pratono, A., Sumarti, S. S., & Wijayati, N. (2018). Contribution of Assisted Inquiry Model of E-Module to Students Science Process Skill. Journal of Innovative Science Education, 7(1), 62–68. https://doi.org/10.15294/jise.v7i1.20633.

Rahmatullah, R., Inanna, I., & Ampa, A. T. (2020). Canva Application Based Audio Visual Learning Media.

Undiksha Journal of Economic Education, 12(2), 317–327.

Saripudin, E., Sari, I. J., & Mukhtar, M. (2018). Using Macro Flash Animation Media on Motion Materials to Improve Learning Achievement for Learning Science in Junior High School. Journal of Science Research and Learning, 4(1), 68–75. https://doi.org/10.30870/jppi.v4i1.3316