



The Development Education Game Learning Media of Pancasila and Citizenship Education Subject to Increase Learning Motivation

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Abstract. This research was conducted to result learning media game education to learning Pancasila and citizenship education, to increase students motivation in study of high school in material the Archipelago Insight. The method in this research used Hannafin and Peck. The validation of educational game learning media involves media experts, material experts and linguist experts. The media validation results are included in the very valid category with a 96% validity level; material validation is included in the very valid category with a 90% validity level; while the validation of linguists is included in the valid category with a validity level of 80%. Product practicality assessment is carried out in one-to-one and small group stages. The practicality of the product at the one-to-one stage is included in the very practical category with a practicality level of 93.2%. The product practicality assessment at the small group stage is classified into the very practical category with a practicality level of 84.5%. Meanwhile, at the research stage, the field test determines the potential effect to increase students' learning motivation with a percentage of 83.4% which is considered very good. Based on the results of the study, it can be concluded that educational game-based learning media in PPKn learning is stated to be very valid, very practical and has a potential effect in increasing the learning motivation of high school students with a percentage that is categorized as very good.

Keywords: Development · Media Learning · Game Education · Learning Motivation

1 Introduction

In the 21st century, it can be said that the century of knowledge with technological advances, but there are still many educators using conventional learning such as the use of learning resources that only come from books. One of the reasons for conventional learning that is still carried out by educators is the ability and skills of educators who are still minimal in designing learning [1]. As revealed by Kristen [2] the skills that must be possessed in the 21st century are creativity and innovation. As educators, you should keep up with technological developments by creating innovations in creative

learning. According to Winarno [3] Civics education teachers in the matter of selecting and structuring materials must be related to the ability to identify the learning resources used. In the selection of learning resources, it is not only from books. In line with what was explained by Taufiq et al. [4] learning is not solely based on textbooks and other single-source instructional resources. Therefore, it is necessary for innovations to be carried out in learning as a source of learning and a means of supporting students in learning.

The rapid development of technology and information has caused many changes in all aspects of life. One of them is in the aspect of learning at school. Technology and information can also display scientific data that can be accessed easily and quickly. The development of technology and information can encourage the use of technology results in the teaching and learning process [5]. Utilization of the results of these technologies in the learning process is one of them by using learning media. In line with the opinion of Kleiman [6] that technology is a powerful cognitive tool and learning tool. Additionally, technology can positively contribute to learning environments by promoting inquiry, facilitating communication, producing educational materials, and supporting student self-expression [7].

According to Arsyad [8] media is a part of educational resources or tangible teaching aids that are used in classroom settings to encourage pupils to study. The use of technology in the development of learning media is a positive impact of technology. Learning media that uses technology in learning can help teachers communicate and provide interesting information for students as well. Due to greater trust in instructors and students to use technology in education, the usage of media in the classroom can encourage favorable attitudes from both teachers and students [9]. Using learning media is one way a teacher tries to raise the standard of education in addition to communicating the information in the learning materials. If used effectively, learning media can assist teachers in easily presenting material to pupils. As a result, it is currently strongly advised to employ learning media to avoid confusing students and teachers [10].

Simkova [11] states that the mind and body of children become one with the game. They reason that playing games is for refreshing from studying, but in reality they play games that are less useful and even leave their studies because of games. Actually, games can have a positive impact, one of which is the use of educational games in learning. According to Moursund [12] educational games in the world of education have the opportunity to improve the education system for the better, one of which is to increase student motivation and learning outcomes.

Digital learning materials with game-based components can boost students' enthusiasm in their studies and have positive cognitive consequences [13]. By incorporating content into games and allowing students to learn via playing them, game-based learning media aims to make learning fun for everyone. Game-based learning can encourage participants to learn, aid in knowledge creation at the level of retention and understanding, encourage engagement during the learning process, and allow students to study independently [14].

2 Literature Review

Pancasila and citizenship education can be interpreted as a vehicle for developing and preserving noble and moral values rooted in the culture of the Indonesian nation which is expected to be realized in the form of behavior in the daily life of students as individuals, members of society in the life of the nation and state based on Pancasila [15]. In line with what is explained by Lubis [16] Civics education is one of the subjects given in formal education to foster the moral attitude of students so that they have positive character and personality in accordance with the values of Pancasila.

According to Kansil [17], the goal of civics education is to increase knowledge and to develop the capacity to comprehend, appreciate, and also believe in the Pancasila values as a guide to behavior in the life of society, nation, and state so that they can become citizens who are full of responsibility. And also reliable and can provide the ability to be able to learn further.

In order for Pancasila and citizenship education subjects to be in accordance with the expected goals, it is necessary to have interesting Pancasila and citizenship education learning media and can increase students' learning motivation in the learning process. One of them is educational game based learning media. Winarno [3] states that Civics education teachers are required to be able to take advantage of Civics education learning media, namely media selected in accordance with Civics education learning that can stimulate the birth of an active and creative learning process.

3 Methodology

3.1 Research Place

This research was conducted at SMA N 6 Palembang, which is one of the public high schools in the city of Palembang, South Sumatra Province, Indonesia.

3.2 Research Design

This study employs the R&D approach, often known as the research and development method.

This approach is a research that is utilized to create certain items and evaluate their efficacy. In this R&D method, it has several types of models, one of which is the Hannafin and Peck development model in Yaumi [18], this model is called "the CAI design model" which stands for "the Computer Assisted Instruction" or in the sense that learning computer based. Researchers use this development model because the development of educational game learning media is a development using computer media or other digital media. The Hannafin and Peck development model has three stages of development, namely the needs assessment stage, the design stage, and the development & implementation stage. The product developed in this research is the development of educational game learning media in Pancasila and citizenship education learning that is valid, practical and has a potential effect in the form of increasing motivation from the use of this educational game learning media that has been developed.

4 Results and Discussion

4.1 Research Result



This research was conducted with the aim of producing learning media that can help the teaching and learning process in Pancasila and citizenship education subjects, especially the material for insight into the archipelago with media made with the Construct 2 program which is designed to be game-based so that it is expected to produce media that is valid, practical and can potentially boost motivation of learners. Researchers used data collection techniques, namely documentation techniques, walkthrough techniques, questionnaire or questionnaire techniques and self-observation. At this stage of development, researchers used development procedures and researchers used a development model, namely the Hannafin and Peck model. The stages in this research include: (1) needs analysis stage; (2) design stage; (3) development and implementation stages.

At the needs analysis stage, the researchers conducted interviews and distributed needs questionnaires about the development of learning media to students, which aims to find out how necessary the use of media in the learning process is, the questionnaire contains what media they want or need in the future learning process. In the second stage, the researchers carried out the design that was adjusted by the results of the students' needs through interviews and the results of the media needs questionnaire. Furthermore, in the third stage, the researchers carried out the development and implementation stage of the research with the stages of self-evaluation, expert review, one-to-one and small group.

In the first stage, namely self-evaluation, the researcher made improvements to the initial screen which still looked normal, corrected by adding a competency button containing KI and KD and others. After improvements have been made, the results of these improvements are ready to be validated against the prototype, then the researcher conducts an expert review at this stage the product development of educational game learning media in Civics learning to increase learning motivation has been validated by material, media and language experts then the validator provides feedback or comments to produce media so as to produce valid media. The media validator was carried out by S, who is a lecturer in History Education and Education Sciences at Sriwijaya University, the material validator was carried out by an EN lecturer, who was a PPKn lecturer at Sriwijaya University, and the SO language validator was an Indonesian language lecturer at Sriwijaya University. After the media developed by the researcher was validated by experts and obtained a score for consideration of the validity of the media (Table 1).

The average result of the media expert's total assessment is 4.8 (96%), including the very valid category. As for the advice from the media validator, that is, before starting the game, the overall material is added. Previously, the game that the researcher developed after the home screen had a play button and immediately played, there was no overall material at the beginning of the game. After validating the researcher added the material in its entirety before the game started on the home screen. Furthermore, the assessment of material experts was 4.5 (90%), included in the very valid category, at this stage of material validation there were no shortcomings that must be revised. The material contained in this learning media deserves to be tested without revision. Furthermore, the assessment of linguists is 4.0 (80%) which is included in the valid

Table 1. Picture 1. Repair of Prototype 1 Stage Self Evaluation

Previous view repaired	
Display after repair	

category. Suggestions from language validators are to pay attention to correct spelling, such as a period (.) at the end of a sentence, a comma (,), adding words (and), and giving italics to foreign words. There are still many errors in the spelling of the material, questions and game instructions that the researchers developed. After validating with linguists, the researchers made spelling improvements to the material, questions and game instructions such as improvements to every word that should be in italics, and put a dot at the end of the sentence.

Furthermore, in the one-to-one stage, three students in class X MIPA 4 were selected based on different levels of learning achievement with an average assessment result of 37.3 (93.2%), included in the very practical category. While the Small group stage and obtained an average product of 33.8 (84.5%) with a very practical category. These results are obtained from the results of the calculation analysis of Hamdi [19] as follows.

4.2 Discussion

Learning media is not only an intermediary to convey messages or materials but more than that. According to Hidayati & Wuryandari [21], employing learning media allows pupils to have a high level of curiosity and get new experiences. Students also pay attention to the process when they observe, hold, and solve problems in their own unique ways rather than just the outcome when learning the fundamental principles.

Teachers as facilitators for students in learning activities should be able to determine interesting media and in accordance with learning objectives. In the learning process, the selection of media is very important in order to achieve the learning objectives. In the learning process using interesting learning media can improve learning processes and outcomes, besides that it can also attract students' attention to lessons and learning motivation is also good [22].

One of the learning media innovations that can be used by teachers in the learning process is educational games. According to Nur et al. [23] educational games can be used as an innovative learning media in learning. Educational games can also increase students' attention, present an interactive learning process and provide innovation in the learning environment.

Educational games are made with different goals in mind than other entertainment-focused games. Additionally, using educational games as a teaching tool can help students develop their problem-solving, solution-finding, quick-thinking, and competitive skills [24]. Therefore, it is hoped that the selection and use of appropriate learning media such as educational game learning media can increase students' learning motivation.

5 Conclusion

Educational game learning media developed through three stages (Hannafin and Peck), namely the first need analysis stage, namely the initial stage of needs analysis, then the design stage, namely the process of designing products and the process of making research instruments, and the last stage is the development and implementation stage, namely the development of the design. Product, expert validation and product testing on one to one, small group and field tests.

Based on the findings of the validation from linguists, media experts, and material experts, instructional video games are a very valid form of learning media. Educational game learning media is particularly useful at the one-on-one and small group levels and may increase participants' learning motivation to a very high degree. The learning media developed in this study only focused on the topic of archipelago insight. Therefore, future research is expected to expand various topics of Pancasila and citizenship education learning.

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Authors' Contributions. The recommendation from the results of this study is that educational game learning media in Civics learning is one of the learning media that can help increase students' learning motivation. The learning media that researchers have developed are expected to be used by Civics teachers as the right strategy in Civics learning. From this research, it is also expected that teachers and schools can innovate in learning in order to create learning that can increase students' learning motivation.

References

1. Daryanto. (2015). *Media pembelajaran*. Bandung: Satu Nusa.
2. Kristen, Kareliuk, et al. (2014). "What knowledge is of most worth: teacher knowledge for 21st century learning". *Journal of Digital Learning in Teacher Education*, Vol. 29. No. 4, pp. 127–140. <https://doi.org/10.1080/21532974.2013.10784716>
3. Winarno. (2013). *Pendidikan kewarganegaraan*. Jakarta: Bumi Aksara.
4. Taufiq. (2014). Pengembangan media pembelajaran IPA terpadu berkarakter peduli lingkungan tema konservasi berpendekatan science edutainment. *Jurnal Pendidikan IPA Indonesia*, 1(2). <https://doi.org/10.15294/jpii.v3i2.3113>
5. Wibawanto, W. (2017). *Desain dan pemrograman multimedia pembelajaran interaktif*. Jawa Timur: Cerdas Ulet Kreatif.
6. Kleiman, G. M. (2004). Myths and realities about technology in k-12 schools: five years later. *Contemporary Issues in Technology and Teacher Education*, 4(2), 248–253. <https://www.learntechlib.org/primary/p/19944/>
7. Bruce, B., & Levin, J. (2001). Roles for new technologies in language arts: inquiry, communication, construction, and expression. In J. Jenson, J. Flood, D
8. Arsyad, A. (2016). *Media pembelajaran*. Jakarta: PT. Raja Grafindo persada.
9. Abdulrahman, M. D., Faruk, N., Oloyede, A. A., Surajudeen-Bakinde, N. T., Olawoyin, L. A., Mejabi, O. V., Imam-Fulani, Y. O., Fahm, A. O., & Azeez, A. L. (2020). Multimedia tools in the teaching and learning processes: a systematic review. In *Heliyon*. 6 (11). Elsevier Ltd. <https://doi.org/10.1016/j.heliyon.2020.e05312>.
10. Amriani. (2014). Pengaruh penggunaan media pembelajaran terhadap minat belajar siswa pada mata pelajaran PAI siswa sd inp lasepang kecamatan bantaeng kabupaten bantaeng. *Repositori UIN Alauddin Makassar*. <https://doi.org/10.24014/an-nida.v37i1.309>.
11. Simkova, M. (2014). Using of computer games in supporting education. *Journal Procedia-Social and Behavioral Sciences*. <https://doi.org/10.1016/j.sbspro.2014.05.210>
12. Moursund, D. (2006). *Introduction to using games in education: A Guide for Teachers and Parents*. University of Oregon
13. Huizenga, J. W. Admiraal, G. ten Dam, and J. Voogt. (2019). Mobile game-based learning in secondary education: Students' immersion, game activities, team performance and learning outcomes, *Comput. Human Behav.*, vol. 99, pp. 137–143. <https://doi.org/10.1016/j.chb.2019.05.020>
14. Chang, C.-C. Liang, P.-N. Chou, & Lin, G.-Y. (2017). Is game-based learning better in flow experience and various types of cognitive load than non-game-based learning? *Perspective from multimedia and media richness*, *Comput. Human Behav.*, vol. 71, pp. 218–227. <https://doi.org/10.1016/j.chb.2017.01.031>
15. *Kemendikbud*. (2016). *Guru pembelajar: modul pelatihan SD kelas awal*. Direktorat Jendral Guru dan Tenaga Kependidikan dan Kebudayaan.
16. Lubis, Arafat Maulana. (2018). *Pembelajaran PPKn*. Medan. Aksha Sakti.
17. Kansil, C.S.T. (2003). *Pendidikan kewarganegaraan di perguruan tinggi*. Jakarta: Pradnya Paramita
18. Yaumi, M. (2018). *Media dan teknologi pembelajaran*. Jakarta: Pranadamedia Group.
19. Hamdi H. (2013). Pembuatan multimedia interaktif menggunakan moddle pada kompetensi mengamati gejala alam dan keteraturannya untuk pembelajaran siswa sma kelas XI semester 1. *Pillar of Physics Education.*, Vol. 1, <https://ejournal.unp.ac.id>.
20. Kompri. (2015). *Motivasi pembelajaran perspekif guru dan siswa*. Jakarta: Remaja Rosdakarya
21. 22. Hidayati, N., & Wuryandari, A. I. (2012). Media design for learning Indonesian in junior high school level. *Procedia-Social and Behavioral Sciences*, 67, 490–499. <https://doi.org/10.1016/j.sbspro.2012.11.354>

22. Buchory, M.S, dkk. (2017). The development of a learning media for visualizing the pancasila values based on information and communication technology. *Jurnal Cakrawala Pendidikan*, 36(3), 503–521. <https://doi.org/10.21831/cp.v36i3.12748>
23. Nur, F, dkk. (2020). Android-based-game and blended learning in chemistry: effect on students' self-efficacy and achievement. *Jurnal Cakrawala Pendidikan*. 39 (3), 507–521. <https://doi.org/10.21831/cp.v39i3.28335>
24. Ardiningsih, D. (2019). Pengembangan game kuis interaktif sebagai instrumen evaluasi formatif pada mata kuliah teori musik. *Jurnal Inovasi Teknologi Pendidikan*, 6(1), 92–103. <https://doi.org/10.21831/jitp.v6i1.17725>

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