The Characteristics of Excellence and Success Factors in Self-Regulated Learning among National Award-Winning Upper Secondary Students in ROIKEANSARASIN Cluster

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Abstract

This research was a qualitative phenomenological study and its purposes were to 1) understand the meaning of self-regulated learning and excellence from the perspectives of students, administrators, teachers, and parents of students who have achieved learning success. 2) study the self-regulated learning process of successful students through the experiences shared by students, administrators, teachers, and parents. 3) identify the success conditions of self-regulation in students who have achieved learning success, as obtained from students, administrators, teachers, and parents. The research instruments consisted of causal factor interview protocol and observational forms, and the data was analyzed by using content analysis. The research findings indicated that 1) self-regulated learning is a process of self-control that involves taking responsibility for learning tasks, having the motivation to seek knowledge using various skills, self-assessment, management, and having the necessary reinforcements to achieve one's goals. This leads to excellence, a unique quality that surpasses others, and it stems from individual dedication to personal development and setting challenging standards for oneself. 2) The processes or strategies to promote self-regulation in learning and lead to excellence consist of three components: cognition, metacognition, and motivation. 3) The conditions or factors that promote self-regulated learning and contribute to student success include personal factors, behavioral factors, and environmental factors. These three factors directly affect the learners and enable them to self-regulate their learning and develop themselves towards excellence. The findings of this study can serve as a basis for further development of self-regulated learning to guide students towards excellence.

Keywords: excellence factors, qualitative research, self-regulated learning

1. Introduction

At present, society is swiftly progressing in technology, causing significant shifts in technological advancement. This trend is notably noticeable among teenagers who enjoy widespread access to conveniences, contributing to a situation where many young people lack essential life skills such as reading books, doing laundry, exercising patience, and waiting in queues. These challenges represent a social issue among the younger generation, prompting efforts from various sectors including educational institutions to tackle these issues continually. (Unicef Thailand, 2024) Academic difficulties, mental health concerns, crime, drug use, and sexual issues are increasing among young individuals. Tackling these challenges within the youth demographic, who are navigating varied environments, poses a significant hurdle that multiple sectors of society are currently striving to resolve comprehensively. (Department of Mental Health, 2022). Efforts to deal with these issues often focus on external factors like regulating mass media such as television programs and product advertisements. The government tries to ensure that only beneficial content is presented to society, though achieving this completely is challenging. Schools also implement strict rules to discipline students according to social norms, which has had some success but hasn't fully resolved the problems. Additionally, there's a trend indicating that as more efforts are made to solve these issues by controlling external environments, the problems don't necessarily decrease. The solution should emphasize changing adolescent behavior, particularly through measures that

encourage teenagers to exercise self-control and act responsibly. This self-regulation needs to come from within the students themselves, highlighting the core issue of fostering self-discipline among students. Thoresen and Mahoney (Svein Loeng, 2020) argue that self-control plays a pivotal role in enabling individuals to manage negative behaviors effectively. The essence of self-control lies in the capacity to make appropriate decisions regarding actions and emotional responses based on the situation, to set future objectives, to exercise restraint and patience in the face of challenges, and to comprehend the consequences of one's actions. Self-regulation prepares students to be well-prepared global citizens in the 21st century by emphasizing the development of essential knowledge and skills. These include collaboration, communication, creativity, and self-regulation, all crucial for achieving success in the modern era. Additionally, students should be encouraged to deeply engage in self-directed learning (DSDL). Sukie van Zyl and Elsa Mentz (2022) state that self-directed learning (SDL) involves taking responsibility for one's learning and the ability to transfer knowledge and skills to new and unfamiliar situations. Furthermore, interdisciplinary scientific learning can play a significant role in fostering students' self-efficacy in 21st-century skills. By leveraging everyday situations and key concept maps, students can develop a positive self-perception of their abilities in these skills. Overall, integrating 21st-century skills instruction, promoting a self-directed learning curriculum, and interdisciplinary scientific learning can help prepare students to become self-directed learners in the 21st century. During the years 2018 to 2020, the COVID-19 pandemic occurred. Surveys revealed that most students experienced learning loss, particularly in terms of self-regulated learning (Bongkotkorn, Supakesorn, Pongthorn, Asawaniwed, and Titiworada, Polyiem, 2022). A key factor in promoting learning is focusing on enhancing the level of self-regulation in learning, which is related to students' learning outcomes (Suartama, Ni, Luh, and Sukanadi, 2023). Therefore, students must be patient and able to control their learning to achieve their educational goals. Self-regulation strategies in self-directed learning are crucial for students as they help them take responsibility for their learning and develop the necessary skills for lifelong learning and future educational advancement. The transition to online learning or online lessons has highlighted the importance of self-regulation skills in learning (Anshu, Piyush, Gupta, Tejinder, and Singh, 2022). Research by Paweena Yodsit and Napaporn Yodsit (2016) found that learners with high self-regulated learning skills tend to achieve better academic performance and benefit more from innovative teaching strategies. Therefore, promoting self-regulation skills in learning is essential for overall academic success and future personal development. Based on the aforementioned reasons, the researcher is interested in studying the characteristics of excellence and success factors of self-regulation in learning among national award-winning high school students in the Roi Kaen Sarn Sin group of provinces (Roi Et, Khon Kaen, Maha Sarakham, and Kalasin). The findings from this research will be beneficial for policy-making and strategic planning in student development, aiming to efficiently develop students into 21st-century citizens.

2. Research Objectives

The research question "What are the characteristics of excellence and the success factors of being a self-regulated learner?" leads to the formulation of the following three research objectives:

To understand the meaning of self-regulated learning and excellence from the perspectives of students, administrators, teachers, and parents of students who have achieved learning success.

To study the self-regulated learning process of successful students through the experiences shared by students, administrators, teachers, and parents.

To identify the success conditions of self-regulation in students who have achieved learning success, as obtained from students, administrators, teachers, and parents.

3. Literature Review

Self-regulated learning, from a conceptual standpoint, refers to the learner's ability to understand and control the process of knowledge acquisition and motivation to solve learning problems to achieve set goals. It comprises three key factors: Cognitive Strategies, Meta-Cognitive Processes, and Motivation (Zimmerman, 1990; cited in Salinee Jongjit, Nachai Supharukchaisakul, and Winai Dasukwan, 2015). Learners initiate and exert more effort in seeking knowledge and various skills independently rather than relying heavily on assistance from others. Schraw, Crippen, and Hartley (2006) studied and classified the components of self-regulation in science learning into three components as follows: 1) **Cognition**, which includes skills necessary for encoding, memorizing, and retrieving information, consisting of three types of learning skills: 1) cognitive strategies or intellectual methods, 2) problem-solving strategies, and 3) reasoning skills. Cognitive strategies vary widely and are personal techniques used by learners or even teachers themselves to enhance learning. 2) **Metacognition**, which involves understanding and guiding one's thinking processes in learning, consisting of two sub-components: 1) knowledge of cognition, which includes understanding one's thinking comprising declarative knowledge, procedural

knowledge, and conditional knowledge, and 2) regulation of cognition, which consists of three sub-components: planning, monitoring, and evaluation. 3) **Motivation**, which includes beliefs and attitudes used to develop cognitive and metacognitive skills, consisting of two sub-components: 1) self-efficacy, which refers to the level of confidence in oneself to perform tasks or achieve set goals, and 2) beliefs about knowledge (epistemological beliefs).

4. Research Conceptual Framework

From reviewing literature related to self-regulation in learning, it is found that individuals who possess characteristics of excellence and factors contributing to self-regulation in student learning, which lead to self-regulated learning and academic success, result from components and supportive factors, as follows:
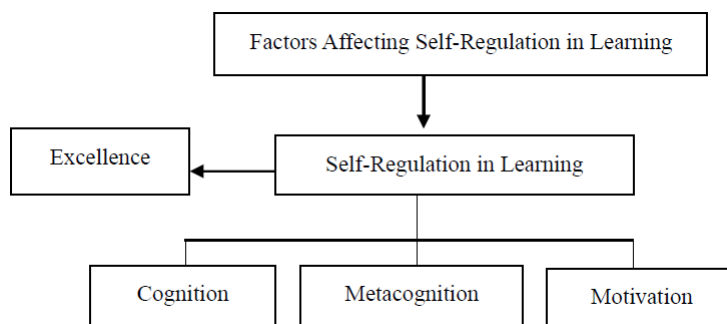

Figure 1. Diagram of the Components and Factors Affecting Self-Regulation in Learning

5. Method

This study aims to explore explanations and understandings of phenomena experienced by participants in naturalistic settings. It employs an inductive research approach, generating conclusions from specific case studies and then generalizing them into broader knowledge. Researchers emphasize interpreting and understanding the meaning of phenomena from the perspective of the participants in real-life situations. Based on these principles, the researchers outline the scope of the study, dividing it into three aspects as follows:

1. Content scope: The researchers identified three study topics, namely, the meaning of self-regulation in learning, the process of self-regulation in learning, and the factors contributing to self-regulated learning success.

2. Research Methodology Scope: The researcher designed this research using a qualitative research approach by selecting a specific case study method and employing the Instrumental case study selection. This is because the chosen case study represents the group of data providers that support comprehensive conclusions to meet the research objectives thoroughly. In selecting the cases, the researcher will use a targeted data provider selection method, with criteria clearly defined by the researcher. The chosen case study must be the most information-rich case.

3. Data Providers' Scope: The main information providers are students who have national-level achievements or awards in each subject area group, or students who have received royal honors, at the upper secondary level (grades 10-12) and have a grade point average of at least 3.50 in all subjects at the upper secondary level in the northeastern region (Roi Et province). In this educational program, the target group consists of 4 students, 1 teacher, 1 administrator, and 1 parent, totaling 7 people.

5.1 Part 1: The Meaning of Self-Regulated Learning and Excellence

The perspectives of students, teachers, administrators, and parents of high school students who have received national awards in the Roi Et province, reflecting their self-regulation in learning from the student's perspective (Emic view), have two characteristics: the meaning of self-regulation in learning and the characteristics of excellence.

5.1.1 The Meaning of Self-Regulated Learning

The meaning of self-regulation in the context of students, teachers, administrators, and parents of students can be defined as comprising self-awareness, self-monitoring or self-assessment, and the intrinsic motivation to learn. This includes Self-awareness: Self-regulation in learning involves students' ability to understand and control their cognitive processes and self-motivation to solve learning problems to achieve their set goals, as stated by

the students.

"I see it as our duty. Once we're given a task, we have to do our best. I believe in listening to the teachers because they already have the ability. We must do our best." (Student 3)"

"Self-regulation in learning means taking responsibility for oneself and being able to plan one's learning, as well as having the motivation to work towards achieving one's goals as expected." (Teacher)

Self-assessment: It is an important characteristic that allows one to know one's strengths and weaknesses, leading to a process of self-improvement and significance.

"Self-regulation in students' learning is a crucial process that helps them develop themselves and succeed in their learning endeavors. It involves self-assessment for development." (Administrator)

"Self-regulation in learning, in my opinion, means control, planning in work, learning, competition, and everything we manage. If we plan well, work can proceed according to plan. Then, if we set goals, we can achieve the goals we have planned." (Parent)

Motivation: A crucial element in self-development and achieving success in learning is the motivation to learn. It is another component that helps learners develop themselves with goals and drive in their work. However, each individual's motivation depends on their methods, which can include both positive reinforcement and negative motivation depending on the satisfaction of the learners and the surrounding social context.

"Self-discipline, for me, is about self-regulation. It's not about coercion but rather about adhering to a plan, following the steps I've laid out for myself, and doing them to the best of my ability. It also involves having discipline, planning for various tasks, making plans beforehand, and making an effort to succeed in those tasks. And when successful, rewarding myself so that I have the strength to keep pushing forward." (Student 2)

In the context of individuals involved, there is a consensus that self-regulated learning entails self-control to take responsibility for tasks, exert effort in seeking knowledge through various skills, self-assessment, managing oneself, and having the motivation needed to achieve the goals set forth, as illustrated in the diagram.
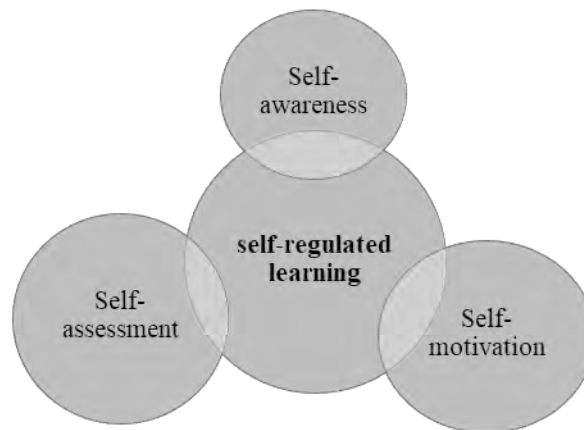

Figure 2. A diagram of the meaning and characteristics of self-regulated learning

5.1.2 Characteristics of Excellence

The excellence of students is an important aspect desired by students, teachers, administrators, and parents. It comprises two key components: dedication to their tasks and the cultivation of challenging standards.

Passion in what you do: The excellence of a student's abilities, whether gifted or high-potential, is further enhanced by the quality of their dedication and self-improvement. It's the attribute of being driven and developing oneself with a focus on the outcome of the work rather than the pursuit of rewards. Passion in what one does manifests through continuous honing of one's skills in a relentless pursuit of excellence.

"Excellence, to me, means standing out in one aspect or another. For instance, I excel in the Thai language, be it in speaking, writing, composing poetry, or even in competitive Thai language competitions. It's about possessing a skill in an area that I enjoy and perform well in." (Student 1)

"The excellence in my thinking is developing students to reach their maximum potential and enhancing the already existing abilities to excel even further." (Teacher)

Challenging Standards: Personal Development towards Excellence in Management is crucial for establishing criteria to challenge oneself in training and striving for higher standards than initially set, to achieve higher competencies.

"Excellence is what Nambeun is all about. It means being the best or arising from the ability or potential that a child can demonstrate, whether it's in learning, competing, or doing projects. What's best for him is excellence for you as a parent." (Parent)

"Excellence means creating and fostering an environment that supports students and staff in continuously developing themselves for the better. It also involves establishing a culture that sets high standards for learning and teaching, supporting learners and staff in actively developing useful skills and knowledge, and fostering a culture of confidence in diversity and collaboration, so that everyone can pursue their knowledge and abilities according to their capabilities and needs." (Administrator)

Excellence refers to the outstanding qualities or characteristics of individuals, which surpass others. Each person's excellence in certain areas may involve unique abilities and garner confidence from others in those particular areas. It stems from a dedication to self-improvement and setting challenging standards for oneself, cultivated through disciplined self-direction in learning until it becomes a habit of learning.

5.2 Part 2: The Self-Regulated Learning Process of Successful Students

Self-regulated learning Strategies of students involve studying and categorizing the components of self-regulation in learning into three main components as follows:

5.2.1 Cognition

This refers to the skills necessary for encoding, memorizing, and retrieving information. It includes three types of learning skills:

Cognitive Strategies: These are the thought processes used to help think effectively. Cognitive strategies vary widely and are specific techniques used by individual learners or even teachers to enhance learning.

"We need to learn to use diverse thinking to find the best answers and foster creativity, much like composing poetry. Thinking in a variety of ways can create beauty in language and result in excellent work. This requires a combination of knowledge-based thinking and creativity." (Student 1)

Problem-solving strategies are processes used to find solutions to problems in an orderly and rational manner. Various methods can be applied, especially in situations requiring solutions to complex problems, which necessitate knowledge and understanding of the issues that need to be resolved.

"We have to do our best. However, it's not perfect from the start. On days when the pressure of our hands is too heavy or too light, we might make mistakes in cutting the aircraft, which can cause problems for the plane. But if we cut it correctly and the parts fit well together, the aircraft will be able to fly longer. We have to keep experimenting and making cuts every day and remember what we've learned. We must strive to do better than we did before." (Student 4)

Critical thinking skills involve the process of systematically analyzing and evaluating various things using accurate knowledge, experience, and reasoning. This enables one to make decisions or solve problems in a reasoned and principled manner. Critical thinking skills can be applied in many situations.

"To achieve success, one must learn from mistakes and make improvements accordingly. The more we recognize errors at each step, the better we can find solutions to them. The most important aspect is the experience gained along the way, which enables us to think rationally and solve problems. Success or excellence is the destination or a bonus for each learner." (Student 3)

5.2.2 Metacognition

Refers to the skill of understanding and regulating one's cognitive processes in learning. It comprises two subcomponents:

Knowledge of Cognition: This involves being aware of one's thinking. It is found to occur as follows:

Declarative knowledge

"The qualities we should possess include the awareness of our potential in a certain area, which leads to success in life. Our excellence comes from the well-acquired knowledge we have learned, making us stand out from others." (Student 1)

Procedure Knowledge

"Self-regulation in learning is an important step that helps students develop themselves and achieve success in their learning. Therefore, knowledge of the processes and skills in process management is essential for self-regulation." (Administrator)

Regulation of Cognition:

Planning Setting goals, methods, and details regarding future operations through planning helps us achieve structured, appropriate systems that align with predefined objectives.

"Planning is step-by-step. Now, you should read books. Now, you should do exercises. Now, you should rest. Planning requires effort. Plan with effort. If you plan but do not exert effort, it will be in vain. Therefore, planning must go hand in hand with effort and perseverance." (Student 2)

Monitoring involves tracking one's learning outcomes to identify areas of improvement or any deficiencies. It is a method that aids in summarizing results for future planning in self-regulated learning development.

"Being involved in fostering self-discipline among students plays several roles for me — I am both a mother and a friend, a sister, and a mentor. As a trainer, I continuously monitor their progress and report on their achievements. I believe they truly learn by doing and can thus achieve real results." (Teacher)

Evaluation involves analyzing the completeness and effectiveness of learning or activities undertaken, either qualitatively or quantitatively, to improve and make decisions about future directions for personal development.

"Building a supportive learning community that fosters and continuously stimulates the development of everyone in the educational environment, and assessing personal development from both peers and oneself. The focus is on enhancing academic skills and emotional intelligence to enable learners to grow emotionally, mentally, and socially." (Administrator)

5.2.3 Motivation

Motivation is the beliefs and attitudes used to develop cognitive skills and metacognition, consisting of two sub-components:

Self-efficacy refers to the level of confidence in oneself that one can perform tasks or achieve set goals.

"At first, when we don't succeed, there may be some disappointment because we strive to try but don't achieve the goals we set. We may feel saddened, but we can use that disappointment as motivation to keep fighting. Okay, if we make mistakes somewhere, we'll correct and improve those areas to make them better." (Student 2)

Epistemological Beliefs refer to beliefs or attitudes regarding knowledge or the acquisition of knowledge, which involve the belief that acquired knowledge will be beneficial to oneself and others.

"The attempt to apply the knowledge one has discovered in life, as they say, "Where there is effort, there is success," involves using the method of repetition again and again until reaching the point of success." (Student 1)

"First, divide your time and gradually try both wrong and right approaches. If you make too many mistakes, you'll be scolded, so you have to try to make as few mistakes as possible. Initially, gather knowledge from the internet. Once you try applying it, you'll succeed. This builds confidence. Then, the teacher helped assemble the airplane and guided the process. We tested flying it. On the second day, the two of us worked together. Initially, the plane didn't fly, so we helped each other dissect its structure. The teacher came in to teach techniques, and we practiced each step heavily under their guidance." (Student 4)

From studying the components of self-regulation in student learning, it is found that self-regulation comprises three key components: cognition, metacognition, and motivation, as detailed in the diagram.

5.3 Part 3: Conditions for Success in Self-Regulated Learning of Students

The conditions for success in self-regulated learning of students, which involve teachers, administrators, and parents leading students toward sustainable self-regulation, can be divided into three contexts as follows:

On the personal side, it involves the knowledge one possesses, including awareness of one's thinking processes, having goals that influence decision-making processes, creating motivation, as well as the feelings that arise. If the feelings are negative, they will affect and hinder one's thinking processes.

"Self-regulation, for me, is about self-discipline. It's not exactly forcing myself, but rather following the plan and steps I've set for myself and doing my best. Additionally, it's important to have discipline and to plan for the things you want to achieve. You need to plan first and then put in the effort to accomplish your goals." (Student 2)

"The key is determination. Determination means practicing diligently what the teacher has taught. You must trust your coach. During practice, you will repeatedly do the same things until you master them. Sometimes you might feel discouraged because you make mistakes, but you have to keep repeating until it turns out well and you achieve success like I have today." (Student 3)

Behavioral aspect: This involves self-observation, responses related to self-control, self-monitoring, comparing one's responses with others, and displaying reaction responses. These behaviors arise from self-awareness, planning, cognitive processes, and the expression of behavior.

"Self-assessment is possible. For instance, when I have students practice, I ask them to rate their performance. They give themselves a score after completing the task and compare it with their previous performance. This helps them understand whether they have reached their peak or if there are areas that need improvement." (Teacher)

Environmental factors include influences from the surrounding environment, such as family, family's social status, educational institutions, friends, or the impact of role models who exhibit exemplary behaviors. Additionally, there are influences from persuasive communication, which is a social experience that significantly affects self-regulation in learning. This is another important factor.

"Family factors. My family supports me to do my best because it is considered a good experience." (Student 3)

"I am certain that he must have observed your actions, mother. Whenever we do something, we are determined and focused, and we plan and set our goals. We strive to be responsible and disciplined in what we do. If we set our goals and make plans, success or reaching those goals is surely within our grasp." (Parent)

"The causes or key factors that support students in educational institutions to succeed in learning and self-regulation towards success are numerous. The first is having teachers who provide full guidance and support. Teachers who encourage and teach with genuine interest help create a positive learning environment and stimulate students to be more focused and enthusiastic about their studies." (Parent)

Studying the characteristics of excellence and success factors in self-regulated learning among nationally awarded high school students in the Roi Et province can be summarized in the following diagram:
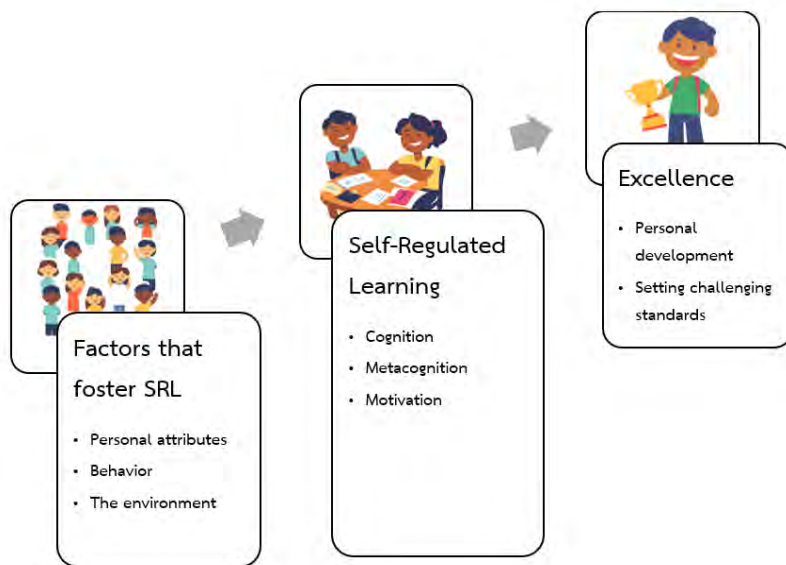

Figure 3. Self-regulated Learning Excellence Roadmap

6. Summary of Research Findings

The study explores Self-Regulated Learning (SRL), which involves individuals controlling themselves to take responsibility for tasks and exert effort in seeking knowledge through various skills. It encompasses self-assessment, self-management, and the drive to achieve set goals, ultimately leading to excellence characteristics that distinguish individuals and surpass expectations. This is achieved through dedication to personal development and setting challenging standards. Therefore, developing SRL in learners consists of three main components: cognition, metacognition, and motivation. Factors that foster SRL include personal attributes,

behavior, and the environment, directly impacting learners and enabling them to develop to their fullest potential, aiming toward their excellence.

7. Discussion

Self-regulated learning involves self-control to take responsibility for tasks and exert effort in seeking knowledge through various skills. It includes self-assessment, management, and motivation required to achieve self-set goals, ultimately leading to excellence. Consistent with Zimmerman's (1989) concept, learners who initiate and exert effort in seeking knowledge and skills independently, rather than relying on help from others, possess outstanding qualities and capabilities. These stem from their dedication to self-improvement and the establishment of challenging standards for themselves. Self-regulated Learning (SRL) consists of three components: Cognition, Metacognition, and Motivation, aligning with Pintrich's (1995) concept. SRL is the process of directing one's learning activities across three dimensions:

Self-regulation of Behavior involves controlling resources used for learning, such as time, location, peers, instructors, or others who assist in learning.

Self-regulation of Motivation and Affect entails managing emotions, and feelings, and changing beliefs about one's motivation, like perceiving one's abilities (Self-Efficacy) and learning goals.

Self-regulation of Cognition involves controlling one's thinking during learning, such as choosing or modifying strategies to match content and enhance learning. According to Boekaerts and Corno (2005, cited in Salinee Jongjitsirirat, Nachai Supakitchaisri, and Winai Dasukkan, 2015), SRL involves using metacognition and motivation in learning. Research by Schraw and Hartley (2006) and Orjika and Paschal Chukwunemerem (2023) indicates that learners use cognitive strategies, metacognition, and motivation to control their learning behaviors, enhancing problem-solving, critical thinking, knowledge about thinking, cognitive control, and self-beliefs toward achieving their goals. Factors that promote self-regulated learning among students consist of three main factors: personal factors, behavioral factors, and environmental factors. These align with Bandura's (1986) assertion that learning through observing one's behavior and its consequences is highly influential in changing learners' perceptions of their abilities and fostering enduring knowledge. Environmental influences include the impact of models, environmental factors that interact with individuals, and behavioral influences (Yukyeong, Kim, Jeongwon, Lee, & Dongho, Kim, 2022). Bo Yu (2023) further argues that environmental influences significantly contribute to changing self-regulated learning behaviors. These three factors directly affect students, enabling them to engage in self-regulated learning and develop their full potential towards achieving personal excellence.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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