



Role of Self Regulation in Sustainable Learning amongst Adolescents

Harjot Kaur¹, Kuldeep Kaur Grewal¹, Shaloo Saini²

¹School of Humanities and Physical Education, CT University Ludhiana.

²Lyallpur Khalsa College of Education, Jalandhar.

Abstracts

This article presents theoretical conceptualization the role of self regulation in sustainable learning. Self regulation refers to the student – initiated regulation of strategies and activities such as planning , adjusting ,monitoring and evaluating their own learning. Self regulated learning is a skill that can help students learn more effectively and sustainably. It's a critical skill for lifelong learning and can help students build knowledge that's relevant to their current and future needs. Different ways that SRL can help with sustainable learning are (1) Develops proactive learning (2) Improves performance (3) Integrates knowledge (4) teachable skill

Self- regulated learning is a key factor in sustainable learning as it help students develop the skills - learn independently , adapting to new situations, develop lifelong learning skills , prepare students for future learning ,help students to become critical thinkers, help learners stay focused on goals by experiencing the sense of achievement and long term progress . SRL enhance life long learning and transfer skill , knowledge and abilities from one situation to another.

To further understand SLE and SRL , this is an important and novel future direction for research and educational practice

Introduction

Self Regulation is vital for sustainable learning in teenagers. It represents the capacity to control one's feelings , actions, and thoughts to achieve long-term objectives . Gillebaart (2018) describes self-regulation, as “the complete system of standards, thoughts, processes and actions that steer individuals' behavior towards achieving desired outcomes”. These desired outcomes may refer to long-term objectives, but they can also pertain to other standards or norms. While it is closely associated with the notion of self-control, self-regulation encompasses more than just controlling actions, as it offers “the entire framework for successful goal attainment”. Here's how it aids in sustainable learning:

1. **Establishing Goals and Perseverance:** Self-regulation enables adolescents to define specific objectives for their education and try best to achieve these objectives even when faced with challenges. It nurtures perseverance, which is crucial for ongoing development and success over time.
2. **Time Management:** Adolescents who develop self-regulation skills tend to manage their time more efficiently, striking a balance between study time and leisure activities while adhering to deadlines. This is crucial for minimizing procrastination and ensuring consistent advancement in their education.
3. **Emotional Regulation:** Adolescents who can self-regulate are better equipped to handle feelings of frustration, anxiety, or other emotional reactions that could disrupt their ability to learn. By remaining composed during challenging situations, they can sustain their attention and drive.
4. Adolescents who possess robust self-regulation abilities can contemplate their learning methods, identify when a strategy is failing, and modify their techniques accordingly. This enables them to become more productive and successful in their learning efforts.
5. Self-directed learners actively manage their own education, investigating resources and techniques that align with their individual learning preferences. This self-governance fosters more profound and tailored grasp of the content.
6. Individuals who can regulate their emotions and control their behaviors tend to align their actions with their values, handle stress effectively, navigate conflicts, persevere through challenging situations, recognize positive attributes in others, and reach their objectives (Eisenberg, 2000; Boekaerts, 2011; Hofmann et al., 2014; Hampson et al., 2016).

Definition and Significance

Self-regulation is the capacity to oversee and direct one's own learning activities, which encompass goal-setting, planning, monitoring, and evaluation. Within the realm of sustainable learning, self-regulation empowers adolescents to take responsibility for their education, foster a growth mindset, and build practices that encourage continuous learning.

Key Elements

1. **Metacognition:** The skill to contemplate and assess one's own learning methods.
2. **Self-motivation:** The capability to establish objectives, manage task priorities, and sustain enthusiasm.
3. **Self-monitoring:** The skill to keep track of progress, recognize improvement areas, and modify learning strategies accordingly.
4. **Emotional self-regulation:** The ability to control emotions like anxiety or frustration that may affect learning.

Advantages of Sustainable Learning

1. **Enhanced academic outcomes:** Self-regulation improves learning results, as young individuals take charge of their education and create effective learning methods.

2. **Boosted motivation:** Self-regulation encourages intrinsic motivation, allowing adolescents to set objectives and strive to accomplish them.
3. **Improved time management:** Self-regulation allows adolescents to prioritize tasks, utilize their time effectively, and juggle various responsibilities.
4. **Increased resilience:** Self-regulation assists adolescents in developing coping mechanisms, handling stress, and recovering from difficulties.
5. **Lifelong learning:** Self-regulation fosters a growth mindset, empowering adolescents to adapt to new challenges, learn from setbacks, and continue their education throughout life.

Strategies to Encourage Self-Regulation

1. **Demonstrate self-regulation:** Educators and caregivers can display self-regulatory behaviors, such as establishing goals and reflecting on achievements.
2. **Instruct on self-regulation techniques:** Clearly teach teenagers methods like self-monitoring, self-evaluation, and self-adjustment.
3. **Create choices for independence:** Provide options and let teenagers take responsibility for their education.
4. **Promote reflection and self-evaluation:** Consistently encourage teenagers to think about their learning, establish objectives, and assess their progress.
5. **Nurture a growth mindset:** Highlight the importance of effort, resilience, and learning from setbacks.

Review of Related Literature

Multiple theories and frameworks regarding self-regulation acknowledge the significance of context or the environment in fostering self-regulation (e.g., Pintrich, 2000; Järvelä and Hadwin, 2013; Zimmerman, 2013; Murray et al., 2015; de la Fuente-Arias, 2017; Panadero, 2017).

Kristian Wijaya (2022) studied **The Important Role of Self-Regulation in Worldwide EFL Learning Contexts**. The obtained major findings unveiled that a higher degree of self-regulation enabled EFL learners to transform into more life-long knowledge seekers fully reaping more fruitful language learning outcomes.

Özçelik, Alev; Arik, Selçuk (2022) **Attitudes of Secondary School Students towards Sustainable Development**. As a result of the research, it was determined that the total attitude scores of secondary school students for sustainable development were high. Similarly, it was found that the total attitude scores of the scale for the sub-factors were high. It was found that the overall scores for secondary school students' attitudes towards sustainable development showed a statistically significant difference in favour of the eighth grade in terms of 'grade level'. However, it was found that the total scores of secondary school students' attitude towards sustainable development did not show any significant difference with respect to the variables 'gender', 'receiving environmental education', 'participating in an environmental project' and 'reading books about the environment'.

Wang, Jin-Kai; Xue, Hui-Qin; Wu, Xiao-Fei (2023) **Mental Health and Academic Achievement among Chinese Adolescents during COVID-19 Pandemic: The Mediating**

Role of Self-Regulation Learning. Results showed that the degree to which students were mentally healthy was not significantly related to academic achievement, whereas academic achievement and mental health were positively associated with self-regulated learning. Following structural equation modelling analysis, the effect of mental health on academic achievement was fully mediated by self-regulated learning. Taken together, the findings emphasised the necessity of developing self-regulated learning strategies during public health emergencies and have clinical and educational implications for planning psychological interventions in order to improve mental health and academic performance as well.

Hasan Ucar; Yusuf Zafer Can Ugurhan (2023) **The Role of E-Learning Readiness on Self-Regulation in Open and Distance Learning** Results indicated that learners with high e-learning readiness levels had higher self-regulated learning skills compared to those with low levels. It was also determined that self-regulated learning skills did not differ in terms of the gender of the learners while they differed in terms of the time the learners spent on the learning management system.

Ivana Rochovska (2024) studied **Motivation and Self-Regulation of Learning in Homeschooled Students.** The results indicated that identified regulation was prevalent among homeschooled students, who tended to exhibit intrinsic rather than extrinsic motivation. This contrasts with full-time attending students, who generally display a more external regulation style. Among unschoolers, identified regulation was equally prevalent, but the Relative Autonomy Index (RAI) values were higher, indicating a stronger inclination towards intrinsic motivation. Despite these differences in RAI between unschoolers and other homeschoolers, the differences were not statistically significant.

Kshitij Sharma; Andy Nguyen; Yvonne Hong (2024) **Self-Regulation and Shared Regulation in Collaborative Learning in Adaptive Digital Learning Environments: A Systematic Review of Empirical Studies.** Result indicated that Adaptive learning technologies are closely related to learners' self-regulatory processes in individual and collaborative learning.

Maria Sundler; Ellinor Hultmark; Susanne Engström; Helena Lennholm; Annica Gullberg (2024) **Insights into Sustainable Development: Secondary School Students' Conversations about Product Life Cycles.** Results show that the students discuss with regard to all three dimensions of sustainable development. However, the phases of a product's life cycle occur to varying extent within the different sustainability dimensions. Additionally, the students also connect dimensions with both harmonious and contrasting perspectives but also talk about the dimensions isolated. When participating students discuss, traces of mainly anthropocentric and technocentric view emerge. This has implications for technology education, where for example deliberative conversations can be used for engaging students in sustainable development.

Vandana Aggarwal; Mohd Aarif Rather; Meghna Mehndroo (2024) **Fostering Sustainable Development through Adolescent Engagement in Vocational Education.** This research highlights a disparity in the perceived value of VET, especially among women, indicating a broader sociocultural issue. Results indicated a gap in understanding VET's role in sustainable

development, suggesting a need for public awareness and policy reforms. This study provides actionable insights for educational policy and administrative reform.

Conclusion

In conclusion, self-regulation provides adolescents with the resources needed to engage in learning in a sustainable and efficient manner, cultivating practices that encourage lifelong learning and personal growth and promote sustainable development among adolescents by providing a framework that encourages responsible behavior, environmental stewardship, and social responsibilities. Effective regulations can guide adolescents in making informed decisions about resource use, environmental protection, and social equity. By incorporating sustainability principles into education, policies, and community practices, regulations can foster a generation of young individuals who are not only aware of the challenges facing the planet but are also equipped to contribute positively toward long-term global sustainability goals. Empowering adolescents with the knowledge and tools to navigate these challenges ensures that, they become proactive agents of change, ultimately fostering a more sustainable future.

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