



## Exploring Self-Regulated Learning Skills in Gen Z Students in Soe, Nusa Tenggara Timur's After the Covid-19

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### Abstract

The study reveals that the SRL skills of Gen Z senior high school students in Soe City post-pandemic are predominantly high across metacognitive, motivational, and behavioral dimensions. This research using descriptive quantitative study investigated the Self-Regulated Learning (SRL) of senior high school students in Soe City, East Nusa Tenggara, Indonesia, following the COVID-19 pandemic. The research aimed to unveil the prevailing SRL circumstances using numerical data analyzed with SPSS version 26.0. A Likert-type SRL questionnaire, assessing metacognition, motivation, and behavior, was administered online via Google Forms to 204 Gen Z students from the third grade of SMA X. The findings indicated that the majority of students demonstrated high SRL skills (50%), with a substantial portion exhibiting medium levels (48.09%) and a small percentage showing low SRL (1.96%). Examining individual SRL aspects, a similar trend emerged. In metacognition, most students scored high (61.3%), followed by medium (36.3%) and low (2.5%). For motivation, the distribution was high (44.1%), medium (50%), and low (5.9%). The behavioral aspect also showed a similar pattern: high (44.1%), medium (52.9%), and low (2.9%).

**Keywords:** *Gen Z; Senior High School; Self Regulated Learning*

### Introduction

According to the census results of the Central Statistics Agency (BPS), Generation Z, also known as Gen Z, exhibits a significant presence. The data released in 2020 indicates that Generation Z constitutes 24.97% of the population, amounting to 74.93 individuals. Holubuva (2015) asserts that Generation Z demonstrates an aptitude for assimilating learning theories and concepts more readily when these concepts are integrated with technological elements. However, they have also demonstrated a preference for electronic media over traditional printed materials, with only a small percentage of teenagers engaging with books, magazines, and news (Trimansyah, 2016). A significant body of research has identified a correlation between Generation Z's underachievement in academic settings and their lack of skills, motivation, perseverance, confidence, and poor relationships with teachers and peers.

Conversely, Generation Z exhibits a remarkable aptitude for leveraging technology to access information, thereby amassing extensive knowledge. Their prolonged engagement with electronic devices, often at the expense of direct human interaction, contributes to a perceived deficiency in interpersonal communication skills. This combination of strengths and weaknesses significantly influences their learning style. Generation Z's expectations for modern learning techniques and evolving methods, coupled with a preference for diverse message delivery that engages their senses, underscores the need for a multifaceted approach to education (Maszweski, 2016).

Generation Z, or those born between 1995 and 2010, has been characterized by its exposure to the internet and a plethora of entertainment options, including television and online games. Consequently, they have developed an expectation for learning experiences that are both educational and engaging (Robinson, 2013). It is noteworthy that Generation Z's learning style differs significantly from that of previous generations. However, various innovations in learning can be implemented without the need for sophisticated tools. Consequently, Generation Z's learning methods must be tailored to their individual needs. Generation Z's proficiency in technology, which they readily adapt to, fosters the development of their learning independence.

As posited by Schunk and Zimmerman (2018), the concept of self-regulated learning (SRL) has the potential to exert a favorable influence on students' academic performance. SRL refers to the process by which students actively engage in the pursuit of their educational objectives. Generation Z students who possess SRL skills can establish goal-setting, self-instruction, and self-reinforcement, which can foster perseverance (Liao et al., 2012). These skills enable students to plan, perform, and regulate their learning. Generation Z's technological aptitudes allow them to independently locate information using their devices and access the internet on social media platforms. Consequently, educators are presented with the opportunity to innovate and enhance the efficacy and efficiency of learning by integrating technology and information, thereby addressing the challenges of digital literacy and enhancing the learning outcomes of Generation Z students (Syah, 2023). The cultivation of effective self-regulation is contingent upon the alignment of material and non-material support.

The necessity of self-regulated learning in students has been demonstrated to have a positive impact on academic achievement (Cazan, 2012; Effeneya et al., 2013; Silva, 2014). Sibarani, R. M., & Meilani, Y. F. (2021) have shown that students can better adjust their learning rhythm and their own learning process. High learning achievement is characterized by high regulation skills (Azhar et al., 2013). Before the pandemic, the phenomenon of independent learning had begun to grow in one of the junior high schools in Kupang, Indonesia. Students already had their own study schedules at home, but not all of them could take advantage of free time at home to study regularly. Parental support and supervision were needed to increase students' awareness of learning. The enhancement of the SRL process is influenced by a variety of factors, including modeling, encouragement, facilitation, goal setting, rewarding, and other processes (Martinez-Pons, 2009).

The advent of technological advances has had a profound impact on Generation Z students, often engendering a waning interest in traditional learning environments, particularly those that continue to eschew the integration of digital technology. The global pandemic of Coronavirus Disease 2019 (henceforth referred to as "Covid-19") has precipitated substantial changes in educational systems in Indonesia and around the world. The transition from offline to online learning has presented a considerable challenge, necessitating that students develop skills of self-regulated learning (SRL) to optimize their academic performance. This transition poses a significant challenge for Generation Z students, who possess rapid technological aptitude yet encounter difficulties in independently managing their learning. Consequently, the implementation of online learning must be meticulously designed to ensure a direct and equivalent learning experience to that of face-to-face activities.

The implementation of online learning is expected to enhance students' ability to organize, control, and evaluate their learning activities independently. Curriculum design based on theory and practice has been shown to motivate Gen Z students in their learning, thereby facilitating a positive learning process. Teachers are encouraged to create regular tasks that stimulate individual learning abilities. Additionally, the presence of teachers who have good interpersonal relationships with students is necessary to trigger students' self-discipline motivation.

A correlation has been demonstrated between low SRL and deviations in social behavior, as well as student failure in academics. Students who are unable to regulate themselves tend to have low achievement levels (Salovaara, 2005). Self-Regulated Learning (SRL) is defined as learning by directing or regulating oneself (Susetyo & Amitya, 2012). Three aspects that support SRL include metacognition, motivation, and behavior (Zimmerman, 1989). The metacognition aspect, as defined by Boekaerts et al. (2000) and Sinclair & Watson (2004), pertains to the ability of students to organize, plan, and evaluate learning outcomes. The motivational aspect, as delineated by Zimmerman (2008), refers to the drive that individuals possess to regulate their learning activities. The actions and decisions that individuals make to organize the environment in which they learn are referred to as behavior (Zimmerman, 1990).

Andriani's (2022) research indicated that students' SRL skills are classified as proficient if they possess the capacity to autonomously formulate plans, monitor their progress, regulate their activities, and evaluate their performance. Conversely, Safitri et al. (2022) asserted that the pandemic exerted a substantial impact on student learning outcomes and achievements. The possession of high SRL skills in students has been shown to direct their thoughts, feelings, and actions toward achieving their desired goals (Jayanti et al., 2020). The transition from online to face-to-face learning, which occurred at the onset of the pandemic, has had a significant impact on the three aspects of metacognition, motivation, and behavior. This has resulted in fluctuations in the level of SRL among Generation Z students before the pandemic, during the pandemic, and after the pandemic. This research aims to examine the impact of Self Regulated Learning on Gen Z students at SMA X, Soe City, Indonesia, with a focus on the period following the pandemic.

## **Research Method**

This research employs descriptive quantitative methodologies with the objective of unveiling the prevailing circumstances. Descriptive quantitative research utilizes numerical data to provide a descriptive account of a variable. The quantitative calculations in this study are facilitated by SPSS version 26.0, a software program employed to assess components of Self-Regulated Learning (SRL) in SMA X Soe City, Indonesia. The instrument utilized in this study is a Likert-type SRL questionnaire with a range of 1 to 4, which has a maximum score of 156. The determining indicators of SRL skills include metacognition, motivation, and behavior (Zimmerman, 1989).

The study population consisted of 416 students, including from XII IPA 1 (38 students), XII IPA 2 (38 students), XII IPA 3 (38 students), XII IPA 4 (38 students), and XII IPA 5 (38 students), XII IPA 6 (38 students), XII IPA 7 (38 students), XII IPS 1 (38 students), XII IPS 2 (38 students), XII IPS 3 (37 students), XII IPS 4 (37 students). The study population consisted of 3rd grade SMA X, Soe City, East Nusa Tenggara, Indonesia (DAPODIK data 2022/2023). The sample size was determined using the Slovin formula, with a total of 204 respondents. The data collection method employed an online questionnaire instrument, known as a "questionnaire", which was distributed to 204 Gen Z students via Google Form.

## Results

The data obtained in this study are displayed descriptively and quantitatively. The assessment criteria for SRL skills were calculated using data distribution according to Azwar (2012). These criteria were then processed and displayed as in Table 1.

Table 1.

No.	Categories	SRL	Metacognition	Motivation	Behavior
1.	Low	$N < 78$	$N < 29$	$N < 24$	$N < 26$
2.	Medium	$78 \leq N < 117$	$29 \leq N < 42$	$24 \leq N < 36$	$26 \leq N < 39$
3.	High	$117 \leq N$	$42 \leq N$	$36 \leq N$	$39 \leq N$

SRL skills categorized as “low” yielded a total score of less than 78, while those categorized as “medium” yielded a score less than 117 and greater than 78. Conversely, SRL categorized as “high” yielded a score greater than 117. The provisions for describing the aspects tested, namely aspects of metacognition, aspects of motivation, and aspects of behavior, were likewise delineated.

The findings from the survey, which included 204 respondents, are presented in tabular and graphical formats. The data are then divided into three categories based on the diagram: low, medium, and high, which are used to illustrate the students' SRL skills. The mean score for SRL skills is 97.5, with a maximum value of 156, a minimum value of 39, a standard deviation of 19.5, and a range of 117. Furthermore, if categorized, the display is as shown in.

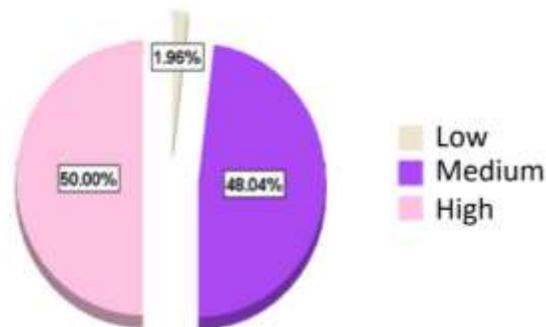


Table 2.

No.	Categories	SRL	Metacognition	Motivation	Behavior
1.	Low	4 students	5 students	12 students	6 students
2.	Medium	95 students	74 students	102 students	108 students
3.	High	105 students	125 students	90 students	90 students

As illustrated in Figure 1, the SRL competencies of post-pandemic Generation Z students were examined, revealing that 50% of the sample, equivalent to 102 students, demonstrated "high" SRL proficiency. A further 48.09% of the students, or 98 individuals, were classified as having "medium" SRL skills. Notably, 1.96% of the sample, or 4 students, were identified as having "low" SRL skills. The comprehensive mapping of SRL skills indicators utilized a multifaceted approach, encompassing metacognition, motivation, and behavioral aspects. The results of this study are illustrated in Figure 2.

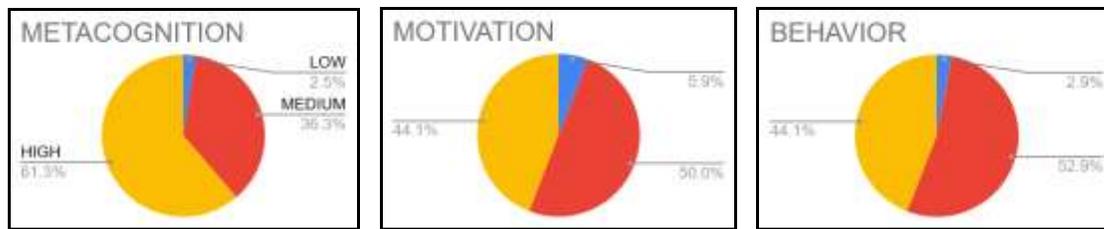


Figure 2. SRL Aspect Metacognition, Motivation, Behavior Gen-Z

As illustrated by the graph in Figure 2, the majority aspects of students are categorized as having high SRL skills, with details on each aspect categorized based on high-medium-low, this research used Formula 1 to classify the interval categories by using deviation standard and resulting in a percentage score of the metacognition aspects: 2.5% or 5 students categorized as “low”, 36.3% or 74 students categorized as “medium”, and 61.3% or 125 students categorized as “high.”

The motivation aspect yielded the following results: 5.9% or 12 students were categorized as “low”, 50% or 102 students were categorized as “medium”, and 44.1% or 90 students were categorized as “high.” Additionally, the behavior aspect yielded the following results: 2.9% or 6 students were categorized as “low”, 52.9% or 108 students were categorized as “medium” and 44.1% or 90 students were categorized as “high.”

Thus, the description of SRL skills of gen Z high school students in Soe City, East Nusa Tenggara, Indonesia after the pandemic is mostly categorized as “high” in each aspect. In the metacognition aspect, based on indicators of planning, monitoring, and self-evaluation. Motivational aspects based on expectations, values, and effectiveness. And behavioral aspects based on indicators of selecting, regulating, and controlling.

$N < (\text{Mean} - 1.SD)$	Low	(1)
$(\text{Mean} - 1.SD) \leq N < (\text{Mean} + 1.SD)$	Medium	
$(\text{Mean} + 1.SD) \geq N$	High	

## Discussion

Generation Z (Gen-z) students exhibit a range of traits and characteristics that set them apart from previous generations. Their diversity, global perspective, and aptitude for leveraging technological advancements across various facets of life are notable characteristics (Urba et al., 2024). Contrary to the views of their teachers, Generation Z students approach digital utilization differently, particularly in contexts such as online transactions, service reservations, and food delivery, which necessitate exploration and autonomy skills (Ishak et al., 2025). These competencies contribute to Generation Z's capacity to adapt to both online and offline learning environments. The digital competencies exhibited by Generation Z students facilitate access to information and its dissemination, as well as the facilitation of information exchange with others (Żczyńska-Dobiesz & Chomałowska, 2014).

The advent of information technology has rendered information retrieval and dissemination more expeditious, a development that has profound implications for the learning activities of Generation Z students. Individuals capable of assuming responsibility for their learning activities through supervision, management, and control over motivation, metacognition, and behavior to improve learning outcomes are designated as Self-Regulated Learning (Azmi, 2016; Pintrich & De Groot, 1990). The necessity of SRL skills for students has been underscored in the aftermath of the pandemic, as these skills have been

identified as a significant factor in enhancing student achievement (see Azmi, 2016; Pintrich & De Groot, 1990). Numerous studies have demonstrated that students who possess SRL skills during the pandemic have exhibited commendable academic performance (Ejubovic & Puška, 2019; Hudaifah, 2020; Sutarni et al., 2021). These students have demonstrated an ability to autonomously orchestrate their learning processes, aligning them with their unique characteristics. Consequently, the necessity for the cultivation of SRL skills post-pandemic has become increasingly evident, as it is essential for students to possess the autonomy to manage their learning methodologies, study schedules, and ancillary factors that facilitate active learning.

Self-regulated learning (SRL) is a process in which individuals establish learning objectives, monitor, regulate, and control their cognition, motivation, and behavior to align with these objectives and contextual conditions in their environment (Waspada and Nurrahmatullah, 2024). The independence that Generation Z has in seeking information can encourage them to set goals, monitor their personal progress, and adjust their learning strategies according to their own needs (Mirmoadi and Satwika, 2022). The advent of technology has facilitated the promotion of SRL by furnishing students with access to tools and resources that empower effective learning management (Waspada and Nurrahmatullah, 2024). Nevertheless, the possession of proficient digital literacy skills is imperative to encourage students to navigate the internet in the pursuit of suitable resources and to evaluate the credibility of the information they encounter. The utilization of online learning platforms and tools, such as learning analytics, by Generation Z students can facilitate the monitoring of their progress and the identification of areas necessitating further attention (Kristanto & Pradana, 2022).

SRL is formed by a number of supporting aspects, including metacognition, motivation, and behavior. In this study, the metacognition aspect is the highest, with 68.6% of the sample indicating a "high" ability among Gen Z students after the pandemic, especially with regard to their ability to organize, monitor, and self-evaluate their learning activities. Metacognition is necessary for Gen Z students to overcome learning problems (Anggo, 2011). The efficacy of metacognition in facilitating problem-solving in learning contexts is well-documented (Anggo, 2011). Students who possess high metacognition skills tend to demonstrate a heightened capacity for self-awareness, which enables them to identify their learning needs more accurately and select and plan learning strategies that align with their individual learning style. Research indicates that students who exhibit high metacognition levels tend to achieve more optimally in comparison to their counterparts with low metacognition (Panggayuh, 2017). Consequently, the development of metacognition skills fosters students' ability to organize their cognitive processes, manage knowledge, and process information, thereby enhancing their success in academic tasks.

Budi & Ghofar's research (2017) posits that metacognition fosters higher thinking skills, thereby enabling individuals to overcome challenges during the learning process. The efficacy of metacognition is evident in an individual's capacity to assess the learning process, as evidenced by the collection and subsequent evaluation of assignments. The objective of this evaluation is to identify areas for enhancement and modification, including learning strategies, study time, and other factors that contribute to enhanced learning quality. Iskandar (2016) further elaborates on the significance of metacognition in enabling students to assess their capabilities and identify the study strategies that are most effective for them. The advent of digital technology, which serves as a standardizer for Generation Z, has emerged as a significant influencer of metacognition.

The motivation component, accounting for 51% of the variance, is identified as the second most significant aspect. This suggests that students possess positive expectations, values, and emotions that contribute to the development of post-pandemic SRL abilities. Daulay (2021) posits that students who exhibit high levels of learning motivation can cultivate learning independence. Motivation functions as a catalyst, prompting individuals to achieve their learning objectives through the pursuit of learning independence. High motivation exerts an influence on students' endeavors to complete assignments. This heightened motivation has been found to encourage students to prioritize task completion and

demonstrate full commitment (Kristiyani, 2016; Hamdu & Agustina, 2011; Mendari & Kewal, 2015). It has been observed that full commitment to a task is contingent upon self-motivation, which fosters a belief in students' abilities to produce favorable outcomes. This, in turn, leads to heightened attention and interest in task completion. Such student thinking has the potential to perpetuate a cycle of encouragement, promoting continued learning and achievement. In accordance with the assertions put forth by Mulyaningsih (2014) and Cleopatra (2015), the existence of a robust learning motivation has been demonstrated to result in the attainment of notable learning achievements.

The high student motivation makes them independently determine their learning targets and then use this as encouragement to achieve them. In order to achieve achievement, students with high motivation can make the necessary changes to support their goals. Motivation enables students to change how they learn (Tokan & Immaculata, 2019). Changes are made to adapt students' characteristics and needs so that ongoing learning activities better support them and help them remain motivated to learn. Gen Z students born between 1995 and 2010 are currently receiving education from elementary to tertiary level, and some are already in the world of work. With their understanding of access to information and the world, encouraging their learning motivation to increase, Gen Z can provide input to educators regarding efforts to develop, maintain, and improve learning activities. Students' internal motivation can rise and fall, requiring support and encouragement from the external environment (Zulkarnain, Sari & Purwadi, 2019).

Furthermore, in third place, the behavioral aspect, with a percentage of 50.5%, indicates that students are very good at selecting, organizing, and controlling their learning activities. Behavior is assessed by determining the individual's attitude in managing the physical environment to create conditions supporting learning activities (Zimmerman, 1989). With the characteristics possessed by Gen Z, they can choose, arrange, and create a comfortable physical and social atmosphere or conditions for themselves to learn. By regulating the physical and social environment, learning activities can run smoothly because they are carried out comfortably and in an atmosphere that allows you to focus but still relax while studying. In line with Mariana (2021), students who arrange a place to study want to study in peace and comfort. The behavior formed is characterized by the ability of Gen Z students to have a study schedule directed towards learning goals or targets, as well as focusing on learning without being distracted by social media. Thus, high harmonization of the three aspects, metacognition, motivation, and behavior of Gen Z students, can encourage self-regulated learning skills.

## **Conclusion**

This research provides a valuable snapshot of the self-regulated learning (SRL) competencies of post-pandemic Generation Z high school students in Soe City, East Nusa Tenggara, Indonesia. The findings indicate that a significant majority of students demonstrate high SRL proficiency overall, with 50% exhibiting "high" skills and 48.09% possessing "medium" skills. While a small percentage (1.96%) displayed "low" SRL skills, the general trend suggests a positive landscape of SRL abilities within this cohort. Examining the individual aspects of SRL further reveals that metacognition is the strongest area, with 61.3% of students categorized as "high." Motivation and behavior aspects show a more balanced distribution, with a notable portion of students falling into the "medium" category (50% and 52.9% respectively), alongside 44.1% exhibiting "high" skills in both. In summary, while students generally possess strong SRL skills, particularly in metacognition, there are opportunities to further cultivate motivation and self-regulatory behaviors.

Educational technology holds significant implications for fostering SRL in Generation Z students. Capitalizing on their strong metacognitive skills, digital tools should incorporate features for planning, monitoring, and self-evaluation. To address moderate levels in motivation and behavior, technology should offer personalized content, goal-setting tools, and features promoting self-regulation. Crucially,

educational technology can provide targeted support for students with low SRL skills through adaptive platforms and explicit strategy instruction. Effective integration necessitates teacher professional development focused on leveraging digital tools to cultivate all aspects of SRL. Continued research is vital to optimize educational technology's role in enhancing SRL and maximizing learning outcomes for this post-pandemic generation.

## References

### Journal

- Andriani, P. (2022). Self-Regulated Learning pada Perkuliahan Daring selama Masa Pandemi Covid-19. *Jurnal Riset Teknologi Dan Inovasi Pendidikan (Jartika)*, 5(2), 71–82. url: <https://repository.uinmataram.ac.id/2884/1/2022-Jartika-Parhaini%26Hurniati%20%282022%29.pdf>
- Anggo, M. (2011). Pelibatan metakognisi dalam pemecahan masalah matematika. *Edumatica: Jurnal Pendidikan Matematika*. doi: <https://doi.org/10.22437/edumatica.v1i01.188>
- CW, A. G. (2017). Analisis keterampilan berpikir kritis dan metakognitif mahasiswa Program Studi Pendidikan Biologi. *Bioma: Jurnal Ilmiah Biologi*, 6(1). doi: <https://doi.org/10.26877/bioma.v6i1.1472>
- Cleopatra, M. (2015). Pengaruh gaya hidup dan motivasi belajar terhadap prestasi belajar matematika. *Formatif: Jurnal Ilmiah Pendidikan MIPA*, 5(2). doi: <http://dx.doi.org/10.30998/formatif.v5i2.336>
- Daulay, N. (2021). Motivasi dan kemandirian belajar pada mahasiswa baru. *Al-Hikmah: Jurnal Agama Dan Ilmu Pengetahuan*, 18(1), 21-35. doi: [https://doi.org/10.25299/al-hikmah:jaip.2021.vol18\(1\).5011](https://doi.org/10.25299/al-hikmah:jaip.2021.vol18(1).5011)
- Ejubović, A., & Puška, A. (2019). Impact of self-regulated learning on academic performance and satisfaction of students in the online environment. *Knowledge Management & E-Learning*, 11(3), 345. doi: <https://doi.org/10.34105/j.kmel.2019.11.018>
- Hudaifah, F. (2020). The role of self regulated learning in the covid-19 pandemic era. *Biormatika: Jurnal ilmiah fakultas keguruan dan ilmu pendidikan*, 6(02), 76-84. doi: <https://doi.org/10.35569/biormatika.v6i02.773>
- Iskandar, S. M. (2016). Pendekatan keterampilan metakognitif dalam pembelajaran sains di kelas. *Erudio Journal of Educational Innovation*, 2(2), 13-20. doi: <https://dx.doi.org/10.18551/erudio.2-2.3>
- Ishak, M., Baydhowi, B., Mahfud, M., & Mas'odi, M. O. (2025). GEN Z DALAM DUNIA PENDIDIKAN. *Jurnal Multidisiplin Ilmu Akademik*, 2(1), 328-338. doi: <https://doi.org/10.61722/jmia.v2i1.3351>
- Mariana, D. (2021). Analisis Kemandirian Belajar Siswa SD Pada Masa Pandemi Covid-19. *Bina Gogik: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 8(2), 172-178. url: <https://ejournal.stkipbbm.ac.id/index.php/pgsd/article/view/798>
- Hamdu, G., & Agustina, L. (2011). Pengaruh motivasi belajar siswa terhadap prestasi belajar IPA di sekolah dasar. *Jurnal penelitian pendidikan*, 12(1), 90-96. [https://www.academia.edu/download/35968572/8-Ghullam\\_Hamdu1.pdf](https://www.academia.edu/download/35968572/8-Ghullam_Hamdu1.pdf)
- Mendari, A. S., & Kewal, S. S. (2015). Motivasi belajar pada mahasiswa. *Jurnal Pendidikan Akuntansi Indonesia*, 13(2), 1-13. doi: <https://doi.org/10.21831/jpai.v13i2.10304>
- Mirmoadi, B. S., & Satwika, Y. W. (2022). Hubungan antara literasi digital dengan self regulated learning pada mahasiswa. *JDMP (Jurnal Dinamika Manajemen Pendidikan)*, 7(1), 8-23. doi: <https://doi.org/10.26740/jdmp.v7n1.p8-23>
- Mulyaningsih, I. E. (2014). Pengaruh interaksi sosial keluarga, motivasi belajar, dan kemandirian belajar terhadap prestasi belajar. *Jurnal pendidikan dan kebudayaan*, 20(4), 441-451. url: <https://repositori.kemdikbud.go.id/537/>
- Panggayuh, V. (2017). Pengaruh kemampuan metakognitif terhadap prestasi akademik mahasiswa pada mata kuliah pemrograman dasar. *JUPI (Jurnal Ilmiah Penelitian Dan Pembelajaran Informatika)*, 2(1). doi: <https://doi.org/10.29100/jupi.v2i1.228>

- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of educational psychology*, 82(1), 33. doi: <https://doi.org/10.1037/0022-0663.82.1.33>
- Safitri, Gita & Muharsih, Lania & Hemasti, Randwitya. (2022). PENGARUH SELF REGULATED LEARNING TERHADAP PRESTASI BELAJAR MATEMATIKA PADA SISWA KELAS XII DI SMK NEGERI 3 KARAWANG DI MASA PANDEMI COVID-19. *Empowerment Jurnal Mahasiswa Psikologi Universitas Buana Perjuangan Karawang*, 2, 13-23. doi: [doi.org/10.36805/empowerment.v2i1.643](https://doi.org/10.36805/empowerment.v2i1.643)
- Sutarni, N., Ramdhany, M. A., Hufad, A., & Kurniawan, E. (2021). Self-regulated learning and digital learning environment: Its' effect on academic achievement during the pandemic. *Cakrawala Pendidikan*, 40(2), 374-388. url: <https://pdfs.semanticscholar.org/0225/a1704141cbfed80eaa60e66e93c9cc1614ca.pdf>
- Tokan, M. K., & Imakulata, M. M. (2019). The effect of motivation and learning behaviour on student achievement. *South African Journal of Education*, 39(1). doi: <https://doi.org/10.15700/saje.v39n1a1510>
- Urba, M., Ramadhani, A., Afriani, A. P., & Suryanda, A. (2024). Generasi Z: Apa Gaya Belajar yang Ideal di Era Serba Digital?. *DIAJAR: Jurnal Pendidikan Dan Pembelajaran*, 3(1), 50-56. doi: <https://doi.org/10.54259/diajar.v3i1.2265>
- Waspada, I., & Nurrahmatullah, M. F. (2024). A Bibliometric Analysis of Research on The Use of Technology in Self-Regulated Learning. *Journal of Entrepreneurship and Business*, 12(1), 65-76. doi: <https://doi.org/10.17687/jeb.v12i1.1192>
- Watson, V. (2004). Principles of effective practice in supporting students to become self-regulated learners. In *NZARE Conference, Turning the Kaleidoscope*, Wellington, New Zealand. Retrieved (Vol. 2, pp. 08-15). url: <https://www.nzcer.org.nz/sites/default/files/downloads/14343.pdf>
- Żarczyńska-Dobiesz, A., & Chomałowska, B. (2014). Pokolenie “Z” na rynku pracy—Wyzwania dla zarządzania zasobami ludzkimi. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, 350. <https://doi.org/10.15611/pn.2014.350.36>
- Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81(3), 329–339. doi: <https://doi.org/10.1037/0022-0663.81.3.329>
- Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational psychologist*, 25(1), 3-17. doi: [https://doi.org/10.1207/s15326985ep2501\\_2](https://doi.org/10.1207/s15326985ep2501_2)
- Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American educational research journal*, 45(1), 166-183. doi: <https://doi.org/10.3102/0002831207312909>

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