Development of Animated Video Learning Media in Increasing Learning Interest of Deaf Students at Special Schools

Sri Alda Rabiasa¹, Dewi Diana Paramata²*, Muhammad Yusuf², Abdul Haris Odja², Supartin¹, Dewa Gede Eka Setiawan¹

¹ Department of Physics, Universitas Negeri Gorontalo, Gorontalo, Indonesia.
² Department of Science Education, Universitas Negeri Gorontalo, Gorontalo, Indonesia.

Received: May 09, 2024
Revised: June 19, 2024
Accepted: July 25, 2024
Published: July 31, 2024

Corresponding Author:
Dewi Diana Paramata
dewiparamata@ung.ac.id

Abstract: This research is development research (R&D) to obtain quality validation in producing animated video learning media to increase the learning interest of class XI Deaf students at Special Schools in SLB Negeri Kota Gorontalo. The media development model used in this research is the ASSURE model consists of six stages: Analyze learner characteristics; state Objectives; select methods, media, and materials; utilize media and materials; require Learner Participation; and evaluate. The instruments used in this research consisted of student activity observation sheet, learning implementation observation sheet, expert validation sheet, student learning result test sheets, and student questionnaires. The validity of the media received an average score of ≥ 3.00, namely 3.93, and was categorized as very valid overall. The validation indicators obtained an average score of ≥ 3.00 for the overall learning material, namely 3.82 in the very valid category. It is concluded that the validity of animated video learning media in increasing the learning interest of deaf students in SLB Negeri Kota Gorontalo.

Keywords: Animation video; ASSURE; Deaf student; Learning Media; Special schools

Introduction

Children with special needs are included in the category of children who require special services to carry out daily activities. This includes children who experience disorders in physical development, sensory abilities, or specific body parts (Jimenez & Higgins, 2023; Nisa et al., 2018; Sonney, 2023; Trudel et al., 2023; Schueler, 2024). Children with special needs may be intellectually impaired and have distinctive physical characteristics that differentiate them from children their age, such as broad faces, thick or parted lips, mouths that are often open, and tongues that may protrude (Ernita & Rusydi, 2021; Nazarayn et al., 2023).

Children with special needs have various classifications of disability, each of which has the aim of distinguishing various disorders, limitations, and disabilities (Aboulhassan, 2023; Olusanya et al., 2024; Rotenberg et al., 2024; Anaby et al., 2019; Salt & Sargent, 2014). This classification helps schools provide services that suit the needs of each child. Some of the characteristics of children with special needs include hearing impairment, visual impairment, mental retardation, physical impairment, and mental retardation (Rydzewska et al., 2019; Kolo, 2023; Wijaya & Raharjo, 2023; Wardhani, 2023). This classification identifies the types of physical, psychological, and social disorders that children with special needs have (Rezieka et al., 2021; Ritchie, 2022; Hirata & Ozawa, 2023).

Children with hearing impairments, such as those who are deaf, face challenges in hearing sounds entirely or may even experience total inability to hear. However,
it is recognized that almost all individuals, especially humans, can listen, even though only a tiny percentage (Rahmah, 2018). Deaf people have similarities with other children physically, but the differences are apparent in communication. When communicating, deaf children often use sign language. This also happens in the learning process, where teachers often use the lecture method with a sign language system (SIBI). Therefore, learning media is needed to help deaf children and teachers convey material, especially science material, which often requires examples of abstract concepts (Pamungkas et al., 2023; Marschark & Hauser, 2012).

Based on the observations of the situation at the Special School in SLB Negeri Kota Gorontalo, several problems were found, including teachers’ need for teachers to use more learning media in the classroom teaching process. This causes some material to be complex for deaf students to understand because there is material that is difficult for teachers to explain using lip language and sign language. Hence, the material presented is not fully understood by students, which ultimately affects students' interest in learning. Therefore, one solution to this problem is to use a learning approach that combines visual elements, text, and active interaction. Researchers develop learning media, such as animated videos, because this media can help deaf students understand learning through visuals and achieve the teacher's learning goals. Animated videos were chosen because they attract students' attention with interesting animated images. The research was carried out to determine the validity, practicality, and effectiveness of animated video learning media in increasing the learning interest of deaf students at SLB Negeri Kota Gorontalo.

Learning media acts as a tool that helps in the teaching and learning process to make it easier for teachers to convey learning material so that it is hoped that students can better understand the material being taught (Mayasari et al., 2021). Its function is to improve the quality of education. Therefore, the more interesting the learning media the teacher creates, the more it can support students' interest in learning. Increasing students' interest in learning is expected to improve Indonesia's education quality (Hidayah et al., 2021). Apart from that, using learning media in the teaching and learning process can create new interests and motivation for students and influence their psychological aspects (Cholifah & Saputro, 2022). Apart from arousing students' interest in learning, using learning media can also increase their understanding of the material presented by the teacher in class.

Animated videos are a form of learning media that effectively creates interesting learning material (Hapsari & Zulherman, 2021). Animation depicts objects initially static into moving images, creating a lively impression that suits the character. Using a series of images that change and change according to the design, the video becomes diverse by using colorful images that attract students' interest in learning (Agustien et al., 2018). Using animated videos in learning will increase the effectiveness of the learning process by overcoming space limitations and time, facilitating the explanation of abstract concepts, and making it easier for teachers and students to fulfill their learning tasks (Prasetya et al., 2021).

The use of animated video learning media in teaching deaf students requires paying attention to learning models that are appropriate to the conditions of students in the classroom. One learning model suitable for deaf students is the direct instruction model. According to Yanti (2019), the direct learning model is an approach that uses direct demonstrations and teacher explanations, followed by student practice and feedback, thus helping students acquire the knowledge and skills needed for further learning.

**Method**

This research is research and development (R&D). The research was conducted at the special schools in SLB Negeri Kota Gorontalo on Jl. Beringin, Tuladenggi, Kec. Dungingi, Gorontalo City, Gorontalo Province. The research subjects were deaf students in class XI. The research procedure, namely the ASSURE model on flow chart research in Figure 1, consists of six stages: Analyze learner characteristics; state Objectives; select methods, media, and materials; utilize media and materials; Require Learner Participation; and evaluate. The data analysis technique for this research is media validity analysis. Analysis of media validity is reviewed from the validation of media and material experts.

![Figure 1. Flow chart research](image-url)
Result and Discussion

Validation in this research includes media validation and material validation. Media validation was carried out to determine the suitability of animated video learning media in increasing the interest of deaf students in SLB Negeri Kota Gorontalo.

There are several aspects assessed by media expert validators, namely: Video quality consists of three indicators: Suitability of the video displayed with the material presented (SV), select the text and background colors used according to the contrast so they are easy to read (ST), and harmony of text layout, images, and animation with video (HT); The use of sign language consists of three indicators: Appropriateness of hand gestures (AH), clarity of sign language display (CS), and the presentation uses language that is straightforward to understand (PL); And the last aspect is animation quality consists of three indicators: Quality of animation and transition effects in each frame/video cut (QA), suitability of animation to material (SA), and animated charm (AC). These 9 indicators can be presented in the graphic image of the learning media validation results in Figure 2.

![Figure 2. Assessment of Learning Media Validation](image)

Based on the results of the learning media validation assessment in Figure 2, there are 9 indicators in the learning media assessment with the highest validation assessment score, namely the attractiveness of animation, namely 3.98, the second highest, namely suitability of the video displayed with the material presented, the suitability of the layout of the text, images, and animation with the video, the quality of the animation effects and transitions in each frame/video piece, and the suitability of the animation with the material. These four indicators have the same value, namely 3.95. The third highest score is in the indicator of the suitability of the video displayed with the material presented, suitability of the layout of the text, images, and animation with the video, the quality of the animation effects and transitions in each frame/video piece, and the suitability of the animation with the material. These four indicators have the same value, namely 3.95. The indicator that got the lowest score was the choice of text and background colors used according to the contrast so that it was easy to read, with a score of 3.75. So, the average score of ≥ 3.00, namely 3.93, and was categorized as very valid overall. The lowest score was caused by the color of the text needing to be more precise and the size of the text being too close together, thus allowing for less readability by students in the understanding of sound sources.

Based on the picture above, a media validation indicator received the highest score, namely the animation attractiveness indicator, with a score of 3.98. The overall validation score results of media experts with an average value of all indicators are 3.93 and are included in the very valid category. This is in line with the opinion of Giana et al. (2022), which states that if the average of the validation results shows a score close to 4, then it can be interpreted as the feasible category so that the product being developed is feasible and can be directly used for the following research steps. The results of this research are the same as research conducted by Giana et al. (2022), stating that the feasibility of videos for deaf students received the decent category.

There are two aspects to the material assessment carried out by the validator: Material accuracy consists of several indicators, namely: The material used is easy for students to understand (MU), and the material is appropriate to the students' abilities (MA); And the next aspect is the suitability of the material content consists of several indicators, namely: The material used is...
appropriate to the subject (MS), the material's content is based on the learning objectives (MO), the material's content is based on the learning objectives (MC), and the presentation of material can attract students' attention (MP). These 6 indicators are presented in the graphic image of the material validation results in Figure 3.

![Material Validation Indicators](image)

**Figure 3. Assessment of Learning Material Validation**

Based on the results of the material validation assessment in Figure 3, there are 6 indicators in the learning material assessment, with the highest validation assessment score being the material used according to the subject, namely 3.95, while for 5 indicators such as the material used is easy for students to understand, the material is appropriate to the student's abilities, the content of the material used is by the learning objectives, the content of the material is by the animation in the video, and the presentation of the material can attract the attention of students, getting the same validation assessment, namely 3.80. So, the average score of ≥ 3.00 for the overall learning material, namely 3.82 in the very valid category.

This research is also the same as research conducted by Firdausi et al. (2021), namely that the material must have a significant influence on the learning process because students actively pay attention and listen to the learning material, thus allowing the teacher to provide detailed explanations according to the needs and characteristics of the teaching material.

**Conclusion**

The assessment of the feasibility of this video includes validation by media experts. This research achieved an overall score of media expert validation indicators, getting an average score of ≥ 3.00, namely 3.93, and was categorized as very valid overall. The validation indicators obtained an average score of ≥ 3.00 for the overall learning material, namely 3.82 in the very valid category. So, it is concluded that the validity of animated video learning media in increasing the learning interest of deaf students in SLB Negeri Kota Gorontalo is very valid.

**Acknowledgments**

The researcher would like to express his gratitude to the principal and teachers in SLB Negeri Kota Gorontalo.

**Author Contributions**

Sri Alda Rabiasa: Conceptualization, methodology; Sri Dewi Diana Paramata: Writing—original draft preparation; Muhammad Yusuf: Validation; Abdul Haris Odja: Methodology; Supartin: Curation, writing—review and editing; Dewa Gede Eka Setiawan: Formal analysis.

**Funding**

This research received no external funding.

**Conflicts of Interest**

The authors declare no conflict of interest.

**References**


4331
https://digitalcommons.hollins.edu/matltheses/12/


