Development of Canva-Based Learning Media for 11 Grades of SMAN 3 Lamongan on Physics Material

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Abstract: Media has a significant meaning in its presence in the learning process. This is because the presence of the media acts as an intermediary in assisting the delivery of complex material. Media can simplify the delivery of material and concretize abstract materials.The aim of this reseach to develop Learning Media for 11 Grades on Physics Material. The ADDIE development model is used in this development research. Data collection was carried out using a questionnaire instrument to material experts, learning designs, media, and respondents. The respondent for the peer-to-peer trial was a physics teacher at SMAN 3 Lamongan. Respondents for the individual, small group, and field trials were students of 11 grades at SMAN 3 Lamongan. The results of due diligence by material experts, learning design, and media were 83%, 96%, and 93%. The results of the analysis of peer, individual, small group, and field trials were 92%, 93%, 88%, and 90%. Based on the results of the validation and trials, Canva-based learning media for 11 grades of SMAN 3 Lamongan on physics materials is concluded to be very suitable as a media for learning Physics.

Introduction

The learning process, which is essentially a communication process, requires learning media to support learning activities (Rajagukguk, *et.al.*, 2021). Interest, motivation, and desire to learn can be grown through learning media (Indriyani, 2019). Arsyad (2016: 19-20) states that increasing understanding, conveying information, and helping interpret information are benefits of using media. Things that cannot be described verbally can also be conveyed through the media.

Abstract physics material can be conveyed through learning media, so that the delivery of material becomes clearer and more relevant according to the orientation of students in the present and the future. Therefore, in this study the learning media used was Canva. The product developed is in the form of learning media that focus on students more easily understanding physics material. In addition, Canva was chosen as a development product with the aim that student material can be accessed and studied efficiently wherever they need it and effectively at any time (Wiryani, et.al., 2021). The use of Canva as a learning media plays a role in visualizing learning material in a more concrete way. Various graphic

designs on Canva help researchers present interesting learning media for students and can help provide stimulus for students.

The Canva application provides a learning space for teachers and can be relied upon by teachers in implementing learning (Pelangi, et.al., 2020). Free and open in general is one of the advantages of this application. In addition, the Canva application provides a design, without the need to create a design from scratch and there is no need to install the Canva application. Design and animation can be used easily by users, because the tools needed are already available. In addition to providing convenience to teachers, students also get convenience with the material provided through Canva learning media that can be studied again according to the wishes of students (Tanjung & Faiza, 2019). Astuti (2021) states that Canva learning media can help teachers to design interesting learning because it is very easy to use.

In everyday life, many things are closely related to static fluid material (Pisnaji, et.al., 2022). Students through this material are taught to think about and solve problems in everyday life using relevant theories and concepts. This material is often found in everyday life so it is quite easy to apply. However, detailed and fundamental studies are needed to understand the physical processes. The material chosen in this study was Static Fluid material because researchers found students had difficulty explaining floating and sinking events. In addition, students experience difficulties in identifying the force exerted on objects by liquids related to Pascal's law and Archimedes' law. Natural phenomena related to static fluids are part of physics. The law of hydrostatic pressure, Pascal's law, Archimedes' law and others are the scope of matter for static fluids. In everyday life, the application of static fluids can be exemplified in the manufacture of car jacks and ships.

Based on the explanation above, the material to be used is Static Fluid which is material in class 11 IPA. Due to time constraints and the importance of delivering material related to real events in everyday life, learning media are needed that can be accessed easily and contain technology-oriented material in real life. The Canva application provides various advantages for its users, therefore the researchers decided to conduct research with the title " The Development of Canva-based Learning Media for 11 Grades of SMAN 3 Lamongan on Physics Material."

Research Method

This research is development research. The development model used in this Canva-based learning media development research is the ADDIE model. The stages of the ADDIE development model include the stages of analysis, design, development, implementation, and evaluation (Cahyadi, 2019). The analysis phase begins with analyzing the initial needs in the development of this learning media, including the characteristics of students and media. At this stage, the researcher is looking for information in the field why Canva-based learning media is important to be developed. The next stage is the stage of making the media design that will be developed. This stage includes the planning stage of making media and making material that will be made in the design. The stage of making learning media is the development stage. The implementation stage is testing the product. The final stage of developing this learning media is the evaluation stage. At this stage, the researcher made the final revision of the developed Canva-based learning media (Friska, 2022).

Research on the development of Canva-based learning Media on Physics was carried out at SMAN 3 Lamongan with 32 students in class XI IPA as the subject. Individual trials

were conducted on 3 students, small group trials were conducted on 6 students, while field trials were conducted on all students in class XI IPA 4.

Research data collection was carried out using an instrument in the form of a questionnaire. Researchers use this instrument as a tool to measure the quality of Canva-based learning media that has been developed. This questionnaire contains expert responses in the fields of learning design, media, and materials, as well as student responses in learning using Canva-based learning media for Physics materials.

In this development of Canva-based learning media in Physics materials, the validity test was carried out by experts and the development trials were carried out by colleagues and students using a questionnaire as an instrument. The Likert scale is used to compile the questionnaire answers which are categorized into five categories in Table 1 below.

Table 1. The Likert Scale

Score	Category
5	Very Good
4	Good
3	Sufficient
2	Insufficient
1	Very Insufficient

Adapted from Sugiyono (2017)

All statement points from the results of the validity of the material, design, and media experts, as well as the student's responses are totaled. The score for completing the questionnaire is then converted into a percentage score, to then qualitatively explain the percentage score. The formula for calculating the percentage score is as follows.

$$P = \frac{\sum x}{\sum x_i} \times 100\%$$

Keterangan
P : Persentase validasi
$\sum x$: Jumlah skor yang diperoleh
$\sum x_i$: Jumlah skor maksimal yang diperoleh

Revision of the product of Canva-based learning media development in the Physics materials are carried out if the percentage stated in descriptive form states that the product needs to be revised. The feasibility of learning media can be seen from the feasibility level criteria in the following table.

Table 2. Eligibility Level Criteria

Percentage	Eligibility
90%-100%	Very feasible
75%-89%	Eligible
65%-74%	Less feasible
0%-64%	Not worth

Adapted from Arikunto (2019)

Result and Discussion

This development research resulted in the Canva-based learning media application on Physics materials. This research uses the ADDIE model to develop Canva-based learning

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media for physics materials. This learning model consists of 5 stages including analysis, design, development, implementation, and evaluation (Cahyadi, 2019). The first stage of Canva-based learning media development research in the Physics materials was to analyze the initial needs. Analysis of learning materials and media is a stage of the analysis stage of product development (Astuti, 2017). The initial needs analyzed include analysis of students' character and media analysis. Based on the results of the analysis, students in 11 grades of SMAN 3 Lamongan have difficulty identifying the force exerted by objects on liquid zar, so learning static fluid material requires learning media as a tool for delivering material by the teacher. According to Zarviati (2022), teacher creativity in delivering learning material can be increased by using Canva-based learning media and students can understand the material easily because Canva-based learning media can display text, animation, audio, video, and more. Canva-based learning media attractive appearance can increase students' focus and attention on the material being studied (Rahmayanti, 2020).

The second stage is the design stage which includes media planning, design, and creating Canva-based learning media. The media contains material in the form of presentations, learning videos, infographic, mind mapping, and evaluation in the form of Student Worksheets (LKPD) and formative tests. The material is designed in various templates that are attractive to students. The third stage is the development stage. At this stage, the researcher carried out a validity test of Canva-based learning media for Physics materials to material experts, learning design experts, and media experts. The results of the material expert validation test on Canva-based learning media development product design obtained a total score of 104 out of a maximum score of 125, so that a percentage of 83 was obtained. Furthermore, based on the results of the design expert validation test, a score of 144 was obtained from a maximum score of 150, so that the validation percentage is 96%. The results of the media expert validation test show that the total score is 94 out of a maximum score of 100, so the validation percentage is 93%.

Based on the calculation, the percentage of material validation is 83%. After being converted with a validity level, Canva-based learning media is included in the proper qualification. Improvements made include the choice of fonts needing to be adjusted, the color of the cover needs to be adjusted, the prerequisite knowledge has not been seen, and some images do not match the material. Prerequisite ability is a factor that needs attention because the initial ability is needed to plan effective learning according to Thiagarajan's opinion (Lawhon, 1976). Students can adjust and prepare themselves to learn through information about their prerequisite abilities.

The results of converting the percentage validity of learning design experts by 96% are included in the proper qualifications with revision. Revisions were made to university covers that needed to appear in the media and content that needed to be adjusted to standard guidebook requirements, as well as the selection of background media that needed to be improved. The learning media background chosen by the researcher influences the use of media by students, so that the selected background should be comfortable on the eyes and attractive. The media seen, read, heard, and discussed by students affect the effectiveness of learning (Yamin & Karmila, 2020).

A percentage of 93% is obtained from the media expert validation calculations, so Canva-based learning media is included in the proper qualification without revision. This is obtained from the conversion of the percentage to the feasibility level mentioned in Table 2. The suggestions from media experts are not much different from the suggestions for

improvements from learning design experts, namely improvements to the cover color, adding the university logo, and improvements to page iii .

Revisions were made based on suggestions and comments from experts. The next stage is the implementation stage. At this stage, trials were carried out on Canva-based learning media products. The first trial was a peer-to-peer trial. The results of the peer trial got a score of 83 out of 90, so the percentage of eligibility was 92%. The results of the conversion to the eligibility level show very feasible qualifications without revision. Colleagues give suggestions and hope that the technology-based learning media used in physics materials is increasing so that there are various choices of media that support physics learning.

Individual trials at the implementation stage were carried out on 3 students of SMAN 3 Lamongan. The test results show a percentage of 93%. If it is converted into the eligibility level category, then Canva-based learning media is included in the very proper qualification. Students through this individual trial made comments that the media already contained interesting material and they could easily accept and understand the material because it was presented in the application of the material to life. In addition, the suggestions given by the students were to improve the color of the learning media so that the images could be seen more clearly by the students. It is necessary to have the understanding of students to relate material to various events in nature, so that students have the ability to solve problems related to physics concepts encountered in everyday life (Hotang, 2019). Novelensia, et.al. (2021) also made a similar statement that understanding physics concepts means practicing problem solving by finding why and how an event occurs.

Then a small group trial was carried out on 6 students of SMAN 3 Lamongan after individual trials. The results of the analysis show the feasibility of 88%. If it is converted at the eligibility level, then this Canva-based learning media is included in the eligibility qualification with revision. Revisions were made according to suggestions from students, namely the addition of explanatory videos and discussion of questions displayed on the media. According to the students, this Canva-based learning media would be better if it was equipped with a video discussing the questions. This is in accordance with the opinion of Ramadani (2020) that abstract physics materials matter makes students often misunderstand it, so that media that are effective and efficient as well as fun for students are needed to help students see, read, digest, and remember. The use of the Canva application in the form of animated videos can also increase students' motivation and learning achievement (Zulherman, 2021; Hapsari & Zulherman, 2021).

A percentage of 90% was obtained from the results of the last trial, namely the field trial of 32 students. The results of the conversion to the qualification level, the Canva-based learning media show that the qualifications are very feasible for classroom learning and do not need to be revised. Most students said that this learning media made them interested in learning the material and the media was easy to use wherever and whenever they wanted. This statement is in accordance with the opinion of Khomarudin, et.al. (2018) that the teacher's limitations in delivering material and limited class hours can be assisted by utilizing the learning media. Learning outcomes and concrete learning obtained by students are the hope of involving the media in the learning process (Trihandayani, 2022). Collaborative learning is expected to occur with the use of Canva in learning so that the expected learning outcomes in the digital era can be achieved (Putra, 2022). Based on Pelangi's research (2020), the Canva application can help teachers teach science, creativity, and skills that are useful in students' real lives.

The final stage of this development is the evaluation stage. At this stage, the researcher made the final revision of the developed Canva-based learning media. Comments and suggestions from students serve as a reference for product revision. After going through the evaluation stage, the development product is suitable for use in the learning process.

Conclusion

This Canva-based Learning Media on Physics materials was developed to suit the needs of students with the rapid development of today's technology. Using the Canva-based Learning media in Physics materials, students are given the opportunity to enrich their understanding and explore with technology. Product development results can be shown from the validation of material experts on products by 83%, learning design experts by 96%, and the results of the media expert validation by 93%. The results of the questionnaire data analysis from peer trials obtained a percentage of 92%, individuals 93%, small groups 88%, and from field trials 90%. If it is converted to a validity level, then this media is included in the proper and very feasible qualifications. Based on the results of the validation test and development trials, it can be concluded that the Canva-based Learning Media for 11 Grades of SMAN 3 Lamongan on Physics Materials is concluded to be very suitable as media for learning Physics.

Recommendation

The development of Canva-based Learning Media in Physics materials can be maximized by using more varied templates and elements on Canva for Education. In addition, this media focuses on Static Fluid material, further development can be done by adding Dynamic Fluid material.

Acknowledgment

References

Arsyad, Azhar. 2016. Media Pembelajaran. Jakarta: Raja Grafindo Persada.

Arikunto, S. (2019). Prosedur Penelitian Suatu Pendekatan Praktik. Jakarta: Rineka Cipta.

Astuti, I. A. D., Sumarni, R. A., & Saraswati, D. L. (2017). Pengembangan media pembelajaran fisika mobile learning berbasis android. *Jurnal Penelitian & Pengembangan Pendidikan Fisika*, *3*(1), 57-62.

Astuti, S. P. (2021). Pengembangan Media Canva Sebagai Media Pembelajaran pada Materi Listrik Statis. *Navigation Physics*, *3*(1), 8-15.

Cahyadi, R. A. H. (2019). Pengembangan bahan ajar berbasis ADDIE model. *Halaqa: Islamic Education Journal*, *3*(1), 35-42.

Friska, S. Y., Nanda, D. W., & Husna, M. (2022). Pengembangan e-LKPD dengan 3D Pageflip Professional Berbasis Problem Solving pada Tema Lingkungan Sahabat Kita di Sekolah Dasar. *Jurnal Basicedu*, *6*(2), 3200-3206.

Hapsari, G. P. P., & Zulherman, Z. (2021). Pengembangan media video animasi berbasis aplikasi canva untuk meningkatkan motivasi dan prestasi belajar siswa. *Jurnal Basicedu*, *5*(4), 2384-2394.

Hotang, L. B. (2019). Penerapan model pembelajaran discovery learning untuk meningkatkan motivasi dan hasil belajar fisika peserta didik kelas XI IPA 3 SMAN 6 Pekanbaru semester genap. *Physics Education Research Journal*, *1*(1), 56-68.

Indriyani, L. (2019, May). Pemanfaatan media pembelajaran dalam proses belajar untuk meningkatkan kemampuan berpikir kognitif siswa. In *Prosiding Seminar Nasional Pendidikan FKIP* (Vol. 2, No. 1, pp. 17-26).

Lawhon, D. (1976). Instructional development for training teachers of exceptional children: A sourcebook. *Journal of School Psychology*, *14*(1), 75. https://doi.org/10.1016/0022-4405(76)90066-2

Novelensia, E. T. P., Bektiarso, S., & Maryani, M. (2021). Penerapan Pembelajaran Kooperatif Tipe Numbered Heads Together (NHT) disertai Metode Eksperimen Dalam Pembelajaran Fisika di SMA. *Jurnal Pembelajaran Fisika*, *3*(3), 242-247.

Pelangi, G., Syarif, U., & Jakarta, H. (2020). Pemanfaatan aplikasi Canva sebagai media pembelajaran bahasa dan sastra Indonesia jenjang SMA/MA. *Jurnal Sasindo Unpam*, *8*(2), 79-96.

Pisnanji, M. A., Islamiyah, T. A., & Putri, W. A. (2022). Analisis Pemahaman Konsep Materi Fluida Statis pada Siswa Kelas XI di Sekolah Menengah Atas. *Integrated Science Education Journal*, *3*(1), 6-10.

Putra, L. D. (2022). Pemanfaatan canva for education sebagai media pembelajaran kreatif dan kolaboratif untuk pembelajaran jarak jauh. *Educate: Jurnal Teknologi Pendidikan*, *7*(1), 125-138.

Rajagukguk, K. P., Lubis, R. R., Kirana, J., & Rahayu, N. S. (2021). Pelatihan pengembangan media pembelajaran model 4d pada guru sekolah dasar. *Jurnal Pengabdian Kepada Masyarakat*, *2*(1), 14-22.

Rahmayanti, Dela. (2020). Pengaruh penerapan media Canva dengan pendekatan saintifik terhadap hasil belajar peserta didik. Jurnal Vocational Teknik Elektronika dan Informatika. 8,(4) .

Ramadani, E. M., & Nana, N. (2020). Penerapan problem based learning berbantuan virtual lab phet pada pembelajaran fisika guna meningkatkan pemahaman konsep siswa SMA: Literature review. *JPFT (Jurnal Pendidikan Fisika Tadulako Online)*, *8*(1).

Sugiyono. (2017). Metode Penelitian Kuantitatif, Kualitatif, Dan R&D. Bandung: Alfabeta.

Tanjung, R. E., & Faiza, D. (2019). Canva sebagai media pembelajaran pada mata pelajaran dasar listrik dan elektronika. *Voteteknika (Vocational Teknik Elektronika Dan Informatika)*, *7*(2), 79-85.

Trihandayani, A. (2022). *PENGEMBANGAN MEDIA PEMBELAJARAN CANVA UNTUK MENINGKATKAN HASIL BELAJAR SISTEM PENGISIAN IC REGULATOR* (Doctoral dissertation, Universitas Pendidikan Indonesia).

Wiryani, A. P., Hudaidah, H., & Syarifuddin, S. (2021). *Pengembangan Media Pembelajaran Berbasis Website Canva pada Pembelajaran Daring Mata Pelajaran Sejarah di Sekolah Menengah Atas* (Doctoral dissertation, Sriwijaya University).

Yamin, M. R., & Karmila, K. (2020). Analisis Kebutuhan Pengembangan Media Pembelajaran Berbasis Cartoon dalam Pembelajaran IPA pada Materi Lingkungan Kelas III SD. *Biology Teaching and Learning*, *2*(2), 159–170. https://doi.org/10.35580/btl.v2i2.12307

Zarvianti, E., Pilendia, D., & Sandra, L. (2022). VALIDASI MEDIA PEMBELAJARAN FISIKA BERBASIS CANVA PADA MATERI IMPULS DAN MOMENTUM DI KELAS X SMKN 4 KERINCI. *Jurnal Pendidik Indonesia (JPIn)*, *5*(2), 519-527.

Zulherman, H. G. P. P. (2021). Analysis Of The Needs of Animated Video Media Based on The Canva Application in Science. 6 (April), 22–29.