Journal of Educational Research and Evaluation
Volume 7, Issue 1, 2023, pp. 147-158
P-ISSN: 2597-422x E-ISSN: 2549-2675
Open Access: https://doi.org/10.23887/jere.v7i1.52481

The Relationship Between Self-Regulated Learning, Family Support and Learning Motivation on Students' Learning Engagement

Septian Cahya Azhari[1*], Siti Fadjarajani[2], Ely Satiyasih Rosali[3]

[1,2,3] Department of Geography Education, Universitas Siliwangi, Tasikmalaya, Indonesia

ARTICLE INFO

Article history:
Received September 22, 2022
Revised September 24, 2022
Accepted January 20, 2023
Available online February 25, 2023

Kata Kunci :
Self-Regulated Learning, Keterlibatan Belajar Siswa, Motivasi Belajar, Dukungan Keluarga

Keywords:
Self-Regulated Learning, Students' Learning Engagement, Learning Motivation,
Family Support

ABSTRAK

Keterlibatan belajar siswa tumbuh dari kesadaran siswa akan pentingnya mengikuti proses pembelajaran, hal ini dibentuk oleh motivasi belajar, pengaturan diri, dukungan dari lingkungan keluarga maupun sekolah. Penelitian ini menganalisis hubungan antara self-regulated learning, dukungan keluarga dan motivasi belajar terhadap learning engagement siswa. Sebanyak 100 siswa kelas 12 SMA berpartisipasi untuk mengisi kuesioner dalam penelitian ini. Structural Equation Modeling Partial Least Square (SEM-PLS) digunakan sebagai alat untuk menganalisis hubungan yang kompleks dari variabel-variabel tersebut. Analisis reflektif variabel digunakan untuk mengeksplorasi secara statistik hubungan antar variabel. Nilai P antar variabel secara signifikan menunjukkan adanya hubungan antara FS ->LM (0,006), LM->LE (0,000), SRL->LE (0,006), dan SRL->LM (0,000). Berdasarkan hasil penelitian ini, (1) dukungan orang tua dan guru berperan penting dalam membentuk motivasi belajar siswa, (2) kemandirian belajar siswa dibentuk oleh lingkungan belajar siswa dan kesadaran siswa itu sendiri, dan (3) keterlibatan belajar dipengaruhi oleh SRL, dukungan keluarga dan motivasi internal siswa. Diharapkan hasil penelitian ini dapat membantu orang tua dan guru untuk menciptakan lingkungan belajar yang kondusif bagi siswa baik di rumah maupun di sekolah.

ABSTRACT

Students' learning engagement grows from students' awareness of the importance of participating in the learning process, this is shaped by learning motivation, self-regulation, support from the family environment as well as the school. This study analyze the relationship between self-regulated learning, family support and learning motivation to students' learning engagement. A total of 100 of 12 grade students at senior high school participated to fill out the questionnaire in this study. Structural equation modeling partial least square (SEM-PLS) is used as a tool to analyze the complex relationships of these variables. Reflective analysis of variables is used to statistically explore the relationships between variables. The P values between variables significantly indicate that there is a relationship between FS ->LM (0.006), LM->LE (0.000), SRL->LE (0.006), and SRL->LM (0.000). Based on the results of this study,: (1) parental and teacher support has an important role in shaping student learning motivation, (2) student self-regulated learning is formed by the student's learning environment and students' own awareness, and (3) learning engagement is influenced by SRL, family support and student internal motivation. It is hoped that the results of this study can help parents and teachers to create a conducive learning environment for students both at home and at school.

1. INTRODUCTION

The participation of students in the learning process shows their level of attention to understanding and exploring their curiosity towards the subject being explained by the teacher. To achieve optimal learning goals, integration between parents, teachers and students is needed, where teachers as educators are required to understand the conditions and psychology of their students (Chandra, 2015; Chauhan, 2011; Soodla et al., 2017). In some literature on educational psychology articles, the learning activities of students in carrying out learning at school are influenced by several internal and external factors. Internal factors include internal motivation, self-regulated learning and external factors include family support and the learning environment of learners (Pertiwi, D & Sudarsono, A, 2015; Ramli et al., 2018). Self-regulated learning is a core component to know the cognitive, motivational and emotional of students. Social psychology experts as well as cognitive psychologists explain that to be a

*Corresponding author.
E-mail addresses: septian88@gmail.com (Septian Cahya Azhari)

truly effective learner then students must have self-regulating activities. In addition, it is not only regulating their behavior but must regulate their mental processes (Rokhman et al., 2019; Santoso et al., 2014). In particular, self-regulated learning includes several processes that are metacognitive. Among the metacognitive processes of self-regulated learning is about setting learning goals that regulate themselves to realize what they want to achieve when reading books, doing assignments, doing exams or when doing learning (Assagaf, 2016; Isnaeni et al., 2018). In carrying out learning activities they will learn specific things, gain a broad conceptual understanding of a topic, or only gain enough knowledge to be able to do exam questions in class and they always relate all their learning activities to achieve their goals in the future.

Learners who have self-regulated learning know and apply how they use the time and resources available to carry out learning activities. Learners who regulate themselves generally have high self-efficacy that allows them to complete a learning task successfully (Egok, 2016; Julaecha & Baist, 2019). In addition, they have many strategies in learning to stay focused and do tasks with fun, including they always reward themselves for the achievements they make. Self-regulating learners will seek to focus their attention on the learning they are doing and remove from their minds about things that interfere with their focus while learning is taking place (El-Adl & Alkharusi, 2020; Gambo & Shakir, 2021). Students who have self-regulation will also have flexible learning strategies to achieve their learning goals. Next is self-monitoring, learners who manage themselves always to monitor and evaluate themselves regarding the achievements that have been made, besides that they will make future projections regarding strategies for correcting errors that have occurred (Balashov et al., 2021; Panadero et al., 2016). Some learners will also change and modify their learning strategies if needed, which is a step towards achieving their goals or goals in the future. Students who have self-regulation cannot solve their own problems, therefore they will look for friends to solve problems encountered in the learning process together.

In addition to self-regulated learning, family support provides enthusiasm and motivation for learning to students. Among the forms of family support that are expected to be received by learners are support that is emotional, instrumental, judgment or reward and informational support (Laka et al., 2020; Šimunović & Babarović, 2020). The formation of learning motivation will directly affect the learning activities of students. Learning activities are all forms of learning activities that can increase knowledge, affective and function psychomotor students (Emda, 2017; Widiani & Istiqomah, 2021). In experimental research conducted by previous study from the College of the Holy Cross as well as from several researchers from Harvard University and the University of Washington, they conducted a study of 84 low-income parents in North Carolina, the results showed that parents directly provide education to their children so that they are able to have positive reading skills, motivation and study habits (Capotosto et al., 2017). In addition, parents actively support the progress of their children towards the development of independent reading skills.

During the virtual teaching period, children carry out their learning activities at home without direct supervision from their teachers. Thus, this is the biggest challenge in the field of education, students do not yet have a strong self-regulating of their learning activities which causes them not to carry out independent learning activities effectively (Ozer & Akçayoğlu, 2021; Rahim, 2022). In addition, the reason why students experience a decrease in learning quality/learning intensity may be influenced by their internal and external motivations (Aya Pastrana & Sriramesh, 2014; Herbert & Bragg, 2021). Rebuilding their learning mentality after the impact of virtual learning is very important to do to produce superior next generations through the field of education. Some of the obstacles that are often encountered are the lack of student participation in the learning process, this causes the transfer of knowledge from teachers to students is not optimal. The studies that have been carried out include researchers in the field of educational psychology such as study which examines the influence of parental parenting on self-regulated learning (Fuentes et al., 2019). Study assessing the role of self-regulated learning, learning motivation and task delays on the development of student learning competencies (Pelikan et al., 2021). Study researching learning engagement, motivation and academic performance of students (Bayoumy & Alsayed, 2021). Previous study that researching students' learning engagement during the COVID-19 Pandemic (Zhao et al., 2021). Previous research that researching on self-learning predicting engagement in online learning (Sun et al., 2022). Previous research that researching the mediation effect of student online learning engagement and the moderation effect of teacher emotional support (Wang, 2022). Then study that examines the influence of affective feedback adaptive learning systems on learning engagement and independent learning (Liu et al., 2021).

Previous research has explored the relationship between family supports to student learning engagement during virtual learning (Gao et al., 2021). However, among the studies that have been carried out, there has not been an in-depth discussion, so it is necessary to develop research by including aspects of the student's internal environment in the form of learning motivation, self-regulated learning and

family support as the student's external environment for student participation in the learning process. By conducting this study it will be possible to analyze three main factors that cause student participation in the learning process to be high or low, namely SRL, student motivation and family environment.

2. METHODS

This research uses a quantitative approach with survey methods. This type of research is a correlation study that aims to determine the relationship between the variables of self-regulated learning, family support and learning motivation to student's learning engagement. The research gauge used a five-point likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5). The data collection technique uses an online questionnaire questionnaire questionnaire instrument through a google form and then the filling link is spread in the whatsapp group. To measure latent variables, use indicators consisting of 10 indicators from each latent variable which will later be selected during the statistical calculation process. This research was conducted in April 2022 with class XI social studies students at SMAN 9 Tasikmalaya City, West Java. There are four social studies classes that are used as research objects, as many as 100 students were selected by proportional random sampling to fill out the research questionnaire online through the google form. The survey is conducted in three stages, the first stage is to introduce the objectives of this study to students as well as ensure the confidentiality of their answers. In the second part, students are asked to evaluate the questions in the questionnaire. In the third part, students are asked to fill out the questions in the questionnaire honestly according to the conditions they have or are feeling.

The data obtained from the questionnaire is in the form of an ordinal, so it needs to be converted to intervals to minimize statistical miscalculations. Data analysis techniques use Structural Equation Modeling Partial Least Square (SEM-PLS) (Sarstedt et al., 2016). SEM-PLS is a variance-based SEM so that this model is able to analyze models with reflective and formative constructs, so as to issue minimal restrictions on measurement scale, sample size and residual distribution. Data analysis using SmartPLS v.3.3.9 software which is an application developed by the Institute of Operations Management and Organizations (School of Business), University of Hamburg, Germany which functions to calculate structural equation models (SEM). Variance-based SEM is used to develop theories on exploratory research, the focus of exploratory research is to explain the variance of non-free changers with existing datasets, so that this method is appropriately applied to this study that has complex variables. The PLS algorithm calculation uses a weighting scheme "path" then maximum iterations 300 and stop criterion 7. The calculation technique uses bootstrapping using subsamples "5000" with complete bootstrapping, then the confidence interval method uses bias-corrected and accelerated (Bca) bootstrap and test type two tailed with a significance level value of 0.05. In this study, this idea implies that the level of SRL, Family Support can be positively correlated to increase student learning motivation which has implications for learning engagement. Therefore, the hypothesize is show in Figure 1.

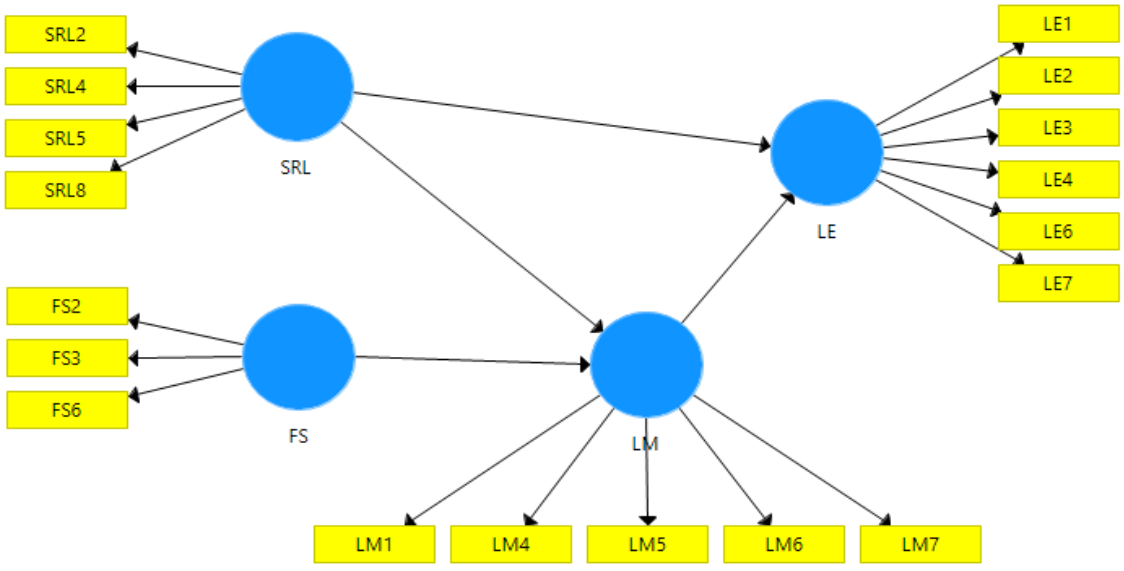

Figure 1. Research Model

3. RESULT AND DISCUSSION

Results

The relationship between self-regulated learning, family support and learning motivation to student learning activities based on the results of analysis using structural equation modeling partial least square (SEM-PLS) shows a significant relationship (see figure 2.) the value of p values family support to learning motivation 0.006, learning motivation to learning engagement 0.000, self-regulated learning to learning engagement 0.006 and self-regulated learning to learning motivation 0.000. Research result design is show in Figure 2.

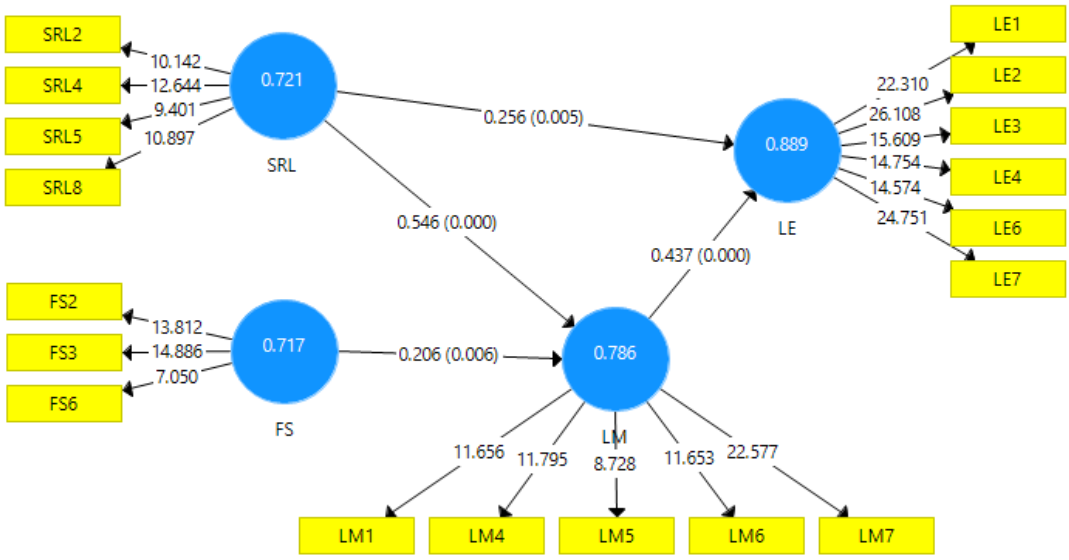

Figure 2. Research result design

Figure 2 shows the relationship between exogenous variables to endogenous and mediation to endogenous. The type of latent variable used in this study is a latent variable with reflective indicators. Latent SLR changers have SLR2, SLR4, SLR5 and SLR 8 indicators. The latent variable FS has indicators FS2, FS3 and FS 6. The latent variable LM has indicators LM1, LM4, LM5, LM6 and LM7. La latent variable have indicators LE1, LE2, LE3, LE4, LE6 and LE7. The inner model values show path coefficients and P Values SRL to LE 0.256 (0.005), SRL to LM 0.546 (0.000), FS to LM 0.206 (0.006), and LM to LE 0.437 (0.000). The outer model values show T values SRL2 10,142, SRL4 12,644, SRL5 9,401, SRL8 10,897, FS2 values 13,812, FS3 14,886, FS6 7,050, LM1 values 11,656, LM4 11,795, LM5 8,728, LM6 11,653, LM7 22,577 and LE1 values 22,310, LE2 26,108, LE3 15,609, LE4 14,754, LE6 14,574, and LE7 24,751, and LE7 24,751.

Hypothesis Test

This study verifies the structural hypothesis of the proposed model. Test the hypothesis using bootstrapping to include 500 subsamples. The results showed that SRL on Learning Engagement (H1) was positively related (β = 0.256, pV 0.005), SRL had a positive effect with learning motivation (H2) (β = 0.546, pV 0.000), family support had a positive effect on learning motivation (H3) (β = 0.206, pV 0.006), and learning motivation had a positive effect on student learning engagement (H4) (β = 0.437, pV 0.000). Furthermore, to see the results of validity and reliability of the data shown based on the values of outer loadings, constructs reliability and validity, discriminant validity, average variance extracted (AVE) and path coefficients presented in Table 1.

Table 1. Outer loadings

Indicator	Family Support	Learning Engagement	Learning Motivation	Self-Regulated Learning
LE1		0.829		
LE2		0.844		
LE3		0.797		

Indicator	Family Support	Learning Engagement	Learning Motivation	Self-Regulated Learning	
LE4		0.775			
LE6		0.722			
LE7		0.834			
FS2	0.826				
FS3	0.832				
FS6	0.724				
LM1			0.724		
LM4			0.730		
LM5			0.664		
LM6			0.732		
LM7			0.805		
SRL2				0.715	
SRL4				0.743	
SRL5					0.747
SRL8					0.745

Base on Table 1, show in the SEM-PLS analysis there is a validity of convergence at the indicator level called the reliability of indicators or outer loadings. The validity of convergence at the latent change level is called internal consistency or composite reliability. Furthermore, the way to find out the validity of convergence at the latent change rate is with the coefficient of Cronbach's Alpha. The data processing results show that the value of the outer loadings is above 0.6 so that it meets the data validity requirements. Construct Reliability and Validity is show in Table 2.

Table. 2 Construct Reliability and Validity

Matrix	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted (AVE)
Family Support	0.717	0.747	0.838	0.633
Learning Engagement	0.889	0.896	0.915	0.642
Learning Motivation	0.786	0.802	0.852	0.536
Self-Regulated Learning	0.721	0.722	0.827	0.544

Base on Table 2, the validity of convergence at the latent change level can be known from its internal consistency value. As a comparison of internal consistency, it can be seen the value of Cronbach's Alpha. Cronbach's Alpha value at family support is 0.717, learning engagement is 0.889, learning motivation is 0.786, and self-regulated learning is 0.721. Data reliability has been met, where the value of Cronbach's Alpha exceeds the limit of 0.7, as well as AVE values above 0.50 so that it satisfies convergent validity, while for discriminant validity, it can be seen in Table 3.

Table. 3 Discriminant Validity

Variable	Familly Support	Learning Activity	Learning Motivation	Self-Regulated Learning
Familly Support	**0.796**			
Learning Engagement	0.208	**0.801**		
Learning Motivation	0.417	0.597	**0.732**	
Self Regulated Learning	0.386	0.529	0.626	**0.738**

The validity of discriminants needs to be tested at the level of indicators and the degree of change. At the indicator level, the validity of discriminants can be seen from the cross loading of each indicator against the changer which should be measured against other changes. The validity of the changer level was tested by looking at the Fornell-Larcker criterion, which is a way of comparing the AVE value root of a changer with the multiplier's correlation with all other changers, that is, the value of the AVE root has the largest value compared to the correlation value to other changers. Table 3 shows that the value of the

discriminant validity of each variable has a greater value compared to other values in the same row, this shows that the discriminant validity at the indicator level is met. Avarage variance extracted is show in Table 4. Then specific indirect effect is show in Table 5. Then path coefficients are show in Table 6.

Table. 4 Avarage Variance Extracted (AVE)

Variable	Original sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistic (|O/STDEV|)	P Values
Family Support	0.633	0.628	0.049	12.992	**0.000**
Learning Engagement	0.642	0.641	0.033	19.346	**0.000**
Learning Motivation	0.536	0.536	0.043	12.518	**0.000**
Self-Regulated Learning	0.544	0.544	0.048	11.349	**0.000**

Table. 5 Construct Reliability and Validity

Variable	Original sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistic (|O/STDEV|)	P Values
SRL->LM->LC	0.239	0.244	0.055	4.305	0.000
FS->LM->LC	0.090	0.093	0.036	2.469	0.014

Table. 6 Path Coefficients

Variable	Original sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistic (|O/STDEV|)	P Values
Family Support -> Learning Motivation	0.206	0.214	0.075	2.742	**0.006**
Learning Motivation -> Learning Engagement	0.437	0.437	0.089	4.900	**0.000**
Self-Regulated Learning -> Learning Engagement	0.256	0.264	0.093	2.748	**0.005**
Self-Regulated Learning -> Learning Motivation	0.546	0.556	0.065	8.428	**0.000**

Base on Table 6, family support has a significant relationship with learning motivation with an original sample value (O) of 0.206 and a P value of 0.006, learning motivation to learning engagement of the original sample value (O) of 0.437 and P values of 0.000, self-regulated learning of learning engagement of the original sample value (O) of 0.256 and P values of 0.006 and self-regulated learning of the learning motivation of the original sample value (O) of 0.546 and P values of 0.000.

Discussion

The Relationship Between Family Support and Learning Motivation

This study analyze the relationship between self-regulated learning, family support and learning motivation to student learning activities. First, the findings in this study are that there is a relationship between family support and learning motivation. One of the motivations for students' learning is in arises because they have parents who care and pay attention to them in the educational aspect. Although not all factors come from parents, the parental support factor in shaping and making their children have high learning motivation occurs a lot because of the support of their parents (Garcia-Reid et al., 2015; Kelly & Zhang, 2016; Mazurenko & Hearld, 2015). Family support includes environmental support, emotional support and ability support (Gao et al., 2021). Students strive to develop their potential through social and family environment education is a sign that they have the comfort of living with their families. In addition, family support can be in the form of parents' efforts in meeting children's needs which is supported by stable family economic conditions, this can affect the development of children's learning competencies and learning motivation. The relationship between family support and student learning motivation was analyzed using SEM-PLS analysis which presented the results of the analysis of the original sample (O) 0.206, sample mean (M) 0.214, standard deviation (STDEV) 0.075, T statistic 2.742 and p values 0.006.

Based on statistical analysis, it shows that family support has an influence on the formation of children's learning motivation, but its relationship with student learning activities, the variable of learning motivation becomes a mediating variable, meaning that not only family support as a variable that forms learning motivation but also learning motivation can be formed by itself because it has self-regulated learning as the basis for the implementation of metacognitive learning theory (Aurah, 2013; Ganda & Boruchovitch, 2018; Şen, 2016). External factors that shape learning motivation come from student environmental factors, teacher support at school, and family support. In addition, to maximize the potential of students, the relationship with the social environment must be considered only a positive social environment (Garcia-Reid et al., 2015; Mudrák et al., 2020).

Consistent with previous studies that have shown there is a link between family support and learning motivation, there was research on the relationship of teacher and parent support to student learning participation at the university level (Descals-Tomás et al., 2021). In previous studies, it used the mediating variable of student learning intentions towards their participation in the learning process. However, in this study, parental support can increase student learning motivation and then the learning motivation affects all forms of student participation activities in the learning process at school. The comparison of these two studies generally states that family environmental support plays an important role in fostering students' motivation and learning intentions so that they can actively participate in carrying out their learning at school.

As a reinforcement of learning motivation that affects student participation in the learning process in the classroom, a quality study shows that intrinsic motivation and student epistemic beliefs have a positive effect on student learning achievement (Chai et al., 2021; Gao et al., 2021). Previous studies have also found that students who have strong intrinsic motivation tend to invest their time and energy in seeking a broader and deeper understanding (Burns et al., 2019). The application of this intrinsic learning motivation, for example, in the form of constructive learning strategies.

The Relationship Between Learning Motivation and Student Learning Engagement

Second, there is a relationship between learning motivation and student learning engagement. The variable of learning motivation becomes a mediating variable between family support and student learning activities. Thus students' learning motivation can grow consciously because they have a strong internal self-drive towards the achievements they will achieve, for example, ideals. The results of statistical analysis showed a relationship between learning motivation and student learning activities with the original statistical value of the sample (O) 0.437, sample mean (M) 0.437, standard deviation (STDEV) 0.089, T statistic 4.900 and p values 0.000. Meanwhile, research conducted by previous study found that one of the factors that make students active in learning is the school curriculum (Bayoumy & Alsayed, 2021), it emphasizes that the subjects students study offer a diversity of learning opportunities that can increase student learning activities.

Some studies have different views on this subject, for example the research conducted by previous study explaining that the classroom environment is at the heart of how a student is actively involved in his learning activities (Reinke, 2019). Moreover, other studies adds that the school environment that determines creativity, collaboration, active learning, and integrative thinking is related to higher student engagement in the school (Hudson & Carrasco, 2015; Konold, T., Cornell, D., Jia, Y., & Malone, 2018). The involvement of students in the learning process becomes an important factor that can influence the learning effect. Previous study state student involvement consists of absorption, dedication and student spirit in learning activities (Ouweneel et al., 2011). The absorption dimension can interpret the student's emotional state, for example, the feeling of pleasure.

The most relevant and supportive research results of this study is the research conducted in previous studies found that student learning participation is mediated by the use of learning technology used by teachers during delivering material in class, through this, student learning motivation can grow (An, F., Yu & Xi, 2022). In addition, teacher support in schools is proven to enable student learning engagement in the classroom. Thus, previous studies provide empirical evidence that learning motivation is one of the main elements that cause students to want to participate in the learning process, as well as the results of this study which show a direct relationship between learning motivation and learning engagement (Yang et al., 2021).

The dimension of dedication interprets their sense of pride, enthusiasm, enthusiasm and courage in facing challenges when following the learning process. Furthermore, the vigor dimension describes the physical condition of students during the learning process, for example, students have persistence in learning and are not easily discouraged in facing problems (Aurah, 2013; Jong Jek Siang, & Santoso, 2016). A higher level of student engagement can be a benchmark that students have high self-regulation, master effective learning strategies and have good mental and physical health.

The Relationship Between Self-regulated Learning and Student Learning Engagement

Third, there is a relationship between self-regulated learning and learning engagement. Research conducted by previous study shows that students who have self-regulated learning are able to provide the best results in their learning activities (Jaramillo et al., 2022). In an era of very rapid technological development, it becomes an opportunity and makes it easier for students to dig up information and deepen their academic knowledge. Several studies have proven that the use of smartphones, tablets or computer applications is a means for students to explore the world's libraries (Anshari et al., 2017; Hartley et al., 2020), so that those who use smartphones wisely for the learning process are proven to be able to improve their academic achievemen (Ariel & Elishar-Malka, 2019; Dalvi-Esfahani et al., 2020). However, students who use smartphones unwisely so that they interfere with their learning activities can result in a decrease in students' cognitive power such as not paying attention to the teacher when explaining in class, less concerned about schoolwork this has an impact on low academic performance (Chen & Yan, 2016; Lepp, A., Barkley, J. E., & Karpinski, 2015).

Previous research that supports the results of this study is the research conducted that found empirical evidence that self-regulated learning can affect students' learning participation as well as their satisfaction in carrying out learning together with their teachers (Yoo & Jung, 2022). Self-regulated learning will lead students to make the best efforts in all forms of the learning process, the goal is to be able to achieve their personal goals in both academic and non-academic aspects. Recent research has subsequently found that self-regulated learning can improve student performance in learning (Adam et al., 2017). So based on the results of previous studies, the results of this study support and strengthen previous research which states that self-regulated learning can increase student learning engagement in the learning process.

The Relationship Between Self-regulated learning and Student Learning Motivation

Fourth, there is a relationship between self-regulated learning and learning motivation. Based on statistical analysis of the values of the original sample (O) 0.546, sample mean (M) 0.556, standard deviation (STDEV) 0.065, statistical T 8.428 and p values 0.000, thus showing that significantly through exploratory analysis SRL has a relationship with increasing students' intrinsic learning motivation. Consistent with the results of research that finds that distance learning allows students to improve their self-regulated learning, but there are challenges because students must be able to place high demands in organizing their learning and motivation (Pelikan et al., 2021). Self-regulated learning has an important role in student success in learning. Among the factors that cause students who have SRL to be able to carry out learning well is because they are able to actively control the learning process by setting goals that they will achieve, managing learning time, evaluating their performance, always motivating themselves and establishing social interactions to carry out collaborative learning (Adam et al., 2017; Dent, A. L., & Koenka, 2016). Self-regulated learning leads students to perform learning activities consciously and know the direction of the goal for what they are learning. In achieving this goal, motivation arises as the basis for the reason they learn. Meanwhile, other studies provide a different view, where students' learning motivation is not only influenced by SRL or extrinsic factors, but also influenced by technological factors as a medium for teachers to deliver their teaching materials (Shieh & Hsieh, 2021). The findings in this study show that it is important to maintain student self-regulated learning, at least parental support, a positive peer environment and student awareness to carry out learning activities consciously.

4. CONCLUSION

The conclusion of the findings of this study is that to make students play a role in the learning process, it is necessary to pay attention to various aspects in the internal and external environment of students. In a family environment, the family must be able to provide optimal and comprehensive support, students must maintain the quality of self-regulated learning, learning motivation as well as its metacognitive aspects. Student self-regulated learning is formed in a complex way from the student's learning environment. Parents who have closer supervision with students are expected to regularly be able to control the learning development of students, besides that comfortable and calm family environment conditions will make it easier for students to carry out learning. Family support makes a great contribution in the social and cognitive development of students so that they can develop their potential more broadly and have an attitude of independence. The role of teachers in schools is to create an interactive learning atmosphere and be able to provide attention to students. So that the integration between the family and school environment is conducive to forming and strengthening student learning motivation and in line with increasing student engagement and academic performance.

5. REFERENCES

Adam, N. L., Alzahri, F. B., Cik Soh, S., Abu Bakar, N., & Mohamad Kamal, N. A. (2017). Self-Regulated learning and online learning: A systematic review. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 143–154. https://doi.org/10.1007/978-3-319-70010-6_14.

An, F., Yu, J., & Xi, L. (2022). Relationship between perceived teacher support and learning engagement among adolescents: Mediation role of technology acceptance and learning motivation. *Frontiers in Psychology*, *13*, 992464. https://doi.org/10.3389/fpsyg.2022.992464.

Anshari, M., Almunawar, M. N., Shahrill, M., Wicaksono, D. K., & Huda, M. (2017). Smartphones usage in the classrooms: Learning aid or interference? *Education and Information Technologies*, *22*(6), 3063–3079. https://doi.org/10.1007/s10639-017-9572-7.

Ariel, Y., & Elishar-Malka, V. (2019). Learning in the smartphone era: Viewpoints and perceptions on both sides of the lectern. *Education and Information Technologies*, *24*(4), 2329–2340. https://doi.org/10.1007/s10639-019-09871-w.

Assagaf, G. (2016). Pengaruh kemandirian belajar dan regulasi diri terhadap hasil belajar matematika melalui motivasi berprestasi pada siswa kelas X SMA Negeri di Kota Ambon. *Matematika Dan Pembelajaranya*, *2*(1), 105–126. https://jurnal.iainambon.ac.id/index.php/INT/article/download/306/238.

Aurah, C. M. (2013). The Effects of Self-efficacy Beliefs and Metacognition on Academic Performance: A Mixed Method Study. *American Journal of Educational Research*, *1*(8), 334–343. https://doi.org/10.12691/education-1-8-11.

Aya Pastrana, N., & Sriramesh, K. (2014). Corporate Social Responsibility: Perceptions and practices among SMEs in Colombia. *Public Relations Review*, *40*(1), 14–24. https://doi.org/10.1016/J.PUBREV.2013.10.002.

Balashov, E., Pasicichnyk, I., & Kalamazh, R. (2021). Metacognitive awareness and academic self-regulation of hei students. *International Journal of Cognitive Research in Science, Engineering and Education*, *9*(2), 161–172. https://doi.org/10.23947/2334-8496-2021-9-2-161-172.

Bayoumy, H. M. M., & Alsayed, S. (2021). Investigating relationship of perceived learning engagement, motivation, and academic performance among nursing students: A multisite study. *Advances in Medical Education and Practice*, *12*, 351–369. https://doi.org/10.2147/AMEP.S272745.

Burns, E. C., Martin, A. J., & Collie, R. J. (2019). Examining the yields of growth feedback from science teachers and students' intrinsic valuing of science: Implications for student- and school-level science achievement. *Journal of Research in Science Teaching*, *56*(8), 1060–1082. https://doi.org/10.1002/tea.21546.

Capotosto, L., Kim, J. S., Burkhauser, M. A., Oh Park, S., Mulimbi, B., Donaldson, M., & Kingston, H. C. (2017). Family Support of Third-Grade Reading Skills, Motivation, and Habits. *AERA Open*, *3*(3), 233285841771445. https://doi.org/10.1177/2332858417714457.

Chai, C. S., Lin, P.-Y., King, R. B., & Jong, M. S.-Y. (2021). Intrinsic Motivation and Sophisticated Epistemic Beliefs Are Promising Pathways to Science Achievement: Evidence From High Achieving Regions in the East and the West. *Frontiers in Psychology*, *12*, 581193. https://doi.org/10.3389/fpsyg.2021.581193.

Chandra, R. (2015). Classroom management tools for effective teaching. *International Journal of Education and Psychology Research*, *4*(4). https://www.researchgate.net/profile/Ritu-Chandra-2/publication/313889949_Classroom_Management_for_Effective_Teaching/links/59c682e6aca272c71bc2c58c/Classroom-Management-for-Effective-Teaching.pdf.

Chauhan, M. S. (2011). Slow Learners: Their Psychology and Educational Programmes. *International Journal of Multidisciplinary Research*, *1*(8), 279–289. https://www.academia.edu/download/54854309/22_VOL_1_ISSUE8_ZEN.pdf.

Chen, Q., & Yan, Z. (2016). Does multitasking with mobile phones affect learning? A review. *Computers in Human Behavior*, *54*, 34e42-42. https://doi.org/10.1016/j.chb.2015.07.047.

Dalvi-Esfahani, M., Wai Leong, L., Ibrahim, O., & Nilashi, M. (2020). Explaining Students' Continuance Intention to Use Mobile Web 2.0 Learning and Their Perceived Learning: An Integrated Approach. *In Journal of Educational Computing Research*, *57*(8). https://doi.org/10.1177/0735633118805211.

Dent, A. L., & Koenka, A. C. (2016). The Relation Between Self-Regulated Learning and Academic Achievement Across Childhood and Adolescence: A Meta-Analysis. *Educational Psychology Review*, *28*(3), 425–474. https://doi.org/10.1007/s10648-015-9320-8.

Descals-Tomás, A., Rocabert-Beut, E., Abellán-Roselló, L., Gómez-Artiga, A., & Doménech-Betoret, F. (2021). Influence of Teacher and Family Support on University Student Motivation and Engagement. *International Journal of Environmental Research and Public Health*, *18*(5), 2606. https://doi.org/10.3390/ijerph18052606.

Egok, A. . (2016). Kemampuan Berpikir Kritis dan Kemandirian Belajar dengan Hasil Belajar Matematika. *Jurnal Pendidikan Dasar*, *7*(2), 185–198. https://core.ac.uk/download/pdf/297684592.pdf.

El-Adl, A., & Alkharusi, H. (2020). Relationships between self-regulated learning strategies, learning motivation and mathematics achievement. *Cypriot Journal of Educational Sciences*, *15*(1), 104–111. https://doi.org/10.18844/cjes.v15i1.4461.

Emda, A. (2017). Kedudukan Motivasi dalam Pembelajaran. *Lantanida Journal*, *5*(2), 93–196.

Fuentes, M. C., García-Ros, R., Pérez-González, F., & Sancerni, D. (2019). Effects of parenting styles on self-regulated learning and academic stress in Spanish adolescents. *International Journal of Environmental Research and Public Health*, *16*(15). https://doi.org/10.3390/ijerph16152778.

Gambo, Y., & Shakir, M. Z. (2021). Review on self-regulated learning in smart learning environment. *Smart Learning Environments*, *8*(1), 1–14. https://doi.org/10.1186/s40561-021-00157-8.

Ganda, D. R., & Boruchovitch, E. (2018). Promoting Self-regulated Learning of Brazilian Preservice Student Teachers: Results of an Intervention Program. *Frontiers in Education*, *3*, 1–12. https://doi.org/10.3389/feduc.2018.00005.

Gao, H., Ou, Y., Zhang, Z., Ni, M., Zhou, X., & Liao, L. (2021). The Relationship Between Family Support and e-Learning Engagement in College Students: The Mediating Role of e-Learning Normative Consciousness and Behaviors and Self-Efficacy. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.573779.

Garcia-Reid, P., Peterson, C. H., & Reid, R. J. (2015). Parent and Teacher Support Among Latino Immigrant Youth: Effects on School Engagement and School Trouble Avoidance. *Education and Urban Society*, *47*(3), 328–343. https://doi.org/10.1177/0013124513495278.

Hartley, K., Bendixen, L. D., Gianoutsos, D., & Shreve, E. (2020). The smartphone in self-regulated learning and student success: Clarifying relationships and testing an intervention. *International Journal of Educational Technology in Higher Education*, *17*(1), 1–14. https://doi.org/10.1186/s41239-020-00230-1.

Herbert, S., & Bragg, L. A. (2021). Factors in a professional learning program to support a teacher's growth in mathematical reasoning and its pedagogy. *Mathematics Education Research Journal*, *33*(3), 409–433. https://doi.org/10.1007/s13394-020-00310-5.

Hudson, K., & Carrasco, R. (2015). Researching Nursing Students' Engagement: Successful Findings for Nursing. *International Journal of Nursing & Clinical Practices*, *2*(1). https://doi.org/10.15344/2394-4978/2015/150.

Isnaeni, S., Fajriyah, L., Risky, E. S., Purwasih, R., & Hidayat, W. (2018). Analisis Kemampuan Penalaran Matematis dan Kemandirian Belajar Siswa SMP pada Materi Persamaan Garis Lurus. *Journal of Medives : Journal of Mathematics Education IKIP Veteran Semarang*, *2*(1), 107. https://doi.org/10.31331/medives.v2i1.528.

Jaramillo, A., Salinas-Cerda, J. P., & Fuentes, P. (2022). Self-Regulated Learning and Academic Performance in Chilean University Students in Virtual Mode During the Pandemic: Effect of the 4Planning App. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.890395.

Jong Jek Siang, & Santoso, H. B. (2016). Learning Motivation and Study Engagement: Do They Correlate With Gpa? An Evidence From Indonesian University. , https://doi.org/. *Researchers World : Journal of Arts, Science and Commerce*, *7*(1), 111–118. https://doi.org/10.18843/rwjasc/v7i1(1)/12.

Julaecha, S., & Baist, A. (2019). Hubungan kemandirian belajar dengan hasil belajar siswa SMK kelas XII pada pelajaran matematika. *Jurnal Analisa*, *5*(2), 103–108. https://doi.org/10.15575/ja.v5i2.4752.

Kelly, S., & Zhang, Y. (2016). Teacher Support and Engagement in Math and Science: Evidence from the High School Longitudinal Study. *The High School Journal*, *99*(2), 141–165. https://doi.org/10.1353/hsj.2016.0005.

Konold, T., Cornell, D., Jia, Y., & Malone, M. (2018). School Climate, Student Engagement, and Academic Achievement: A Latent Variable, Multilevel Multi-Informant Examination. *AERA Open*, *4*(4), 1–17. https://doi.org/10.1177/2332858418815661.

Laka, B. M., Burdam, J., & Kafiar, E. (2020). Role of Parents in Improving Geography Learning Motivation in Immanuel Agung Samofa High School. *Jurnal Inovasi Penelitian*, *1*(2), 69–74. https://doi.org/10.47492/jip.v1i2.51.

Lepp, A., Barkley, J. E., & Karpinski, A. C. (2015). The relationship between cell phone use and academic performance in a sample of U.S. college students. *SAGE Open*, *5*(1). https://doi.org/10.1177/2158244015573169.

Liu, Y., Yue, S., Hu, X., Zhu, J., Wu, Z., Wang, J., & Wu, Y. (2021). Associations between feelings/behaviors during COVID-19 pandemic lockdown and depression/anxiety after lockdown in a sample of Chinese children and adolescents. *Journal of Affective Disorders*, *284*, 98–103. https://doi.org/10.1016/j.jad.2021.02.001.

Mazurenko, O., & Hearld, L. R. (2015). Environmental factors associated with physicians engagement in communication activities. *Health Care Management Review*, *40*(1), 79–89. https://doi.org/10.1097/HMR.0000000000000003.

Mudrák, J., Zábrodská, K., & Takács, L. (2020). Systemic Approach to the Development of Reading Literacy: Family Resources, School Grades, and Reading Motivation in Fourth-Grade Pupils. *Frontiers in Psychology*, *11*(37). https://doi.org/10.3389/fpsyg.2020.00037.

Ouweneel, E., Le Blanc, P. M., & Schaufeli, W. B. (2011). Flourishing students: A longitudinal study on positive emotions, personal resources, and study engagement. *Journal of Positive Psychology*, *6*(2), 142–153. https://doi.org/10.1080/17439760.2011.558847.

Ozer, O., & Akçayoğlu, D. İ. (2021). Examining the roles of self-efficacy beliefs, self-regulated learning and foreign language anxiety in the academic achievement of tertiary efl learners. *Participatory Educational Research*, *8*(2). https://doi.org/10.17275/per.21.43.8.2.

Panadero, E., Klug, J., & Järvelä, S. (2016). Third wave of measurement in the self-regulated learning field: when measurement and intervention come hand in hand. *Scandinavian Journal of Educational Research*, *60*(6), 723–735. https://doi.org/10.1080/00313831.2015.1066436.

Pelikan, E. R., Lüftenegger, M., Holzer, J., Korlat, S., Spiel, C., & Schober, B. (2021). Learning during COVID-19: The role of self-regulated learning, motivation, and procrastination for perceived competence. *Zeitschrift Fur Erziehungswissenschaft*, *24*(2), 393–418. https://doi.org/10.1007/s11618-021-01002-x.

Pertiwi, D, L., & Sudarsono, A, Z. (2015). Internal Factors of English Learning Achievement. *Jurnal Pendidikan Dan Pembelajaran Khatulistiwa*, *4*(4), 1–12. https://doi.org/10.26418/jppk.v4i4.9692.

Rahim, N. B. (2022). the Interaction Between Teaching Competencies and Self-Efficacy in Fostering Engagement Amongst Distance Learners: a Path Analysis Approach. *Malaysian Journal of Learning and Instruction*, *19*(1), 31–57. https://doi.org/10.32890/mjli2022.19.1.2.

Ramli, N., Muljono, P., & Afendi, F. M. (2018). External Factors, Internal Factors and Self-Directed Learning Readiness. *Journal of Education and E-Learning Research*, *5*(1), 37–42. https://doi.org/10.20448/journal.509.2018.51.37.42.

Reinke, N. B. (2019). Promoting student engagement and academic achievement in first-year anatomy and physiology courses. *Advances in Physiology Education*, *43*(4), 443–450. https://doi.org/10.1152/advan.00205.2018.

Rokhman, N., Waluya, S. B., & Rochmad. (2019). Individuals development of the metacognitive thinking skills on solving math word problems. *Journal of Physics: Conference Series*, *1321*(2), 1–8. https://doi.org/10.1088/1742-6596/1321/2/022103.

Santoso, H. B., Lawanto, O., Becker, K., Fang, N., & Reeve, E. M. (2014). High and Low Computer Self-Efficacy Groups and Their Learning Behavior from Self-Regulated Learning Perspective While Engaged in Interactive Learning Modules. *Journal of Pre-College Engineering Education Research (J-PEER)*, *4*(2), 10–28. https://doi.org/10.7771/2157-9288.1093.

Sarstedt, M., Hair, J. F., Ringle, C. M., Thiele, K. O., & Gudergan, S. P. (2016). Estimation issues with PLS and CBSEM: Where the bias lies! *Journal of Business Research*, *69*(10), 3998–4010. https://doi.org/10.1016/j.jbusres.2016.06.007.

Şen, Ş. (2016). Modeling the structural relations among learning strategies, self-efficacy beliefs, and effort regulation. *Problems of Education in the 21st Century*, *71*(1), 62–72. https://www.ceeol.com/search/article-detail?id=951771.

Shieh, M.-D., & Hsieh, H.-Y. (2021). Study of Influence of Different Models of E-Learning Content Product Design on Students' Learning Motivation and Effectiveness. *Frontiers in Psychology*, *12*, 753458. https://doi.org/10.3389/fpsyg.2021.753458.

Šimunović, M., & Babarović, T. (2020). The role of parents' beliefs in students' motivation, achievement, and choices in the STEM domain: a review and directions for future research. *Social Psychology of Education*, *23*(3), 701–719. https://doi.org/10.1007/s11218-020-09555-1.

Soodla, P., Jõgi, A. L., & Kikas, E. (2017). Relationships between teachers' metacognitive knowledge and students' metacognitive knowledge and reading achievement. *European Journal of Psychology of Education*, *32*(2), 201–218. https://doi.org/10.1007/s10212-016-0293-x.

Sun, W., Hong, J.-C., Dong, Y., Huang, Y., & Fu, Q. (2022). Self-directed Learning Predicts Online Learning Engagement in Higher Education Mediated by Perceived Value of Knowing Learning Goals. *The Asia-Pacific Education Researcher*. https://doi.org/10.1007/s40299-022-00653-6.

Wang, L. (2022). Student Intrinsic Motivation for Online Creative Idea Generation: Mediating Effects of Student Online Learning Engagement and Moderating Effects of Teacher Emotional Support. *Frontiers in Psychology*, *13*(954216). https://doi.org/10.3389/fpsyg.2022.954216.

Widiani, D., & Istiqomah, L. (2021). The Influence of Learning Motivation and Intellectual Intelligence on Learning Achievement in Islamic Religious Education. *Jurnal Pendidikan Islam*, *7*(2), 149–164. https://doi.org/10.15575/jpi.v7i2.15273.

Yang, Y., Li, G., Su, Z., & Yuan, Y. (2021). Teacher's Emotional Support and Math Performance: The Chain Mediating Effect of Academic Self-Efficacy and Math Behavioral Engagement. *Frontiers in Psychology*, *12*, 651608. https://doi.org/10.3389/fpsyg.2021.651608.

Yoo, L., & Jung, D. (2022). Teaching Presence, Self-Regulated Learning and Learning Satisfaction on Distance Learning for Students in a Nursing Education Program. *International Journal of Environmental Research and Public Health*, *19*(7), 4160. https://doi.org/10.3390/ijerph19074160.

Zhao, H., Xiong, J., Zhang, Z., & Qi, C. (2021). Growth Mindset and College Students' Learning Engagement During the COVID-19 Pandemic: A Serial Mediation Model. *Frontiers in Psychology*, *12*, 621094. https://doi.org/10.3389/fpsyg.2021.621094.