

## The Role of Self-Regulated Learning in Strengthening Students' Independent Learning Character: Literature Review

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### ABSTRACT

This study investigates the role of self-regulated learning (SRL) in developing independent learning habits among students. SRL enables people to effectively manage their learning processes by combining metacognitive skills, motivation, and behavioral strategies to achieve academic success. SRL improves students' overall quality of life by establishing structured learning habits and routines, in addition to academic performance. The findings, which were obtained through a literature review using the Sinta and Google Scholar databases, show that increased self-reliance and self-awareness throughout the stages of SRL positively contribute to personal growth and the development of desirable personality traits. Overall, the study emphasizes the importance of SRL in developing effective and autonomous learners.

Keywords: Self-Regulated learning, character building, independent character

#### ABSTRAK

Penelitian ini membahas mengenai peran self-regulated learning dalam memperkuat karakteristik belajar mandiri siswa, yang diperlukan untuk keberhasilan akademik dan kemajuan diri Karakter mandiri memberikan peran penting dalam diri individu siswa agar mampu mengendalikan diri untuk mencapai tujuan dalam suatu aktivitas dengan mengikutsertakan kemampuan metakognisi, motivasi, dan perilaku khususnya dalam belajar. Tahapan-tahapan self-regulated learning memberikan pola aturan yang rutin dan membentuk kebiasaan belajar yang terstruktur, sehingga selain dapat meningkatkan prestasi belajar, juga dapat meningkatkan kualitas hidup individu siswa. Penelitian ini merupakan kajian literatur dengan menggunakan database dari Sinta dan Google Scholar. Hasil kajian menunjukkan bahwa kemandirian dan kesadaran diri untuk fokus mencapai tujuan dengan melalui setiap tahapan dalam self-regulated learning akan memberikan dampak yang baik bagi kemajuan diri sehingga menumbuhkan karakter yang baik pula.

Kata kunci: Self-Regulated Learning, pendidikan karakter, karakter mandiri siswa

### INTRODUCTION

Character development is critical for a country's growth and strength, and it all starts with a solid educational foundation that promotes positive values. Education plays an important role in shaping personality traits required for civic engagement and community contribution, as well as providing future generations with the skills and knowledge they need to succeed. To accomplish this, effective teaching methods must incorporate moral and ethical principles while blending theoretical knowledge with practical applications. Furthermore, incorporating core values such as fairness, respect, compassion, and social responsibility into the curriculum is essential for developing well-rounded individuals capable of positively contributing to society.

Furthermore, adopting a multidisciplinary approach necessitates simultaneous the development of cognitive, affective, and psychomotor skills (Zainudin & Ubabuddin, 2023). Integrating these educational resources is essential to prepare students to successfully face future challenges. Self-awareness and selfregulation have emerged as important components in this framework. Students who develop self-awareness can effectively assess their strengths and weaknesses, which is crucial for setting realistic and achievable goals (Schunk & Zimmerman, 2007). Furthermore, encouraging self-regulation increases students' sense of responsibility and intrinsic motivation, both of which are fundamental to the wellbeing of lifelong learners (Pintrich, 2000; Winne & Hadwin, 1998). This comprehensive approach not only improves academic performance but also builds the basis for positive behavioral development through selfreflection and the adoption of beneficial habits (Azmi, 2016; Nurvicalesti et al., 2023).

Current research on self-regulated learning (SRL) includes a wide range of groups,

perspectives, and educational contexts, highlighting its importance for both academic achievement and personal development. Selfregulated learning has been studied at several educational levels, including elementary school students (Astuti & Wangid, 2018), higher education contexts (Zhu et al., 2016), and diverse demographic groups (Elstad & Turmo, 2014). Furthermore, the complex relationship between motivation, academic experiences, and social dynamics in self-regulated learning has been extensively researched (Pekrun et al., 2002; Sierens et al., 2009).

The concept of self-regulated learning (SRL) plays a vital role in developing independent learners who can effectively manage their educational journey. SRL provides students with the confidence and skills they need to face learning challenges while also strengthening their self-regulation abilities (Astuti & Wangid, 2018; Astuti, 2024; Nahdi, 2017). This educational model not only helps students overcome obstacles and achieve their goals but also fosters a strong sense of self-efficacy and a comprehensive understanding of effective learning strategies (Putry & Putri, 2017). Following the principles of Bandura's social SRL cognition theory, emphasizes the interaction of personal, behavioral, and environmental factors in shaping individuals' actions (Bandura et al., 1999; Zimmerman & Shank, 2013). Understanding these dynamic interactions is critical in developing effective self-regulated learning environments that meet diverse student needs (Efklides, 2011; Usher & Pajares, 2008; Wolters, 2010).

Building on Zimmerman's (2002) concept of the self-regulation cycle within a socialcognitive framework that includes planning, implementation, and self-reflection, selfregulated learning is highlighted. Each phase emphasizes the importance of detailed preparation and continuous monitoring of cognitive and emotional processes during academic tasks. While existing literature highlights primarily the theoretical frameworks and strategies aimed at enhancing self-regulated learning-such as self-efficacy beliefs (Zimmerman, 1990; Bandura, 1997) and specific instructional interventions (Cleary & Zimmerman, 2004), it often overlooks the contextual factors that either hinder or facilitate the practical application of SRL in authentic educational settings. By examining these factors alongside the foundational principles of SRL, we can gain a more nuanced understanding of how self-regulation influences students' cognitive, motivational, and behavioral aspects. This exploration remains essential for fully grasping the complexities of SRL (Efklides, 2011; Winne & Hadwin, 1998).

To strengthen self-regulation in cognitive, motivational, and behavioral aspects, practical classroom interventions such as the Self-Regulation Encouragement Program (SREP) have demonstrated positive results in developing students' self-regulated learning abilities (Cleary & Zimmerman, 2004). By instructing students on goal-setting, and methodological approaches, and reflecting on their learning experiences, these programs promote both academic success and personal development (Hadwin & Oshige, 2011; Panadero & Alonso-Tapia, 2014).

Research indicates that students practicing self-regulated learning demonstrate higher levels of responsibility and self-management academic within their pursuits and achievement pathways (Clarebout & Horz, 2016; Elstad & Turmo, 2014; Kolovelonis et al., 2012). Furthermore, essential self-regulation strategies help individuals align their thoughts, emotions, and behaviors with their educational goals (Dias & Castillo, 2014; Jantz, 2011). Promoting self-regulated learning is critical not only for improving academic achievement but also for building autonomy and self-confidence in students, thereby developing lifelong learning skills applicable to a wide range of fields (Boeckaerts, 1999; Sierens et al., 2008; Wolters et al., 2006; Zimmerman, 1990). Given the interactive nature of self-regulation, which is influenced by both individual actions and learning environments, educators and parents must actively promote these competencies to prepare students for long-term success and fulfillment.

In conclusion, there is a crucial need for further investigation in several critical domains. Future research should investigate into the intersection of self-regulated learning with personal, behavioral, and environmental factors that shape students' learning experiences. Examining the relationship between self-regulated learning (SRL) and student independence in a variety of classroom settings presents another promising avenue for inquiry. Overall, this study emphasizes the importance of SRL in developing effective and autonomous learners who are prepared to navigate their academic and personal lives successfully.

### **RESEARCH METHODOLOGY**

This study aimed to examine the relationship between self-regulated learning (SRL) and student independence across different educational contexts. A systematic literature review was conducted, focusing on research articles that explored the role of SRL in student learning and independence. The review process involved several stages: searching for, selecting, and analyzing peer-reviewed journal articles from a diverse range of academic databases.

The study used secondary data sourced from academic articles and relevant libraries, with a particular focus on Indonesian national journals. The researchers began the screening process by searching reputable academic databases such as Sinta and Google Scholar for relevant studies on SRL and student independence. This method ensured a thorough and reliable analysis of the topic.

Following data collection, the analysis focused on identifying common themes, methodologies, and key findings from the selected studies. Six articles were reviewed, each providing a distinctive perspective on the relationship between SRL and student independence.

To increase the study's reliability, the researchers validated their findings against previously published works, ensuring the results' reliability and validity. The detailed analysis and synthesis of the collected data revealed important insights into the relationship between SRL and student independence, with implications for educational practices and policies.

#### FINDING AND DISCUSSION

The systematic review and analysis of the literature sources revealed several key findings regarding self-regulated learning (SRL) and its relationship to student independence. This study generates the findings from various articles to demonstrate how SRL plays an important role in increasing student independence and academic success.

Table 1.	Literature	review	results
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No.	Research Title	Research Findings
1	Self-Regulated Learning sebagai Karakter dalam Pembelajaran Matematika. Dede Salim Nahdi (2017)	Self-regulated Learning empowers students to achieve their educational objectives on their own, facilitating them to identify effective learning strategies and get involved independently in academic activities.
2	Penguatan Profil Pelajar Pancasila Melalui Self-Regulated Learning (SRL) Peserta Didik. Nikmah Nurvicalesti, Ratnasari, Shera Reffi Mariska (2023)	Many articles affirm the hypothesis that effective SRL activities improve students' self-regulation, critical and creative thinking, confidence, and mindset development toward learning goals.
3	Penerapan Self-Regulated Learning Berbasis Internet Untuk Meningkatkan Kemandirian Belajar Mahasiswa. Ana, Yani Achdiani (2015)	Internet-based SRL approaches have increased student learning independence in classroom action research studies, while there remains potential for improvement in self- regulation, willingness to learn, and skills in problem-solving.

4	Kemandirian Belajar Siswa dalam Pembelajaran Matematika Menggunakan Kurikulum Merdeka. Dini Aghniya Ghassani, Agustin Nursa'adah, Farah Septira, Mufid Effendi (2023)	The Merdeka curriculum calls for increased student learning independence in mathematics, which can be accomplished with effective teaching methods and strategies.
5	Analisa Faktor Pengaruh Self- Regulated Learning Terkait Performance Goals terhadap Prestasi Akademik. Safira Firdaus, Lutfi Rachman, Marindra Firmansyah (2020)	SRL development is greatly impacted by the need to achieve high grades, promote excellent career prospects, and ensure a successful future through performance goals.
6	Self-regulated Learning Salah Satu Modal Kesuksesan Belajar dan Mengajar. Shofiyatul Azmi (2016)	Academic success is attributed to students' self-awareness, responsibility, and effective study methods, all of which are assisted by self-regulation. SRL development relies significantly on self-efficacy and social support.

Analysis of the reviewed literature indicates that self-regulated learning (SRL) serves as a critical factor in enhancing academic achievement and fostering student independence across various educational contexts. The findings reveal a consistent theme: students with strong SRL skills perform better academically and have a greater ability to achieve learning objectives on an individual basis. This relationship emphasizes the importance of developing self-regulated learning strategies to empower learners and support their academic success, especially in diverse educational settings where adaptability and self-direction are necessary.

Furthermore, the literature highlights the importance of self-efficacy and social support in the development of SRL skills. According to research, students who have higher levels of self-efficacy are more likely to use effective selfregulation strategies, which improves their academic performance. Social support from peers, educators, and family is also important in reinforcing SRL behaviors because it provides learners with the encouragement and resources they need to engage in self-directed study. As a result, instructional strategies that focus on improving SRL skills, as well as fostering self-efficacy and creating a supportive learning environment, are critical to improving students' learning achievement and independence.

## Self-Regulated Learning (SRL) Phases: planning, implementation, and selfreflection

The analysis of the literature reveals that Self-Regulated Learning (SRL) implies a cyclical framework consisting of three distinct phases: planning, implementation, and self-reflection (Dignath & Büttner, 2008; Zimmerman, 2002). In the planning phase, students actively set specific learning goals and develop the strategies required for their achievement. During the implementation phase, these plans are carried out, and students track their progress toward the goals they have set. The final phase, self-reflection, entails critically evaluating the effectiveness of the chosen performance, strategies and overall as highlighted by (Perry, 1998) and Paris & Paris, (2001).



Figure 1. Self-Regulated Learning (SRL) Phases

The cyclical nature of SRL helps learners develop independence and self-motivation, preparing them for future academic and professional success (Boekaerts & Corno, 2005).

# The planning stage (Forethought): Task analysis and Self-motivation beliefs

A deeper examination of the planning stage reveals two interrelated components that are critical for improving SRL. Firstly, task analysis involves both goal setting and strategic planning, in which students define their desired learning outcomes and devise actionable steps to achieve them (Perry, 1998; Paris & Paris, 2001). Firdaus et al. (2020) emphasize that well-defined performance objectives increase students' commitment and enable strategic planning, boosting motivation from the beginning.

Secondly, self-motivation beliefs involve the students' understanding of the material, their sense of independence, and their use of effective strategies to achieve their goals (Wolters et al., 2006). Key elements of self-motivation beliefs include self-efficacy, outcome expectations, intrinsic interest, and goal orientation, all of which play critical roles in developing self-regulated learners.

# The implementation phase: Self-control (Self-control) and Self-observation

In the implementation phase of Self-Regulated Learning (SRL), students actively engage with learning tasks using the strategies they have developed. which come up into two interrelated categories: self-control and selfobservation. Self-control is crucial during this phase because it influences how effectively students manage their attention, minimize distractions, and utilize their time. Zhu et al. (2016) define self-control as the ability of students to focus on their learning tasks while prioritizing them over external distractions. This multifaceted process consists of instruction. self-direction, comparison, visualization, focusing, and the application of task strategies.

Concurrently, self-observation allows students to systematically evaluate their performance, providing valuable feedback that improves their understanding and highlights areas for improvement. Students can improve their overall learning outcomes by regularly assessing their progress toward achieving their goals and making necessary strategy adjustments.

# The self-reflection stage: Self-assessment and Self-reaction

During the self-reflection stage of Self-Regulated Learning (SRL), two interrelated categories arise, each with a significant impact on student learning outcomes. First, selfassessment. or self-judgment, involves comparing information gathered through selfobservation with the standards or goals established during the planning process (Zimmerman, 2002). According to Nahdi (2017), in the context of mathematics education, a student's ability to evaluate their performance with existing goals can significantly outcomes. improve learning Additionally, causal attribution plays an important role, as it involves beliefs about the reasons behind success and failure (Pintrich, 2000; Pekrun et al., 2002). Students who attribute their success to effective strategies rather than luck or external factors are more motivated, which improves their learning experiences (Usher & Pajares, 2008).

The second category, self-reaction, includes students' emotional and behavioral responses their self-assessments. Positive selfto reactions to feedback can boost motivation, whereas negative reactions can harm learning outcomes. Azmi (2016) claims that students who have positive self-reactions to their progress are more likely to engage in adaptive behaviors, such as seeking further support or resources. Those with negative self-reactions, on the other hand, may engage in inappropriate defensive behaviors to protect their self-image, such as removing themselves from difficult tasks or avoiding all learning opportunities (Zimmerman, 1990; Claerbout et al., 2016).

# A Triadic Analysis of Self-Regulated Learning

The implementation of Self-Regulated Learning (SRL) is significantly enhanced when students

actively manage and adapt the various factors its effectiveness. influencing SRL is conceptualized as a cyclical feedback process where learners make adjustments based on their prior performance to improve future learning outcomes (Zimmerman & Schunk, 2013). This cyclical framework highlights the necessity of recognizing that personal, behavioral, and environmental factors are not static; instead, they change throughout the learning and performance spectrum.

The continuous observation and adjustment of these dynamic factors are critical for the effective functioning of SRL, as indicated by the triadic model of SRL processes, which underscores the interplay between personal beliefs. behavioral strategies, and environmental contexts. This understanding can inform educational practices aimed at fostering student independence and adaptability in their learning approach





## Personal Factors

influences Student personality their perceptions of self-confidence and self-efficacy. which are critical for effective self-regulated learning (SRL). According to Bandura (1997), self-efficacy is a fundamental determinant influencing a student's ability to engage in SRL. Students' perceptions of self-efficacy are influenced by four interrelated factors: their knowledge. metacognitive processes. established goals, and emotional states.

Furthermore, Siegler (as cited in Zimmerman, 1990) emphasizes the significance of declarative knowledge, defined as structured information about external events. Effective SRL, however, necessitates both procedural knowledge-understanding how to implement various learning strategies—and conditional knowledge-understanding when and why to apply these strategies effectively (Winne & Hadwin, 1998; Sugihartono et al., 2007). This emphasizes the complexity and multidimensionality of self-regulated learning, necessitating a seamless integration of these elements for optimal cognitive learner outcomes.

### Behavioral Factors

The metacognitive process is critical in selfregulated learning (SRL), because it includes planning and analyzing tasks, guiding learning efforts, and influencing the feedback derived from these processes (Boekaerts, 1999). Research indicates that individuals with high self-efficacy tend to set more challenging goals and use a broader range of SRL strategies than their low-achieving peers. Additionally, emotions play a significant role in SRL by influencing motivation and decision-making. According to Pekrun et al. (2002), emotions such as happiness, anxiety, and boredom are intricately linked to key SRL components like interest, motivation, and learning strategies. Emotionally driven behavioral responses are essential to the self-regulation process. establishing the affection system as а fundamental aspect of SRL.

### Environmental factors

Environmental factors also significantly influence SRL, which include social interactions and the overall learning environment structure. Bandura's social cognitive theory (1986) emphasizes the importance of learning through social experiences—both direct interactions

and observational learning—in shaping perceptions of their abilities. students' Furthermore, how the learning environment is organized, including task arrangement and situational elements, has a significant impact on SRL effectiveness (Zimmerman, 1990). An optimal learning environment promotes selfobservation, self-judgment, and self-reaction processes, thereby facilitating more effective SRL.

Finally, the triadic model's interplay of personal, behavioral, and environmental factors is crucial for optimizing SRL efficiency. Achieving effective management and adjustment of these components, guided by ongoing self-monitoring and self-reflection, leads to greater learning autonomy and (Zimmerman, academic success 1990: Zimmerman & Schunk, 2013). he development of SRL skills is essential for students aspiring to achieve both personal and academic growth, as it promotes independence and enhances academic performance (Azmi, 2016; Hadwin & Oshige, 2011). By adopting and applying SRL principles, students can significantly elevate their learning experiences and aachieve their academic goals more effectively.

### CONCLUSION

Self-regulated learning (SRL) is a multifaceted process that is necessary for both academic success and personal development The comprehensive nature of SRL provides students with vital resources to manage their learning through a complex interaction of personal, behavioral, and environmental factors. Students who engage in metacognitive, motivational, and behavioral self-regulation are better able to set realistic goals, implement effective strategies, and continuously adjust their approaches in response to evaluative feedback.

Promoting SRL within educational environments is not merely beneficial; it is necessary. Research indicates that students who demonstrate effective SRL tend to have higher levels of responsibility, self-efficacy, and resilience in overcoming academic challenges. Consequently, educators and parents play a critical role in developing these skills, which serve as the foundation for lifelong learning and adaptability in a variety of fields.

The implementation of programs such as the Self-Regulation Encouragement Program outcomes. (SREP) has shown positive underscoring the advantages of goal-setting, strategic planning, and reflective practices in promoting SRL. The cyclical phases of SRLnamely planning, implementation, and selfreflection-highlight the ongoing nature of learning, which empowers students to cultivate autonomy, motivation, and competency in academic achieving their and personal objectives.

Moreover, a comprehensive understanding of SRL through the perspective of triadic analysis reveals the dynamic interaction between personal, behavioral, and environmental dimensions. Students who can successfully navigate these changing factors can improve their learning independence and academic achievement. This adaptability, combined with strong self-regulation strategies, is crucial for effectively managing cognitive and emotional processes when faced with challenging tasks.

Thus, integrating SRL principles into educational frameworks should be considered a priority. This comprehensive approach not only augments academic achievement but also fosters independence, establishing a strong foundation for student's future educational and professional pursuits. Enhancing SRL skills is therefore a vital step toward equipping students for long-term success and resilience in a continually evolving world.

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