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Learning Motivation and Authoritative Parenting for Self-Regulated Learning: The Mediation of Self-Efficacy

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ABSTRAK

Self-regulated learning merupakan salah satu faktor yang dapat menentukan keberhasilan pembelajaran dalam penerapan pembelajaran daring di masa pandemi COVID-19. Namun, peneliti belum membahas secara mendalam faktor pembelajaran individu (motivasi belajar dan efikasi diri) dan pengaruh sosial (pengasuhan otoritatif) yang dapat mengembangkan keterampilan belajar mandiri siswa. Penelitian ini bertujuan untuk menganalisis pengaruh motivasi belajar dan pola asuh otoritatif terhadap self-regulated learning melalui self-efficacy sebagai mediator. Penelitian ini menggunakan pendekatan kuantitatif, dengan jumlah responden sebanyak 310 siswa kelas XI IPS SMA. Responden dipilih berdasarkan teknik proporsional random sampling. Data dianalisis menggunakan regresi berganda dengan SPSS 22. Hasil penelitian menunjukkan bahwa self-efficacy secara parsial memediasi pengaruh motivasi belajar dan pola asuh otoritatif terhadap self-regulated learning. Hasil penelitian ini memberikan pengembangan teori dan memudahkan lembaga pendidikan, kepala sekolah, guru, siswa, dan orang tua untuk memperoleh informasi terkait self-regulated learning selama pandemi COVID-19.

ABSTRACT

Self-regulated learning was one of the factors that can determine the success of learning in the application of online learning during the COVID-19 pandemic. However, researchers have not thoroughly discussed the factors of individual learning (learning motivation and self-efficacy) and social influences (authoritative parenting) that can develop students' self-regulated learning skills. This study aims to analyze the effect of learning motivation and authoritative parenting on self-regulated learning through self-efficacy as a mediator. This study used a quantitative approach, and the number of respondents was 310 students of class XI Social Science High School. Respondents were selected based on the proportional random sampling technique. Data were analyzed using multiple regression with SPSS 22. The results showed that self-efficacy partially mediated the effect of learning motivation and authoritative parenting on self-regulated learning. The results of this study provide theoretical development and make it easier for educational institutions, school principals, teachers, students, and parents to obtain information related to self-regulated learning during the COVID-19 pandemic.

1. INTRODUCTION

The COVID-19 pandemic has brought rapid and comprehensive changes to various aspects of human life, one of which is self-regulated learning in the world of education. (Bestiantono et al., 2020; Carter Jr et al., 2020; Indartono et al., 2020) Student self-regulated learning is increasing in line with the Indonesian Ministry of Education and Culture policy, which changes conventional learning methods to online (Sangsawang, 2020; Sulisworo et al., 2020). Students who study online from home must overcome learning barriers by focusing on their learning goals, help themselves by not depending on others, and evaluate their learning (Abidah et al., 2020; Hadwin et al., 2022; Wong et al., 2019). So, self-regulated learning becomes one of the factors that determine the success of online learning during the COVID-19 pandemic. Self-regulated learning is a learning strategy students use to achieve their learning objectives, namely obtaining information or skills. Self-regulated learning strategies include goal setting, environmental management, self-consequences, and self-evaluation. For example, students who reported having high self-regulated learning tended to manage their study time, seek help from information, and

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conduct self-evaluations, which have been shown to have better learning outcomes (Roick & Ringeisen, 2018; Zimmerman, 2015). Meanwhile, students who are reported to have low self-regulated learning will procrastinate, experience a decrease in learning achievement, and others can experience detrimental to their learning activities (Amani et al., 2020; El-Adl & Alkharusi, 2020; Pelikan et al., 2021). Researchers have widely discussed the importance of self-regulated learning skills that students should possess in their learning (Alnafea, T., & Curtis, 2017; Cai, R., Wang, Q., Xu, J., & Zhou, 2020; S. Y. Chen & Liu, 2020).

However, these studies have not fully discussed the learning factors that can develop students' self-regulated learning skills. Several researchers explain that factors of individual learning (such as learning motivation and self-efficacy) are positively related to self-regulated learning (Alhadabi et al., 2019; Panadero, 2017). However, it is essential to determine social influences, especially during the online learning period due to the COVID-19 pandemic. The results of several studies have found that the role of parents in children's learning during online learning is very much needed. Authoritative parenting style is a social influence factor that students need to support their self-regulated learning (Fadillah et al., 2020; Uka & Uka, 2020). The findings of these researchers follow the theory of triadic reciprocality. In the triadic reciprocality, three factors influence self-regulated learning: personal factors (individual cognitive), behaviour, and environmental factors (McEown & Sugita-McEown, 2019; Seroussi & Yaffe, 2020).

So, this study uses two unique self-regulated learning factors: individual learning (learning motivation and self-efficacy) and social influences (authoritative parenting). These factors can improve students' self-regulated learning skills. This study examines the direct and indirect effects of individual learning factors and social influences on self-regulated learning. Factors of individual learning studied in this study is learning motivation. Motivation is a general idea that provides energy, direction, and behavior change. Motivation provides the idea that motivation will make individuals move forward and complete their tasks. So that, learning motivation can increase students' responsibility for their learning, complete assignments on time, and complete tasks more efficiently. Another individual learning factor is self-efficacy. Self-efficacy is a person's belief about his ability to complete a task (J. H. Chen et al., 2019; Webb-Williams, 2018). Someone with high self-efficacy will be able to complete complex tasks as challenges to be mastered, not threats to be avoided. The social influences in this research are authoritative parenting. The first guidance a child gets comes from the family, especially the care of their parents. Authoritative parenting is a parent with an attitude of discussing with children but still being firm with the rules that have been determined and not limiting children with absolute limits (Amani et al., 2020; Pramudyani, 2020).

Previous research found that in social cognitive theory, there is a positive correlation between the main variables (learning motivation and self-efficacy) in developing self-regulated learning. In their findings, several researchers stated that learning motivation positively correlates with self-regulated learning (El-Adl & Alkharusi, 2020; Uka & Uka, 2020). The use of self-efficacy as a mediating variable is supported by findings that state that increased learning motivation is positively related to an increase in one's self-efficacy (Alhadabi et al., 2019; Sökmen, 2021). Furthermore, increased self-efficacy was positively related to their self-regulated learning. These findings further support the use of self-efficacy as a mediating variable on the effect of learning motivation on self-regulated learning. Previous research has also found that authoritative parenting positively correlates with self-regulated learning (Amani et al., 2020). The use of self-efficacy as a mediating variable is supported by previous research findings, which state that increased authoritative parenting is positively related to an increase in one's self-efficacy (Alnafea, T., & Curtis, 2017). Furthermore, increased self-efficacy was positively associated with their increased self-regulated learning. These findings further support the use of self-efficacy as a mediating variable. Base on the problem and those previous studies, the researcher are interesting in conducting study aimed to determine the effect of learning motivation and authoritative parenting on self-regulated learning through self-efficacy as a mediator. The presence of self-efficacy as a mediating variable that previous researchers have not studied is expected to strengthen the direct and indirect effects of learning motivation and authoritative parenting on self-regulated learning. The novelty of this study was to examine the direct and indirect effects of the unique factors of self-regulated learning. These are individual learning factors (learning motivation and self-efficacy) and social influences (authoritative parenting) on students' self-regulated learning.

2. METHOD

This study uses a quantitative method with specific focus on survey designs. The survey design was used to examine the relationship between variables in answering the questions in the hypothesis (Hair et al., 2019). Data regarding learning motivation, authoritative parenting, self-efficacy, and self-regulated learning collected through an online survey using google form. The sample of this research is the students of class XI Social Science High School in the North Tapanuli district. Determining the number

of samples based on the minimum representative sample, namely the number of samples in this study was 62 items multiplied by 5, the result was 310 students. The sample selection was based on the proportional random sampling technique. So that all sample members have the same opportunity to be the research sample with the proportion for each school.

Questionnaires were distributed to respondents via a google form. Respondents who filled out the questionnaire were respondents who voluntarily filled it out based on a pre-determined agreement. The questionnaire uses a 4-point Likert scale. The use of the 4-point Likert scale is to avoid "neutral" responses from respondents (Chyung et al., 2017). The data collection process lasts for two months. Questionnaires were distributed to 310 respondents and received back as many as 310. In data collection, the questionnaire was divided into two parts, namely the introduction and the questionnaire's statements. The first part is an introduction to the questionnaire used to obtain demographic information from respondents, such as gender, school, parents' income, and the number of study groups. Table 1 shows the results of the demographic data of 310 respondents consisting of 32% men and 68% women, and the average income of students' parents is in a low category, which is 86%.

Table 1. Respondent Demographic Data

Attribute	Classification	n (%)
Gender	Man	98 (32)
	Female	212 (68)
Parents' income (father and mother)	Low (Rp300.000-Rp2.400.000, each month)	267 (86)
	Middle (Rp2.500.000-Rp4.600.000, each month)	33 (11)
	High (Rp4.700.000-Rp7.000.000, each month)	10 (3)

The second part is a statement based on a Likert scale. The questionnaire contains 62 statements for all variables used. For example, the variable Self-regulated learning used 19 statements, learning motivation used 23 statements, authoritative parenting used 10 statements, self-efficacy used 10 statements (Buri, 1991; Hidayati & Listyani, 2010; Widoyoko, 2012). Development of the instrument used to adapt the instrument to the research subject, and the subjects studied.This study analyses the data used in multiple regression analysis with the help of SPSS version 22. Multiple regression was used to test the research hypothesis. The number of variables tested in this study was four variables, namely self-regulated learning (SRL), learning motivation (LM), authoritative parenting (AP), and self-efficacy (SE).

3. RESULT AND DISCUSSION

Result

The result of the descriptive analysis of the research variables is show in Table 2.

Table 2. The Variable Statistical Description

Variabel	N	Min	Max	Mi	SDi
Self-regulated learning	310	17	67	42	8.3
Learning motivation	310	64	18	41	7.6
Authoritative parenting	310	10	40	25	5
Self-efficacy	310	10	40	25	5

Base on Table 2, the self-regulated learning variable has a maximum value of 67, a minimum value of 17, an ideal mean of 42, and an ideal standard deviation of 8.3. The variable of learning motivation has a maximum score of 64, a minimum value of 18, an ideal mean of 41, and an ideal standard deviation of 7.6. The authoritative parenting variable has a maximum value of 40, a minimum value of 10, an ideal mean of 25, and an ideal standard deviation of 5. The self-efficacy variable obtained a maximum value of 40, a minimum value of 10, an ideal mean of 25, and the ideal standard deviation of 5. This study uses item validity to see how far the instrument can perform as a measuring tool with the help of SPSS version 22. Item validation is obtained through confirmatory factor analysis (CFA) test. The statement item is valid in measuring the construct if the loading factor is more significant than 0.5. The CFA test results obtained information from 62 statements is show in Table 3.

Table 3. Loading Factor Value (n=310)

Items	Component			
	LM	AP	SE	SRL
LM1	0.793			
LM2	0.805			

Items	Component			
	LM	**AP**	**SE**	**SRL**
LM3	0.785			
LM4	0.776			
LM5	0.804			
LM6	0.097			
LM7	0.822			
LM8	0.769			
LM9	0.795			
LM10	0.816			
LM11	0.762			
LM12	0.818			
LM13	0.779			
LM14	-0.150			
LM15	0.822			
LM16	0.766			
LM17	0.170			
LM18	0.812			
LM19	0.796			
LM20	-0.027			
LM21	0.800			
LM22	0.826			
LM23	-0.065			
AP1		0.763		
AP2		0.796		
AP3		0.825		
AP4		0.805		
AP5		0.782		
AP6		0.806		
AP7		0.792		
AP8		0.747		
AP9		0.792		
AP10		0.795		
SE1			0.766	
SE2			0.776	
SE3			0.809	
SE4			0.771	
SE5			0.811	
SE6			0.771	
SE7			0.825	
SE8			0.822	
SE9			0.808	
SE10			0.823	
SRL1				0.239
SRL2				-0.009
SRL3				0.799
SRL4				0.788
SRL5				0.810
SRL6				0.811
SRL7				0.787
SRL8				0.754
SRL9				0.753
SRL10				0.775
SRL11				0.833
SRL12				0.842
SRL13				0.811
SRL14				0.783
SRL15				0.780
SRL16				0.810

Base on Table 3 show the result that indicates seven statements failed. The dropped statement items consist of 5 statements of learning motivation and 2 of self-regulated learning. The statement item is declared void because the loading factor value is less than 0.5. Dropped items will be deleted and not used for further testing. So, the number of statements used in this study is as much as 55. The instrument used in this study does not have a solid theoretical basis, so the researcher must test the construct validity through convergent and discriminant validity. Convergent validity is obtained by looking at the average variance extracted (AVE) as show Table 4.

Table 4. Discriminant Validity Test

Variable	AVE	LM	AP	SE	SRL
Learning motivation	**0,636**	**0,636**			
Authoritative parenting	**0,625**	*0,267*	**0,625**		
Self-efficacy	**0,638**	*0,314*	*0,160*	**0,638**	
Self-regulated learning	**0,627**	*0,566*	*0,274*	*0,449*	**0,627**

Base on Table 4 show the validity value is accepted if the AVE value is equal to or greater than 0.5. All variables are declared valid with acquiring an AVE value of more than 0.5, meaning that half of the statement items can measure the variable. Then, the discriminant validity test was conducted to see how the variables differed from other variables. Discriminant validity is determined based on the AVE value of the two variables compared to the squared value of the estimated correlation between the two variables. Discriminant validity is accepted if the AVE must be greater than the estimated squared correlation. As Table 4 shows, all variables have an AVE value more significant than the estimated squared correlation so that the research instrument has met convergent validity and discriminant validity. The data that has been collected cannot be analyzed directly, but it is necessary to test the classical assumptions first. Classical assumption tests include normality, linearity, multicollinearity, and heteroscedasticity tests. Normality test using kolmogorov-smirnov with asymp.sig (2-tailed) value of 0.200, or>0.05, meaning that the variables are normally distributed. Furthermore, it is necessary to know that the data from each independent variable has a linear relationship with the dependent variable. The linearity test uses the sig deviation from linearity with the test results of all variable and dependent relationships greater than 0.05, meaning that the data is linear. Then a good regression model is shown by the absence of correlation between the independent variables, which are known through the tolerance value and the variance inflation factor (VIF) value. The test results of all variables show tolerance values>0.1 and VIF<10, meaning there is no multicollinearity. Furthermore, the heteroscedasticity test was used to determine that the variance of the variables was not the same for all observation variables. This study uses the glejser test, with the results sig>0.05, meaning there is no heteroscedasticity. After all the classical assumption tests have been met, the next step is to perform a regression to check the significance of the proposed hypothesis. The results of multiple linear regression will obtain a standard beta coefficient (β) and p-value for the significance test. Suppose the equation in the model has a positive standard beta coefficient (β). In that case, that variable increases the standard deviation of the other variables, and if the p-value is less than 0.05, it means that the significance test is passed. Meanwhile, in determining the hypothesis of the mediating effect of self-efficacy, it is determined based on the views. Partial mediation occurs if the effect of the independent variable on the dependent variable decreases but is not equal to zero when the mediator variable is included in the equation. Meanwhile, perfect mediation can occur if there is no effect of the independent variable on the dependent variable when the mediator variable is included in the equation. The results of the multiple linear analysis tests are presented in Table 5.

Table 5. Multiple Linear Regression Analysis Results

Variabel independen, mediation, and control	Self-regulated learning				
	Model 1 (β)	Model 2 (β)	Model 3 (β)	Model 4 (β)	Model 5 (β)
Gender	0.066	0.049	0.022	0.029	0.024
School	-0.032	-0.004	-0.002	-0.052	-0.016
The number of study groups	-0.088	0.012	-0.023	-0.068	0.008
Parents' income	0.321	0.132	0.201	0.127	0.059
Learning motivation		0.717			0.491
Authoritative parenting			0.464		0.120
Self-efficacy				0.627	0.329
R^2	0.118	0.585	0.312	0.469	0.672
ΔR^2	0.118	0.467	0.194	0.351	0.554

Base on Table 5 shows the results of the coefficient of determination for each variable. ΔR^2 and R^2 are sometimes called coefficients of determination, where ΔR^2 is based on R^2, which is added to the element of the independent variable, which in this study added a control variable. The value of the determinant coefficient is between zero and one. If the coefficient of determination is close to one, the independent variables provide almost all the information to predict the dependent variable. Based on Table 5, the contribution of the influence given to self-regulated learning is: control variables (gender, school, parents' income, and the number of study groups) of 0.118 (11.8%), learning motivation of 0.467 (46.7%), authoritative parenting of 0.194 (19.4%), self-efficacy of 0.351 (35.1%) and learning motivation, authoritative parenting, and self-efficacy of 0.554 (55.4%).

Discussion

This study aims to prove that the effect of learning motivation and authoritative parenting with the mediation of self-efficacy on self-regulated learning is stronger than the direct effect. For the first hypothesis, the results show a positive influence between learning motivation and self-regulated learning (Denis, 2019; Sallis et al., 2021). The positive standard beta coefficient of 0.717 ($p<0.05$) supports the first hypothesis. Thus, the first hypothesis in this study is accepted. The contribution of learning motivation to self-regulated learning is 46.7%. This study's results are consistent with previous studies, which found learning motivation related to self-regulated learning (Daumiller & Dresel, 2019; Hidayat et al., 2020). Research from previous study on the antecedents and consequences of student experience perceptions during the transition from primary to secondary school (Uka & Uka, 2020). This research has two consequences: learning motivation and self-regulated learning. Another finding is that students' self-regulated learning positively relates to learning motivation. Previous study also found that groups of students who considered themselves to have high competence in self-regulated learning were positively related to learning motivation (Pelikan et al., 2021). Students with high competence are better able to learn independently by managing their time and assignments, use metacognitive strategies more often, and have higher learning motivation than students with low competence. These findings indicate that learning motivation is positively related to self-regulated learning. However, this research has not focused on examining whether learning motivation is one of the factors that can develop students' self-regulated learning skills.

For the second hypothesis, the results show a positive influence between authoritative parenting and self-regulated learning. The second hypothesis is supported by the positive standard beta coefficient of 0.464 ($p<0.05$). So, the second hypothesis in this study is accepted. The contribution of authoritative parenting influence on self-regulated learning is 19.4%. This study's results are consistent with previous studies that found authoritative parenting to be associated with self-regulated learning (Amani et al., 2020; Newman, 2017). For the third hypothesis, the results show a positive influence between self-efficacy and self-regulated learning. The positive standard beta coefficient of 0.627 ($p <0.05$) supports the third hypothesis. So, the third hypothesis in this study is accepted. The contribution of the effect of self-efficacy on self-regulated learning is 35.1%. This study's results are consistent with previous studies that found self-efficacy related to self-regulated learning (Balapumi et al., 2016; Lai et al., 2018; Mulyana et al., 2015). Research from previous study that uses 6 consequences: cognitive learning strategies, metacognitive learning strategies, and self-efficacy. The result is that self-regulated learning (cognitive and metacognitive learning) and self-efficacy positively relate to academic performance. Another finding is that self-efficacy has a positive relationship with self-regulated learning. Increased self-efficacy will encourage students to apply more self-regulated learning strategies, such as setting goals and planning (Roick & Ringeisen, 2018). Previous research on the effectiveness of self-regulated learning, also supports these findings (Lai et al., 2018). His research found an increase in students' self-efficacy through the belief that their competence in learning would relate to their learning mechanisms. In addition, they were self-evaluated in self-regulated learning settings (time management, seeking help, and self-evaluation). These findings indicate that self-efficacy is a variable that is positively related to self-regulated learning. However, the research has yet to focus on examining whether self-efficacy is a factor that can improve students' self-regulated learning skills.

For the fourth hypothesis, the results obtained are that self-efficacy is mediating effect on learning motivation and authoritative parenting on self-regulated learning. The fourth hypothesis is supported by learning motivation, which has a positive effect on self-regulated learning with a positive standard beta coefficient of 0.491 ($p <0.05$); authoritative parenting has a positive effect on self-regulated learning with a positive standard beta coefficient of 0.120 ($p<0.05$); and self-efficacy has a positive effect on self-regulated learning with a positive standard beta coefficient of 0.329 ($p<0.05$). The effect of learning motivation on self-regulated learning with self-efficacy mediation decreased from the standard beta coefficient value of 0.717 ($p=0<05$) to 0.491 ($p<0.05$), and the influence of authoritative parenting with

self-efficacy mediation also decreased from the coefficient value. standard beta 0.464 ($p<0.05$) to 0.120 ($p<0.05$). The decrease from the standard beta coefficient value through mediating variables has proven that self-efficacy mediates learning motivation and authoritative parenting in self-regulated learning. So based on the research results obtained, this study proved that learning motivation has a stronger effect on self-regulated learning by mediating self-efficacy. The contribution of learning motivation and authoritative parenting with the mediation of self-efficacy is 55.4%.

The findings of previous research supported the use of self-efficacy as a mediating variable between learning motivation and self-regulated learning. Previous research show that learning motivation is positively related to self-efficacy (Cleary & Kitsantas, 2017; Hassankhani et al., 2015; Masud et al., 2016). For example, motivated students will consider the lesson valuable and can control their learning. This condition will increase the self-efficacy of their ability to learn. Meanwhile researches other found that self-efficacy was positively related to students' self-regulated learning (Roick & Ringeisen, 2018). For example, students who have confidence in their ability to learn to tend to be more responsible in their learning. They are more likely to use self-regulated learning strategies, such as time management strategies, to complete their learning tasks on time and more efficiently.

Previous research has widely discussed the importance of self-regulated learning skills that a student must possess in improving student learning outcomes and achievement. However, these studies have yet to fully discuss learning factors such as self-influences (learning motivation and self-efficacy) and social influences (authoritative parenting) that can develop students' self-regulated learning skills. In addition, during online learning due to the Covid-19 pandemic, self-regulated learning is required for students to study from home. Students can use self-regulated learning strategies to overcome obstacles while learning from home and achieve learning goals. So, the novelty of this study is to explore the direct and indirect effects of the unique factors of self-regulated learning, namely individual learning factors (learning motivation and self-efficacy) and social influences (authoritative parenting) on students' self-regulated learning. This study adds a self-efficacy variable to mediate between variables so that the results obtained can explore the direct and indirect effects of learning motivation and authoritative parenting on self-regulated learning. The implication of this study provides benefits for developing the theory of the influence of learning motivation, authoritative parenting, and self-efficacy on self-regulated learning. The limitation of this research is that the contribution given by the variables of learning motivation, authoritative parenting, and self-efficacy to self-regulated learning is 55.4%. This condition means that 44.6% of other factors that influence self-regulated learning of high school students in North Tapanuli Regency need to be re-examined. Further research is needed on other factors affecting students' self-regulated learning skills.

4. CONCLUSION

This study found that self-efficacy partially mediates the effect of learning motivation and authoritative parenting on self-regulated economic learning. This means that self-efficacy can strengthen the influence of learning motivation and authoritative parenting on students' self-regulated learning. In addition, the results of this study can facilitate educational institutions, school principals, teachers, students, and parents in obtaining information related to self-regulated learning during the COVID-19 pandemic. Future researchers are expected to use other variables to affect students' self-regulated learning. Future researchers are also expected to be able to explore self-regulated learning variables in other contexts by using various possible moderating variables.

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