GOLDEN RATIO

Developing Learning Strategies to Improve Students' Learning Motivation

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ABSTRACT

This study explores the development of effective learning strategies aimed at enhancing students' learning motivation. Employing a systematic literature review (SLR) method, this research analyzes scholarly works published in the last ten years. The findings reveal that active, contextual, and student-centered approaches such as Problem-Based Learning, Project-Based Learning, and collaborative learning can significantly increase students' intrinsic and extrinsic motivation. Furthermore, integrating technology through digital media, e-learning, and gamification improves students' engagement and learning satisfaction. The application of Keller's ARCS motivational model, Gardner's theory of Multiple Intelligences, and Vygotsky's sociocultural approach provides a comprehensive theoretical foundation for designing motivational learning strategies. The study emphasizes the importance of teacher competence, technological adaptation, and supportive learning environments. This research contributes theoretically and practically to education by offering a conceptual framework for designing strategies that improve student motivation in the modern learning context.

Keywords: Learning Strategies, Student Motivation, ARCS Model, Digital Learning.

I.   Introduction

In modern education, student motivation is a crucial factor influencing the success of the learning process. Motivation not only drives students to learn but also determines their resilience in facing academic challenges. Therefore, developing appropriate and contextual learning strategies is essential to optimally enhance student motivation. This literature review aims to examine strategic approaches proven effective in enhancing student motivation, based on theories and findings from various scientific literature. According to the motivation theory proposed by Deci and Ryan (2000) in Self-Determination Theory (SDT), learning motivation is divided into two types: intrinsic and extrinsic. Intrinsic motivation arises from within students due to personal interest and satisfaction in learning activities, while extrinsic motivation comes from outside the individual, such as rewards, grades, or encouragement from parents and teachers. The development of learning strategies should consider both to create a learning environment that supports autonomy, competence, and social engagement.

Learning strategies that foster curiosity and active student engagement tend to be more effective in increasing learning motivation. Slavin (2015) emphasized the importance of cooperative, contextual, and problem-solving-based learning. Models such as Problem-Based Learning (PBL), Project-Based Learning (PjBL), and Collaborative Learning have been shown to stimulate students' cognitive and emotional engagement, which in turn fosters sustained learning motivation. In the context of learning strategies,

Vygotsky (1978), through sociocultural theory, emphasized the importance of social interaction and scaffolding in enhancing students' learning potential. Learning strategies involving dialogue, group discussions, and feedback from teachers or peers can create a zone of proximal development (ZPD), the distance between a student's actual abilities and the potential abilities that can be achieved with the help of others. Implementing this strategy contributes to increased student self-confidence and willingness to learn.

In addition to a socio-cognitive approach, developing learning strategies also requires consideration of differences in students' learning styles and individual needs. Gardner (2011), in his theory of multiple intelligences, identified that each student possesses a different dominant intelligence, such as linguistic, logical-mathematical, musical, kinesthetic, visual-spatial, interpersonal, and intrapersonal. Learning strategies that respond to these variations will make students feel valued and relevant to the learning, thus motivating them to engage more deeply. Technological advances also open up significant opportunities for designing more engaging and personalized learning strategies. Information and communication technology (ICT)-based learning, such as the use of interactive media, e-learning, and gamification, is an innovation that can increase the learning motivation of digital-generation students. As Keller (2010) stated in his ARCS (Attention, Relevance, Confidence, Satisfaction) model, the use of engaging media, relevant materials, and delivery that fosters self-confidence and learning satisfaction are crucial in designing motivating learning strategies.

By integrating various motivational theories and learning strategies that adapt to students' needs, teachers are expected to be able to design learning processes that are not only academically effective but also enjoyable and meaningful. This literature review will outline various learning strategies from theoretical and empirical perspectives, and provide practical implications for the world of education in order to shape students who are motivated for lifelong learning. Although numerous studies have discussed learning motivation and learning strategies separately, there is still a gap in the literature that comprehensively examines how learning strategies are developed systematically to address low student motivation in the context of primary and secondary education in the digital era. Most previous studies have focused more on the effectiveness of specific learning models without linking them in depth to students' motivational dimensions (Pintrich & Schunk, 2002). Furthermore, there is not much literature review that combines various motivational theoretical approaches, whether from cognitive, humanistic, or sociocultural perspectives, to form a comprehensive learning strategy framework that is relevant to the actual needs of Indonesian education.

The novelty of this research lies in its integrative and reflective approach, namely by reviewing, critiquing, and elaborating various learning strategies that have been developed based on contemporary motivation theories, then compiling them as a conceptual basis for designing learning strategies that can be applied adaptively by educators. This research also highlights the importance of personalizing learning strategies through the use of educational technology based on the ARCS model (Keller, 2010), and proposes the concept of developing learning strategies based on student potential (student-centered strategy framework), which has not been widely highlighted in previous literature reviews. Thus, this research is expected to provide a conceptual contribution in the development of learning strategies that are not only instructionally effective but also able to increase students' intrinsic motivation sustainably.

II. Literature Review and Hypothesis Development

2.1. Learning Strategy Development

The development of learning strategies is an integral part of the educational process, aiming to create optimal, adaptive, and student-centered learning conditions. Learning strategies are defined as a comprehensive approach encompassing planning, implementation, and evaluation of learning activities to achieve established learning objectives (Joyce, Weil, & Calhoun, 2011). These strategies must be flexible and adaptable to student characteristics, the learning context, and developments in science and technology.

Therefore, developing learning strategies is a crucial step in responding to the needs of today's students, particularly in terms of stimulating and maintaining their learning motivation.

2.2. Motivation to learn

Self-motivation to learn is an internal or external drive that drives students to engage in learning activities, maintain that engagement, and directs them toward achieving specific learning goals (Santrock, 2018). In Self-Determination Theory (SDT), developed by Deci and Ryan (2000), motivation is divided into intrinsic and extrinsic motivation. Intrinsic motivation arises from students' desire to learn due to curiosity or personal satisfaction, while extrinsic motivation is influenced by external factors such as rewards, praise, or social pressure. Effective learning strategies should be able to foster both types of motivation through an approach that considers student autonomy, competence, and social engagement. In the motivational realm, Keller (2010) developed the ARCS (Attention, Relevance, Confidence, Satisfaction) model, which provides a systematic framework for designing motivating learning. This model emphasizes that learning strategies must capture students' attention, be relevant to their needs and goals, increase self-confidence, and provide post-task satisfaction. The use of interactive media, real-world problem-solving, and formative evaluation is part of ARCS-based learning strategies that have been shown to increase student motivation.

2.3. Constructivist Approach

The constructivist approach to learning emphasizes that students actively construct their knowledge through social interactions and direct experiences. Vygotsky (1978), through his sociocultural theory, emphasized the importance of scaffolding and the zone of proximal development (ZPD), where teachers act as facilitators to help students reach their full potential. Therefore, learning strategies such as problem-based learning and project-based learning are highly recommended because they can create challenging, relevant learning experiences and motivate students to actively engage.

2.4. Theory of Multiple Intelligences

Furthermore, Gardner (2011), through his theory of multiple intelligences, suggests that each student possesses different intelligences, such as linguistic, logical-mathematical, musical, kinesthetic, interpersonal, and others. Learning strategies that address these differences will create an inclusive learning environment and motivate all students to learn according to their respective strengths. Therefore, developing learning strategies that adapt to students' intelligence and learning styles is crucial for fostering overall learning motivation. The integration of these various theories provides a strong conceptual foundation for developing learning strategies that teachers can apply in modern learning contexts. Teachers are not only required to master learning content but also to be able to design strategies that can continuously increase student motivation. Therefore, this literature review is crucial for summarizing, analyzing, and recommending the most relevant and impactful learning strategies in today's educational context.

III. Research Method

This study is a library research study that aims to examine and analyze in depth the theories, concepts, and results of previous research related to the development of learning strategies and their relationship to increasing student learning motivation. This study uses a qualitative approach with a descriptive analysis method, namely systematically presenting the contents of various scientific sources to find patterns, concepts, and theoretical foundations relevant to the topic being studied. The data sources for this study included secondary literature, such as scientific books, articles from accredited national and international journals, research reports, dissertations, and other official documents relevant to the themes of learning strategies and

learning motivation. Source selection was conducted purposively, selecting references deemed credible, up-to-date, and directly relevant to the research focus.

Data collection techniques were conducted through documentation, namely by collecting data and information from available library sources, both printed and digital. The literature search process focused on publications published within the last 10 years to ensure the relevance and freshness of the information analyzed, although it did not preclude reference to classical theories that remained conceptually relevant. Data analysis was conducted using a content analysis approach. The collected data were analyzed through three main stages: data reduction, data presentation, and conclusion drawing (Miles & Huberman, 1994). Data reduction was carried out by sorting and selecting important information according to the focus of the study. Next, relevant data were presented in the form of a logically structured thematic narrative. Conclusions were drawn inductively by formulating a theoretical synthesis derived from the results of the analyzed literature review.

To ensure the validity of the data and findings, theoretical triangulation and comparison techniques were employed, comparing various theories and research findings from various sources to ensure the consistency and validity of the information. Furthermore, each source used will be cited and systematically cited using the APA (American Psychological Association) citation style standards as an effort to maintain scientific ethics in writing. With this research method, it is hoped that a deep and comprehensive understanding of effective learning strategies for enhancing student motivation will be obtained, as well as producing conceptual contributions that can be used as a basis for developing more relevant and applicable educational practices.

IV.   Results and Discussion

4.1. Research Result

The results of this literature review indicate that effective learning strategies for increasing student motivation must include an active, contextual, and adaptive approach to technological developments. The analyzed studies confirm that methods such as Problem-Based Learning (PBL), Project-Based Learning (PjBL), and collaborative learning have been proven to increase student engagement in the learning process. When students are actively involved in solving problems relevant to their lives, their intrinsic motivation will more easily grow.
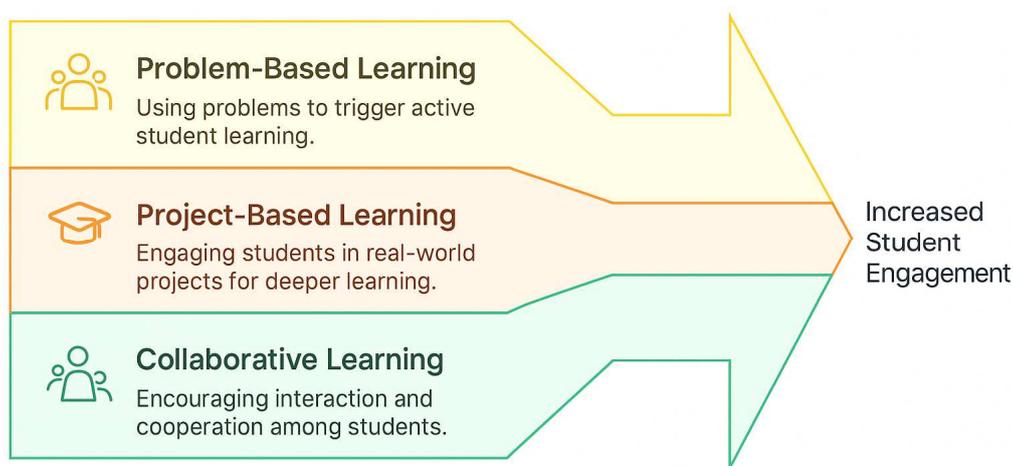

Problem-Based Learning
Using problems to trigger active student learning.

Project-Based Learning
Engaging students in real-world projects for deeper learning.

Collaborative Learning
Encouraging interaction and cooperation among students.

Increased Student Engagement

Figure 1. Effective Learning Strategies

Successful learning strategies must also consider the integration of character values into the process, particularly in the context of Islamic Religious Education (PAI). Students' moral and spiritual literacy can be

developed not only through teaching materials but also through learning methods that emphasize role models, reflection, and social engagement. Previous research has shown that when PAI learning is conducted contextually and connects Islamic values to students' daily lives, learning motivation is higher and more sustainable. In the context of educational technology, digital-based learning is a rapidly developing strategy and has a significant impact on student learning motivation. The use of interactive media, instructional videos, e-learning, and gamification-based learning applications provides variety in learning that can capture student attention, increase material relevance, and provide learning satisfaction. This aligns with Keller's (2010) ARCS theory, which emphasizes the importance of four main elements: attention, relevance, confidence, and satisfaction in motivating learning.

The literature review also shows that teacher readiness and pedagogical competence are key determinants of the success of learning strategies. Numerous literature findings emphasize the importance of ongoing teacher training, both in terms of innovative teaching methods, the use of technology, and strengthening students' psychological insights. Teachers who understand learning motivation theories, such as Self-Determination Theory (Deci & Ryan, 2000), will be better able to create learning environments that support student autonomy, competence, and social connectedness, which are the main foundations of intrinsic motivation. Another factor found to be highly influential is the curriculum's focus on student diversity. Student-centered learning strategies, which address diverse learning styles, as proposed by Gardner (2011) in his theory of multiple intelligences, have been shown to significantly increase interest and motivation in learning. When students perceive learning as relevant to their personal strengths and interests, their engagement increases, and their motivation to learn naturally grows.

Collaboration between schools, parents, and the community also emerged as a crucial factor in supporting motivating learning strategies. The reviewed literature emphasizes that a positive and conducive learning environment is not only created in the classroom but is also strengthened by the active involvement of students' families and social environments. This holistic approach is essential to creating an educational ecosystem that supports students' integrated cognitive, affective, and spiritual development. In general, the results of this study conclude that developing learning strategies capable of increasing student motivation requires a comprehensive approach, namely the integration of educational psychology theories, pedagogical innovation, the use of technology, and the involvement of all educational stakeholders. These findings provide an important contribution to enriching the insights of teachers and curriculum designers to continuously update learning strategies that prioritize not only academic outcomes but also foster a spirit of lifelong learning.

4.2. Coverage

This research thematically covers theoretical and conceptual studies of various learning strategies designed and implemented to enhance student learning motivation, particularly in the context of primary and secondary education. The primary focus is on learning strategies that are active, contextual, and innovative, and capable of addressing the challenges of student learning motivation in the digital era. This research also discusses pedagogical approaches that are adaptive to technological developments, social change, and individual student needs. In substance, this research integrates several major theories that serve as the foundation for understanding learning motivation and learning strategies, including: Deci and Ryan's Self-Determination Theory (2000), Gardner's Multiple Intelligences Theory (2011), Keller's ARCS Model of Motivation (2010), and Vygotsky's Sociocultural Theory (1978). These theories serve as a reference for analyzing how learning strategies can be designed to support the development of students' intrinsic and extrinsic motivation.

The scope also includes learning strategies such as Problem-Based Learning (PBL), Project-Based Learning (PjBL), Collaborative Learning, and technology-based learning such as e-learning, gamification, and interactive multimedia. This research examines the effectiveness of these methods in encouraging students' cognitive and emotional engagement in the learning process, particularly in subjects with character-building

values such as Islamic Religious Education (PAI). Methodologically, this study limits its data sources to secondary literature published within the last 10 years, including national and international journals, academic books, research reports, and relevant official documents. However, conceptually relevant classical theories are included to strengthen the research's theoretical foundation.

In terms of context, this research focuses on the Indonesian education system, but still incorporates global studies for comparison and conceptual enrichment. Thus, the results not only provide a mapping of learning strategies appropriate to the characteristics of Indonesian students but also open up opportunities for the adoption of proven effective international practices. Finally, the scope of this research also includes an implementative dimension, namely how the analyzed learning strategies can be adapted by teachers in daily learning practices, including lesson planning, method selection, media use, and evaluation of the learning process. This research is not only theoretical but also directed at practical relevance in efforts to create a learning system that is motivating, holistic, and oriented towards developing students' full potential.

4.3. Discussion

The results of this literature study confirm that developing appropriate learning strategies plays a significant role in increasing student learning motivation. Active, contextual, and experiential learning has been shown to foster student interest in the learning process. This aligns with Self-Determination Theory, which states that learning motivation will increase if students' basic psychological needs, namely autonomy, competence, and relatedness, are met in the learning process (Deci & Ryan, 2000). In his literature review, Kong (2021) highlighted that constructivist experiential learning has been shown to increase student engagement and motivation. This approach creates an active and meaningful learning context, which aligns with the basic psychological needs in SDT, especially the aspects of competence and autonomy. A study by Patzak, A., & Zhang, X. (2025) concluded that teacher autonomy support and structure provision synergistically play a crucial role in meeting students' psychological needs—autonomy, competence, and relatedness—which aligns with the theoretical framework of Self-Determination Theory. Meta-analysis findings indicate that the combination of these two strategies significantly increases student motivation, engagement, and overall learning satisfaction.

Problem-based and project-based learning strategies, such as Problem-Based Learning (PBL) and Project-Based Learning (PjBL), have been shown to positively influence students' intrinsic motivation. These models encourage students to solve real-world problems collaboratively and creatively, which not only enhances critical thinking skills but also fosters a sense of ownership over the learning process and outcomes. These learning models are considered relevant for building student independence in learning and transforming them into active subjects, rather than passive objects. The integration of information and communication technology (ICT) is also a crucial aspect of modern learning strategies. The use of digital learning media, educational applications, and online learning platforms enriches students' learning experiences. In this context, Keller's (2010) ARCS model serves as a primary reference, where learning strategies must capture students' attention, demonstrate relevance, foster confidence, and provide learning satisfaction. When these four elements are met, students' learning motivation can be significantly enhanced.

Furthermore, the importance of a learning approach that considers students' diverse intelligences is also highlighted in this discussion. Gardner's (2011) theory of Multiple Intelligences states that each student possesses unique potential that needs to be facilitated in the learning process. By adapting learning strategies based on students' dominant strengths, such as verbal, logical, visual, kinesthetic, and interpersonal intelligence, teachers can create a more personalized, inclusive, and motivating learning environment. The pedagogical aspect of teachers cannot be overlooked. Research shows that teacher readiness to implement innovative learning strategies is crucial to the success of motivating learning. Teachers must understand student characteristics, be able to select appropriate approaches, and utilize learning technology effectively. Therefore, ongoing teacher training is a crucial prerequisite for developing adaptive and transformative learning strategies.

Students' socio-cultural conditions must also be taken into consideration when planning learning strategies. Family, community, and local cultural environments influence students' perceptions and motivations for learning. Culturally relevant strategies will provide deeper meaning for students and encourage emotional engagement in the learning process. In other words, motivating learning is not only methodologically engaging but also touches on students' values and identities. This research makes a significant contribution to enriching the educational literature, particularly regarding the development of motivation-based learning strategies. Its theoretical contribution lies in combining various motivational approaches and learning models into a comprehensive and applicable conceptual framework. This research not only examines learning strategies from a technical perspective but also analyzes them within psychological, pedagogical, and sociological frameworks, thus providing a more comprehensive approach.

The practical contribution of this research lies in its concrete recommendations for educators in designing learning strategies relevant to the needs and characteristics of today's students. Teachers can use the results of this study as a reference in selecting learning methods, media, and approaches that can effectively increase learning motivation. Furthermore, this research emphasizes the importance of teacher training oriented towards pedagogical innovation and technological literacy. Furthermore, this research also contributes to policymakers and curriculum designers. By understanding the importance of learning strategies in influencing student motivation, educational institutions are expected to support curriculum flexibility, the provision of digital learning resources, and cross-sector collaboration between schools, parents, and the community. Thus, this research is not merely academic in nature but also provides practical solutions for strengthening the education system more broadly.

V.   Conclusion

Based on the results of the literature review, it can be concluded that developing learning strategies plays a crucial role in increasing student learning motivation. Learning strategies that focus solely on delivering material are no longer relevant to the needs of 21st-century students. Active, contextual, and participatory learning, such as Problem-Based Learning and Project-Based Learning, can significantly stimulate students' curiosity, engagement, and enthusiasm for learning. These strategies not only improve conceptual understanding but also encourage the formation of intrinsic and extrinsic motivation through meaningful learning experiences. Furthermore, the use of learning technology through digital media, e-learning, and gamification is an essential part of modern and relevant learning strategies. Approaches that integrate the ARCS model have been shown to increase student attention, relevance, confidence, and satisfaction in learning. Similarly, the application of principles from Multiple Intelligences theory and sociocultural learning enriches learning strategies to be more inclusive and appropriate to the diverse potential of students. Teachers who understand and apply these theories contextually can create a conducive learning environment to continuously increase student motivation. As an implication of these findings, it is recommended that teachers continue to develop innovative, participation-oriented, and technology-based learning strategies. Schools and educational institutions are advised to provide regular professional training and improve digital learning infrastructure. The government needs to design policies that support curriculum flexibility and strengthen teachers' capacity to design motivating learning experiences. Meanwhile, future researchers can expand this study empirically across various educational levels and socio-cultural contexts to broaden insights and strengthen the foundation of educational practices oriented towards increasing student learning motivation.

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