Strategy for Teachers to Support Self-Regulation for Student Learning Process in Post-Pandemic Learning

Lini Oltiovini Udju1, Yulia Setia2*, Ivy Mary Lin3
1 Department of Elementary Teacher Education, Petra Christian University, Siwalankerto 121-131, Surabaya, Indonesia
2 Department of Early Childhood Teacher Education, Petra Christian University, Siwalankerto 121-131, Surabaya, Indonesia
e-mail : yulia.setia@petra.ac.id
*Penulis korespondensi

ARTICLE INFO ABSTRACT

Keywords:
Post-pandemic learning, self-regulation in learning, teacher strategy.

Christian education aims to form students who have Christ-like qualities. This effort is a mission that Christian education wants to achieve. To develop these qualities, students need good self-regulation skills in learning. Self-regulation is the ability of students to direct their thoughts, feelings, and behavior to achieve learning goals. Students who have good self-regulation will achieve success in learning. However, since post-pandemic learning, students have had challenges adapting from online learning to face-to-face learning. This affects student self-regulation in learning. Therefore, Christian teachers, as shepherds, have a responsibility to help students experience increased self-regulation. In this study, researchers wanted to examine the strategies used by a teacher to support student self-regulation in the post-pandemic learning context. This study uses descriptive qualitative research methods with observation and interviews as data collection techniques. The data were then analyzed using data reduction, presentation, and conclusion. After examining more deeply, the researchers found that the teacher implemented several essential strategies in the context of post-pandemic learning and were proven to support students in experiencing increased self-regulation abilities in the learning process.

INTRODUCTION

Self-regulation is one of the critical factors in character development and academic success, particularly for elementary school students (Prevalence et al., 2021). Researchers have found that high-achieving students often possess high levels of self-regulation because they can find alternative ways to manage themselves while learning (Inzlicht et al., 2021). As stated by Sa’ida (2018), the importance of self-regulation lies in empowering students to develop and position themselves in any situation, encouraging them to manage, control, and direct themselves in achieving their learning goals.

The shift to online learning has weakened students’ self-regulation abilities during the learning process due to several challenges in adapting from online to in-person learning, as identified in a study by Alimuddin & Pratiwi (2022) titled "Post-Covid-19 Pandemic Learning in Elementary Schools.” Challenges in the self-regulation of elementary school students post-pandemic include a loss of understanding of the material due to disruptions in online learning caused by network issues and decreased student independence, as online learning tasks can be completed with internet assistance or parental guidance. Furthermore, post-pandemic learning has also revealed that students struggle to focus in the classroom, experience declining discipline, and exhibit less courteous behavior in their interactions with peers and teachers (Alimuddin & Pratiwi, 2022). This is particularly challenging for late childhood age groups, including fourth graders. According to Faturrohman and Gunawan (2021), this age group faces unique challenges in developing self-regulation since they have not fully grasped how to readapt to in-person learning environments and determine the correct learning priorities.

In 2022, the researcher completed a six-month internship at X Christian Elementary School in Batam, Indonesia. During this time, the researcher had the opportunity to shadow a fourth-grade teacher who was highly regarded by colleagues for her ability to help students regulate themselves effectively. This experience sparked the researcher's interest in investigating the strategies employed by teacher to support student self-regulation in the post-pandemic learning process at X Christian Elementary School in Batam.

Based on the introduction above, the research problem in this study is: "What are the strategies employed by the teacher to support self-regulation in the learning process of fourth-grade students at X
Christian Elementary School in Batam post-pandemic?” This research aims to describe how the teacher employs strategies to support self-regulation in the learning process of fourth-grade students at X Christian Elementary School in Batam post-pandemic.

THEORETICAL FOUNDATION

Self-Regulation in Learning

According to Bandura, self-regulation is controlling one's behavior. Individuals can control their learning process through several stages, including self-observation, self-assessment, and self-response (Pendidikan et al., 2018). Thus, the definition of self-regulation in learning is the extent to which students can become active learners in terms of metacognition, motivation, and behavior during their learning process (Zimmerman, 2008). According to Zimmerman, aspects of self-regulation in learning include:

1. Metacognitive

According to Zimmerman (2012), metacognition in learning is a series of thought processes involving planning, goal-setting, monitoring, organizing, and evaluating learning (as cited in Yudhiarti, 2021). Metacognition refers to how students structure their learning styles according to their abilities and uniqueness (Nazurty et al., 2019). Pintrich, in his book titled "Understanding Self-Regulated Learning," describes students’ self-regulation ability in learning. This involves students knowing which parts are missing from their attention and understanding while learning. Subsequently, students can identify the location of errors or deficiencies and rectify them by revisiting the sections they did not understand. Students will then test how much they comprehend the newly read or learned material by questioning themselves about what they have just read or studied. Consequently, it can be said that one effective way for students to self-regulate is by comparing their achievements from day to day without comparing themselves or competing with the achievements of others.

2. Motivation

Motivation is closely tied to self-efficacy and the goals and expected outcomes. Self-efficacy can be measured through students’ responses regarding task selection, perseverance, efforts invested, and the skills acquired. Outcomes and self-efficacy expectations demonstrate to students the potential cause-and-effect scenarios that will unfold in the future, aiding students in establishing the goals they aspire to achieve (Zimmerman & Schunk, 2013).

Zimmerman, in another study on “investigating self-regulation and motivation,” states that the motivational aspect can be observed through a student's willingness to exert all efforts, showing interest in completing tasks, being goal-oriented in learning, and having the confidence that consistent practice in solving problems will lead to an improvement in knowledge and skills. This, in turn, reduces self-doubt and gradually eliminates a lack of confidence (Zimmerman, 2008).

Pintrich and De Groot (1990) support Zimmerman's theory by describing that motivational components in self-regulation involve students' goals and beliefs regarding the tasks they undertake. Students are interested in tasks and find reasons why they should complete the assigned tasks. In other words, students can ask, "Why should I do this task?". Learning motivation will guide and propel students to act towards the goals they set initially. Self-aware students will monitor their learning process and evaluate their emotional state (affection) by learning how to control negative feelings such as anxiety while enhancing or improving their learning (Harahap, 2023; Pintrich, 1995).

Moos and Ringdal (2012) add that in the aspect of motivation, students can find meaning in the learning context in which they are engaged. The higher the target a student aims to achieve, the greater the likelihood that the student will apply self-regulation in learning (Harahap, 2023). In conclusion, in motivation, students show initiative and a desire to discover the meaning behind everything they learn.

3. Behavior

According to Zimmerman, the behavioral aspect can be observed in how students choose, organize, and reduce environmental distractions to ensure that learning activities proceed optimally (Yudhiarti, 2021). Fuente et al. (2022) add that behavior as an aspect of self-regulation can be understood as a student's actions in establishing and arranging a learning environment that can support all aspects of the learning process to achieve the predetermined ultimate goals. Indicators of the behavioral aspect of self-regulation can be seen in the student's ability, both at school and home, to implement time management and effort in completing
tasks and wisely utilizing time. Students also monitor their efforts in completing tasks, reevaluate their methods, and rectify inappropriate attitudes or habits in learning (Harahap, 2023).

This behavior is inseparable from the individual’s motivation to have learning targets. Students will demonstrate their best efforts in learning, maximize their learning methods, and synchronize learning stages in line with their needs (Harahap, 2023). Thus, academic achievement is positively related to good behavioral adaptation in learning (de la Fuente et al., 2022). Based on this theoretical

Teacher Strategies to Support Student Self-Regulation

The teacher's strategies serve as efforts and steps designed by educators to achieve learning objectives. The teacher's strategy in selecting appropriate teaching methods greatly aids the teacher and students in conducting the learning process more effectively and efficiently (Budiana et al., 2022, p.1). Therefore, teachers must exercise precision in choosing teaching strategies to contribute to shaping students' self-regulation.

Beyond the general meaning of teacher strategies, a Christian teacher interprets their role as assisting students in cultivating good self-regulation to mold them into individuals whose lives reflect Christ. The quality of life resembling Christ implies that Christian education nurtures students to emulate Him. This aligns with the mission of Christian Elementary School X Batam, which is committed to developing faith, knowledge, and truth in God. Consequently, students are expected to embody Christ's character by being trained, educated, shaped, and equipped to become leaders with integrity, possessing knowledge, understanding, and wisdom from God (school website, 2022). Angin and Yuniretnowati (2020) state that the mindset and behavior of individuals will undergo renewal to be like Christ based on what they have learned. Therefore, Christian education should shape and produce thoughts and behaviors similar to Christ, acknowledging that this process is not easy and requires time for students to practice becoming Christ-like continually.

As a result, for a Christian teacher, the instruction given to students extends beyond imparting knowledge alone; it involves guiding and directing students to possess good affective skills in the image of God (Purba & Chrismastianto, 2021). Christian teachers should view these strategies as something serious and essential to undertake. The perspective of Christian education, a teacher's role goes beyond mere teaching; it involves discipline. This is emphasized by Widianing (2018), stating that the impact of a Christian teacher extends beyond cognition; the crucial aspect is fulfilling the Great Commission to make everyone a disciple of God. Therefore, teachers' strategies are meaningful in helping students grow as disciples of God with good self-regulation, glorifying God in their studies.

However, before assisting students in developing good self-regulation, teachers must first serve as examples of possessing good self-regulation. Self-regulation is also crucial for teachers to meet professionalism demands, adapt to learning, and innovate within a curriculum system that tends to change (Moos & Ringdal, 2012). Regarding the influence of teachers, Harahap (2023) mentions that self-regulation learning strategies are not detached from external influences (teachers) or the environment, which can direct students to specific behaviors and stimulate the growth of self-regulation.

Harahap (2023) summarizes the stages of using self-regulation learning strategies according to Zimmerman as follows:
1. Setting goals: In this stage, teachers guide students to determine short-term and long-term goals they want to achieve.
2. Analyzing abilities: Teachers guide students to recognize their abilities by providing opportunities for them to write down their achievements and desired accomplishments, considering the difficulty level and success in achieving them.
3. Recognizing potential: Teachers guide students to recognize their strengths or advantages, weaknesses, opportunities, and threats in achieving their goals.
4. Time management: Teachers first make students aware of the importance of time management in learning to effectively and efficiently achieve their learning goals. Teachers can start by teaching students to prioritize their daily activities.
5. Creating a study schedule: Teachers ask students to create a daily study schedule committed to implementing what they have created. Teachers can monitor students’ progress in its implementation after one week.

In addition to the above five stages, Omrod (in Harahap, 2023) adds strategies that teachers can apply to students, such as:
1. Supporting students in setting and reviewing learning goals.
2. Facilitating students to learn and achieve without teacher intervention by providing group and independent learning opportunities.
3. Providing activities that allow students to set goals and manage their time, such as by giving exciting learning activities, assignments, or projects.
4. Developing methods needed to help students develop self-regulation.
5. Asking students for constructive feedback on their learning processes.

Latipah (2010) promotes self-regulation learning strategies using the rehearsing, elaborating, modeling, and organization approach, which the researcher will further elaborate on:

1. Rehearsal: A method of repeating information using the senses, and the information is received by the cognitive brain and temporarily stored in short-term memory until it enters long-term memory.
2. Elaboration: A strategy to connect information from long-term memory with previous knowledge. Elaboration helps students remember information stored in their long-term memory. Examples of implementing this strategy include summarizing, paraphrasing, or analogizing.
3. Modeling: This strategy uses the teacher as a model to be imitated by students in learning, thinking, behaving, and self-regulating.
4. Organizing thoughts: A strategy to help students create a structure for information and knowledge they have acquired. This can be supported by teaching students to create mind maps, make brief notes, create graphics and outlines, etc.

Based on the description of these strategies, the researcher will use the five strategies proposed by Harahap and the four approaches suggested by Latipah as the framework or theoretical basis for this research.

A teacher's strategy in selecting the proper teaching methods greatly aids teachers and students in making the learning process more effective and efficient (Budiana et al., 2022, p.1). Therefore, teachers must have precision in choosing teaching strategies that can be instrumental in shaping students' self-regulation. Beyond the conventional meaning of a teacher's strategies, a Christian teacher interprets their role as one that helps students develop robust self-regulation, aiming to mold them into individuals whose quality of life emulates Christ. Consequently, the strategies employed by a teacher aim to nurture students to grow as God's disciples with good self-regulation, thus honoring God through their studies.

Post-Pandemic Learning

Post-pandemic learning necessitates several changes and adaptations, which can be challenging for elementary school students. In this context, there is potential for the emergence of what is known as "learning loss," which refers to the fading of students' learning capabilities and experiences, with significant and long-lasting impacts on their self-regulation abilities, extending into their adulthood (Faturohman & Gunawan, 2021). Schools must try to bridge the gap and address the decline in students' self-regulation skills resulting from distance learning.

METHODS

The research approach used in this study is qualitative and descriptive. In the book "Metodologi Penelitian Kualitatif" by Harahap (2023), it is explained that one category of qualitative research is descriptive analysis ("tick-description"). Descriptive analysis is a qualitative research method aimed at understanding and explaining the subject by "presenting" all the visualized phenomena and elucidating the reasons behind these phenomena. This descriptive method aims to provide a detailed account of all facts and form conclusions about the observed phenomenon through observation and interview processes (Suryani et al., 2020). Meanwhile, the data collection methods used in this research include interviews, observations, and document analysis.

The subjects of this study include Kei (pseudonym), the fourth-grade class teacher at X Christian Elementary School in Batam, and several informants, namely the school principal Yen (pseudonym), and three fourth-grade students referred to as An, Budi, and Clay (pseudonyms). According to Miles and Huberman, data analysis involves three stages or activities: data reduction, data presentation, and conclusion (Sidiq et al., n.d.). After obtaining data, the researcher performs data reduction, the results of which are then presented. Subsequently, the presented data will be discussed based on the research problem formulated using relevant theories. Ultimately, the researcher will conclude the teacher's strategies to support self-regulation.
in the learning process of fourth-grade students at X Christian Elementary School in Batam within the context of post-pandemic learning when the analyzed data has been proven reliable and accountable by the researcher.

FINDINGS

Motivation plays a significant role in self-regulated learning, guiding students to develop self-regulation skills (Syaparuddin et al., 2020). Through motivation, students can engage in activities, direct their learning, and persevere in achieving their learning goals. This ability can enhance students' self-regulation in learning (Shannon et al., 2016).

To foster self-regulation in students' learning, according to Kei, students need self-awareness to possess self-regulation, which subsequently motivates them to learn. "The main thing, in my opinion, is the internal motivation, the will from within that needs to be reminded. That is how I see it, motivated by my own experiences. Is the mind and heart here? Are they focused and ready for today's learning? When they say they are ready, it is okay, then we start the learning." (K. S., personal communication, April 15, 2023).

During observations, the researcher observed how Kei ensures that students are mentally and physically prepared for the learning process. Another form of motivation Kei provides is maintaining clear articulation and raising her voice when teaching. When our teacher explains something, she does it with enthusiasm, which helps us stay focused and engaged. (Student B, personal communication, April 1, 2023). Clarity in articulation and a loud voice are essential to keep students attentive and engaged, preventing them from feeling bored or drowsy (Shannon et al., 2016).

Additionally, Kei often gives additional assignments to students. "Usually, Ms. Kei gives us extra assignments when she sees we are getting bored or sleepy. The exam is for those who are not keeping up". (Student C, personal communication, April 14, 2023). Students mentioned that Kei surprises them with tests when they feel lazy or drowsy. Berry (2016) states that tests are one of the means to boost students' motivation for learning.

The decline in students' self-regulation abilities during the learning process is not only marked by decreased motivation to learn. Yen, the principal of X Christian Elementary School in Batam, mentioned that one sign of a decrease in students' self-regulation abilities in learning is the decline in their metacognitive skills. This challenge arises due to the limitations of teachers in reaching students during online learning.

It is confirmed by Kei, who has observed a decline in students' understanding and knowledge during their learning journey. "In terms of knowledge, maybe we used to teach online during the pandemic, right? So, we could not be sure whether they had truly grasped the material we presented because they were not physically present in front of us. We could not monitor them online like that" (K. S., personal communication, November 18, 2023).

To support their metacognitive abilities, Kei employs strategies such as reinforcing the material being studied by the students. She achieves this by emphasizing essential information when explaining a topic, conducting material reviews, engaging in question-and-answer sessions, and assisting students in summarizing previously learned material.

"The first thing I do is to help them by emphasizing the important material during the lesson; then, I help them summarize what they have learned that day. What they have learned today, summarize it, have a question-and-answer session, and review it during evaluation time" (K. S., personal communication, November 18, 2022).

Lawson (2019) states that repetition is one of the most frequently used self-regulated learning strategies. This strategy aids students in remembering and comprehending the material they have learned. Quoting Sari and Appulembang (2019), revisiting the material and emphasizing crucial aspects can establish patterns in long-term memory. Another form of repetition employed by Kei is providing remedial sessions when students fail a test. This was confirmed by Clay, who said, "Usually, if we do not get a passing grade, the teacher helps with remedial sessions. It helps" (Student C, personal communication, April 14, 2023). Kei ensures that all her students understand the material before moving on to new topics. Remedial sessions are about improving grades and allowing students to evaluate their learning methods and revisit parts they may not have understood (Illahi et al., 2022).

Meanwhile, Clay expressed that mathematics is the subject he finds most challenging. To improve his performance, Kei often provides additional practice problems, encourages him to study challenging sections,
and helps him find solutions. This effort results in Clay achieving better scores in subsequent practice sessions. "Yes. After practicing math a lot, I scored 70 in the exercises, and then, in the next chapter's exercises, I scored 85" (Student C, personal communication, April 14, 2023). This illustrates that Kei's repetition strategy improves students' metacognition, as evidenced by the increasing scores. The researcher views this as a positive way to prepare students to face the realities of life, persevere in the face of difficulties, make continuous efforts, and ultimately achieve their life goals with a strong ability for self-regulation.

Following the repetition, Kei implements elaboration strategies both orally and in writing to assist students in genuinely retaining and understanding the material. Drawing from Harahap (2023) on elaboration strategies, these methods help connect information from long-term memory to prior knowledge, such as summarizing, paraphrasing, or using analogies. Regarding oral elaboration, Kei states, "Making summaries, taking notes, listening, and retelling what the teacher explained. Question-and-answer methods can also help the children" (K. S., personal communication, November 18, 2022). The oral elaboration helps students become more active learners, encouraging them to ask questions and seek help when encountering difficulties in understanding the material or completing assignments, whether from the teacher or their peers (Latipah, 2010).

In written elaboration, Kei teaches students to write down essential points in their notes, create summaries, and take notes about the material they are studying. "Yes, they are helping. We emphasize this part – making outlines, summaries, taking notes again" (K. S., personal communication, November 18, 2022). This approach facilitates better retention of the material. "Oh, yes, I usually take notes. I write them in a small notebook, and after that, I reread them in the book. Then, I understand" (Student C, personal communication, April 14, 2023).

Another repetition strategy employed by Kei involves collaboration with students' parents. Kei engages parents in shaping students' discipline and self-regulation behaviors at home by providing repeated reminders. "So, we (teachers and parents) have to remind them repeatedly" (K. S., personal communication, April 15, 2023). For example, Kei utilizes communication through WhatsApp groups to collaborate with parents in reminding students about necessary equipment or project requirements that must be brought to school the next day. Through this collaboration with parents, Kei can also seek support and solutions to any difficulties or problems students may encounter at school.

Rahima (2022) pointed out that the involvement of parents and teachers in supporting students can enhance students' self-regulation. Therefore, involving parents in the learning process is also a strategy to improve students' self-regulation. Since elementary school-age students are still making choices and decisions and have not fully developed a sense of responsibility, the cause is their limited ability to self-regulate (Surdi et al., 2022).

Another strategy employed by Kei is training students in time and activity management. Kei always reminds students to check their schedules by providing each student with a schedule. This practice has a positive impact, as students can independently organize their activities at home without needing the schedule. "There is no schedule, but I can estimate. That is because it is already organized in my mind. I am used to it" (Student C, personal communication, April 14, 2023). It can be said that Kei has successfully trained students in adequate time and activity management. "We are used to the reminders from the teacher. So, before playing, we tidy up our study table. At home, we tidy up, and then we play" (Student C, personal communication, April 14, 2023). Faiz and Rahman (2021) mention that when students practice daily time management, it becomes a habit that fosters discipline. Discipline is crucial because students with good self-regulation exhibit self-control without external supervision, and, as students in Christ who emulate Him, they are expected to master self-control in all aspects (Pahlawan & Tambusai, 2019).

In addition to using schedules, Kei mentions that she leads by example: "I set an example for them first" (K. S., personal communication, April 15, 2023). The role model of a Christian teacher in time management can influence students to do the same (Ipiana & Triposa, 2021). This is in line with Debona and Han's (2020) view on the responsibility of Christian teachers who have been reborn in Christ; they should act as role models for students in school. Through the teacher's example of the importance of self-regulation, students can also be influenced to grow in good self-regulation.

Furthermore, Kei also encourages students to think about their learning goals at school. "What is your goal for going to school? What do you want to learn today?" (K. S., personal communication, April 15, 2023). Kei helps students reflect on what they want to achieve in the learning process at school. Harahap (2023) states that setting learning goals before studying encourages students to monitor their learning
achievements. Students will think about their efforts to achieve the set target. For example, Clay sets a daily goal to work on a project: "I usually approach gathering information daily. This helps me complete my project within three weeks. To stay on track, I set targets for the amount of information I need to gather and the number of pictures I should take." (Student C, personal communication, April 14, 2023). The researcher assumes that students can discover strategies and plan the time needed to complete their projects. Latipah (2010) says that planning from the beginning of learning is essential to maintain students' self-regulation behavior in learning, keeping them focused on their goals and having clear self-awareness.

Having learning objectives or achievement targets, students can also evaluate their efforts to achieve their learning goals (Dwintasari & Kurniawati, 2019). Self-evaluation of their learning methods provides feedback on areas students need to improve. Kei also assists students in evaluating their learning outcomes: "Yes, I was taught to measure it based on my past failures" (Student C, personal communication, April 14, 2023). This is an example of effective self-evaluation. The student does not compare their achievements with those of other students but rather compares their past to their present self.

Lastly, Kei fulfills her role as a Christian teacher who acts as a shepherd for her students: "So, as a good shepherd and guide for the children, I must always remind the children that there should be motivation in the learning process and it should be related to Proverbs 1:7, 'The fear of the Lord is the beginning of knowledge,' which serves as their motivation" (K. S., personal communication, April 15, 2023). Debora and Han (2020) emphasize that Christian education must be based on the truth of God's Word, written in the Bible, to speak to all generations about the work of God in Christ through the help of the Holy Spirit. Therefore, as a believer, a Christian teacher conducts teaching by making the Bible the absolute truth above all other truths and by sharing Christ in their teaching (Darmawan, 2014).

Kei explains that her role as a shepherd in supporting the development of students' self-regulation is to educate students to, first and foremost, live in fear of the Lord. When students live in the fear of the Lord, with the help of the Holy Spirit, they will naturally acquire the knowledge and ability to practice good self-regulation in their learning. Thus, the various strategies employed by the teacher to support students' self-regulation yield positive results.

CONCLUSIONS

Teacher strategies in education are crucial for supporting students' self-regulation in learning, especially in the context of post-pandemic education, which requires adaptation and adjustment. Self-regulation is essential for molding students into individuals with quality, responsibility, and independence in all aspects of life. Teachers who spend nearly the whole day with students at school significantly enhance students' self-regulation. Therefore, teachers need effective strategies to support students' self-regulation in the post-pandemic era.

Based on the research findings, teachers can implement various strategies, particularly important in the post-pandemic learning context, to enhance students' self-regulation in the learning process. These strategies include:

1. Repetition to reinforce information or material.
2. Elaboration through both oral and written methods.
3. Motivating students in their learning.
4. Developing students' skills.
5. Training students in time and activity management.
6. Assisting students in setting learning goals and self-evaluation.
7. Collaboration with parents.
8. Embracing the role of a teacher as a shepherd, especially in a Christian teaching context.

In this case, the teacher guides students to live in the fear of the Lord so that, with the help of the Holy Spirit, students can develop self-regulation skills.

Teachers' strategies have proven to support students in developing and enhancing self-regulation, particularly in the post-pandemic learning context. This is evident from the improvement in students' learning outcomes, with their grades consistently increasing. Students become more disciplined, show a desire to learn, know their learning objectives, and can self-evaluate the learning process. Teachers' support dramatically influences the development of students' self-regulation skills, allowing them to excel academically while also honoring God.

REFERENCES


This is an open access article under the CC BY license