# Development of Canva-Assisted Learning Videos with Strengthening the Independent Character of Grade IV Elementary School Students

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**Abstract.** The purpose of this study is to produce *canva*-assisted learning video media on light material with independent character strengthening for grade IV elementary school students that is valid according to material experts, media experts, and teachers, and is of interest to teachers and students. This research and development applies the Borg and Gall model which consists of 10 stages. *Canva*-assisted learning media is presented in the form of learning videos that present materials and guidelines for conducting experiments independently so that it can help students develop independent characters, and is equipped with a combination of animation, images, text, and sound. Product validity tests are carried out by material experts, media experts, and users (teachers). The trial was carried out on 21 grade IV students of SDN Sananwetan 1 Kota Blitar. The results of product validation from material experts obtained a value of 90%, media experts by 93.75%, users (teachers) by 94.4% and belong to the very valid category. As for the attractiveness aspect test, students get a score of 99.4%.

**Keywords:** Learning Videos · Elementary School Students · Independent Character

## 1 Introduction

The development of the times that occur today is very influential on technological progress. Developments also occur in the educational aspect which is characterized by the use of learning media with various variations. This change will certainly change the habits of teachers in teaching. Teachers must be able to adapt to various learning conditions such as when online learning is held due to the Covid-19 pandemic. In the process, online learning experienced many problems. However, learning must still be carried out to achieve learning objectives.

In order to improve the quality of education, it can be done by maximizing the use of media in learning [1]. Facts in the field show that the quality of learning is not optimal due to the decrease in student interest and motivation to learn. This is also influenced by uninteresting learning and the lack of media diversity, which triggers students' boredom during learning activities [2]. In addition, the media used is not adapted to the student's learning style or type. Teachers must know the learning style of students to prepare for

effective learning [3]. The use of existing learning media such as modules, textbooks and other less interesting media is a result of delays in the use of technology [4]. In this case innovation in learning is necessary, such as the development of learning media.

In making learning media, it should be adjusted to the material and learning objectives and potential of students [5]. Interesting learning media affect students' interest and learning success [6]. Teachers need to be even more creative when it comes to delivering fun learning to students. In realizing fun learning, teachers must be more creative and use interesting learning media [7]. The effective use of learning media can make the material conveyed well. Thus students can become more interested and respond to the material presented by the teacher.

Teachers can take advantage of existing technology according to student needs such as using various application platforms to create interesting video media such as in the Canva application. Canva is an online graphic design application that has a variety of attractive video templates, animations and images. Animations used for learning media have the purpose of long-term memory processing of students. Colored images or writings will be easier to accept and remember by children of primary school age [8]. The implementation of video media with diverse animations and images can help abstract concepts in light matter.English translation.

According to Waldrip et al. [9] Natural Science or Science is a science that examines natural symptoms in the form of facts, processes, concepts and laws that have been tested for truth by passing through several studies and findings. In learning science, it cannot be done by memorizing and listening to the teacher's explanation alone. However, it must be done by the students themselves through direct experiments and observations. In learning science, strong concepts are needed that can be obtained through experiments or in everyday life [10]. The use of technology in learning is able to realize student independence in learning. As stated by [11] that one of the efforts to foster independence in students is to use media in the form of video as a form of technological progress today.

Observations and interviews that have been carried out on class IV teachers of SDN Sananwetan 1 Kota Blitar showed the results that students had difficulty understanding the material about the properties of light and the relationship between the nature of light and the process of seeing. This is influenced by the limited learning resources because it only uses thematic books. The learning media used is less varied because teachers only use learning videos from Youtube. Learning videos taken from youtube have the same design for some materials so that it makes students bored and not interested. In addition, in the learning video on light matter there are no guidelines for students to conduct experiments related to the properties of light so that experiments are not carried out. This makes students less understanding of light matter. The potential possessed is that all students have a smartphone as a tool to access videos on youtube.

## 2 Methods

In this study, a canva-assisted learning video media was developed on light matter with independent character strengthening for grade IV elementary school students. This research and development method refers to the Borg and Gall model [1] which has 10 stages, namely, (1) potential and problems; (2) data collection; (3) product design; (4)

**Table 1.** Likert Scale for Product Validation By Experts and Users (teachers)

| Score | Valuation | Description |
|---|---|---|
| 4 | Excellent | If 3 descriptors appear |
| 3 | Good | If 2 descriptors appear |
| 2 | Bad | If 1 descriptors appear |
| 1 | Very Not Good | If no descriptor appears at all |

Source: [12]

product validation; (5) product revisions; (6) product trials; (7) product revisions; (8) trial use; (9) product revisions; (10) mass production. English translation.

The data sources in this development research are material experts, media experts, teachers as users and students. The types of data used are quantitative and qualitative data. Quantitative data is obtained from validation questionnaire sheets by material experts, media experts, users (teachers) to find out the validity of the product and students to find out the attractiveness of the product. Meanwhile, qualitative data was obtained from the results of interviews and observations conducted with class IV teachers of SDN Sananwetan 1 as well as suggestions and input from experts and users (teachers) on the product being developed. The validity test score was obtained using the following likert scale guidelines from [12] (Table 1).

The student response questionnaire aims to find out the level of interest of canva-assisted learning videos. The data were analyzed using the Guttman Scale which consisted of 2 intervals of "yes" and "no" i.e. "yes" with a score of 1 and "no" with a score of 0.

Based on the acquisition of validation questionnaire data scores by material experts, media experts, and teachers, it can be processed by referring to [13] as follows.

$$Vah = \frac{Tse}{Tsh} \times 100\%$$

Information:

Vah = Expert Validation

Tse = Total empirical score achieved

Tsh = Maximum expected total score

The results of the validation scores of material experts, media experts, and users (teachers) can be interpreted in Table 2.

Based on the categorization in Table 2, Canva-assisted learning video media products on light material with independent character strengthening for grade IV elementary school students can be used if the percentage of validity level is at least 71%. If the value is less than 71% then major revisions need to be made according to suggestions and input from experts and users.

For student response questionnaire data about product attractiveness, it can be interpreted using the criteria in Table 3.

**Table 2.** Validity Categorization Criteria

| Achievement Level (%) | Category | Test Decision |
|---|---|---|
| 86,00–100,00 | Very valid | Can be used without revision |
| 71,00–85,00 | Valid | Can be used, but needs revision |
| 56,00–70,00 | Quite valid | Can be used with major revisions |
| 41,00–55,00 | Less valid | Should not be used and need revision |
| 25,00–40,00 | Invalid | Should not be used |

Source: [13]

**Table 3.** Criteria for Categorization of The Ministry of Justice

| Achievement Level (%) | Category | Test Decision |
|---|---|---|
| 81,00–100,00 | Very interesting | Can be used without revision |
| 61,00–80,00 | Interesting | Can be used, but needs revision |
| 41,01–60,00 | Quite interesting | Can be used with major revisions |
| 21,00–40,00 | Less attractive | Should not be used and need revision |
| 00,00–20,00 | Unattractive | Should not be used |

Source: [13]

Based on the criteria in Table 3, canva-assisted learning video products on light material with independent character strengthening for grade IV elementary school students can be used if the percentage of questionnaires is at least 61%. If the results of the percentage of attractiveness questionnaires do not reach 61%, the learning video needs to be revised.

## 3 Result and Discussion

The results of research and development include (a) the implementation of research and development and (b) the recapitulation of data from product validation results. The parts are presented in order as follows.

Potentials and Problems. Observations and interviews were conducted in class IV of SDN Sananwetan 1 Blitar City on October 14, 2021. Interviews were conducted with class IV teachers, namely Mrs. Kartika Rini, S.Pd. In the results of observations and interviews, it was found that the potential was that students have smartphones and like learning that utilizes technology-based media; there are facilities support such as LCD projector, laptop and good WiFi network. The problems found include the learning resources used by teachers only thematic student books and the media used are learning videos from Youtube that have the same template or design as other material videos, it arouses students' boredom and makes students less interested in the material; the non-conduct of experiments on material that requires experiments such as on light matter so that students do not understand the material.
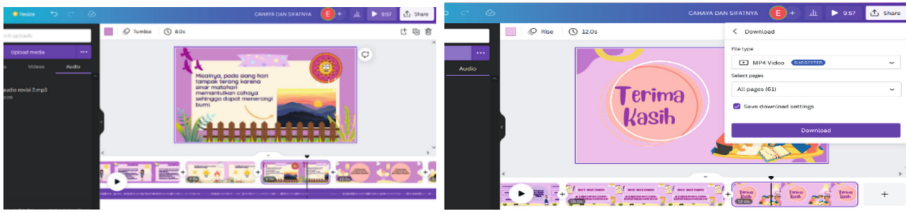
**Fig. 1.** Product Design

Data collection was carried out based on potential and problems in class IV of SDN Sananwetan 1 Blitar City. Problems that occur such as limited learning resources and lack of interest in learning media can be overcome by developing technology-based media such as learning videos. This is strengthened by the potential of students, namely having a smartphone and being able to operate it. Then there is also an analysis of KI and KD in student books and teacher books to find out the suitability of KI and KD in permendikbud Number 37 of 2018 which can be used as a reference in determining material and making questions. Based on the suitability of the results of the KI and KD analysis that has been carried out, this research and development can be continued to the next stage, namely designing learning video media products. The product design carried out is to design a learning video media product assisted by Canva (Fig. 1).

Product validation aims to produce valid canva-assisted learning video media products based on the assessment of material experts, media experts and users (teachers). Product validation is carried out after the product is consulted with supervisors 1 and 2.

Product revision is carried out by changing and repairing the product based on the validation results of the three validators. Revisions from material experts are contained in the learning objectives section; adding guidelines and questions to the video when conducting experiments; adding details of the tools and materials that must be prepared at the experimental step; and changed a few words. The revision of the media expert and the user (teacher) is that the tempo of the narrative is changed to be slower, correcting intonation and pronunciation; and reducing the volume on the backsound of the music.

The product trial was carried out with 6 grade IV students of SDN Sananwetan 1 Blitar City on June 13, 2022. The trial activities carried out were to carry out learning activities using canva-assisted learning video media, conducting experiments independently. Then the students filled out a questionnaire for the response to the canva-assisted learning video media. The following is a documentation of product trial activities.

The product was repaired after deficiencies were found in the product trials. Revisions were made to the color part of the writing to make it clearer and the image on the light reflecting material part was enlarged.

The trial of use was carried out after product revision, which was carried out 3 times on June 17 and 20, 2022 with the target of testing 21 grade IV students of SDN Sananwetan 1 Blitar City. The activities carried out are carrying out learning activities using canva-assisted learning video media and conducting experiments independently. Then the students filled out a questionnaire of the response to the canva-assisted learning video media product.

**Table 4.** Product Validation Results

| No. | Aspects | Assessment in % | | | | Total (%) | Average | Category |
|---|---|---|---|---|---|---|---|---|
| | | **Material Expert** | **Media Experts** | **User** | **Learners** | | | |
| 1. | Conformity of the material | 100 | α | 100 | α | 200 | 100 | Very Valid |
| 2. | Material presentation techniques | 75 | α | 100 | α | 175 | 87,5 | Very Valid |
| 3. | Sentence structure | 75 | α | 75 | α | 150 | 75 | Valid |
| 4. | Independent character | 100 | 100 | 100 | α | 300 | 100 | Very Valid |
| 5. | Loading questions | 100 | α | 100 | α | 200 | 100 | Very Valid |
| 6. | Display | α | 100 | 100 | α | 200 | 100 | Very Valid |
| 7. | Presentation of illustrations and drawings | α | 100 | 100 | α | 200 | 100 | Very Valid |
| 8. | Audio rendering | α | 75 | 75 | α | 150 | 75 | Valid |
| 9. | Attractiveness | α | α | 100 | 99,4 | 199,4 | 99,6 | Very Interesting |
| Total | | 450 | 375 | 850 | 99,4 | 1774,4 | 836,1 | |
| Average | | 90 | 93,75 | 94,4 | 99,4 | 197,1 | 92,9 | |
| Category | | Very valid and very interesting | | | | | | |
| Test Decision | | Can be used without revision | | | | | | |

Information:

α = There are no indicators on the assessment aspect.

After the implementation of the trial, revisions were made to correct product deficiencies. Students' response to the product is that students like the video media and it is easier to understand the light material because they conduct experiments directly. Product revision is carried out by adding images of examples of light refraction events in everyday life.

After the product is declared valid, mass production is carried out by uploading Canva-assisted learning video media products on Youtube and Google Drive with the link: https://youtu.be/iiG6c6HRvSw / https://bit.ly/3zCNHQS and sent via WhatsApp which is then distributed to teachers and students of grade IV other schools.

Based on Table 4, it is known that the validation of canva-assisted learning video media from material experts obtained results of 90% of the very valid category, from

media experts obtained results of 93.75% of the very valid category and from users (teachers) obtained results of 94.4% with very valid categories. As for the results of the product trial, it obtained results of 98.9% and in the trials of use obtained results of 100% with a very interesting category.

The results of the development of canva-assisted learning video media products are validated by 3 validators, namely material experts, media experts, and users (teachers) which include several aspects, namely, aspects of material suitability; material presentation techniques; sentence structure; independent character; contains questions; display; presentation of illustrations and drawings; audio presentation and appeal. The results of the validation of canva-assisted learning video media products were interpreted based on the categorization criteria of the [13] formula from material experts obtained 90% results, from media experts obtained results of 93.75%, from users (teachers) obtained results of 94.4% and all three reached the very valid category.

Aspects of material suitability are assessed by material experts and users (teachers). Material experts and users provide a 100% rating with a very valid category. The determination of material in this learning video media has gone through the process of analyzing Core Competencies, Basic Competencies, indicators, and learning objectives. Thus the content of the learning video is in accordance with the material learned by students, namely material about light and investigating the properties of light. This is in accordance with the opinion of [5] who states that in making learning media, it should be adjusted to the learning objectives, material, and potential of students.

Aspects of material presentation techniques are assessed by material experts and users (teachers). Material experts give a score of 75% and users (teachers) give a score of 100%. In the material presentation technique, improvements were made based on input from material experts, namely to add guidelines and stimulation questions to the appearance of the experimental step; and add details of the tools and materials needed during the experiment. The added guidelines are in the form of a command to pause the video so that the experimental steps can be understood and implemented properly. The stimulation questions in the experimental steps are added with the aim that students think critically.

In addition, so that students are able to analyze the results of the experiments that have been carried out. Such as when conducting experiments to investigate the nature of light when light passes through two mediums of different density. Students can analyze which parts of the pencil appear to be broken when they are put in a glass filled with water and why it happened. The addition of detailed tools and materials in the experimental step aims to make it easier for students to conduct experiments. Learning media must be packaged as well as possible and able to display stimulation so that students think critically, so that the material can be well received. This is in line with the opinion of [14] which states that to achieve learning objectives, it must be supported by the existence of learning media in which it allows the right relationship between stimulus and response.

Aspects of sentence structure are assessed by material experts and users (teachers). Material experts and users (teachers) give a score of 75%. In the aspect of sentence structure, improvements were made based on input from material experts, namely in order to change some words into words that are easier for students to understand. As explained in the process of seeing, the sentence "light intensity" is changed to "the

abundance of light". Sentence structures addressed to elementary school students should be well packaged and as simple as possible. This is in line with the opinion of [15] who stated that if the language and sentence structure in learning media are good, it will certainly be able to help in learning optimally.

Aspects of independent character are assessed by material experts, media experts, and users (teachers). Material experts, media experts, and users give 100% value. The product developed has reached the criteria as a learning medium that supports learning independence because it is equipped with guidelines for conducting an experiment independently. In the learning process, students independently conduct 5 types of experiments investigating the properties of light by paying attention to the guidelines on the learning video. Thus it can help form an independent character of learning in students. Strengthening the independent character in students is indispensable in order to accustom students to be confident and not dependent on others. The same thing was stated by [16] that student independence is very necessary because it affects students' self-confidence when they are in the school environment and outside of school.

Aspects containing questions are assessed by material experts and users (teachers). Material experts and users give 100% value. The question exercises in the learning videos developed are made in accordance with basic competencies, indicators, learning objectives to be achieved, and the material used as the basis for making questions. There are seven learning objectives to be achieved. One of them is that students are able to conduct experiments investigating the properties of light when light passes through several straight or parallel paper holes. Thus the making of questions is based on the learning objectives. For example, what happens when the light of the flashlight is directed at the paper holes arranged parallel or straight, and what happens when the paper holes are arranged randomly. This is in line with the opinion expressed by [4] that question making is a development of basic competence, indicators of competency achievement, and learning objectives.

English translation. The display aspect is assessed by media experts and users (teachers). Media experts and users give 100% value. The learning video media products developed have met the suitability of attractive appearances both in the use of fonts and background displays. The types of fonts, sizes and colors used are very varied so they look attractive. Some fonts are bolded indicating the material's subtitles or emphasis on the material. The use of the background is also very interesting which is dominated by light purple to dark purple colors. The background display is equipped with animations, stickers and interesting elements that match the material. As in the display of the event of the appearance of sunlight, stickers and animations of the sun are added that can move. Learning videos with an attractive appearance will make students happy to learn and make learning not boring [11].

Aspects of presenting illustrations and images are assessed by media experts and users (teachers). Media experts and users give 100% value. The learning video media products developed have met the characteristics of learning media for elementary school students which include interesting illustrations, good image quality and images according to the material. The illustrations shown in the light matter stimulation section are attractively packaged. Equipped with moving animated images that correspond to the

material. The moving image presented on the stimulation of light matter is able to provide an overview of events when the lights go out and light up. The image used is HD quality so it remains good and does not break. Similarly, in the opinion of [8] suggest that the arrangement of colored images or writing is easier to accept and remember by children of primary school age.

Aspects of audio presentation are assessed by media experts and users (teachers). Media experts and users give a rating of 75%. Learning videos are equipped with audio in the form of narration and music backsound. In the aspect of audio presentation, improvements were made based on input from media experts and users (teachers), namely in order to reduce the tempo of the narration in the video. The tempo of the narration presented on the video is too fast so it will be difficult for students to accept. The tempo of the narrative should be adjusted to that of primary school age so that the media is suitable for use and the material can be well received. This is similar to the opinion of [17], that decent media can be implemented in learning and make it easier for students to master the material.

The wisdom of learning video media assisted by canva light material was obtained from the results of trials that were carried out twice, namely product trials on June 13, 2022 with 6 students and trials of use on June 17, 20, 2022 with 21 students. In addition, it is also supported by the results of user validation (teachers). The value of the attractiveness aspect in the product trial obtained a value of 98.9% with the answer "Yes" and 1.1% with the answer "No". In the trial, all students gave the answer "Yes" and obtained a 100% score. And the validation results from users for the attractiveness aspect obtained a value of 100%.

English translation. Based on the results of product trials and usage trials, it was found that, (a) students like canva assisted learning videos, (b) canva assisted learning videos are easily accessible and downloadable, (c) students are interested in images and animations in learning videos, (d) students are easier to understand light material when learning to use videos equipped with images and animations, (e) students understand the experimental steps on learning videos, (f) the student understands all the words contained in the learning video, (g) the type and size of the letters in the video can be read easily by the student, (h) the student can listen to the sound on the video clearly, (i) the student is interested in the music in the learning video, (j) the student is not bored and bored when learning using the canva assisted learning video.

The advantage that the product has is that it has an attractive appearance equipped with a combination of text, images, audio, animations and interesting illustrations; equipped with guidelines for conducting experiments so as to support students to learn independently; has a duration of 16 min with HD video quality; it has no time constraints in its use due to storage through Google Drive and Youtube; can be used anytime and anywhere. The disadvantage that the product has is that the focus of development is only for light matter; can only be accessed on smartphones and laptops/PCs; requires a good network to download before it can be viewed for free or offline; file size is quite large.

## 4   Conclusion

Based on the results of research and development, validation results were obtained from material experts by 90%, media experts by 93.75%, and from users (teachers)

obtained a score of 94.4% and all three of them were included in the very valid category. The results of the questionnaire of student responses to interest in product trials and usage trials obtained an average of 99.4%. The results of the interest from the user (teacher) obtained a score of 100%. It can be concluded that Canva's assisted learning video media on light material with independent character strengthening for grade IV Elementary School is declared very valid according to material experts, media experts, and users (teachers) and is very interesting according to teachers and students. So that Canva assisted learning videos can be used in learning.

## References

1. Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif dan R&D*, 2nd ed. Bandung: Alfabeta, 2019.
2. Dwipayana, P, "Analisis Kebutuhan Pengembangan Multimedia Interaktif Berbasis Budaya Lokal Untuk Pembelajaran IPA SMP," *Jurnal Pendidikan dan Pembelajaran Sains Indonesia*, vol. 3(1), pp. 49–60, 2020.
3. Bintartik, L, Yuniawatika, and Untari, E, "Learning Style Of Grade V Students At Elementary Schools In Blitar," *International Research-Based Education Journal*, vol. 1(2), pp. 103–107, 2017.
4. Hapsari and Zulherman, "Analisis Kebutuhan Pengembangan Media Video Animasi Berbasis Aplikasi Canva Pada Pembelajaran IPA," *PSEJ*, vol. 6, pp. 22–29, 2021.
5. Rusman, *Belajar dan Pembelajaran Berbasis Komputer*. Bandung: Alfabeta, 2018.
6. Zulfadewina, Sucipto, Iba, and Zulherman, "Development of Adobe Flash CS6 Multimedia-Based Learning Media on Science Subjects Animal Breeding Materials," *Jurnal Basicedu*, vol. 4(4), pp. 1308–1314, 2020.
7. Sukamti and Untari, E, "Pelatihan Pembuatan Media Pembelajaran Dari Barang Bekas," *Jurnal Ilmiah Pengabdian kepada Masyarakat*, vol. 1(2), pp. 159–163, 2018.
8. Putra, A. P, Soepriyanto, Y., and Husna, A., "Pengembangan Multimedia Game Edukasi tentang Keragaman Masakan Khas Daerah-daerah di Indonesia untuk Kelas V SD," *Jurnal Kajian Teknologi Pendidikan*, vol. 1(4), pp. 299–306, 2019.
9. Fitriyani, N, "Pengembangan Media Pembelajaran Audio-Visual Powtoon Tentang Konsep Diri Dalam Bimbingan Kelompok Untuk Peserta Didik Sekolah Dasar," *Jurnal Tunas Bangsa*, vol. 6(1), pp. 104–114, 2019.
10. Sukamti, Kartini, H, and Kartinilasari, R, "Pengaruh Penerapan Model Group Inestigation Terhadap Hasil Belajar IPA Siswa Kelas V Di SDN," *Sekolah Dasar: Kajian Teori dan Praktik Pendidikan*, vol. 23(2), pp. 177–188, 2014.
11. Yudianto, A, "Penerapan Video Sebagai Media Pembelajaran," *Seminar Nasional Pendidikan*, pp. 234–237, 2017.
12. Sugiyono, *Metode Penelitian Pendidikan*. Bandung: Alfabeta, 2016.
13. Akbar, S, *Instrumen Perangkat Pembelajaran*. Bandung: PT Remaja Rosdakarya, 2017.
14. Rohma, A and Sholihah, U, "Pengembangan Media Audio Visual Berbasis Aplikasi Canva Materi Bangun Ruang Limas," *Jurnal Pendidikan Matematika Universitas Lampung*, vol. 9, pp. 292–306, 2021.
15. Wati, I. F., "Pengembangan 'Ayo Bermain' Inovasi Pengembangan Bahan Ajar Berbasis Game Based Learning Tema Ekosistem dalam Penguatan Karakter Kreatif Siswa Kelas V SDN Bendogerit 2 Kota Blitar." Skripsi tidak diterbitkan. Malang: FIP UM, 2021.

16. Diniyah, A, Bernard, M, Nurjaman, A, and Akbar, G, "Analisis Kemampuan Kemampuan Penalaran dan Self Confidence Siswa SMA dalam Materi Peluang," *Journal on Education*, vol. 1(1), pp. 14–21, 2018.
17. Rahmatullah, Inanna, and Ampa, A, "Media Pembelajaran Audio Visual Berbasis Aplikasi Canva," *Jurnal Pendidikan Ekonomi Undiksha*, vol. 12, pp. 317–327, 2020.