

# Self-Efficacy, Self-Regulated Learning, and Student Academic Achievement in the Post Pandemic Era: A Literature Review

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**Keywords:** Academic Achievement, Self-Efficacy, Self-Regulated Learning, Students

**Abstract:** *Purpose:* During the COVID-19 pandemic, the online learning system has been used worldwide, including in Indonesia. However, there seemed to be prolonged effects of this method, which lasted for almost two years during the pandemic, to students' motivation in learning, which affected their learning outcomes. Studies reported that during the online learning students reported to be demotivated, showed enhanced procrastination on completing tasks, and less encountered on social aspects in their academic trajectories. This situation might give negative impacts to subsequent learning processes in the post pandemic era. There have been factors that might influence students' learning processes, particularly in the post pandemic era, both from internal and external aspect. The objective of the current article would be on tapping factors influencing students' academic achievements, particularly on the internal psychological factors of the students. *Methods:* The current study used a literature review by selecting related articles using keywords: self-regulated learning, self-efficacy, academic achievement, impact of COVID-19. Literatures were searched through several online platforms. *Results:* Literatures being reviewed revealed evidence the impact of self-regulated learning as well as self-efficacy to students' learning processes, which in turn influenced their academic achievements. These factors were found to be robust factors that may help students to (re)adapt to normal learning processes after the pandemic COVID-19 has subsided. *Conclusions:* The current study suggested that enhancing students' self-regulated learning and self-efficacy would be the key roles on helping them cope with barriers in their academic trajectories particularly in the after-pandemic COVID-19.

## 1 INTRODUCTION

The COVID-19 pandemic has been ongoing since early 2020 in Indonesia. The government has made various efforts to prevent the spread of this virus. Some of the efforts that have been made by the government include Large-scale Social Restrictions and Adaptation of New Habits. These policies encourage people to adjust their behavior following the health protocols set by the government. In addition, the COVID-19 pandemic has changed the order of people's lives, where aspects of people's lives are changing rapidly (BPS, 2020). The changing aspects of people's lives are also happening in the world of education. Distance learning has

accompanied students these past two years. This is due to the prevention of transmission of the COVID-19 virus. According to the circular letter of the minister of education and culture no.4 of 2020 concerning the implementation of policies during the emergency period of the spread of COVID-19, learning will be entirely at home (Kemendikbudristek, 2020). This has an impact on the student learning process and affects student learning outcomes. Learning during the COVID-19 pandemic forms different learning patterns for students in the current post-pandemic. This form of different learning patterns can affect the academic achievement or learning outcomes of post-pandemic students.

Students' academic achievement is a form of evidence of learning success or students' ability to follow their learning activities following student

grades which can be expressed in the form of report cards, study achievement index, or graduation rates (Harmoko, 2020). In addition, Bloom defines academic achievement as a student learning process that produces a change in knowledge, understanding, application, analysis power, synthesis, and evaluation. While Syah, academic achievement is characterized by the occurrence of a psychological change as a result of the experience and learning process of students which includes changes in cognitive, affective, and psychomotor aspects (Hadwin, 2012).

Changes in cognitive, affective, and psychomotor aspects have factors that influence them. Two factors influence academic achievement. First, internal factors, namely factors that come from within the student, which include: physical and mental maturity, knowledge, intelligence, skills, interests, and motivation, as well as factors of student personality characteristics (Simamora, Harapan, & Kesumawati, 2020). Second, external factors, namely factors that come from students, include family environment factors, school factors, and community factors (Syafi'i, Marfiyanto, & Rodiyah, 2018). This article will focus more on internal factors of achievement; including self-efficacy and self-regulated learning.

Research on academic achievement in students has previously been conducted by previous researchers. The research includes: Ruliyanti & Laksmiati's research (2014) shows results of research that state the relationship between self-efficacy and self-regulated learning with academic achievement can be accepted. Furthermore, Semmar's (2006) research shows that self-efficacy, self-regulated learning, and motivation seem to play an important role in the academic achievement of distance learners. From Anisa's research (2021) self-efficacy and self-regulated learning play an important role in student academic achievement. Students who have high self-efficacy and self-regulated learning will be able to adapt well to academic activities in universities which are quite busy. So that this will help students to achieve brilliant academic achievement.

Theoretically, learning is carried out to achieve cognitive goals, namely thinking and intellectual behavior. The psychomotor goal is related

to the active physical movement response of students. The affective goal is the empathic aspect of students. These learning objectives will be achieved if supported by learning dynamics that run well. Some factors that can affect learning dynamics are learning conditions, learning methods, and learning outcomes. The dynamics of learning in Indonesia are currently externally disrupted by the COVID-19 outbreak crisis. Some impacts include; 1) school is transferred to the home through the online learning process; 2) there is a transformation of technology-based learning media through the use of the WhatsApp Group, Zoom, Google Classroom, WebEx, Youtube, and TV channels; 3) adjustments to learning methods; 4) adjustments to learning evaluations for determining grade promotion and graduation standards, and 5) demands parent collaboration at home as a substitute for teachers to control children's learning. (Mansyur, 2020).

During the COVID-19 pandemic, the online learning system has been used worldwide, including in Indonesia. However, there seemed to be prolonged effects of this method, which lasted for almost two years during pandemic, to students' motivation in learning, which affected their learning outcomes. Studies reported that during the online learning students reported to be demotivated, showed enhanced procrastination on completing tasks, and less encounter on social aspects in their academic trajectories. This situation might give negative impacts to subsequent learning processes in the post pandemic era.

There have been factors that might influence students learning processes, particularly in the post pandemic era, both from internal and external aspect. The objective of the current article would be on tapping factors influencing students academic achievements, particularly on the internal psychological factors of the students.

## 2 THEORITICAL REVIEW

### 2.1 Self-Efficacy

Self-efficacy is defined as beliefs in one's capabilities to organize and execute the courses of action required

to produce given attainments (Bandura & Wessels, 1997). Academic self-efficacy refers to one's confidence to perform in academic, or learning situations. (Hodges, Stackpole-Hodges, & Cox, 2008). Self-efficacy refers to the personal beliefs or to an individual's confidence in his own ability to perform effectively specified tasks (Yusuf, 2011). Self-efficacy' refers to the beliefs that people hold about their abilities to perform certain tasks and accomplish specific goals (Bandura, 1994). Bandura has contended that learners who possess high levels of self-efficacy are not intimidated or challenged by complex assignments and projects, which they see as an opportunity for growth and mastery (Semmar, 2006). Self-efficacy is hypothesized to influence choice of activities, effort expended, and persistence (Bandura, 1986). Students who hold low self-efficacy for learning may avoid tasks; those who judge themselves efficacious are more likely to participate. When facing difficulties, self-efficacious learners expend greater effort and persist longer than students who doubt their capabilities (Schunk, 1990).

Based on the above understanding, it can be concluded that self-efficacy is a belief in one's ability to learn, organize and carry out tasks effectively and produce certain achievements.

## 2.2 Self-Regulated Learning

Self-Regulated Learning is a concept of how learners become regulators of their own learning (academically) (Zimmerman, Barry J & Schunk, 1989). According to Goetz, Self-regulated learning is a form of acquiring knowledge and skills in which the learners are independent and self-motivated. Learners independently choose their own goals and learning strategies that will lead to achieving those goals. It is through evaluating the effectiveness of one's learning strategies - comparing one's current state with the target state - that learning can be modified and optimized (Goetz, Nett, & Hall, 2013).

Self-regulation is not a mental ability or an academic performance skill; rather it is the self-directive process by which learners transform their mental abilities into academic skills. Learning is viewed as an activity that students do for themselves in a proactive way rather than as a covert event that happens to them in reaction to teaching. Self-regulation refers to self-generated thoughts, feelings, and behaviors that are oriented to attaining goals

(Zimmerman & Zimmerman, 2010). Self-regulated learners have the cognitive and metacognitive abilities as well as the motivational beliefs and attitudes needed to understand, monitor, and direct their own learning (El-adl & Alkharusi, 2020).

## 2.3 Academic Achievement

Academic achievement that represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in academic environments (Kane, 2017). Academic achievement is defined concerning the communicative (oral, reading, writing), and thinking skills and competencies (with regards to the subject matters of mathematics, science, and social science) that enable a student to succeed in school and, later on, in society. Most researchers tend to depend on standardized achievement tests in measuring academic outcomes, as many forms of scholarly achievement are not always easily measured (Mozammel, Shakar, & Ahmed, 2021). Academic achievement can be defined as learned proficiency in basic skills and content knowledge (Caesar, n.d., 2005). Academic achievement refers to the level of scholastic accomplishment reached by a student (Moss & Moss-Racusin, 2021).

Good (1959) defines academic achievement as the knowledge attained or skill developed in the school subjects, usually designated by test scores or marks assigned by the teachers. As a result of learning through different subjects, the learning outcome changes the behaviour patterns of the students. Learning affects three major areas of students namely (1) Cognitive, (2) Affective, and (3) Psychomotor. According to him, learning does not reach the same level in all three domains at a time. Students may be at higher or lower level in any domain (Bhat, 2014).

## 3 METHODS

The current study used a literature review. a literature review is a comprehensive overview of prior research regarding a specific topic and includes all of the main themes and subthemes found within the general topic chosen for the study. These themes and subthemes are usually interwoven with the methods or findings of the prior research (Denney & Tewksbury, 2013).

A literature review by selecting related articles using keywords: self-regulated learning, self-efficacy, academic achievement, and impact of

COVID-19. Literatures were searched through several online platforms. An extensive search was performed using several databases such as, SAGE Journals, Google Scholar, ERIC, Springer, and Scopus. The entire process of literature research was summarised in Figure 1 including keywords used, specific conditions applied, and the stages of the screening process.

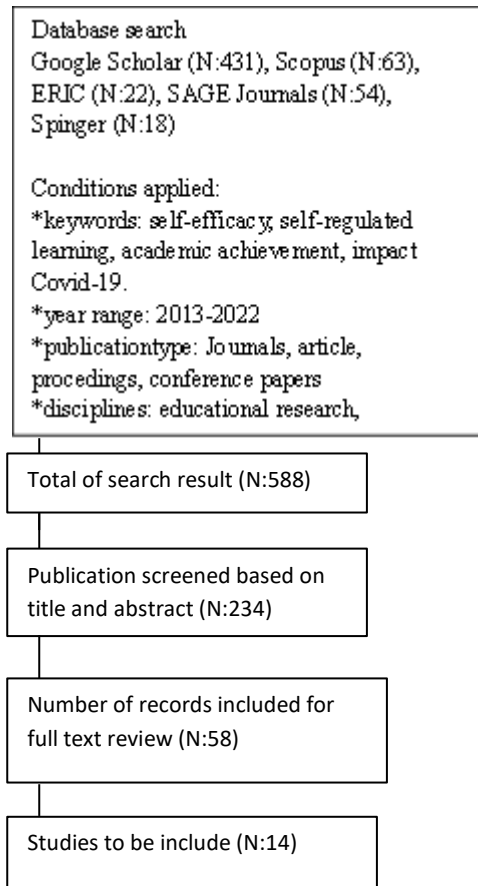


Figure 1: process of literature review

In addition, inclusion criteria were also established for this review. First, only studies published in the last ten years will be considered to give the most recent research trends. Second, only academic achievement-related studies in school context will be considered. Third, only studies investigating the relationship between self-efficacy, self-regulated learning, academic achievement, and impact of COVID-19 will be considered. Fourth, students at all levels of education are considered for

this review from elementary to secondary until higher education across the globe for generalization to academic learning. Lastly, only published articles, journals, proceedings, or conference papers are considered for this review.

## 4 RESULTS

### 4.1 Self-Efficacy and Academic Achievement

Self-efficacy is one of the important for psychological variables that are related to the behavior and contribute to the achievement of the personal goals, of an individual. Judgements and beliefs of an individual about his abilities and capabilities take an important role in controlling the environment and, consequently, achieving success (Fakhrou & Habib, 2021).

Academic achievement plays a major role in students` lives and, because of crucial educational decisions are made. There are organized academic exams that aim to measure the amount of information, in any field of knowledge, that students memorize or remember. These exams also indicate students` ability to understand, apply, analyze, or use this information in various life circumstances. Academic achievement is an indicator of the achievement of educational goals and thus, educational institutions give much import to this concept. Hence, educational institutions, through teaching, aim to attain academic achievement. Thus, academic achievement is the level of cognitive development that a student reaches in one aspect of the academic program (Hodges, 2018).

Based on what was presented theory above, it can be said that self-efficacy is composed of the beliefs that individuals have about their abilities and the confidence they have about performing certain behaviors. In other words, if a person is confident about his self-efficacy, he tends to attain more achievements and values himself and his self-confidence. Furthermore, to achieve good results, such a person will perform the proper behavior. His focus on his behavior offers him many benefits. In addition, such an individual will gain a high level of academic self-efficacy, thereby causing more success and academic achievement.

### 4.2 Self-Regulated Learning and Academic Achievement

Self-regulated learning has been studied extensively to understand factors influencing achievement. Pintrich (2000) defines self-regulated learning as “an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment” (Rivers, Nakamura, & Vallance, 2022).

Self-regulated learning theories of academic achievement are distinctive from other accounts of learning and instruction by their emphasis (a) on how students select, organize, or create advantageous learning environments for themselves and (b) on how they plan and control the form and amount of their own instruction. Undoubtedly, all learners are responsive to some degree during instruction; however, students who display initiative, intrinsic motivation, and personal responsibility achieve particular academic success (Zimmerman, 1990).

Table 1: Summary Research Findings of The Included Studies

Authors	Years	Topic
Rivers, et al	2022	Online Self-regulated Learning and Achievement in the Era of Change
Mozammel, et al	2021	COVID-19 and Online Learning: Critical Insight for Academic Achievement
Syafi'i, et al	2018	Study About Student Learning Achievement and Factor Affecting
El-adl, et al	2020	Relationships between Self-Regulated Learning Strategies, Learning Motivation and Mathematics Achievement

de Fátima Goulão	2014	The Relationship between Self-Efficacy and Academic Achievement in Adults' Learners
Simamora, et al	2020	Determinant Factor Affecting Student Learning Achievement
Mansyur, et al	2020	The Impact of COVID-19 on the Dinamics of Learning in Indonesia
Maemunah, Nugraha, & Kamil	2021	Understanding Demotivating Factors on EFL Students in Online Learning
Anisa, Magfirah, & Thahir	2021	The Role of Self-efficacy and Self-regulated Learning on Student Academic Achievement
Basith, Syahputra, & Ichwanto	2020	Academic Self-Efficacy As Predictor Of Academic Achievement
Tarumasely	2021	The Influence of Self-regulated Learning and self-efficacy on Academic Achievement
Sari, Tusyantari, & Suswandari	2021	The Impact of Online Learning for elementary school students during COVID-19
Fakhrou, et al	2021	The Relationship between Academic Self-efficacy and Academic Achievement in Students of the Department of Special Education

Komaraju, et al	2013	Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter?
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### 4.3 Self-Efficacy and Self-Regulated Learning as Factors to Increase Academic Achievement After Pandemic COVID-19

Self-regulation refers to the degree to which learners are “metacognitively, motivationally, and behaviorally active participants in their own learning process” (Zimmerman, 1989, p. 329). The interdependent relationship between self-regulation and self-efficacy with respect to academics can be seen in the literature. Briefly, as a learner gains positive self-efficacy beliefs regarding a task, the learner is more likely to participate and persist in that task. Likewise, if a learner is choosing to engage and persist in a task, the chance of success and, thus, enhanced self-efficacy for that task increases. Research has found that students with higher levels of self-efficacy are more likely to demonstrate self-regulated learning (Hodges et al., 2008).

Self-efficacy and self-regulated learning appear to play an essential role on the academic achievement after-pandemic Covid-19 learners. Individuals seem to be at a greater advantage with regard to accomplishing their tasks when they feel confident in their abilities and can self-regulate their learning and increase the academic achievement.

Literatures being reviewed revealed evidence the impact of self-regulated learning as well as self-efficacy to students’ learning processes, which in turn influenced their academic achievements. These factors were found to be robust factors that may help students to (re)adapt to normal learning processes after the pandemic COVID-19 has subsided. Factors of academic achievement in the table 2.

Table 2: Academic Achievement Factors

Academic Achievemnet Factors
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Internal factors		External factors
Physiology		Family environment
Psychological	Self-efficacy	School environment
	Self regulated learning	
		Community
		Culture

## 5 CONCLUSION

The current study suggested that enhancing students’ self-regulated learning and self-efficacy would be the key roles on helping them cope with barriers in their academic trajectories particularly in the after-pandemic COVID-19.

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