



Learning Modules with ARCS Keller Approach to Increase Children's Learning Interest and Motivation

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Abstrak: Data Statistik Pendidikan tahun 2023 menunjukkan bahwa 5,14% siswa SD/ sederajat harus mengulang pendidikannya, salah satunya disebabkan oleh ketidakmampuan menyelesaikan pelajaran. Metode pembelajaran dengan ARCS Keller yang memberikan pendekatan sistematis dan komprehensif dapat menjadi langkah inisiatif dalam menstimulasi minat dan motivasi belajar. Penelitian ini merupakan studi kasus yang dilakukan terhadap 3 orang siswa kelas V di SDN Kotalama 5 yang memenuhi kriteria inklusi dengan tujuan untuk mengetahui gambaran minat dan motivasi belajar siswa sebelum dan setelah dilakukan pembelajaran menggunakan modul pembelajaran dengan pendekatan ARCS Keller. Instrumen yang digunakan adalah Course Interest Survey (CIS) untuk mengetahui tingkat minat belajar siswa dan Instructional Materials Motivation Survey (IMMS) untuk mengetahui sejauh mana motivasi belajar siswa serta lembar observasi dan wawancara untuk memperoleh data pendukung. Seluruh data dianalisis menggunakan metode deskriptif kuantitatif. Hasil penelitian menunjukkan peningkatan nilai rata-rata minat belajar sebesar 12,45% dan motivasi belajar sebesar 11,34%, diikuti dengan perubahan sikap yang positif dalam mengikuti pembelajaran. Penggunaan modul pembelajaran dengan pendekatan ARCS Keller mampu untuk meningkatkan minat dan motivasi belajar siswa dengan membantu siswa lebih berkonsentrasi, memahami materi dengan baik, berpikir kritis, memiliki rasa percaya diri hingga dapat mencapai kepuasan dalam belajar.

Kata Kunci: Minat, motivasi, belajar, ARCS keller

Abstract: The 2023 Education Statistics data shows that 5.14% of elementary school students/equivalent had to repeat their education, one of the reasons being the inability to complete the lessons. The ARCS Keller learning method which provides a systematic and comprehensive approach can be an initiative step in stimulating interest and motivation in learning. This research is a case study conducted on 3 fifth-grade students at SDN Kotalama 5 who met the inclusion criteria with the aim of determining the description of students' interest and motivation in learning before and after learning using the learning module with the ARCS Keller approach. The instruments used were the Course Interest Survey (CIS) to determine the level of student interest in learning and the Teaching Materials Motivation Survey (IMMS) to determine the extent of student motivation in learning as well as observation sheets and interviews to obtain supporting data. All data were analyzed using quantitative descriptive methods. The results showed an increase in the average value of learning interest by 12.45% and learning motivation by 11.34%, followed by positive changes in attitudes in participating in learning. The use of learning modules with the ARCS Keller

approach can increase students' interest and motivation in learning by helping students concentrate better, understand the material well, think critically, have self-confidence and achieve satisfaction in learning.

Keywords: Interest, motivation, study, ARCS keller

INTRODUCTION

Interest and enthusiasm for learning are crucial for children's learning. To date, many children still lack interest and motivation in learning, resulting in suboptimal learning outcomes, particularly academic achievement. According to the (International Education Database, 2025), Indonesia ranks 67th out of 203 countries in terms of education quality. Based on the results and achievements of the educational process, according to the (Girsang et al., 2023), on Badan Pusat Statistik 2023 report, the repetition rate for elementary school students remains high, at 5.14%, junior high school at 3.58%, and high school at 3.64%. The teaching and learning process itself is quite complex. Students not only listen to and memorize material presented by the teacher but also must be actively involved in learning activities. Through this process, students can experience gradual changes in their knowledge, skills, and attitudes. According to (Durisa et al., 2022), education must be implemented effectively so that students feel comfortable and enjoy the learning material. This opinion emphasizes that teachers must be facilitators who can provide encouragement and support to students so they can achieve learning goals effectively.

In an effort to achieve learning goals, the elements of interest and motivation are important and cannot be overlooked, as stated by several previous researchers, (Nawahdani et al., 2022) and (Pondaag et al., 2021) who stated that there is a relationship between student interest and learning motivation. Learning interest as an internal element within students that encourages them to carry out certain activities to achieve a goal plays an important role in the success of the teaching and learning process. According to (Tanjung, 2022), learning interest is a psychological aspect of a person interpreted as a desire, a feeling of liking to do something which in this case, for students is related to the learning process shown through enthusiastic participation and activeness in learning. Meanwhile, (Uno, 2023) in a book he wrote has stated that the elements of motivation and learning are two things that influence each other. Meanwhile, (Fang et al., 2024) and (Xueli et al., 2025) stated that motivation is an essential topic in educational research, it has a close relationship with students' learning outcomes. Learning motivation is a relatively permanent change in behavior and potentially occurs as a result of practice or reinforcement (reinforced practice) based on the goal of achieving a certain goal. According to (Suharni, 2021), students who have less motivation to learn tend to show attitudes and behaviors, such as; (1) lethargy and helplessness, such as

laziness, reluctance, slow learning, procrastination, unfinished work, lack of concentration, indifference, apathy, poor physical posture, drowsiness or lethargy and so on; (2) Avoidance or escape, such as being absent, skipping, not attending class, not doing assignments, not taking notes, forgetting, lacking self-confidence, and so on; (3) resistance, such as behaving impolitely, often disturbing, damaging things, not liking lessons, criticizing, and so on; (4) compensation, such as looking for other activities while studying, prioritizing unimportant work.

Based on preliminary research conducted by researchers and the fifth-grade homeroom teacher at SDN Kota Lama 5, several students were found to exhibit low levels of interest and motivation in learning. They reported that some students appeared to be inattentive to the teacher's explanations during the learning process, some displayed a listless and unenthusiastic expression, and even attempted to leave the classroom. The ARCS (Attention, Relevance, Confidence, and Satisfaction) cooperative learning model is a learning approach that remains relevant for use at the elementary school level. This model was developed by John M. Keller, an education expert from the United States, as stated by (A. Nur & Kurniawan, 2022). The ARCS model is a type of problem-solving model used to design motivational factors and learning environments to encourage and maintain student motivation in learning. This model is closely related to student motivation, especially in acquiring new knowledge, as noted by (Ikhlasani et al., 2023). In the learning process, teachers need to fulfill four aspects of ARCS: increasing student attention, aligning learning materials with their learning experiences, instilling confidence, and creating a sense of satisfaction in students.

The ARCS learning model provides a structured and comprehensive approach to enhance the learning process by increasing student interest and motivation (Salsabiela et al., 2024). Integrating ARCS theory, which guides students to learn gradually, from developing attention, understanding and reasoning, to self-confidence, to achieving satisfaction in learning, into an interactive module can certainly help simplify and bring a new atmosphere to the teaching and learning process. This is a form of problem-solving approach to designing aspects of interest and motivation as well as the learning environment to encourage and maintain student motivation to learn. Therefore, the researcher intends to conduct research related to student interest and motivation before and after learning using a module with the ARCS Keller method approach.

METHOD

This research is a case study with a quantitative descriptive approach with the aim of determining students' learning interests and motivations before and after being given learning

using a module with the ARCS Keller approach. This research was conducted on some students from a total of 27 fifth grade students at SDN Kotalama 5 who were selected based on the criteria of sufficient to poor interest and motivation levels (<3.5) accompanied by other criteria that have been determined by the researcher, such as; students who are less able to focus on learning, tend to be slow in learning and have low confidence and self-confidence. 3 students were obtained who met the established criteria.

Data collection in this study was carried out twice, namely at the beginning of the study and at the end of the study, using the ARCS model instrument compiled by Keller in 2010 which consists of two measurement devices, including; Course Interest Survey (CIS) to measure student interest in learning activities and Instructional Materials Motivation Survey (IMMS) to determine the level of learning motivation. Both of these questionnaires are questionnaires with a Likert scale of 1-5, each consisting of 34 questions for the CIS questionnaire and 36 questions for the IMMS questionnaire, focusing on 4 ARCS indicators, namely Attention, Relevance, Confident and Satisfaction. This questionnaire is used by researchers to determine the level of student interest and learning motivation which is divided into 5, including; Not good (<1.5), less good (<2.5), quite good (<3.5), good (<4.5) and very good (4.5 - 5). In addition, to obtain other information that can enrich the research data, researchers also use observation sheets and interview guidelines.

Primary data obtained from the ARCS Keller questionnaire (ICS & IMMS) administered to the subjects were analyzed and categorized into five levels of student motivation and interest: poor, less than good, fair, good, and excellent. These primary data were then supported by systematically compiled observations and interviews, allowing for interpretation and comparison before and after the subjects were taught using the ARCS Keller method.

Data collection in this study utilized a well-prepared method to align with the ARCS theory developed by John M. Keller (1987). The following steps were taken in data collection as shown at figure 1:

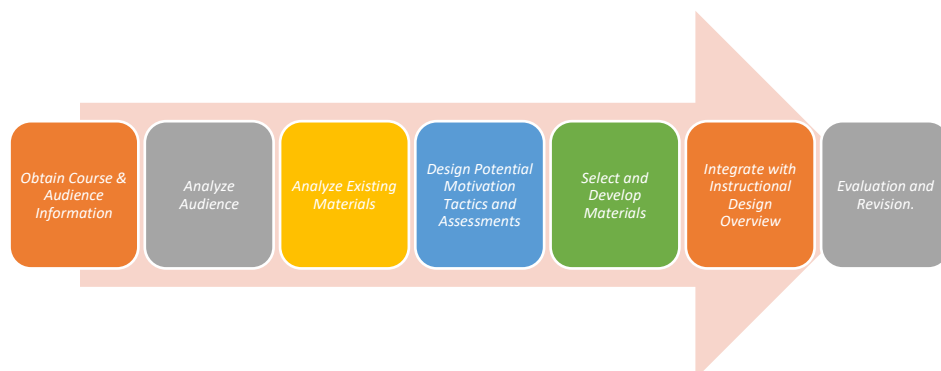


Figure 1. Stages of Keller's ARCS Method Approach

First, interviews were conducted during the preliminary study with homeroom teachers to obtain information about the subject and students. These interviews aimed to determine factors influencing students' initial interest and motivation, as well as how they would respond to the material and learning strategies to be used. Next, a student analysis was conducted to determine the types of motivational and interest issues present. This analysis was conducted using a pre-prepared research instrument, namely a pretest to obtain CIS and IMMS scores. Afterward, the existing material was analyzed through interviews. The purpose of these interviews was to obtain demographic data, such as student identity, background, activity level, and additional information regarding problems students faced during the learning process. This data will later be used as supporting material in this research.

After the necessary data was collected, the design stage for potential motivation and assessment strategies was carried out. At this stage, the researcher created a learning module to support students in their learning process. The module was created by referring to the textbook and integrating it with Keller's ARCS Learning Method. The developed modules were then selected and developed in this fifth stage. This module discusses science subjects, which tend to be considered difficult because students feel unable to understand unfamiliar vocabulary or vocabulary they have never heard before.

The learning modules developed by the researchers using the ARCS Keller method were then integrated into the learning process. The ARCS Keller learning process was divided into three sessions. The research phase concluded with observations and interviews, as well as retesting using the provided instruments (posttest). This evaluation aimed to obtain primary and supporting data regarding changes in student interest and motivation levels after implementing the ARCS Keller learning intervention. The data obtained were then analyzed qualitatively and quantitatively.

RESULTS AND DISCUSSION

Results

Based on the research results, 3 (three) students from the total fifth grade of SDN Kotalama 5 had CIS and IMMS scores that tended to be sufficient to even less than other students accompanied by problems in the areas of interest and motivation to learn and self-confidence that caused students to be less able to focus on learning so that it had an impact on learning delays. According to (Rahman, 2022), In general, there are two important roles of motivation in learning. First, motivation functions as an inner driving force that encourages students to learn and teach, and ensures the learning process takes place continuously to achieve certain goals. Second, motivation also plays an important role in

providing enthusiasm, enthusiasm, and a sense of joy when learning, so that students who have high motivation will have enough energy to carry out learning activities well.

Interviews with homeroom teachers yielded supporting data that aligns with the CIS and IMMS questionnaire scores mentioned above. Students with average CIS and IMMS scores ranging from moderate to low tend to exhibit low learning interest and motivation, as described by (Rohmatillah & Kholifah, 2021) Lazy, often missing lessons and assignments, often disruptive, and unable to focus. In contrast, students with high average CIS and IMMS scores are more able to participate in learning without significant obstacles or problems.

The CIS and IMMS scores of the study subjects before and after receiving education using the ARCS Keller method are as follows:

Table 1. Course Interest Survey (CIS) & Instructional Materials Motivation Survey (IMMS) Questionnaire Results

Research Subjects	CIS			IMMS		
	Before	After	% Growth	Before	After	% Growth
R1	3,29	3,38	2,74	3,39	3,47	2,36
R2	2,44	3,24	32,79	3,31	3,50	5,74
R3	3,26	3,32	1,84	2,47	3,11	25,91
Average	3,00	3,31	12,45	3,06	3,36	11,34

Tabel 1 shows that R1, a research subject, had CIS and IMMS scores in the adequate category (3,29 & 3,39). However, observations and interviews revealed that R1's self-confidence was low, characterized by hesitation and shyness, making him less active in class. Furthermore, R1 also lacked social skills, characterized by limited social interaction and a feeling of awkwardness when initiating communication with peers. In-depth interviews with his homeroom teacher revealed that R1 was a bright and diligent student. He also had a positive outlook on his future. After participating in the ARCS Keller approach, his CIS and IMMS scores (3,38 & 3,47) significantly improved. Furthermore, R1 was able to collaborate with his peers. Although he still struggled with socializing, he was confident in expressing his opinions and asking questions during the learning process. His constant initiative in helping his friends also demonstrated his growing self-confidence.

Based on the data from Table 1, R2 had a relatively adequate level of motivation (3,31), but showed a less than optimal level of interest in learning (2,44). Observations and interviews with the homeroom teacher revealed that R2 tended to get bored quickly during lessons, was lazy about assignments, and frequently left class. However, the student appeared more enthusiastic about learning outside of class. R2 stated that he aspired to be a pedicab driver and a truck driver, indicating that his mindset regarding his future was less open, leading to a decline in his interest in learning. After participating in the ARCS Keller

approach, the student's level of interest in learning increased from "poor" to "adequate" (3,24), while his motivation remained in the "adequate" (3,5) category. R2 appeared more enthusiastic about participating in the lessons because he found the different learning method more exciting and enjoyable. The student often attempted to drop out of class due to the difficulty of understanding unfamiliar words. However, by the end of the lesson, the student consciously began to consider becoming a successful cake seller. The researchers believe that this change in mindset about his future may have been influenced by the stimuli provided in the module, providing the student with broader insights and an increased interest in learning, although not drastically.

As presented in Table 1, R3 was found to have a motivation level in the "poor" category (2,47) and a learning interest in the "adequate" category (3,26). Based on observations and interviews, it was discovered that R3 tended to lack enthusiasm in participating in the learning process. The student also often did not pay attention and preferred to busy himself during the learning process. This resulted in R3's grades tending to be low. After being taught using the ARCS Keller method, R3 showed an increase in his interest and motivation to learn to the sufficient category (3,32 & 3,11). Observations showed that R3 had developed enthusiasm in participating in the learning process. Although he still had difficulty focusing when given explanations, he was still able to participate in the group practicum activities and was able to write a report on the practicum results according to what was in the module. In addition, R3 was also able to re-explain his understanding of the material that had been given.

Discussion

According to (Paputungan, 2023), the development of school-age children is a process of change that occurs within an individual, both physically and mentally, toward maturity, which occurs regularly, gradually, and sustainably. Child development cannot be separated from the view of humans as holistic beings, so there are several aspects that need to be considered, namely: cognitive and intellectual, social, language, emotional, personality and artistic, and moral. In general, a person's development is a combination of several processes, namely biological, cognitive, and socio-emotional, which are interrelated and influence each other. Therefore, it is important to pay attention to the level of satisfaction, as it is one of the markers of a child's emotional development, so as not to disrupt the balance of their cognitive and biological processes. Thus, children will be better able to improve the quality of their learning. One effort that can be made to achieve all of this is by using interactive and engaging learning media such as this ARCS Keller learning module.

Based on the research data presented previously, it is known that there is a significant increase in terms of children's interest and motivation to learn, which tends to be in a positive direction, namely 11.34% for the level of learning interest and 12.45% for the level of learning motivation. This shows that learning using the ARCS Keller approach module can help increase interest and motivation to learn for children who have problems in this regard. The following is a portion of the page from the module with the ARCS Keller approach used in this research:



Figure 2. Learning Module with ARCS Keller Approach

The module fragment shown in Figure 2 was created by researchers by implementing the ARCS theory created by John M. Keller. When implementing learning using Keller's ARCS approach, a teacher can begin by eliciting and focusing students' attention, followed by conveying the objectives and benefits of the learning process. This is crucial for students to better understand the essence of the learning process. Furthermore, a teacher can explain the lesson material using concrete examples to facilitate student comprehension. Furthermore, when providing tutoring, teachers must provide opportunities for students to participate in the learning process, provide feedback, and summarize the material taught at the end of the lesson.

Learning is conducted using Keller's ARCS approach through a module created by the researcher, with three meetings, each meeting having a different theme. This module is based on the ARCS model developed from expectancy-value theory, which consists of two main components: the value of the desired goal and the expectation of being able to successfully achieve that goal. From these two components, Keller developed four components: Attention, Relevance, Confidence, and Satisfaction. This ARCS model focuses on increasing student attention, aligning learning materials with their learning experiences, building self-confidence, and creating satisfaction. These four aspects of motivation are very important to implement to maintain student motivation, so that learning becomes interesting, meaningful, and challenging.



Figure 3. Learning with ARCS Keller Approach

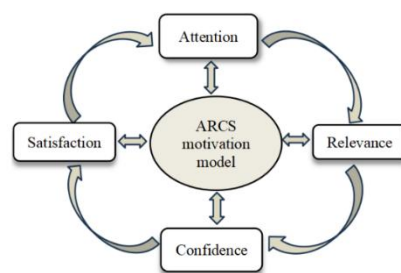
Figure 3 shows the implementation of learning using a learning module with the ARCS Keller approach created by researchers. According to (Spangenberg & Roberts, 2020), the principle of attention relates to students' attention or interest and how they maintain it. Attention, as a way to focus the mind, is crucial in the teaching and learning process. During the learning process, students' interest and attention need to be activated and maintained. Therefore, researchers strive to attract and maintain respondents' attention through the use of this unique learning module. This aligns with the opinion of (Ma & Lee, 2021) who stated that the ARCS learning model is able to maintain students' attention and concentration during learning. According to Izmirli (Salsabiela et al., 2024), focusing attention or interest can be achieved through more flexible learning methods that can make learning more engaging. Teachers should be able to arouse and maintain this attention during learning through strategies to maximize learning outcomes, one of which is through different teaching and presentation methods. The stimulation provided by the use of a module with the new and unique ARCS Keller approach in learning can arouse students' interest and curiosity.

In terms of relevance, students are expected to be able to understand the learning and connect learning outcomes clearly, systematically, and logically to their daily work and behavior. This high level of understanding and reasoning can encourage student interest and motivation in participating in the teaching and learning process. In practice, teachers should be able to connect learning materials to students' circumstances and provide a clear understanding of learning objectives. According to (Karabatak & Polat, 2020), linking learning materials to environmental conditions and providing several examples related to students' conditions can make a greater contribution to students' reasoning abilities. Therefore, learning using Keller's ARCS approach can train students to analyze factual situations and solve problems with logical, systematic steps in accordance with reasoning ability indicators (Hamidah et al., 2022).

Self-confidence and belief in success must be instilled in students so they strive harder to achieve their desired goals. Self-confidence is a form of motivation that can help students develop positive expectations during the learning process. In classroom learning, teachers must be able to understand students' needs and create lessons that emphasize increasing

student self-confidence. This aligns with Angkowo's opinion in (Setiawan et al., 2020), which states that in an effective learning process, it is important to eliminate feelings of anxiety and inadequacy in students. According to (Bahri & Supriyadi, 2021), a successful achievement cannot be achieved if someone still believes success is merely luck without effort. Therefore, it is important to help students develop positive expectations for success, so that students can have an honest, disciplined, responsible, polite, caring, and confident attitude in interacting during the learning process and communicating in various environments such as school, home, and community. the goal is to provide experiences that help them develop their own self-confidence (S. Nur, 2020).

Ultimately, students should be able to achieve a level of satisfaction in learning. In this case, satisfaction refers to the feeling of pleasure students experience from positive rewards and recognition for their efforts and successes during the learning process. According to (Putra & Dianastiti, 2023), this satisfaction is crucial for students to feel positive about the lesson and gain a positive learning experience. Satisfaction focuses on students' satisfaction in achieving their learning expectations. In this regard, (Lidia Susanti, 2020) argue that satisfaction will fuel greater effort and enthusiasm for learning and practicing in subsequent learning. This is supported by (Susanti & Imbiri, 2020), who state that a student who receives recognition and evidence for their efforts will support their subsequent learning because of the resulting sense of satisfaction within themselves, known as intrinsic motivation. Real extrinsic rewards can also provide satisfaction and can take the form of substantive or symbolic rewards.



Picture 4. ARCS Keller Design

Picture 4 is a depiction of a learning series with the ARCS Keller approach introduced by John M. Keller, even though this ARCS model is more than 35 years old, the benefits and functions of the model remain relevant. The ARCS model can be used not only to design a curriculum that is motivating and comfortable for students, but also to improve the learning process efficiently and effectively and can be used for basic provisions on student motivation perceptions. This is reinforced by the opinion of (DEWI, 2020) which states that student-oriented learning and high learning motivation will make it easier for students to remember

the lessons they have learned, and those memories will be stored for a long time in students' memories, which ultimately results in optimal achievement evaluations.

Researchers argue that it is important to consider students from all aspects. The development of school-age children in general is a combination of several processes, namely biological, cognitive, and socio-emotional. The concepts of interest and motivation are inseparable and influence each other both intrinsically and extrinsically. According to John M. Keller, as stated in (A. Nur & Kurniawan, 2022), teachers must motivate students. This is because fostering a passion for learning in students is not only their own responsibility, but also the teacher's.

CONCLUSIONS

Based on the research results, the third research subject showed an average increase in learning interest scores of 12.45% and learning motivation of 11.34%. Qualitatively, there was also a change in student attitudes towards a more positive direction in participating in teaching and learning activities. This proves that learning using modules with the ARCS Keller method approach is able to significantly arouse student interest in learning and is able to motivate students to the maximum, thus obtaining more optimal learning quality. In implementing this research, there was a limitation, namely related to the limited number of respondents tested in the study. Through the results of this study, all data presented should be used as a reference source and consideration for future research by maximizing the number of research respondents, so that more credible results are obtained to support teachers in preparing better learning methods & media and increasing student interest and motivation in learning.

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