

THE EFFECT OF SELF EFFICACY ON SELF REGULATED LEARNING AMONG STUDENTS OF STATE ISLAMIC UNIVERSITY DURING ONLINE LEARNING

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ABSTRACT

This study aimed to learn the effect of self-efficacy on self-regulated learning during online learning for students at State Islamic University. The sampling technique used was purposive sampling, with a total sample of 410 students of State Islamic University (UIN) Raden Fatah Palembang. The results showed that the relationship or the value of the correlation coefficient between the variables of self-efficacy and self-regulated learning was 0.466. The significance value was 0.0019 where ($p < 0.05$) and ($\text{sig} = 0.001 < 0.05$). Hypothesis test showed that R-square test result based on self-efficacy variable on self-regulated learning was 0.217. These results indicated that 21.7% of self-efficacy affected self-regulated learning variables. Thus, self-efficacy and self-regulated learning had a significant positive effect on students at the State Islamic University (UIN) Raden Fatah Palembang. In other words, the higher the level of self-efficacy, the higher the level of self-regulated learning would be.

Keywords: Self-efficacy, Self-regulated Learning, Islamic Students

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INTRODUCTION

The impact of the Covid-19 pandemic is a multidimensional problem faced by various sectors, including the education sector. Online learning during the Covid-19 pandemic caused a decrease in the quality of learning for students (Sahu, 2020). Sintema (2020) further states that the decrease was caused by reduced formal learning hours and a lack of e-learning facilities that can be used in teaching and learning. Argaheni (2020) states that students face problems in dealing with online learning, including ineffective discussions, students not actively participate in lectures, and mentally depressed students. Running an online learning becomes difficult, especially for universities

that still in need of an online-based educational system. In addition, the internet network quality is not evenly distributed throughout Indonesia.

According to Annur (2020), the problems in online learning are caused by several factors, one of which is the unpreparedness of various parties such as the unpreparedness of educators and students; not maximized online learning, time limit and learning control (Fit et al., 2023). Based on the results of observations made on January 16, 2022, to students of Psychology Faculty of State Islamic University Raden Fatah Palembang regarding learning barriers during the Covid-19 Pandemic, several obstacles or

problems were found: uneven quality of electronic devices in various regions, not transparent lecture materials and frequent out of control changes in course schedules. During formal teaching and learning hours, students get tired quickly because they often stare at online media screens (cell phones and laptops) and are easily anxious and stressed for fear of missing the material explained. In dealing with various problems during the online learning process, students need to have self-regulated learning in themselves to be able to undergo online lectures optimally and effectively so that knowledge increases and learning objectives are achieved (Cai et al., 2020).

According to Mou (2021), in an online learning, students must have self-regulated learning because they must be responsible for their own learning. In this case, students must be able to regulate themselves or apply self-regulated learning to achieve the desired learning objectives. Furthermore, the results of Nursidiq (2020) on students of the Economic Education Study Program at the University of Muhammadiyah Purworejo stated that the more positively students can apply self-regulated learning (SRL), the lower the level of student anxiety they feel during the Covid-19 pandemic.

In the last two decades, there have been many studies on the importance of self-regulated learning (SRL), some of which were based on the research results by Jatisunda et al. (2020). Self-regulated learning (SRL) makes individuals responsible for the learning process and able to manage their emotions as motivation to gain meaningful knowledge when participating in the online learning process. The results of the study by Syefrinando et al. (2020) stated that good self-regulated learning (SRL) will help students to solve various problems they face in learning.

Research by Dasan et al. (2020) showed that low self-regulated learning (SRL) during the Covid-19 pandemic will impact students,

such as triggering stress, depression, anxiety and isolation, as well as low levels of awareness and self-confidence. The results of research conducted by Abtokhi et al. (2021) show that the applied self-regulated learning is less than optimal. In contrast to the results of research conducted by Mahmud & German (2021), statistical analysis results showed that the level of self-regulated learning of Covid-19 pandemic students is moderate.

Based on the observation of the preliminary study through the distribution of google forms which was carried out on January 16, 2022, at the Faculty of Psychology, State Islamic University Raden Fatah Palembang, it showed that there were several obstacles in carrying out lectures where 80% of respondents felt that online learning was less effective and had many obstacles. Furthermore, students complained about various obstacles such as ineffective learning, the unpreparedness of students in managing themselves in the online learning process and still prefer face-to-face learning, confusion in understanding lecture material, boring online learning and difficulty in managing time. Thus, self-regulated learning for psychology students is essential in achieving educational goals and solving various problems that exist during the Covid-19 Pandemic.

Self-regulated learning (SRL) enables students to make strategies to align themselves with the environment, including efforts to align themselves with academic demands and the demands of new regulations during the Covid-19 Pandemic. Self-regulated learning (SRL) is essential in achieving learning goals, especially during the Covid-19 pandemic. Self-regulated learning (SRL) is an individual controller in ensuring learning objectives can be achieved (Chalachew, 2018).

According to Zimmerman (1989), self-regulated learning (SRL) is a process carried out by individuals to activate and maintain their thoughts, feelings, and actions in

achieving goals. Self-regulated learning is individuals' dynamic behaviour and willingness to achieve online learning goals (Barnard et al., 2009). According to Leutwyler (2009), self-regulated learning (SRL) is not only related to activities to achieve goals but also relates to efforts to avoid environmental disturbances and emotional impulses. As happened during the Covid-19 pandemic, people must apply self-regulated learning (SRL) to achieve learning goals by activating and maintaining thoughts, feelings and actions (Kristiyani, 2016).

The ability of self-regulated learning in individuals is influenced by several internal factors, one of which is self-efficacy. Self-efficacy is an internal factor that influences from within a person so that the development of self-regulated learning (SRL) occurs. According to Bosscher & Smit (1998), self-efficacy is an individual's belief in his ability to influence every event in his life. Thus, self-efficacy is a belief in individuals' ability to solve problems during the pandemic.

Students with high self-efficacy set challenging goals and maintain strong commitments. They will increase their efforts when facing failure and perceive failure as a lack of effort or knowledge and skills that can actually be learned (Cigdem & Esra, 2019). They face challenging situations believing they can control them. People who have high self-efficacy are able to show personal achievement, reduce pressure, and reduce vulnerability to depression (Bandura, 1989).

With the ability of students' self-efficacy, it is easier to solve problems or tasks. The ability of high self-efficacy will focus more on finding solutions to problems than thinking about the shortcomings that exist. The research results of Ulfatun et al. (2021) showed that high self-efficacy was correlated with the level of self-regulated learning in students during the Covid-19 pandemic. The higher the self-efficacy ability, the higher the

student's self-regulated learning (SRL) level (Wijaya et al., 2020a). Based on the results of research by Sun & Wang (2020) using 319 students in China, there is a positive relationship between self-efficacy and self-regulated learning in college students.

Based on the data that has been described, the researchers think that self-regulated learning (SRL) is a significant and exciting variable for further research. In this study, researchers will comprehensively examine internal self-efficacy factors influencing self-regulated learning in students at State Islamic University Raden Fatah Palembang.

RESEARCH METHODS

The subjects of this study were students of the State Islamic University Raden Fatah Palembang as a research setting. First, the author took students from SIU Raden Fatah Palembang as research respondents because, according to a preliminary study, there were problems related to the importance of self-regulated learning. Second, during the pandemic, students must be able to do self-regulated learning to adapt to changes and new rules. Third, the student learning method focuses more on the student, thus, students must be more active in learning.

The sample used in this study was 410 students. The sampling method used was a non-probability sampling technique. In this technique, each element in the population has a different opportunity to be sampled (Sugiono, 2012). The sampling technique used is purposive with specific considerations or criteria. Self-regulated learning (SRL) is measured by Measuring self-regulation online, developed by Barnard et al. (2009). The measuring instrument used in this study was an online questionnaire via google form with a Likert scale consisting of 4 answer choices: strongly disagree - strongly agree.

In this study, researchers used confirmatory factor analysis (CFA) using Lisrel 8.8 software to test the validity of the measuring instrument. In analyzing the descriptive statistics, the results of the assumption test and the results of the hypothesis testing, the researchers used SPSS software.

RESULT AND DISCUSSION

Self-efficacy Validity Test

The study used the general self-efficacy scale-12 (GSES-12) developed by Bosscher & Smit (1998). This scale was tested for validity using the confirmatory factor analysis (CFA) method, which was tested using Lisrel 8.80 software. The first analysis using Lisrel 8.80 software obtained a Chi-square value = 1070.02, P-value = 0.00000, and RMSEA = 0.214. Therefore, by looking at the P-value that was less than 0.05 and the RMSEA greater than 0.05, it could be concluded that the model was not fit, so it needed to be modified to the model.

After 20 modifications were made, the Chi-square value = 43.31, df = 34, P-value = 0.131, and RMSEA = 0.026. Judging from the P-value, which was more significant than 0.05 and the RMSEA value, which was less than 0.05, it could be concluded that the model was a fit. Look at the following:

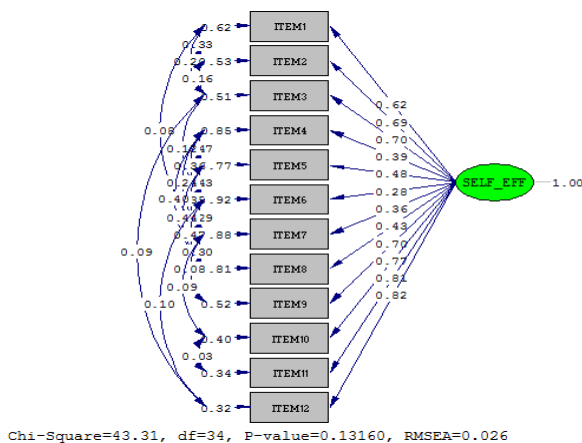


Figure 1. Model fit of the self-efficacy scale

After the model fit was obtained, the next step was to see the significance of the item's

validity. All items on the self-efficacy scale were valid, this can be seen from the positive charge coefficient value, and the T-value was more than 1.96, so it could be said to be valid.

SRL Validity Test

The validity test of the self-regulated learning scale was carried out to test whether the 24 items in this scale were uni dimensional, meaning they only measure one variable, namely self-regulated learning. The validity of this scale was tested using the confirmatory factor analysis method, confirmatory factor analysis (CFA), which was tested using Lisrel 8.80 software. The first analysis using Lisrel 8.80 software obtained a Chi-square value = 2103, P-value = 0.000, and RMSEA = 0.134. Therefore, by looking at the P-value smaller than 0.05 and the RMSEA greater than 0.05, it was concluded that the model was not fit.

Modifications were made to free the measurement error of each item to be correlated with each other. After 110 modifications were made, the Chi-square value was 157, df = 133, P-value = 0.069, and RMSEA = 0.021. Judging from the P-value greater than 0.05 and the RMSEA value less than 0.05, it could be concluded that the model was a fit, as shown in the following figure:

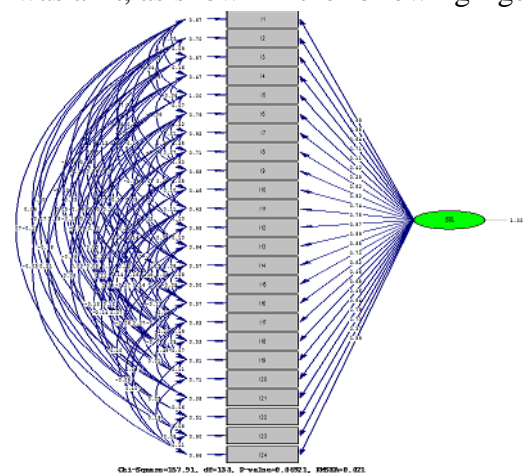


Figure 2. Model fit of the self-regulated learning scale

After the model fit was obtained, the next step is to see the significance of the item's validity. All items on the self-efficacy scale were valid, this can be seen from the positive

charge coefficient value, and the T-value was more than 1.96, so it can be said to be valid.

Description of Research Data

The results of the description of research data using the level of categorization of research variables based on empirical scores (mean and standard deviation) can be seen in the table below:

Table 1
Description of Research Data

Varia bel	N	Me an	Med ian	Std dev iasi	Min	Max
SE	41 0	49, 9	49,8	9,4	18,3 7	64,8 0
SRL	41 0	50	50	9,5	8,24	68,7

Categorization

In this study, at the level of self-efficacy for students, 65 or 15.9% had 'low' self-efficacy, 266 or 64.9% had 'moderate' self-efficacy and 79 or 19.3% was included in the category of 'high' self-efficacy, as shown in the following table:

Table 2
Categorization of Self-efficacy

Score	Categoriza tion	F	Percentage
$\leq x$ 59,3	High	79	19,3%
$40,5 \leq X < 59,3$	Medium	266	64,9%
$X < 40,5$	Low	65	15,9%
Total		410	100%

In addition, the level of self-regulated learning of students was average. However, 169 or 41.2% is in a 'low' category, 172 or 42% is in 'medium' category, and as many as 69 or 16.8% is included in 'high' category for students, as shown in the following table.

Table 3
Categorization of self-regulated learning

Score	Categorization	F	Percentage
$\leq x$ 59,5	High	169	16,8%
$40,5 \leq X < 59,5$	Medium	172	42%
$X < 40,5$	Low	169	41,2%
Total		410	100%

Assumption Test

The assumption or prerequisite test is carried out before the Pearson's Product Moment correlation analysis test is carried out with the intention that the conclusion does not deviate from the actual truth. The assumption test consists of a normality test and a linearity test.

Normality test

This test was conducted to determine the normality of the distribution of items in the study. The technique used for the normality test in this study was the Kolmogorov-Smirnov technique. If the p-value > 0.05 , the data distribution is declared normal in this technique. On the other hand, if the p-value < 0.05 , the data distribution is declared abnormal. The results of the normality test in this study on the variables of happiness and gratitude are shown in the following table:

Table 3
Normality test results

One-Sample Kolmogorov- Smirnov	Keterangan
0.143	Normal

Linearity Test

This test is used to determine whether or not there is a significant linear relationship between the two variables. The linearity test was carried out with a test for linearity at a significance level of 0.05. If Deviation from Linearity > 0.05 , the two variables are declared

to have a linear relationship. If the significance value is < 0.05 , the two variables are considered to have a linear relationship (Alhamdu, 2016). The results of the linearity test on the variables of gratitude and happiness can be seen in the table below:

Table 4
Linearity test results

F	sig	Keterangan
1,97	0.01	Linier

Based on the significant value, the deviation from linearity was 1.97. It means that the significance value was 'larger' than 0.05. Therefore, it can be concluded that the relationship between self-efficacy and self-regulated learning variables was linear ($1.97 > 0.05$). In this way, the linearity assumption test was fulfilled.

Hypothesis testing

Hypothesis testing in this study uses Pearson's product-moment correlation analysis technique. This hypothesis test aims to determine the relationship between variable X (self-efficacy) and variable Y (self-regulated learning). Hypothesis testing between the two variables can be seen in the following table:

Table 5
Hypothesis test results

R	R Square	Adjusted R	Std. error of the Estimate
0.466	0.217	0.001	Significant

Based on the results of hypothesis testing, it is known that the R square test of the self-efficacy variable on self-regulated learning was 0.217. Therefore, these results indicated that 21.7% of self-efficacy affected self-regulated learning variables. These results showed a relationship between self-efficacy and self-regulated learning in students at State Islamic University Raden Fatah Palembang. Thus the results of the study showed that there was a positive relationship between self-

efficacy and self-regulated learning. If the equivalent value of one increases, then the value of the other variable will also increase.

DISCUSSION

In this study, the independent variable is self-efficacy and the dependent variable is self-regulated learning. The aim of this research was to see the effect of self-efficacy on self-regulated learning in students during online learning. The ability to self regulate learning which refers to thoughts, feelings, and behaviors that are self-generated and oriented towards achieving goals, requires the ability to have self-confidence. Self-efficacy is an internal factor that influences one's self so that self-regulated learning (SRL) develops in managing, regulating the process of changing learning from offline to online (Khalidun et al., 2021).

With the ability of self-efficacy, it's easier for students to solve problems or assignments. High self-efficacy abilities will focus more on finding solutions to problems than thinking about the deficiencies that exist in them. Based on the research results from Ulfatun et al. (2021) showed that high self-efficacy correlated with the level of self-regulated learning among students during the Covid-19 pandemic. The higher the ability of self-efficacy, the higher the level of self-regulated learning (SRL) of the student will be (Wijaya et al., 2020b).

Self-regulated learning is carried out by students in an online learning, namely environmental management, goal setting, time management, seeking help, task strategies, and self-evaluation (Barnard et al., 2009). In structuring the environment students choose the right location to avoid noise, look for or choose the time with the least distraction and know a comfortable and efficient place to study online. Setting student goals in an online learning is done by setting goal standards, setting GPA standards above 3.0, making long-

term goals and making lists of achievement targets for online lectures. In addition, students also carry out task strategies in the form of taking careful notes during online lectures, reading lecture instructions, preparing questions and reading a lot during online lectures.

Time management is structured by setting specific time allocations for online learning, making daily and weekly schedules and trying to study every day. With self-regulated learning it does not mean that students do not need the help of others, but with self-regulated learning students know the right help. As the results of this study, students find the right person to consult, try to get help from lecturers through online media, and share problems with classmates online to find solutions. Furthermore, self-evaluation, during the online learning period, forms of self-evaluation carried out by students include summarizing online learning material, asking themselves about material understanding and communicating with classmates to find out differences in understanding in online learning.

The average student self-efficacy during online learning is in the medium category. Self efficacy consists of three dimensions, namely initiative, effort, and persistence (Bosscher & Smit, 1998). The form of student initiative during online learning is to keep learning and not give up studying online lecture material that looks complicated. Furthermore, the effort made by students is to make plans to complete online lecture assignments, continue to try to understand material that is not yet understood, even though online lectures are unpleasant, students continue to take part in online lectures and immediately carry out assignments given by the teacher, and for students failure only makes them try even harder. Persistence is individual's persistence in facing difficulties, during the online learning period students try

persistently. This can be seen where students are able to overcome existing problems, are able to handle unexpected problems and are confident in being able to complete online lecture assignments.

CONCLUSION

From the results of this study it was found that there was a significant relationship between self-efficacy and self-regulated learning in students of State Islamic University Raden Fatah Palembang. Pearson's Product Moment Correlation obtained a significance level of 0.001 ($p < 0.05$). Based on these results, the hypothesis in this study was accepted, 21.7% of self-efficacy affected self-regulated learning variables. So there was a significant positive effect between self-efficacy and self-regulated learning on students at State Islamic University Raden Fatah Palembang. Thus, the higher the self-efficacy, the higher the level of self-regulated learning will be. On the other hand, if the individual has a low level of self-efficacy, the lower level of self-regulated learning will occur.

BIBLIOGRAPHY

- Abtokhi, A., Jatmiko, B., & Wasis, W. (2021). Problem-Solving Skills In Online Basic Physics Learning. *Journal of Technology and Science Education*, 11(2), 541–555.
- Annur, M. F. (2020). Analisis Kesulitan Mahasiswa Pendidikan Matematika. *Jurnal Kajian, Penelitian Dan Pengembangan Pendidikan*, 11(2), 195–201.
- Argaheni. (2020). Sistematis Review : Dampak Perkuliahan Daring Saat Pandemi Covid-19 Terhadap Mahasiswa Indonesia. A Systematic Review : The Impact of Online Lectures during the COVID-19 Pandemic Against Indonesian Students. *Placentum*, 8(2).
- Bandura, A. (1989). Human Agency in Social

- Cognitive Theory. *American Psychologist*, 1175–1184. <https://www.uky.edu/~eushe2/Bandura/Bandura1989AP.pdf>
- Barnard, L., Lan, W. Y., To, Y. M., Paton, V. O., & Lai, S. L. (2009). Measuring self-regulation in online and blended learning environments. *Internet and Higher Education*, 12(1), 1–6. <https://doi.org/10.1016/j.iheduc.2008.10.005>
- Bosscher, R. J., & Smit, J. H. (1998). *Conformatory factor analysis of the General Self-Efficacy Scale*. 36, 339–343.
- Cai, R., Wang, Q., Xu, J., & Zhou, L. (2020). *Effectiveness of Students' Self-Regulated Learning during the COVID-19 Pandemic*. 175–182. <https://doi.org/10.15354/si.20.ar011>. Author
- Chalachew, A. A. (2018). Factors and Influences of Self-Regulation Learning among Sport Science Undergraduate Students in Ethiopian Universities. *The International Journal Research Publication's - Research Journal of Social Science and Management (RJSSM)*, 8(7), 72–82. <https://www.researchgate.net/publication/332875160>
- Cigdem, S., & Esra, B. (2019). *Group efficacy as a moderator on the associations between perceived discrimination , acculturation orientations , and psychological well-being*. May, 1–14. <https://doi.org/10.1002/casp.2421>
- Dasan, N., Mahadzir, M., Mohamed, R., & Ismail, M. N. (2020). *Self-Regulation and Online Sexual Behavior Among University Students*. 5(12), 250–256.
- Fit, C., Gonz, M., Madurga, S., Fuguet, E., & Costa, A. M. (2023). *Problem-Based Learning in Graduate and Undergraduate Chemistry Courses: Face-to-Face and Online Experiences*. <https://doi.org/10.1021/acs.jchemed.2c00741>
- Jatisunda, M. G., Salim Nahdi, D., & Suciawati, V. (2020). Virtual Class During COVID 19: A Self-Regulated Learning Study Of Mathematics Pre-Service Teacher. *International Journal on Emerging Mathematics Education*, 4(2), 81. <https://doi.org/10.12928/ijeme.v4i2.16671>
- Khaldun Hamdan, Ahmad M Al-Bashaireh, Zainab zahra, A. A.-D. (2021). University students' interaction, internet self efficacy, self regulation and satisfaction with online education during pandemic crises of covid-19 (SARS-CoV-2). *International Journal of Educational Management*. <https://doi.org/10.1108/IJEM-11-2020-0513>
- Kristiyani. (2016). *Self-Regulated Learning*. Sanata Dharma University Press anggota APPTI (Asosiasi Penerbit Perguruan Tinggi Indonesia).
- Leutwyler, B. (2009). *Metacognitive learning strategies : differential development patterns in high school*. 111–123. <https://doi.org/10.1007/s11409-009-9037-5>
- Mahmud & German. (2021). *Online Self-Regulated Learning Strategies Amid A Global Pandemic : Insights From Indonesian University Students*. 2(2), 45–68.
- Mou, T. (2021). *Online learning in the time of the COVID-19 crisis : Implications for the self-regulated learning of university design students*. 1, 1–21. <https://doi.org/10.1177/14697874211051226>
- Nursidiq. (2020). Hubungan Regulasi Diri Dengan Kecemasan Menghadapi Ujian Skripsi Pada Mahasiswa Program Studi Pendidikan Ekonomi Universitas

Muhammadiyah Purworejo Cahyana. *E-Jurnal Unipma*.

Sahu, P. (2020). Closure of Universities Due to Coronavirus Disease 2019 (COVID-19): Impact on Education and Mental Health of Students and Academic Staff. *Cureus*, 2019(4).

<https://doi.org/10.7759/cureus.7541>

Sintema, E. J. (2020). Effect of COVID-19 on the performance of grade 12 students: Implications for STEM education. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(7), 1–6. <https://doi.org/10.29333/EJMSTE/7893>

Sugiono. (2012). *metode penelitian kuantitatif, kualitatif, dan R&D*. Bandung: Alfabeta.

Sun, T., & Wang, C. (2020). *College students' writing self-efficacy and writing self-regulated learning strategies in learning English as a foreign language*. <https://doi.org/10.1016/j.system.2020.102221>

Syefrinando, B., Daryanto, M., Salma, H., Negeri, I., Thaha, S., Jambi, S., Islam, U., Sultan, N., Saifudin, T., Artikel, I., Islam, U., Sultan, N., & Saifudin, T. (2020). *Pengaturan diri dan motivasi siswa dalam belajar IPA 1,5[. 4, 865–873*. <https://doi.org/10.11591/ijere.v9i4.20657>

Ulfatun, T., Septiyanti, F., & Lesmana, A. G. (2021). *University Students' Online Learning Self-efficacy and Self-regulated Learning during the COVID-19 Pandemic*. 11(12). <https://doi.org/10.18178/ijiet.2021.11.12.1570>

Wijaya, T. T., Ying, Z., & Suan, L. (2020a). *Jurnal basicedu*. 4(3). <https://doi.org/10.31004/basicedu.v4i3.422>

Wijaya, T. T., Ying, Z., & Suan, L. (2020b). *Jurnal basicedu*. 4(3), 725–732. <https://doi.org/10.31004/basicedu.v4i3.422>

Zimmerman, B. J. (1989). A Social Cognitive

View of Self-Regulated Academic Learning. *Journal of Educational Psychology*, 81(3), 329–339. <https://doi.org/10.1037/0022-0663.81.3.329>