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DETERMINANTS OF *SELF-REGULATED LEARNING*: THE ROLE OF FAMILY ENVIRONMENT, LEARNING FACILITIES AND LEARNING MOTIVATION IN EAST JAKARTA VOCATIONAL HIGH SCHOOL STUDENTS

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Abstract (English)
This study aims to analyze the influence of *self-regulated learning*: the role of the family environment, learning facilities and learning motivation in vocational high school students. The population in this study is students of grades X and XI of East Jakarta Office Management. The method used in this study is a quantitative method. The sample selection was by proportional sampling, so that a population of 143 students was obtained and a sample of 105 students was obtained. The data collected used a questionnaire distribution with 5 Likert scales. Data management and analysis using *Equation Model-Partial Least Square (SEM-PLS)* using the *inner* and *outer models* assisted by SmartPLS 4.0 *software*. The results showed that: 1) there was a significant influence of the family environment on learning motivation; 2) there is a significant influence of learning facilities on learning motivation; 3) there is a significant influence of learning motivation on *self-regulated learning*; 4) there is a significant influence of the family environment on *self-regulated learning*; 5) there is a significant influence of learning facilities on *self-regulated learning*; 6) there is a significant influence of the family environment through learning motivation on *self-regulated learning*; 7) There is a significant influence of learning facilities through learning motivation on *self-regulated learning*.

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Key Words
Self-Regulated Learning, Family Environment, Learning Facilities, Learning Motivation

Abstrak (Indonesia)
Penelitian ini memiliki tujuan untuk menganalisis pengaruh *self-regulated learning* : peran lingkungan kelaurga, fasilitas belajar dan motivasi belajar pada siswa sekolah menengah kejuruan. Populasi dalam penelitian ini adalah siswa kelas X dan XI Manajemen Perkantoran Jakarta Timur. Metode yang digunakan dalam penelitian ini yakni metode kuantitatif. Pemilihan sampel dengan cara *proportional sampling*, sehingga diperoleh populasi sebanyak 143 siswa dan sampel sebanyak 105 siswa. Data yang terkumpul menggunakan penyebaran kuesioner dengan 5 skala likert. Pengelolaan dan penganalisisan data menggunakan *Equation Model-Partial Least Square (SEM-PLS)* dengan memakai *inner* dan *outer model* berbantuan *software* SmartPLS 4.0. Hasil menunjukkan bahwa: 1) terdapat pengaruh signifikan lingkungan keluarga terhadap motivasi belajar; 2) terdapat pengaruh signifikan fasilitas belajar terhadap motivasi belajar; 3) terdapat pengaruh signifikan motivasi belajar terhadap *self-regulated learning*; 4) terdapat pengaruh signifikan lingkungan keluarga terhadap *self-regulated learning*; 5) terdapat pengaruh signifikan fasilitas belajar terhadap *self-regulated learning*; 6) terdapat pengaruh signifikan lingkungan keluarga melalui motivasi belajar terhadap *self-regulated learning*; 7) terdapat pengaruh signifikan fasilitas belajar melalui motivasi belajar terhadap *self-regulated learning*.

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Kata Kunci
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INTRODUCTION

Motivation is a series of efforts that are shown to provide certain conditions, so that a person wants and wants to do something, and if he does not like it, he will try to deny or dislike the feeling of disliking. Rahman (2021) It is stated that learning motivation is a state that exists in an individual where there is an urge to do something to achieve a goal. Student motivation

to learn is an important factor that drives academic achievement and student engagement. The concept of motivation, both intrinsic and extrinsic, plays a crucial role in guiding and maintaining students' behavior towards various learning tasks.

Motivation from the environment can arise because students see or observe others who can inspire their lives, so students are challenged to be able to do a better learning process. If students are motivated, they don't need encouragement from outsiders to complete learning activities. On the other hand, if students do not have motivation then they really need encouragement from the outside to stay motivated, both at school and at home, it is already the duty of teachers and parents to motivate them. When students are no longer in school, then it is the responsibility of the family to motivate them.

In many families in Indonesia, especially those in the lower middle socioeconomic strata, adequate support often encounters obstacles. These obstacles may stem from parents' misunderstandings about the value of education, time constraints due to work obligations, or financial difficulties that force students to help with family chores or do part-time work. Meanwhile, many schools in Indonesia are struggling in terms of learning facilities. Common problems include inadequate infrastructure, lack of practical tools, and limited digital learning materials. This situation creates obstacles to the learning process, reduces student engagement, and lowers their motivation to learn.

LITERATURE REVIEW

Learning Motivation

Martoguhun et al. (2022) explained that "Motivation is a desire or desire that results in individuals or associations that carry out planned and directed activities to achieve the expectations created. Meanwhile, learning is a process activity, with changes in attitudes, behaviors, growth and development towards physical and mental maturity. Learning is not just an experience, because learning takes place actively and integratively and does various activities to produce maximum goals." Juniarsih et al. (2021) stated that learning motivation is the overall driving force in students that gives rise to learning activities, which ensures the continuity of learning activities and gives direction to learning activities so that the learning subject can be achieved. Meanwhile, in the opinion of Moh Ghoizi Eriyanto et al. (2021) Learning motivation is a driving factor in achieving student learning outcomes, because learning motivation itself is a mental factor that encourages learning. Yonatan Sumarto (2021) also argues that learning motivation can provide enthusiasm or encouragement for a person to do work to achieve something according to what is desired and can provide direction for a person to set their learning activities (Mesta et al., 2022).

The indicators of learning motivation according to Uno (2014) in Purnomo & Ria (2020) namely: 1) The existence of desire and desire to succeed; 2) There is an encouragement and need in learning; 3) The existence of hopes and ways of the future; 4) There is an award in learning; 5) There are interesting activities in learning; 6) The existence of a conducive learning environment, so that a student can learn well. According to Sardiman (2010) in Heny & Ismiyati, (2020) Other indicators of learning motivation are: 1) Diligent in facing tasks; 2) Tenacity in facing difficulties; 3) Showing interest in various problems; 4) Prefer to work independently; 5) Quickly bored with routine tasks; 6) Be able to defend their opinions; 7) It is not easy to let go of what you believe; 8) Enjoys finding and solving problems. Meanwhile, according to Abin Syamsudin M. (1996), namely: 1) Duration of learning activities; 2) Frequency of learning activities; 3) Resistance to activity; 4) Perseverance, tenacity and ability to face activities and difficulties to achieve goals; 5) Dedication and sacrifice to achieve goals; 6) The level of aspiration to be achieved with the activities carried out; 7) Achievement qualification level (Anditiasari et al. 2021).

Self-Regulated Learning

According to Febiyanti & Laili (2023) *Self-regulated* learning is a proactive process that students use to acquire academic skills, such as setting goals, choosing and moving strategies, and the effectiveness of one's self-monitoring, not as a reactive process that occurs in students due to impersonal power. As explained by Prastiwi (2020) *self-regulated learning* It is an active learning process in setting goals for the learning process by involving metacognition, motivation, and behavior in learning. The other definition of *Self-regulated learning* is learning independence to manage self-ability and confidence in order to create an appropriate academic creativity and behavior to determine effective learning strategies to achieve an expected learning goal (Nugroho et al., 2022).

According to Reynold & Miller (2013) in Fitriyah & Puspasari (2021) Self-regulated learning indicators, namely; 1) *Self-evaluating*, checking the work to ensure it is correct; 2) *Organizing and transforming*, namely making an outline before writing; 3) *Goal setting and planning*, namely studying in advance before the exam; 4) *Seeking information*, namely literature research; 5) *Keeping records and monitoring*, namely recording events or results; 6) *Environmental structuring* is an effort to physically organize students to make lessons easier; 7) *Self consequating* is appreciating every effort of oneself; 8) *Reheasing and memorizing*, namely memorizing material with explicit practice; 9) *Seeking peer assistance*, namely asking for help from friends; 10) *Seeking teacher assistance*, namely asking for teacher help.

Family Environment

The family environment, which is the earliest place of learning accepted by children, must have a good influence on a child in learning at school, so that the child is able to provide good performance in the academic field. Children need to build good relationships in their families to support their learning success. A calm home atmosphere, not often noisy and tense can support students' learning success. Likewise, the sufficient economic condition of parents certainly affects the availability of children's learning facilities (Fredy et al., 2022). Meanwhile, according to Trianah & Sahertian (2020) "The family environment is the first and main educational environment. The educational process in the family environment can affect the personality of the child as a student in the family." This opinion is supported by Paramitha, (2019) "The family environment is the first educational environment, because it is in this family that children first get an upbringing and the relationship is also said to be the main environment because most of the child's life is in the family so that the education is most accepted by school children in the family."

Indicators of the family environment according to Slameton (2010) are: 1) The way parents educate; 2) Relations between family members; 3) House atmosphere; 4) Family economic situation; 5) Definition of parents 6) Cultural background (Dwi Heny Siska Priani & Ismiyati 2020).

Learning Facilities

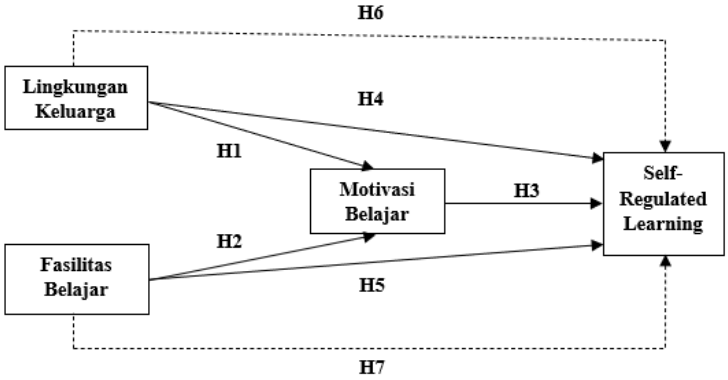
Purnomo et al. (2020) explained that school learning facilities are everything that helps the learning process which includes buildings (buildings, classrooms, laboratories), school supplies (books, markers, chalk, paper, chairs, desks), learning media, and libraries. The existence of adequate learning facilities can encourage students to actively participate in the learning process. This opinion is supported by Yunus et al. (2021) in his research emphasized that "Learning facilities are one of the important components that support the success of the teaching-learning process. With adequate facilities, the learning process can be carried out optimally". Therefore, the availability of learning facilities greatly affects the convenience and smoothness of the teaching and learning process. Opinion Murniatin & Hadziq (2022) "Learning facilities include all the facilities needed in the teaching and learning process, both

mobile and non-moving, so that the achievement of educational goals can run smoothly, regularly, effectively, and efficiently so that students can achieve optimal learning outcomes."

The indicators of learning facilities according to Slameto (2015) are: 1) Learning space or place, namely: comfortable study room, attractive classrooms, adequate room lighting; 2) Study furniture, including desks, chairs, and bookshelves; 3) Learning aids, including stationery, laptops or computers, and projectors; 4) Learning resources, such as package books/textbooks, internet access, laptops or computers connected to the internet (Astuti et al. 2022).

Hyphothesis

Below is a picture of the theoretical framework of this study, which is as follows:



Then the hypothesis in this study, as follows:

H1 : There was a significant influence of the family environment on learning motivation

H2 : There is a significant influence of learning facilities on learning motivation

H3 : There is a significant influence of learning motivation on *self-regulated learning*

H4 : There is a significant influence of the family environment on *self-regulated learning*

H5 : There is a significant influence of learning facilities on *self-regulated learning*

H6 : There is a significant influence of the family environment through learning motivation on *self-regulated learning*

H7 : There is a significant influence of learning facilities through learning motivation on *self-regulated learning*.

METHOD

The method used in this study is a quantitative method. The sample selection was by proportional sampling, so that a population of 143 students was obtained and a sample of 105 students was obtained. The data collected used a questionnaire distribution with 5 Likert scales. Data management and analysis using *Equation Model-Partial Least Square (SEM-PLS)* using the *inner* and *outer models* assisted by SmartPLS 4.0 *software*.

RESULTS AND DISCUSSION

Respondent Profile

In this study, researchers distributed a questionnaire using google forms to 105 students at Vocational High Schools (SMK). In order to get an overview of the respondents who are the object of this study, the researcher classifies the respondents by class. The following are the results of the analysis of the respondent's profile can be seen in the table below.

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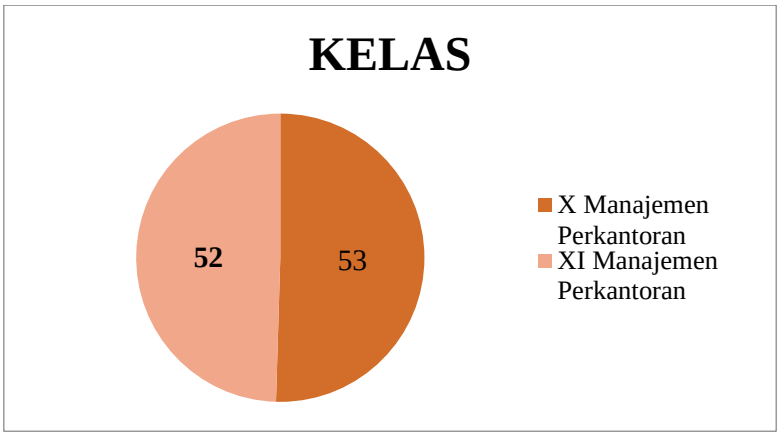
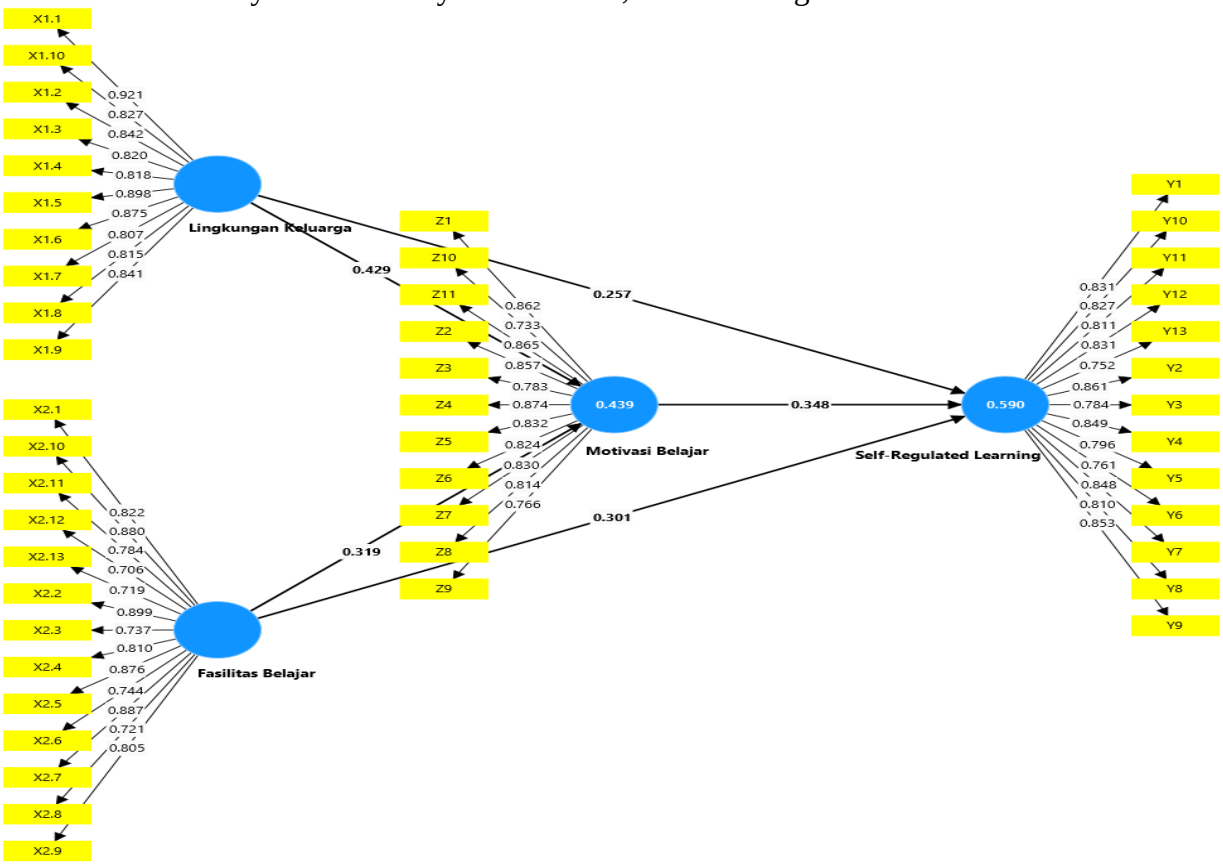


The respondent data above is a class-based data analysis. Based on the table above, it is known that class X in the Office Management department dominates in filling out the Researcher questionnaire with a total of 53 people. Meanwhile, class XI majored in Office Management with 52 respondents.

Measurement Model Analysis (*Outer Model*)

According to Ghozali (2015), the purpose of the outer model evaluation is to assess the validity through convergent validity and discriminant validity, as well as the reliability of the model evaluated by composite reliability and Cronbach's alpha for the indicator blocks (Nurhasanah et al., 2023). Based on the calculation of the outer model analysis conducted by the researcher to assess the validity and reliability of the model, the following results were obtained:



Tests on the *outer model* include *convergent validity*, *discriminant validity*, HTMT, *average variance extracted* (AVE), *composite reliability*, and *conbach's Alpha*.

1. ***Convergent Validity***

Convergent validity testing is tested from each of the construct indicators. According to Chin (1998) in Ghozali and Latan (2015), an indicator is said to be valid if the value is greater than 0,70, while the *loading factor* of 0,50 to 0,60 can be considered sufficient (Yuliantini & Suryatiningsih, 2021). Based on this criterion, if there is a loading factor below 0,50, it will be dropped from the model.

Test Results *Concergent Validity*

	Family Environment	Learning Facilities	*Self-Regulated Learning*	Learning Motivation
X1.1	0,921			
X1.10	0,827			
X1.2	0,842			
X1.3	0,820			
X1.4	0,818			
X1.5	0,898			
X1.6	0,875			
X1.7	0,807			
X1.8	0,815			
X1.9	0,841			
X2.1		0,822		
X2.10		0,880		
X2.11		0,784		
X2.12		0,706		
X2.13		0,719		
X2.2		0,899		
X2.3		0,737		
X2.4		0,810		
X2.5		0,876		
X2.6		0,744		
X2.7		0,887		
X2.8		0,721		
X2.9		0,805		
Y1			0,831	
Y10			0,827	
Y11			0,811	
Y12			0,831	
Y13			0,752	
Y2			0,861	
Y3			0,784	
Y4			0,849	
Y5			0,796	
Y6			0,761	
Y7			0,848	
Y8			0,810	
Y9			0,853	
Z1				0,862
Z10				0,733
Z11				0,865
Z2				0,857
Z3				0,783
Z4				0,874
Z5				0,832
Z6				0,824
Z7				0,830
Z8				0,814

Z9				0,766

Based on the table above, it can be seen that all the variable indicators of this study are declared valid, because the *Outer Loadings* value of each indicator is greater than 0,7. Thus, the questionnaire items can be used in subsequent analyses.

2. ***Descriminant Validity***

The next examination is to compare the correlation between variables with the AVE root (AVE root). The measurement model has good discriminant validity if the AVE root of each variable is greater than the correlation between variables. The root value of AVE can be seen from the *Fornell Larcker Criterion* Smart-PLS 4.0 Output presented in the table below.

Test Results *Discriminant Validity (Fornell Larcker Criterion)*

	Learning Facilities	Family Environment	Learning Motivation	*Self-Regulated Learning*
Learning Facilities	0,802			
Family Environment	0,561	0,847		
Learning Motivation	0,559	0,608	0,823	
Self-Regulated Learning	0,640	0,637	0,672	0,817

From the table above, it can be concluded that the square root of the *Average Variance Extracted* for each construct is greater than the correlation between one construct and another construct in the model. The value based on the above statement shows that the construct in the estimated model meets the criteria for *discriminant validity*. As for the below are the results of *Cross Loading*:

Result *Cross Loading*

	Family Environment	Learning Facilities	*Self-Regulated Learning*	Learning Motivation
X1.1	0,921	0,563	0,637	0,642
X1.10	0,827	0,401	0,607	0,526
X1.2	0,842	0,494	0,423	0,462
X1.3	0,820	0,461	0,453	0,465
X1.4	0,818	0,438	0,448	0,424
X1.5	0,898	0,504	0,676	c
X1.6	0,875	0,422	0,436	0,467
X1.7	0,807	0,522	0,473	0,450
X1.8	0,815	0,402	0,467	0,512
X1.9	0,841	0,521	0,652	0,533
X2.1	0,441	0,822	0,534	0,335
X2.10	0,543	0,880	0,590	0,487
X2.11	0,366	0,784	0,503	0,358
X2.12	0,432	0,706	0,501	0,475
X2.13	0,477	0,719	0,466	0,524
X2.2	0,531	0,899	0,571	0,450
X2.3	0,472	0,737	0,451	0,506
X2.4	0,364	0,810	0,511	0,416
X2.5	0,535	0,876	0,596	0,503
X2.6	0,351	0,744	0,421	0,309
X2.7	0,502	0,887	0,565	0,443
X2.8	0,421	0,721	0,400	0,525
X2.9	0,348	0,805	0,513	0,443
Y1	0,544	0,577	0,831	0,530
Y10	0,577	0,532	0,827	0,611
Y11	0,505	0,527	0,811	0,527

	Family Environment	Learning Facilities	*Self-Regulated Learning*	Learning Motivation
Y12	0,505	0,566	0,831	0,580
Y13	0,487	0,351	0,752	0,445
Y2	0,550	0,545	0,861	0,563
Y3	0,525	0,477	0,784	0,571
Y4	0,495	0,542	0,849	0,555
Y5	0,458	0,524	0,796	0,580
Y6	0,474	0,353	0,761	0,458
Y7	0,542	0,605	0,848	0,536
Y8	0,560	0,589	0,810	0,565
Y9	0,531	0,540	0,853	0,587
Z1	0,588	0,483	0,610	0,862
Z10	0,456	0,394	0,477	0,733
Z11	0,549	0,488	0,621	0,865
Z2	0,498	0,514	0,622	0,857
Z3	0,472	0,384	0,530	0,783
Z4	0,484	0,480	0,536	0,874
Z5	0,512	0,411	0,477	0,832
Z6	0,507	0,453	0,618	0,824
Z7	0,511	0,470	0,509	0,830
Z8	0,411	0,525	0,513	0,814
Z9	0,492	0,445	0,539	0,766

3. HTMT

Result HTMT

	Learning Facilities	Family Environment	Learning Motivation	*Self-Regulated Learning*
Learning Facilities				
Family Environment	0,580			
Learning Motivation	0,582	0,626		
Self-Regulated Learning	0,660	0,649	0,698	

Meanwhile, the acceptable discrimination validity threshold level is also obtained from the Heterotrait-Monotrait Ratio (HTMT) value which is smaller than 0,90 as suggested by (Hair et al., 2017), all HTMT values are lower than 0,9 (Karsiningsih et al., 2019).

4. *Averange Variance Extracted (AVE)*

The AVE value aims to measure the degree of variation of a construct component compiled from its indicator by adjusting to the error level. Testing with an AVE value is more critical than *composite reliability*. The minimum recommended AVE value is 0,50. The AVE output obtained from Smart PLS 4.0 is presented in the table below.

Test Results *Average Variance Extracted* (AVE)

	Average variance extracted (AVE)
Learning Facilities	0,643
Family Environment	0,718
Learning Motivation	0,677
Self-Regulated Learning	0,668

Based on the table above, it can be seen that the AVE value has been greater than 0,50 which means that all of these indicators have met the criteria that have been set and have potential reliability for further testing.

5. *Composite Reliability & Cronbach's Alpha*

The *Composite Reliability* and *Cronbach's Alpha* tests aim to test the reliability of instruments in a research model. If all latent variable values have a Composite Reliability value or *Cronbach's Alpha* ≥ 0.70, it means that the construct has good reliability or the questionnaire used as a tool in this study has been consistent..

Test Results *Composite Reliability* and *Cronbach's Alpha*

	Cronbach's alpha	*Composite reliability* (rho_a)	*Composite reliability* (rho_c)
Learning Facilities	0,953	0,956	0,959
Family Environment	0,956	0,964	0,962
Learning Motivation	0,952	0,954	0,958
Self-Regulated Learning	0,958	0,960	0,963

Based on the table above, it can be seen that the results of the *Composite Reliability* and *Cronbach's Alpha* tests show satisfactory values, namely all latent variables are reliable because all latent variable values have *Composite Reliability* values and *Cronbach's Alpha* ≥ 0,70. So it can be concluded that the questionnaire used as a research tool has been reliable or consistent.

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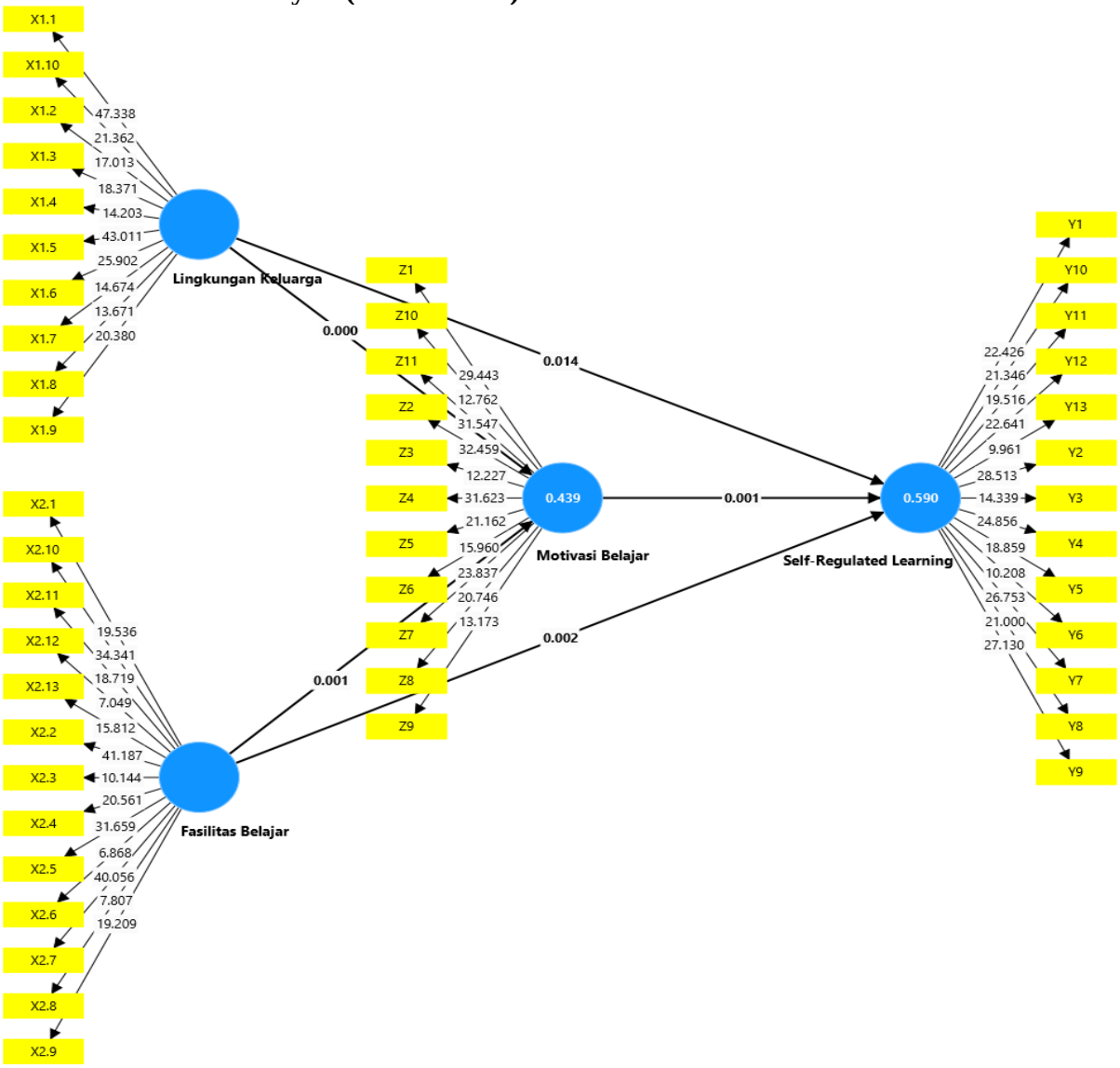
Structural Model Analysis (*Inner Model*)



The stages of testing the structural model (*inner model*) are carried out with the following steps:

1. Test Model

Result Model *Goodness of Fit*

	Saturated model	Estimated model
SRMR	0,082	0,082
d_ULS	7,531	7,531
d_G	17,686	17,686
Chi-square	4621,622	4621,622
NFI	0,469	0,469

NFI values ranging from 0 – 1 are derived from the comparison between the hypothetical model and a particular independent model. Based on the table above, the NFI value is at 0,469 which means it has a model match that can be declared good (Ghozali, 2014).

2. *R-Square* Value (R^2)

Looking at the R-Square value which is a *Goodness of Fit* model test.

Test Result *R-Square* Value (R^2)

	R-square	R-square adjusted
Learning Motivation	0,439	0,428
Self-Regulated Learning	0,590	0,578

1) The *R-Square* value for learning motivation is 0,439, which shows that this model can explain about 43,9% of the variance in the learning motivation variable. An adjusted R-Square value of 0,428 shows that after considering the number of variables included in the model, about 42,8% of the variance in learning motivation can be explained. This shows the model has a pretty good fit, although there is still room to improve the ability to explain those variables.
2) The *R-Square* value for self-regulated learning is 0,590, which shows that this model can explain about 59% of the variance in the self-regulated learning variable. An adjusted R-Square value of 0,578 shows that after considering the number of variables in the model, about 57,8% of the variance on self-regulated learning can be explained. This shows that this model has a better fit in explaining variance in *self-regulated learning* compared to learning motivation.

3. *f^2 Effect Size* (f^2)

The following are the results of the f2 value of each exogenous variable against the endogenous variable:

Test Results *f^2 Effect Size*

	Learning Motivation	*Self-Regulated Learning*
Learning Facilities	0,124	0,135
Family Environment	0,224	0,090
Learning Motivation		0,166

1) Learning Facilities for Learning Motivation
The value of f^2 for the effect of learning facilities on learning motivation is 0,124, which is included in the category of weak influence ($0,02 \leq f \leq 0,15$). This shows that learning facilities have a relatively small influence on learning motivation, although there is still a significant influence.
2) Learning Facilities for *Self-Regulated Learning*
The value of f^2 for the influence of learning facilities on *self-regulated learning* is 0,135, which is also included in the category of weak influence ($0,02 \leq f \leq 0.15$). This shows that although learning facilities have an influence on self-regulated learning, the influence is still relatively small.
3) Family Environment on Learning Motivation
The value of f^2 for the influence of family environment on learning motivation was 0,224, which was in the category of medium influence ($0,15 \leq f \leq 0,35$). This indicates that the family environment has a moderate influence on learning motivation, with a stronger influence than learning facilities.
4) Family Environment towards *Self-Regulated Learning*
The value of f^2 for the influence of the family environment on self-regulated learning was 0,090, which was included in the category of weak influence ($0,02 \leq f \leq 0,15$). This shows that although the family environment has an effect on *self-regulated learning*, the influence is not very large.

5) Learning Motivation for *Self-Regulated Learning*
The value of f^2 for the influence of learning motivation on *self-regulated learning* is 0,166, which is included in the category of medium influence ($0,15 \leq f \leq 0,35$). This shows that learning motivation has a moderate influence on *self-regulated learning*, which is quite significant in affecting the ability to learn independently regularly.

4. *Q-Square (Goodness of Fit Model)*

Test Results *Q-Square*

	SSO	SSE	Q^2 (=1-SSE/SSO)
Learning Motivation	1155,000	819,434	0,291
Self-Regulated Learning	1365,000	837,405	0,387

The Q^2 value for the learning motivation variable is 0,291, which is greater than 0, indicating that the model has predictive relevance for this variable. This Q^2 value indicates that the model is able to explain about 29,1% variance in learning motivation, which means that the model has quite good predictive ability, although there is still room for improvement.

The Q^2 value for the *self-regulated learning* variable is 0,387, which is also greater than 0, indicating that the model has good predictive relevance for this variable. With a Q^2 value of 0,387, the model can explain about 38,7% of the variance in self-regulated learning, suggesting that the model has stronger predictive abilities on these variables compared to learning motivation.

Hypothesis Testing
Direct Impact Analysis (*Direct Effect*)
The estimated value for the influence of the path in the structural model must be significant. This significant value can be obtained by *bootstrapping* procedures. Significant look at the hypothesis by looking at the value of the parameter coefficient and the significant value of t-statistics on the *bootstrapping report algorithm*. To find out whether it is significant or insignificant, it is seen from the t-table at alpha 0,05 (5%) = 1,96. Then the t-table is compared to the t-count (t-statistic).

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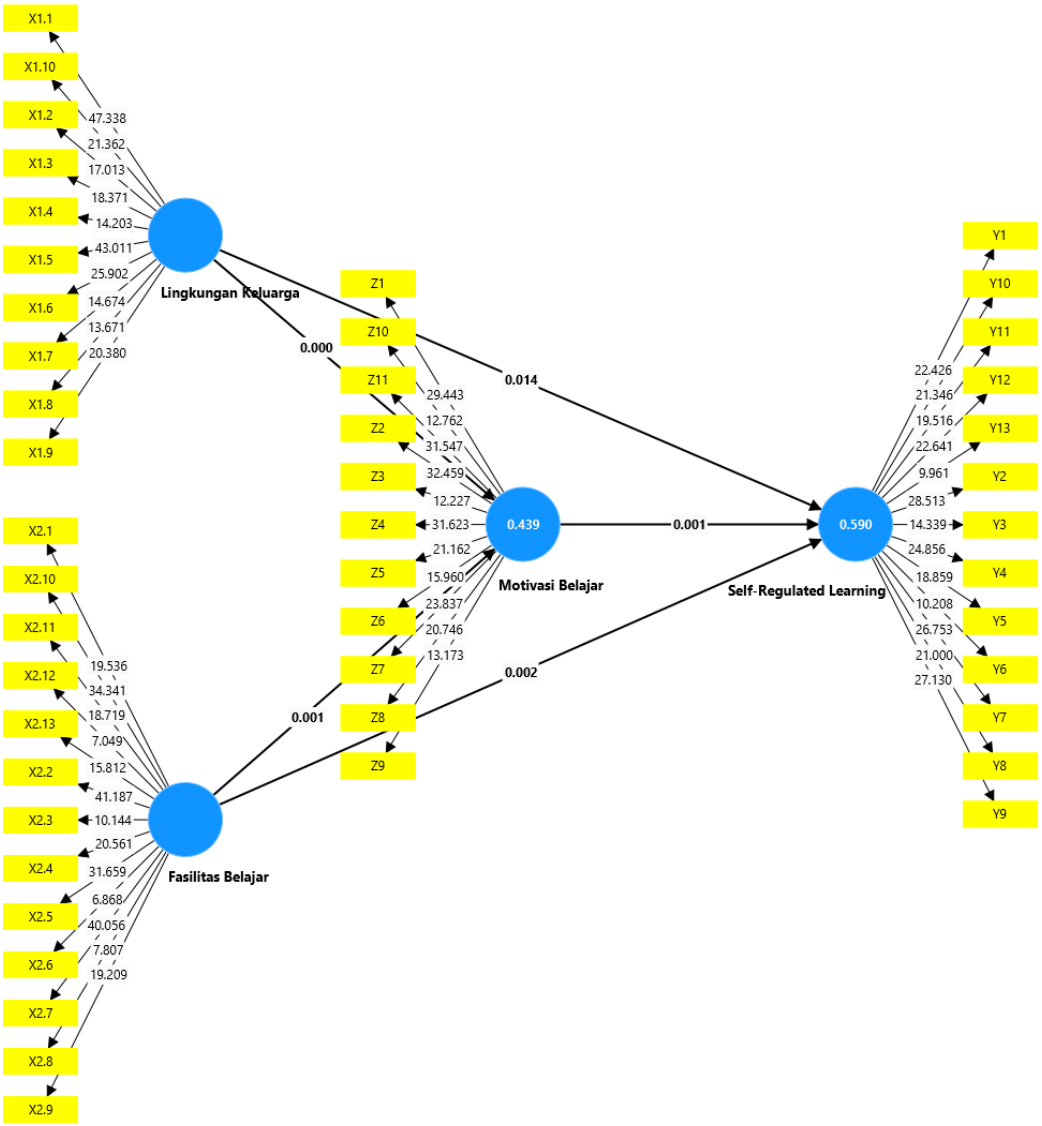

***Bootstrapping* Images**

Table of Hypothesis Test Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Learning Facilities -> Learning Motivation	0,319	0,325	0,095	3,349	0,001
Learning Facilities -> *Self-Regulated Learning*	0,301	0,310	0,098	3,085	0,002
Family Environment -> Learning Motivation	0,429	0,426	0,091	4,697	0,000
Family Environment -> *Self-Regulated Learning*	0,257	0,256	0,104	2,460	0,014
Learning Motivation -> *Self-Regulated Learning*	0,348	0,345	0,102	3,403	0,001
Learning Facilities -> Learning Motivation -> *Self-Regulated Learning*	0,111	0,110	0,041	2,685	0,007
Family Environment -> Learning Motivation -> *Self-Regulated Learning*	0,149	0,150	0,061	2,461	0,014

Here are the results of hypothesis testing on the structural model:

1) Learning Facilities - > Learning Motivation
   The estimated value of the pathway coefficient between learning facilities and learning motivation was 0,319, with a t-statistic of 3,349 and a p-value of 0,001. Since the t-statistic is greater than the t-table (1,96) and the p-value is less than 0,05, this hypothesis is acceptable, which suggests that learning facilities have a significant effect on learning motivation.
2) Learning Facility -> *Self-Regulated Learning*
   The path coefficient between learning facilities and *self-regulated learning* is 0,301, with a t-statistic of 3,085 and a p-value of 0,002. These results show that learning facilities have a significant influence on self-regulated learning, because t-statistics are greater than t-tables and p-values are smaller than 0,05.
3) Family Environment -> Learning Motivation
   The estimated path coefficient between family environment and learning motivation was 0,429, with a t-statistic of 4,697 and a p-value of 0,000. This result was very significant because the t-statistic was much larger than the t-table and the p-value was well below 0,05, indicating that the family environment had a positive effect on learning motivation.
4) Family Environment -> *Self-Regulated Learning*
   The value of the path coefficient between the family environment and self-regulated learning was 0,257, with a t-statistic of 2,460 and a p-value of 0,014. This result was significant, because the t-statistic was greater than the t-table and the p-value was less than 0,05, indicating that the family environment had a positive effect on *self-regulated learning*.
5) Learning Motivation -> *Self-Regulated Learning*
   The pathway coefficient between learning motivation and *self-regulated learning* was 0,348, with a t-statistic of 3,403 and a p-value of 0,001. These results show that learning motivation has a significant effect on *self-regulated learning*, because t-statistics are greater than t-tables and p-values are less than 0,05.
6) Learning Facilities -> Learning Motivation -> *Self-Regulated Learning*
   The path coefficient for this indirect path is 0,111, with a t-statistic of 2,685 and a p-value of 0,007. These results show that learning facilities have an effect on *self-regulated learning* through learning motivation with a significant influence, because t-statistics are greater than t-tables and p-values are less than 0,05.
7) Family Environment -> Learning Motivation -> *Self-Regulated Learning*
   The path coefficient for this indirect path is 0,149, with a t-statistic of 2,461 and a p-value of 0,014. These results show that the influence of family environment on *self-regulated learning* through learning motivation is also significant, because the t-statistic is greater than the t-table and the p-value is less than 0,05.

Discussion

H1 : Family Environment has a significant and positive effect directly on Learning Motivation

Based on the results of the calculation of the path coefficient in the table above, in the family environment variable on learning motivation, the original sample result was obtained of 0,429, while for t-statistic it was 4,697 > 1,96. Then for the p-value value obtained a value of 0,000 < 0,05. So it can be said that the family environment has a significant and positive effect directly on learning motivation, so the H1 in this study is accepted.

H2 : Learning Facilities have a significant and positive effect directly on Learning Motivation

Based on the results of the calculation of the path coefficient in the table above, the learning facility variable on learning motivation obtained an original sample result of 0,319, while for t-statistic it was 3,349 > 1.96. Then for the p-value value obtained a value of 0,001 < 0,05. So it can be said that learning facilities have a significant and positive effect directly on learning motivation, so H2 in this study is accepted.

H3 : Learning Motivation has a significant and positive effect directly on *Self-Regulated Learning*

Based on the results of the calculation of the path coefficient in the table above, the learning motivation variable for *self-regulated learning* obtained an original sample result of 0,348, while for t-statistic it was 3,403 > 1,96. Then for the p-value value obtained a value of 0,001 < 0,05. So it can be said that learning motivation has a significant and positive effect directly on *self-regulated learning*, so H3 in this study is accepted.

H4 : Family Environment has a significant and positive effect directly on *Self-Regulated Learning*

Based on the results of the calculation of the path coefficient in the table above, in the family environment variable for *self-regulated learning*, the original sample result was 0,257, while for t-statistic it was 2,460 > 1,96. Then for the p-value value, a value of 0,014 < 0,05. So it can be said that the family environment has a significant and positive effect directly on *self-regulated learning*, so H4 in this study is accepted.

H5 : Learning Facilities have a significant and positive effect directly on *Self-Regulated Learning*

Based on the results of the calculation of the path coefficient in the table above, the learning facility variable for *self-regulated learning* obtained an original sample result of 0,301, while for t-statistic it was 3,085 > 1,96. Then for the p-value value, a value of 0,002 < 0,05. So it can be said that learning facilities have a significant and positive effect directly on *self-regulated learning*, so H5 in this study is accepted.

H6 : Family Environment through Learning Motivation has a significant and positive effect directly on *Self-Regulated Learning*

Based on the results of the calculation of the pathway coefficient in the table above, the family environment variable through learning motivation for *self-regulated learning* obtained an original sample result of 0,149, while for t-statistic it was 2,461 > 1,96. Then for the p-value value, a value of 0,014 < 0,05. So it can be said that indirectly the family environment through learning motivation has a significant and positive effect on *self-regulated learning*, so the H6 in this study is accepted.

H7 : Learning Facilities through Learning Motivation have a significant and positive effect directly on *Self-Regulated Learning*

Based on the results of the calculation of the path coefficient in the table above, the variable of learning facilities through learning motivation for *self-regulated learning* obtained an original sample result of 0,111 while for t-statistic it was 2,685 > 1,96. Then for the p-value value, the value was 0,007 < 0,05. So it can be said that indirectly learning facilities through learning motivation have a significant and positive effect on *self-regulated learning*, so H7 in this study is accepted.

CONCLUSION AND RECOMMENDATION

Conclusion

Based on the results of the researcher's data processing, conclusions can be drawn which include an overview of the data for each variable, data analysis, discussion as detailed in the chapter, including:

1. It can be synthesized that there is a significant influence between family environment variables on student learning motivation variables at East Jakarta State Vocational School. This means that the higher the level of the family environment, the higher the student's motivation to learn.
2. It can be synthesized that there is a significant influence between the variables of learning facilities on student learning motivation at East Jakarta State Vocational School. This means that the higher the level of learning facilities, the higher the motivation of students to learn.
3. There is a significant and positive influence between learning motivation variables on self-regulated learning at East Jakarta State Vocational School. This means that the higher the level of student motivation to learn, the higher the level of *self-regulated learning*.

Recommendation

Based on the results of the conclusions, implications and limitations of the research that has been carried out by the researcher, the researcher will then summarize various recommendations or inputs for similar research in future research. Here are the various recommendations that can be given by researchers:

1. 1. Use of Larger and Diverse Samples: Given the limited number of samples in this study, it is recommended that researchers subsequently include a larger and more diverse sample from a wide range of demographic and geographic backgrounds of students. So that the results of this study can be relevant or not if applied to the latest sample of other Vocational High School students.
2. Exploring the indicators that are not ideal in the research: 1) The research focuses on internal aspects such as self-efficacy and self-control, as well as external aspects such as social support from family, friends, and teachers. Further research can contribute to developing more effective learning models and learning programs so as to increase students' motivation to learn, especially to overcome challenges optimally. 2) Further research can examine the factors that inhibit self-regulated learning. In addition, research can test the effectiveness of interventions such as strengthening learning objectives (goal setting) and the use of educational technology to support independent learning. This approach can help students develop confidence and pride in managing their learning activities independently. 3) Further research can investigate the extent to which parenting styles, family communication, and parents' expectations of academic achievement affect students' motivation to learn. Additionally, it is important to research the barriers parents may face in providing support, such as a lack of time, limited understanding of their child's learning needs, or socioeconomic factors. 4) Further research can examine the factors that cause the use of devices such as DVDs, projectors, or speakers that are not optimal, such as technical constraints, lack of maintenance, or lack of training for teachers in utilizing educational technology. In addition, research can explore innovative solutions, such as the use of modern technology-based devices that are more affordable and easy to use. By identifying the relationship between access to audiovisual facilities and learning motivation, further research can provide recommendations to educational institutions to improve the quality of learning facilities, so as to support a more interactive and motivating teaching and learning process.
3. Mixed Method Approach: to overcome the limitations of the quantitative methods used, it is recommended that future research combine quantitative methods and qualitative methods. This approach allows for a deeper exploration of the reasons behind student responses, which can later provide a richer understanding of the factors that affect students' motivation to learn. For example, by conducting more in-depth interviews or a case study that can be used to supplement quantitative data.

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