

Utilization of Digital Interactive Media in Improving ARCS Components

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Abstract:

Problems related to motivation in learning among sixth grade students at SDN 5 Beloyang are still considered low, so there is a need to utilize digital-based interactive learning media to boost students' active involvement as they learn new things. This research aims to investigate how using the "Wayground" digital interactive tool affects and improves their drive to learn, by paying attention to the ARCS elements (Attention, Relevance, Confidence, Satisfaction). The methodology used is a quantitative descriptive nature with an instrument in the form of a Likert scale questionnaire that has been prepared based on ARCS motivation indicators. The population in this study consisted of 30 sixth grade students at SDN 5 Beloyang. The findings of this study indicate that the use of digital interactive media has a positive influence on increasing student motivation. The Attention component received a score of 89.35%, Relevance 88.85%, Confidence 90.15%, and Satisfaction 93.35%; all were classified as high. These results indicate that Wayground's digital interactive media is highly effective in capturing students' attention, increasing the relevance of learning content, building self-confidence, and providing a satisfying learning experience. Overall, this study confirms the crucial role of digital interactive media in increasing student learning motivation and supporting a more engaging, adaptive, and meaningful learning process. It is hoped that the results of this study can serve as a reference for learning innovation in educational institutions.

Keywords: Digital interactive media; Wayground; learning motivation; ARCS model; elementary school.

Introduction

Learning motivation is a crucial factor in determining student success in achieving learning objectives. Students with high learning motivation will demonstrate attention, active participation, and commitment to schoolwork. However, at SDN 5 Beloyang, sixth-grade students' learning motivation remains relatively low. Students tend to be passive, easily lose responsibility for assignments, and are less interested in participating in monotonous learning activities.

This condition requires teachers to innovate in learning by utilizing digital interactive media. Digital interactive media provides an interesting, dynamic learning experience, and allows two-way interaction between students and learning materials (Hidayat, NK, & Aini, 2025). The use of digital media is expected to increase the learning motivation component based on the ARCS model (Attention, Relevance, Confidence, Satisfaction) developed by Keller. According to (Keller, 2010) the ARCS Model, it emphasizes the importance of learning strategies that can attract students' attention (attention), link material with students' experiences (relevance), foster self-confidence (confidence), and provide satisfaction with learning outcomes (satisfaction). Thus, the application of digital interactive media is seen as relevant to increasing student learning motivation in elementary schools, especially in grade VI students of SDN 5 Beloyang. Previous studies have shown that the use of digital media can increase student attention and participation, aid conceptual understanding, and create a more enjoyable learning environment. Several studies have also shown that interactive media can increase students' self-confidence and satisfaction in learning.

The ARCS model designed by Keller (2010) highlights the importance of learning strategies that can attract students' attention (Attention), connect material with their needs and experiences (Relevance), increase self-confidence in the learning process (Confidence), and ensure satisfaction with the results obtained (Satisfaction). Although several studies have demonstrated the success of the ARCS approach, research integrating this model with the use of digital interactive media at the elementary school level, particularly for sixth-grade students, is still very limited. Therefore, this study aims to address this gap by empirically examining how the use of digital interactive media can provide a boost to the four components of learning motivation based on the ARCS model for sixth-grade students at SDN 5 Beloyang. The results of this study are expected to contribute to the development of more innovative learning practices, in accordance with the needs of students in the digital era. Based on the description, this study aims to determine the effect of the use of digital interactive media on improving the ARCS components of grade VI students at SDN 5 Beloyang.

1. Digital Interactive Media

The existence of technology today is considered very important in human life as a support in carrying out various activities both in work and in education. According to

(Mulyasa, 2022), educational technology can be understood as a complex and integrated process that involves people, procedures, ideas, equipment, and organizations to analyze problems, find ways to overcome problems, implement, assess, and manage problem solving that covers all aspects of human learning. Interactive media is able to foster student interest in learning because it presents an interesting visual and auditory experience. The digital interactive media used in this study is wayground. According to (Adikasari, 2025), based on the results of research conducted by Nur Kholis Hidayat and colleagues, Wayground has the potential to increase student engagement more deeply. Wayground utilizes the principles of *active recall* and *spaced repetition*, two learning methods that are scientifically proven to improve long-term memory (Hidayat, NK, & Aini, 2025). From the explanation above, it can be explained that digital interactive media is a learning tool that can make students active in learning activities through the use of media such as waygrounds, allowing students and teachers to build interactions and communication.

2.

3. **ARCS Model (Attention, Relevance, Confidence, Satisfaction)**

Numerous ideas exist concerning what drives someone to learn, and each one gives teachers a way to create lessons that connect with students. One example is the ARCS model, which explains how to design lessons to boost motivation (Keller, 2010). This idea gives four actions to make students want to learn more in online classes: grabbing their interest, making it relatable, building confidence, and making them feel happy with what they learned. Keller created the ARCS model (Arai et al., 2021) to explain the things that make people want to learn. The four main parts of this model are:

- a) Attention: It is important at this point to get students interested and excited so they will want to participate. This could include things like acting out scenarios, playing trivia games, and other similar tasks. Using pictures and jokes can also help keep people interested while they are learning.
- b) Relevance: The purpose here is to create learning materials that address what students want to learn. Teachers need to show how helpful the information is and how it will help them improve their understanding and abilities.
- c) Confidence: Here, students should believe they can do well in their training and know they have a good chance of succeeding. So, students need to know what is expected of them and how they will be graded.
- d) Satisfaction: At this point, students are encouraged to learn by being happy with what they have learned. Giving feedback and encouragement can make learning results more meaningful.

From the explanation, it is clear how important it is to implement the ARCS model if it can be present in every learning process so that interactions will be established that enable students to be more active in learning activities, present meaningful learning,

create enjoyable learning through the use of digital interactive media, for example, so that students do not only understand the material alone, but are also encouraged to learn independently and sustainably.

4. Digital Interactive Media Relationship with ARCS

The results of research observations conducted by Ulfa et al. (Teknologi et al., 2025) showed that after using multimedia learning media, students showed a higher enthusiasm for learning. In addition, based on the results of research conducted by Nur Kholis Hidayat and colleagues in terms of learning motivation, the results showed that 17 students strongly agreed that Wayground increased their enthusiasm for learning. One student stated "if it's like a game, learning becomes fun," which confirms that the *gamification approach* is able to create a fun and competitive learning atmosphere. Game elements such as challenges, points, or levels are able to stimulate students' intrinsic motivation (Hidayat, NK, & Aini, 2025). So it can be concluded that through the use of digital interactive media, students can be more diligent in doing assignments, more enthusiastic in participating in class activities, and have a greater curiosity about the material being taught. This is a reference so that the expected learning will build student learning motivation so that communicative and interactive learning is created that allows students to be active in learning activities.

Building students' learning motivation so that communicative and interactive learning is created which enables students to be active in learning activities.

Methods

1. Research methods

This research uses a quantitative descriptive approach. To determine the influence of the use of digital interactive media on student learning motivation based on the ARCS model.

2. Research Subjects

The research was conducted at SDN 5 Beloyang with 30 participants of grade VI students in the odd semester of the 2025/2026 academic year.

3. Research Instruments

The main instrument is a Likert scale questionnaire on learning motivation based on the ARCS model arranged on a Likert scale with a value range of 1–4. Indicators for each ARCS component include attention, relevance, self-confidence, and student satisfaction with learning.

Table 1. Motivational aspects and criteria were modified from Keller (2010).

Aspect	Criteria
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Attention	1. The attraction of learning activities
	2. Can focus on the material
	3. Material attraction
	4. Have a sense of curiosity
	5. The attractiveness of the learning resources/learning media used
Relevance	1. Contextual material
	2. Have a feeling of wanting to succeed in learning
	3. Media helps to understand the material
	4. Feel that the material has been filled according to needs
	5. Media helps connect material with experience.
Confidence	1. Feeling able to learn the content of the material
	2. Feeling confident in answering questions
	3. Feelings of courage to express opinions
	4. Having a feeling of success in the exam
	5. Having a feeling of easy remembering of lesson material/content
Satisfaction	1. Feel satisfied with the media used
	2. Have a feeling of satisfaction with the results achieved
	3. Using media in the next lesson
	4. Have a feeling of pleasure towards the lesson
	5. Proud of learning outcomes

Keller's (2010) motivational aspects and criteria

4. Data source

Data sources are obtained from the results Questionnaire answers given to students after learning using digital interactive media.

Data collection in this study was conducted through a post-test questionnaire, which was administered to students after participating in learning using digital interactive media. The researchers only used a post-test questionnaire because the primary objective of the study was to measure students' perceptions and motivation levels after receiving the treatment, not to compare changes before and after learning.

5. Data Collection Process

The research was conducted in three stages:

- a) Preparation Stage: designing digital interactive media and creating ARCS questionnaire instruments.
- c) Implementation Stage: implementation of learning using digital interactive media in the classroom.
- d) Evaluation Stage: data collection through a questionnaire after media implementation.

6. Data analysis

Data were analyzed using the average motivation score after digital media use. The analysis was conducted using Microsoft Excel and SPSS to obtain significance values.

Result And Discussion

The aim of this research is to find out the effect of using digital interactive media on improving the ARCS component of sixth-grade students at SDN 5 Beloyang. The digital interactive media used was Wayground. Data were collected based on student responses to the post-learning questionnaire using Wayground interactive media. The questionnaire results are shown in Tables 2 and 3 below.

Table 2. Results of questionnaire analysis per item of variable X motivation ARCS model

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Standard Deviation
The attraction of learning activities	30	3	4	3.83	,379
Can focus on the material	30	3	4	3.37	,490
Material attraction	30	3	4	3.67	,479
Have a sense of curiosity	30	2	4	3.40	,621
The attractiveness of the learning resources/learning media used	30	3	4	3.60	,498
Contextual material	30	2	4	3.30	,702
Have a feeling of wanting to succeed in learning	30	3	4	3.63	,490

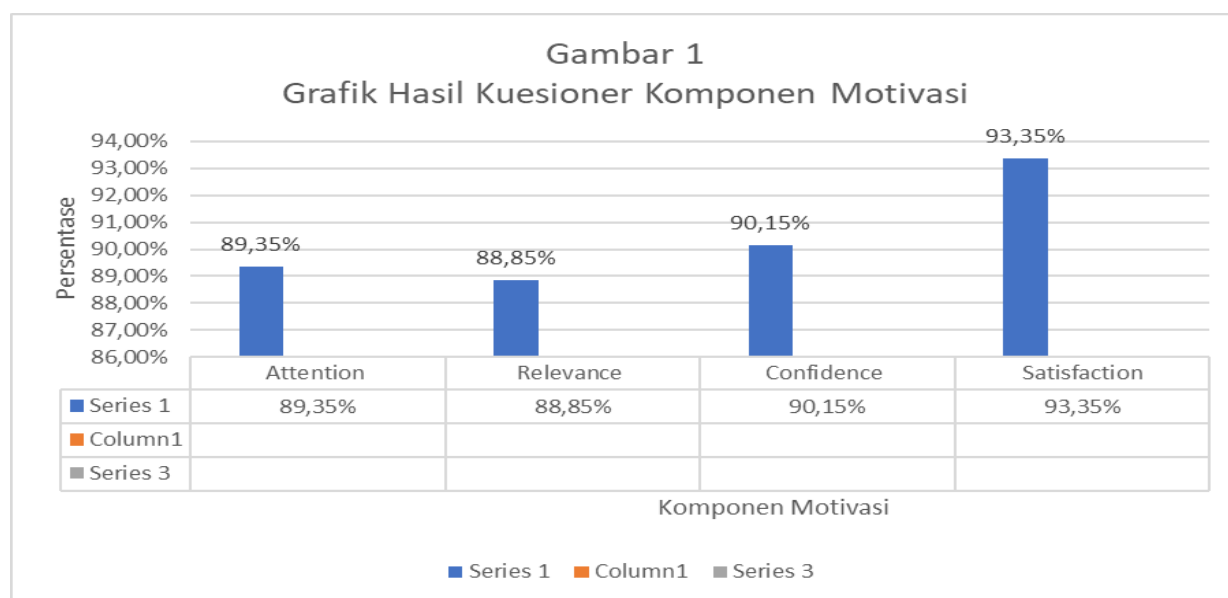
Media helps understand the material	30	3	4	3.70	,466
Feel that the material has been filled according to needs	30	3	4	3.53	,507
Media helps connect material with experience.	30	3	4	3.60	,498
Feeling able to learn the content of the material	30	3	4	3.60	,498
Feeling confident in answering questions	30	3	4	3.63	,490
Feelings of courage to express opinions	30	3	4	3.63	,490
Having a feeling of success in the exam	30	3	4	3.57	,504
Having a feeling of easy remembering of lesson material/content	30	2	4	3.60	,563
Feel satisfied with the media used	30	3	4	3.70	,466
Have a feeling of satisfaction with the results achieved	30	3	4	3.77	,430
Using media in the next lesson	30	3	4	3.67	,479
Have a feeling of enjoyment towards the lesson	30	3	4	3.70	,466
Proud of learning outcomes	30	3	4	3.83	,379
Valid N (listwise)	30				

Source: Primary Questionnaire Data, processed with IBM SPSS version 31.0, 2025

Table 3. Variable analysis results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Standard Deviation
Total Attention	30	14	20	17.87	1,634
Total Relevance (relatedness)	30	14	20	17.77	1,977
Total Confidence (Confidence)	30	15	20	18.03	1,810
Total Satisfaction	30	15	20	18.67	1,729
Valid N (listwise)	30				

Source: Primary Questionnaire Data, processed with IBM SPSS version 31.0, 2025



Source: Primary Questionnaire Data, processed with IBM SPSS version 31.0, 2025

Referring to the data, it can be concluded that learning by utilizing digital interactive media has a positive influence in increasing student motivation. In the Attention component, students obtained an average score of 17.87 out of a maximum score of 20 with an achievement percentage of 89.35% in the strong category. Getting attention in the learning process is very important because it can trigger motivation for students. This is in accordance with the opinion based on the results of research conducted by (Adikasari, 2025), it is known that the presentation of interesting information and attention to the readability of the text as well as the presence of text, images, graphics, and videos in interactive multimedia can attract students' attention and stimulate memory. The digital interactive media displayed by researchers in the form of a

wayground during learning activities was able to make students interested in participating in learning, making students focus, with an attractive media display making students pay more attention and making students feel that learning time is faster when using the interactive media.

The use of Wayground interactive media has also been shown to improve attention in the ARCS model by presenting information in an engaging, diverse, and easily understood way for students. Wayground integrates text, images, graphics, animations, and videos into an organized multimedia presentation, which helps reduce learning boredom and stimulates curiosity. Wayground's bright and balanced visual design, with attention to readability, encourages students to immediately concentrate on the material presented. Interactive components such as navigation buttons, moving illustrations, and smooth visual transitions contribute to a more dynamic and less boring learning experience. Furthermore, the simple and structured presentation of information makes it easier for students to stay focused because each topic is presented sequentially, which in turn reduces the pressure on short-term memory. When using Wayground, students showed increased engagement, looking at the screen more often, following the steps provided, and reacting to visual stimuli. This indicates that Wayground is successful in capturing and maintaining students' interest throughout the learning process. This not only improves concentration but also makes learning time feel shorter because students enjoy the process, maintaining focus from start to finish. Therefore, the variety of multimedia elements, the quality of the visual design, and the level of interactivity offered by Wayground are key factors that strengthen the Attention element in the ARCS model.

For the relevance component, students also achieved an average score of 17.77 out of a maximum of 20, with a percentage of 88.85%, which is included in the strong category. The use of Wayground during learning sessions, including the initial test, has been proven to improve the Relevance element in the ARCS model because the material presented is directly related to students' learning experiences. Wayground was created as an educational game that allows students to answer questions in groups. This activity design creates a learning context that aligns with students' real-world experiences—a play-and-learn experience—thus increasing their engagement with the material being taught.

Each question in Wayground includes a pause that encourages students to reflect and consider the reasoning behind their answers. As students discuss the answers together, they have the opportunity to connect their understanding to relevant concepts. This process makes the learning experience more meaningful because students can see the direct connection between their answers, the impact of their choices, and the explanation of the material presented.

Providing consistent feedback throughout each question session for both correct and incorrect answers, is a vital element in creating relevance. Students learn to identify errors, understand the reasoning behind incorrect answers, and easily recognize correct concepts. This reinforces a meaningful learning experience, as students not only guess answers but also truly understand the connection between the material in Wayground and their existing knowledge.

Based on previous research (Heriantoa, 2021), providing feedback is a powerful strategy for increasing relevance in student learning motivation. Wayground essentially applies this principle, enabling students to connect the material learned to their learning needs. Students become aware that every activity in the media has a purpose and contributes to conceptual understanding. Thus, the game structure, answer discussions, and feedback provided in Wayground make students feel that the material being learned is very important, meaningful, and relevant to their learning process. This results in a significant increase in the Relevance component of the ARCS model.

In terms of confidence, students achieved an average score of 18.03 out of 20, equivalent to 90.15%, which is considered excellent. This high level of confidence is due to Wayground's characteristics, which provide students with full access to materials, choose navigation paths, and determine their learning direction. Heriantoa (2021) stated that providing control over the learning process and opportunities to actively interact with multimedia are important elements in developing confidence.

Furthermore, Wayground's interactive quizzes and immediate feedback allow students to quickly assess their mastery of the material and correct mistakes through enrichment and remedial sessions that can be repeated at any time. This process creates a continuous experience of success, thereby increasing students' confidence in their ability to independently understand the material. In this way, Wayground significantly impacts self-confidence through support for learning control, rapid response, and effective and repeatable learning opportunities.

In terms of student satisfaction, students scored an average of 18.67 out of 20, equivalent to 93.35%, also considered quite strong. This high level of satisfaction indicates that the learning experience using Wayground positively impacts student learning processes and outcomes. Previous research (Sukma & Handayani, 2022) emphasized that the use of interactive learning media can increase student enthusiasm for learning and enhance student interaction during learning activities. These results align with field observations, where students appeared active, enthusiastic, and highly engaged during the learning process using Wayground.

Wayground's interactive features, including active exercises, quizzes with final assessments, and engaging visuals, create a fun learning experience. The sense of success achieved through scores, positive feedback, and opportunities to correct mistakes motivates students to feel a sense of inner satisfaction. They feel directly rewarded for their efforts, fostering a sense of pride in their learning outcomes.

Furthermore, Wayground's learning approach offers a new and different experience from traditional learning methods, thus engaging students to continue using the platform for future learning. These feelings of joy, enthusiasm, and motivation are strong indicators of satisfaction in the ARCS model, where students are satisfied not only with the learning outcomes but also with the process. In this way, Wayground enhances the satisfaction element by offering a unique learning experience.

The limitations of this study are the lack of a control class and the small sample size (30). This study only used a questionnaire to collect data, which is a limitation of this study.

Conclusion

Based on the results of the research that has been conducted, it shows that the interactive digital media Wayground has an influence on increasing the learning motivation of fourth-grade students at SDN 5 Beloyang. The motivation in question includes the ARCS components (Attention, Relevance, Confidence, Satisfaction). The use of digital interactive media provided an in-depth learning experience for students, students experienced a different learning process that was more interesting, so as to increase students' attention during learning activities, make learning materials more relevant and interconnected with students' learning needs, make students more confident in completing the assigned tasks and provide satisfaction with the learning process that students have done. The results of the study showed that the Attention element reached 89.35%, Relevance 88.85%, Confidence 90.15%, and Satisfaction 93.35%, all of which are in the high category. Thus, it can be concluded that the Wayground platform is proven to be able to increase students' learning motivation as a whole and help create a more interesting and meaningful learning process. As a follow-up to this research, researchers are interested in further developing studies on other aspects, such as the influence of Wayground media on learning outcomes, further utilization of digital interactive media for both formative and summative assessments and how its effectiveness and efficiency are. In addition, this research is expected to contribute to learning renewal and innovation within the scope of educational units regarding the effectiveness of digital interactive media in supporting innovative and meaningful learning processes.

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