Psychosocial Factors Affecting Self-Regulated Learning among Indonesian Islamic College Students: The Mediating Role of Perception Feedback

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Abstract
In facing various problems during the online learning process, individuals need to have self-regulated learning to be able to undergo online lectures optimally and effectively. Hence, student's knowledge increases and learning objectives are achieved. This study aims to investigate the mediating effect of self-efficacy in the relationship between perception feedback on self-regulated learning in undergraduate students. Whether the mediation had varying effects on different age levels and sex differences was also examined. The sampling technique used in this study is a non-probability sampling with 410 students. This study uses a quantitative approach with path analysis. In this study, researchers used confirmatory factor analysis (CFA) using Lisrel 8.8 to test the construct validity of theinstrument. The results showed that there was a direct effect from the independent variables, namely self-efficacy, family support, and an indirect effect through mediator variables, namely self-efficacy, family support, friend support, and gender. The effect of self-efficacy and family support is partial mediation on self-regulated learning. While the variables of peer support and gender demographic variables have a perfect mediating effect on self-regulated learning with perception feedback as a mediator.

INTRODUCTION

The problems that exist in online learning are caused by several factors, one of which is the unpreparedness of various aspects, such as educators, regulation, and infrastructure. Consequently, the implementation of online learning was not optimal (Fata et al., 2021; Rahayu et al., 2022). In carrying out online learning, students need to have self-regulated learning (SRL) because they have to be responsible for their learning process (Mou, 2021). The SRL refers to the process of continuously monitoring and controlling one's learning (Vandenbos, 2016). SRL can be defined as thoughts, feelings, and behaviors that are self-generated and oriented towards achieving goals, and requires the ability to believe in themselves (Zimmerman, 2002). Furthermore, self-efficacy is an internal factor that influences from within a person, so the development of the SRL occurs in managing, and regulating the process of changing learning

from offline to online (Kuo et al., 2014; Stephen & Rockinson-Szapkiw, 2021). Thus, self-efficacy can be said to be a belief in individuals to solve their problems during the pandemic.

Self-efficacy is crucial for students because it makes student solve their problems or task easier. A person with a high level of self-efficacy will focus more on finding solutions to problems than thinking about the shortcomings that exist (Graham, 2022). Previous research found that the level of self-efficacy was found to be correlated with the level of the SRL among Indonesian students during the Covid-19 pandemic (Ulfatun et al., 2021). Additionally, the higher self-efficacy correlated positively with students' level of SRL (Wijaya et al., 2020). In parallel, based on the findings from research on Chinese students, individuals who have higher self-efficacy tend to show more effort. Simply put, there is a positive relationship between self-efficacy and SRL in students (Sun & Wang, 2020).

SRL is also influenced by external factors such as social support. Social support is the provision of assistance or comfort to others, typically to help individuals cope with their biological, psychological, and social stressors (Vandenbos, 2016). Based on research conducted by Triwahyuni et al. (2021) there is a positive and significant relationship between social support and the SRL during the Covid-19 pandemic. In addition, Arjanggi (2019) stated that the higher the social support, the higher the student's SRL ability. Also, social support is found as a predictor to increase SRL in online learning (Carter et al., 2020).

However, besides internal and external factors, SRL was also influenced by demographic variables such as age and gender. Age and gender were re-examined in this study as demographic variables, with the fact that there are gaps that need to be filled since another research conducted by Zhao et al. (2014) on 2738 subjects (1630 men and 1108 women). This study found that men tend to score higher than women, although it should be noted that younger people had better planning, regulation, and evaluation compared to the older ones.

In contrast, Wijaya et al. (2020) found that women's SRL level was higher than men's during the Covid-19 pandemic. Pantu (2021) in his research conducted on 296 students in Indonesia found that age affects SRL. The results show that the older an individual, the higher the SRL. Edisherashvili et al. (2022) revealed that various age groups had higher SRL. Based on this research, further research is necessary to examine the role of age and gender on SRL.

Self-efficacy and social support, as well as demographic variables such as (age and gender), affect SRL significantly. The research conducted by Oktariani et al. (2020) shows that self-efficacy and social support provides a significant positive relationship to student SRL. Then, Daharnis (2018) in their research on 226 subjects show that there is a significant relationship between self-efficacy and social support which together affect SRL.

In addition, in forming the SRL, communication is also needed to inform the accuracy of what is done. Through feedback, students can receive suggestions about their weaknesses in learning so they can improve their performance. When students can self-evaluate and understand the feedback that has been given, the learning objectives can be achieved (Aldowah et al., 2019). This indicates that perception feedback can also be a mediator between social support in influencing SRL. Ekholm et al. (2015) found that perception feedback can be a mediator variable between self-efficacy and SRL. And there is a significant relationship between self-efficacy and SRL which is mediated by perception feedback. Perception feedback is defined as a student's thought response and openness to receiving feedback about assignments (Tadlock et al, 2008). Perception feedback refers to students' thoughts about the content of feedback provided by external sources in terms of cognitive, metacognitive, motivational, and affective reactions. High perception feedback is characterized when individuals can receive suggestions about their learning from teachers or peers.

The research conducted by Wong et al. (2019) shows that feedback on activities is reflective, and reinforces the positive effects that support SRL. Perception feedback can vary depending on the content of the feedback and can be in the form of evaluative and informative

communication so that feedback has an effect as a mediator (Strijbos et al., 2021). Perceptions between male and female students are differ, female students have higher scores than men in the field of friendliness, verbal and non-verbal communication. Thus, perception feedback can also be a mediator between gender variables in influencing SRL. Also, providing good feedback can improve SRL. Through feedback, students can accept suggestions and shortcomings in learning so that there are efforts to carry out SRL. According to Mou (2021) regular feedback can develop SRL in students.

SRL is a very important and interesting variable for further research. In this study, researchers will examine the role of internal factors, such as self-efficacy, and external factors, such as social support and demographic factors that affect SRL in online learning. Hence, the researchers took the title "Psychosocial Factors Affecting Self-Regulated Learning among Indonesian Islamic College Students: The Mediating Role of Perception Feedback".

Rationale of The Study

The impact of the Covid-19 pandemic is a multidimensional problem faced by various sectors, one of them being the education sector. Online learning during the Covid-19 pandemic caused a decrease in the quality of learning for students (Sahu, 2020). Such as reduced formal learning hours, and a lack of e-learning facilities that can be used in the learning process (Sintema, 2020). Argaheni (2020) states that there are problems faced by students in dealing with online learning including ineffective discussions, many students who are not actively participating in lectures, and stressing students mentally. The difficulty of running online learning becomes difficult, especially for universities that do not yet have an online-based academic system, and the quality of the internet network is not evenly distributed throughout Indonesia.

In facing various problems during the online learning process, individuals need to have the SRL to be able to undergo online lectures optimally and effectively, so that student's knowledge increases and learning objectives are achieved. In this case, students are required to be able to regulate themselves or apply the SRL in achieving the desired learning objectives. The SLR can help students carry out their learning (Mou, 2021). There are so many research that has been conducted on SLR, but in Indonesia, research on the SRL among Islamic students during the online learning period is still limited, it is only centered on general students.

Purpuses of the study

In general, this study aims to determine the effect of self-efficacy, social support, and demographic variables on the SRL at Universitas Islam Negeri Raden Fatah Palembang (UIN Palembang) during a COVID-19 pandemic. In particular, we postulated that the relationship between independent variables and dependent variable is mediated by perception feedback as mediator variable. Simply put, we want to examine whether there are direct and indirect effects on the SRL.

Research Hypotheses

This research aims to investigate the effect of the independent variable on the dependent variable. Then, the analysis is carried out to see whether the variation in the relationship between the two variables is influenced by the mediator variable. Based on this description, the hypothesis proposed in this study is:

H_1: There is an influence of self-efficacy, social support, and demographic variables (gender and age) on the SRL in students mediated by perception feedback fitted by data.

H_2: There is a joint effect of self-efficacy, social support, and gender demographic variables on the SRL.

There is a direct or indirect effect of self-efficacy on the SRL.
H_4: There is a direct or indirect influence of family support on the SRL.
H_5: There is a direct or indirect effect of peer support on the SRL.
H_6: There is a direct or indirect influence from significant others on the SRL
H_7: There is a direct or indirect effect of gender on the SRL.
H_8: There is a direct effect of age on the SRL.

METHODS

Research Design

This study uses a quantitative approach with a cross-sectional design to see the relationship between independent variables and dependent variables. The dependent variables in this study are the SRL and the independent variables are self-efficacy, social support, and demographic variables (gender and age). And the mediator variable is perception feedback. The instrument used in this study was an online questionnaire through the Google form with the Likert scale method. Then, participants were asked to choose one of the available response options according to what the participants felt or experienced. The measuring instrument in this study is an adaptation measurement tool that has been tested by previous researchers. In this study, the data about independent variables and dependent variables are collected simultaneously and allow for potraying the relationships between variables at one time.

Population and the Methods of Sampling

The subjects on this study were students of UIN Palembang. The reason the authors took UIN Palembang students as respondents was because according to the preliminary study conducted by the researcher, there were problems related to the importance of the SRL. Second, during the pandemic, students are required to be able to carry out the SRL so that they can adapt to changes and new rules. Third, the student learning method is student centered, which means students are required to be more active in the learning processes.

The active student population of the Faculty of Psychology UIN Palembang is 809 students. The sample size used in this study was 410 students. The sampling technique used is a non-probability sampling technique. In this technique, each element in the population does not have the same opportunity to be sampled (Sugiyono, 2011). The sample criteria in this study are as follows: 1) Active student of the Faculty of Psychology UIN Raden Fatah Palembang, 2) Take online lectures, and 3) Willing to volunteer to be research subjects.

The rule of thumb that we used to determine the minimum sample size is as follows: 150 - 315 respondents (Muthén & Muthén, 2002). Based on this rule of thumb, the minimum number of respondents in this study has exceeded the minimum sample size for conducting path analysis.

Instrumentation

The measuring tool used in this study was an online questionnaire via the Google form with the Likert scale method which consisted of 4 categories from Strongly disagree (1) - Strongly agree (4). This scale consists of favorable items and unfavorable items, with different scores. On the favorable item, the highest score is given to strongly agree, and strongly disagree is given a low score. Then, participants were asked to choose one of the available response options according to what the participant felt or experienced. We used confirmatory factor analysis (CFA) to check the construct validity of the instruments. We used two indices to conduct the test of goodness of fit, namely Chi-square and root-mean-square error of approximation (RMSEA). We used Chi-square closer to zero ($p > .05$) and RMSEA < .05 as model fit criteria (Brown, 2015).

In this study, we used four psychological scales. First, by Measuring self-regulation online which was developed by Barnard et al. (2009). The SROL is self-regulated online learning scale consisting of 24 items. The SROL consists of six subscales including environmental structuring; goal setting; time management; seeking help; task strategy; and self-evaluation. This scale was tested for validity using the CFA method. In the first analysis, Chi-square = 2103, p-value = .000, RMSEA = .134. By looking at the P-value less than .05 and RMSEA greater than .05, it can be concluded that the model is not fit.

Modifications were made to free measurement error parameters in the model. After 110 modifications, Chi-square = 157, df = 133, p-value = .069, RMSEA = .021 were obtained. Judging from the large P-value of .05 and the RMSEA value of less than .05, it can be concluded that the model can be said to be fit. After the fit model is obtained, the next step is to look at the significance of the item validity, namely whether each item is significant in measuring the variable to be measured, namely the SRL. The significance of the item can be seen from the t-value of the loading coefficient which is positive and the t-value is more than 1.96. The results show that all items in the SROL are valid.

Second, the self-efficacy variable is measured by the general self-efficacy scale-12 (GSES-12) (Bosscher & Smit, 1998). This instrument consists of 12 items. This scale was tested for validity using the CFA confirmatory factor analysis method. The results of the first analysis show Chi-square = 1070.02, p-value = .00000, and RMSEA = .214. Based on the P-value which is still less than .05 and the RMSEA which is greater than 0.05, it can be concluded that the model is not fit, so it needs to be modified to the model.

Modifications were made to free measurement errors for each item. And after 20 modifications, we obtained Chi-square = 43.31, df = 34, p-value = .131, and RMSEA = .026. Judging from the large P-value of 0.05 and the RMSEA value of less than 0.05, it can be concluded that the model is fitted with the data. After the fit model is obtained, the next step is to test the validity of the items. Based on the results of the analysis, it is known that all GSES-12 items are valid because all of the items have a t-value > 1.96 and the factor loading coefficient is positive. In other words, all items in GSES-12 are valid and can be used for the next analysis.

Third, the social support variable is measured using the multidimensional scale of perceived social support (MSPSS) (Zimet et al., 1988). The first dimension is family support. Testing the validity of the family support scale was carried out to test whether the 4 items in this scale are unidimensional, which means that they only measure one variable, namely family support. This scale was tested for validity using the confirmatory factor analysis (CFA) method which was tested using Lisrel 8.80 software. The first analysis using Lisrel 8.80 software obtained Chi-square = 21.92, P-value = .00002, RMSEA = .156. By looking at the P-value less than 0.05 and RMSEA which is more than .05, it can be concluded that the model is not fit.

Modifications were made to free measurement error parameters. After 1 modification, Chi-square = 1.00, df = 1, p-value = .316, RMSEA = .003 was obtained. Judging from a P-value greater than 0.05 and an RMSEA value of less than .05, it can be concluded that the model is fitted with the data. After the model fit is obtained, the next step is to examine the significance of the item validity, namely whether each item is significant in measuring the variable to be measured, namely family support. The significance of the item can be seen from the factor loading coefficient which is positive and the t-value is more than 1.96. Based on the results of the analysis it is known that all of the dimensions of family support are valid. So that these items meet the criteria for use in the next analysis.

The validity test of the peer support scale was carried out to test whether the four items in this scale are unidimensional, which means that it only measures one variable, namely peer support. The first analysis show Chi-square = 4.04, p-value = .1325, and RMSEA = .05. Based on these results, it can be concluded that the model is fitted with the data. After the fit model is

met, the next step is to examine the significance of item validity. The significance of the item can be seen from the t-value of the loading coefficient which is positive and the t-value is more than 1.96. Based on the results of the analysis, it appears that all items of the peer support are valid. Thus, these items meet the criteria for the next analysis.

The validity test of the significant others scale was carried out to test whether the 4 items in this scale are unidimensional, which means that they only measure one variable, namely significant others. In the first analysis, Chi-square = 34.21, p-value = .0000, RMSEA = .198. By looking at the p-value less than .05 and RMSEA which is more than .05, it can be concluded that the model is not fit. Then, modifications were made to free measurement errors for each item to be correlated with each other. After 2 modifications, Chi-square = .00, df = 0, p-value = 1.00000, RMSEA = .000 is obtained. Judging from the large p-value of .05 and the RMSEA value of less than .05, it can be concluded that the model is fitted with the data.

After the fit model is met, the next step is to investigate the significance of the item validity, namely whether each item is significant in measuring the variable to be measured, namely significant others. The significance of the item can be seen from the t-value of the loading coefficient which is positive and the t-value is more than 1.96. Based on the analysis, it is known that the factor loading coefficient of significant others is positive and significant, so all item meets the criteria for analysis in the next stage.

Lastly, the perception feedback variable was measured using the Feedback Perceptions Questionnaire (FPQ) developed by Strijbos et al. (2021) consists of 18 items. Perception feedback consists of 18 unidimensional items. The FPQ consists of five sub-scale constructs, namely fairness, usefulness, acceptance, willingness to improve, and affect. In the first analysis, Chi-square = 3022.26, P-value = .00000, and RMSEA = .229. By looking at the P-value less than 0.05 and RMSEA which is more than .05, it can be concluded that the model is not fit.

Modifications were made to free measurement errors for each item to correlate with each other. After 55 modifications, Chi-square = 99.95, df = 81, p-value = .075, RMSEA = .024 were obtained. Judging from the large P-value of .05 and the RMSEA value of less than .05, it can be concluded that the model is fitted with the data. After the model fit is met, the next step is to test the significance of item validity. The significance of the item can be seen from the value of the factor loading coefficient which is positive direction and the t-value is greater than 1.96. Based on the results of the analysis, it was found that all significant others items were declared valid.

After all, items are tested for validity using CFA. Items on the instrument that have been proven valid are used to calculate the factor score. Factor score is an estimate of the quantitative value that an individual would have on a latent variable were it possible to measure this directly (Vandenbos, 2016). Simply put, the factor score is the score that the researcher will later use to carry out path analysis. The factor score in this study was computed using SPSS 23 software.

Data Analysis

For descriptive statistics, the Statistical Package for the Social Sciences 23 (SPSS 23) by IBM was used with significance accepted if $p < .05$. There was no problem with missing data as the statements of each online questionnaire needed to be 100% complete before continuing to the next section of questionnaires. The data distribution was checked through skewness and kurtosis to control how much the variables diverge from the normal distribution (Morgan & Griego, 1998).

The hypothesis testing was conducted by the path analysis approach using the Lisrel software version 8.8 (Jöreskog et al., 2006) with maximum likelihood estimation method. Path analysis is a variation of multiple regression analysis which is used to analyze causal

Table 1. Descriptive Statistics

Variabel	N	Min.	Max.	Mean	Std Deviation
Perception feedback	410	6.77	63.15	50	9.6
Self regulated learning	410	8.24	68.07	50	9.5
Self efficacy	410	18.37	64.80	49.9	9.4
Family Support	410	22.94	59.47	49.9	9.4
Friends Support	410	23.01	61.43	50	9.0
Significant others	410	37.85	62.92	49.9	9.7

Table 2. Model summary

Model	R	R-Square	Adjusted R-Square	Std. Error
1	.677[a]	0.459	0.449	7.09061

relationships and determine direct and indirect effects simultaneously between the independent variables and the dependent variable (Stage et al., 2004). In using path analysis, we used several fit indices, such as, the root mean square error of approximation (RMSEA), 90% C.I. for RMSEA, probability RMSEA, comparative fit index (CFI), and Tucker–Lewis index (TLI). Based on published criteria (LT Hu & PM Bentler, 1999), the following standards for good fit were used: CFI > .95, TLI > .95, RMSEA < .05, 90% C.I. for RMSEA < .05, and probability RMSEA > .05. After it has been proven that the model is fitted with the data, then we testing the hypothesis of whether each direct and indirect effect is statistically significant. It can be done by looking at the t-value (z > 1.96) and significant level (p < .05).

RESULTS AND DISCUSSION
Results
The sample size in this study is 410 participants. The subjects of this study were active undergraduate students (S1) of the Faculty of Psychology, Universitas Islam Negeri Raden Fatah Palembang. An overview can be seen in table 1. From the table 1 it can be seen that perceptual feedback has the lowest score of 6.77 and the highest score of 63.15. The SRL has the lowest score of 8.24 and the highest score of 68.07. Self-efficacy has the lowest score of 18.37 and the highest score of 64.80. The social support variable, the family support dimension, has the lowest score of 22.94 and the highest score of 59.47 and the dimension of friend support has the lowest score of 23.01 and the highest score of 61.43 and the significant other dimension has the lowest score of 37.85 and the highest score of 49.9. Next overview can be seen in table 2. Model summary.

From the table above, we can see that the R^2 coefficient is .459 or 45.9%. It can be interpreted that the proportion of variance for each independent variable affects 45.9% on the SRL while the other 54.1% is influenced by other variables outside of this study. After testing the model, the coefficient RMSEA = .30, 90% C.I. = .0 - .14 (lower limit < .05), and probability for RMSEA= .45, (p > .05). Hence, it can be concluded that the model meets the fit criteria. A summary of the model fit test can be seen in table 3 below and the model diagram that has been proven fit can be seen in figure 1. After all the criteria for the model fit are met, the next step is to examine the direct effect between variables. The following standardized coefficients are summarized in table 4 as follows.

From the table above we can find out some important points, such as: First, the self-efficacy has a positive and significant effect with a coefficient of .21 on the SRL. It can be seen from z-value = 5.07 (z > 1.96). It means that self-efficacy directly affects the SRL significantly. It can be interpreted as the higher the self-efficacy, the higher the SRL. Second, the family support has a positive and significant relationship with a coefficient of .20 on the SRL. It can be seen from the z-value = 4.50 (z > 1.96). It means that family support directly affects the SRL

significantly. It can be interpreted as the higher the family support, the higher the SRL. Third, the friends' support has a positive and insignificant relationship with a coefficient of .08 on the SRL.
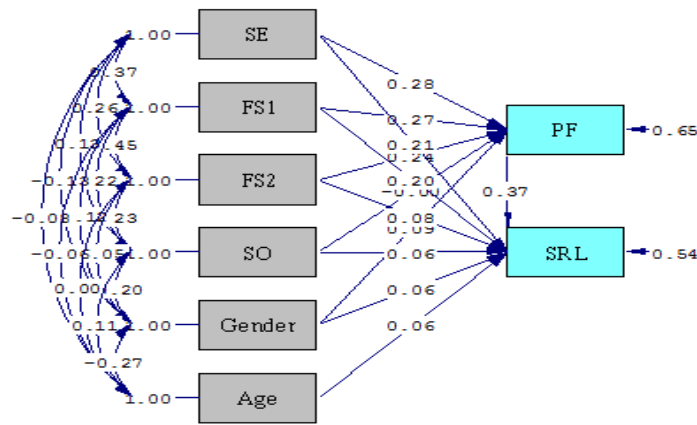

Figure 1. Model diagram

Note: SE = Self-efficacy; FS1 = Family support; FS2 = Friend support; SO = Signicant others; PF = Perception feedback; SRL = Self-regulated leaning

Table 3. Model fit Indices

Indices	Value	Estimate	Model Evaluation
RMSEA	< .05	.30	Acceptable fit
90% C.I	< .05	.00 - .14	Acceptable fit
Probability RMSEA	> .05	.45	Acceptable fit
CFI	1	1	Acceptable fit
TLI	1	1	Acceptable fit

Table 4. Coefficient of Direct Effect Between Variables

Path	Coefficient	S.E	Z-Value	Note
SE ⟶ SRL	.21	.04	5.07	Significant
FS1 ⟶ SRL	.20	.05	4.50	Significant
FS2 ⟶ SRL	.08	.04	1.83	Not Significant
SO ⟶ SRL	.06	.04	1.62	Not Significant
Gender ⟶ SRL	.06	.04	1.63	Not Significant
Age ⟶ SRL	.06	.04	1.60	Not Significant

It can be seen from the z-value = 1.83 (z > 1.96). It means that the support of friends does not directly affect the SRL. Fourth, the significant others have a positive and insignificant relationship with a coefficient of .06 on the SRL. It can be seen from the z-value = 1.62 (z > 1.96). It means that significant others do not directly affect the SRL. Fifth, gender has a positive and insignificant relationship with a coefficient of .06 on the SRL. It can be seen from z-value = 1.63 (z > 1.96). It means that gender does not directly affect the SRL. Lastly, the age variable has a positive and insignificant relationship with a coefficient of .06 on the SRL. It can be seen from the z-value = 1.60 (z > 1.96). It means that age does not directly affect the SRL.

In the next steps, the researchers examine the indirect effect of the variables of self-efficacy, social support (family support, friend support, and significant others), and gender effect on the SRL through the mediator variable perception feedback. The results of the indirect effect can be summarized in table 5 below.

Table 5. Indirect Effect Between Variables

Path	Coefficient	S.E	Z-Value	Note
SE → PF → SRL	.28	.04	6.50	Significant
FS1 → PF → SRL	.27	.05	5.71	Significant
FS2 → PF → SRL	.24	.05	5.28	Significant
SO → PF → SRL	.00	.04	-0.06	Not Significant
Gender → PF → SRL	.09	.04	2.14	Significant

Based on the table above, it can be seen that five indirect paths affect the SRL, such as: First, self-efficacy has a significant and positive influence with a coefficient of .28 on the SRL indirectly through the mediator variable perception feedback, this can be seen from the z-value = 6.50. Second, the family support has a significant and positive effect with a coefficient of .27 on the SRL through the mediator variable perception feedback, this can be seen from the value of z-value = 5.71. Third, the friends' support variable has a significant and positive effect with a coefficient of .24 on the SRL through the mediator variable perception feedback, this can be seen from the z-value = 8.28. Fourth, the significant others variable has an insignificant influence on the SRL through the mediator variable perception feedback. This can be seen from the value of z-value = - .06. Lastly, the gender variable has a significant and positive effect with a coefficient of .09 on the SRL indirectly through the mediator variable perception feedback, this can be seen from the value of z-value = 2.14.

Discussion

Following the purpose of this study which aims to investigate the path analysis model of the SLR which is theorized based on the results of research data, the final model is obtained as shown in figure 2 below.
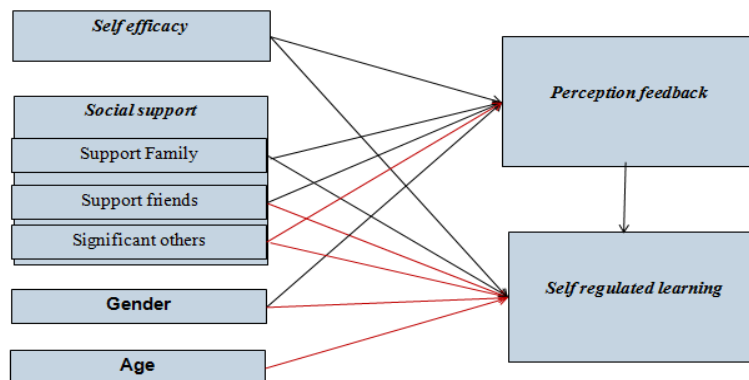

Figure 2. Final model
Note: Red Line = Not significant; Black Line = Significant

The model explains how the relationship between variables has an effect on the SRL, both directly and indirectly using path analysis as an added value in this study. Some of the variables predicted to affect the SRL are self-efficacy, social support (family support, friends support, significant others), and demographic variables (gender and age) through perception feedback as a mediator variable. Based on the results of the research that has been carried out, the variable that has the strongest influence on the SRL, both directly and indirectly, is self-efficacy. It can be interpreted as the higher the individual's self-efficacy, the higher the SRL. These findings align with several previous research. For example, self-efficacy is an internal factor to affect the SRL. These findings are in line with the research results of Daharnis (2018) stating that there is a significant relationship between self-efficacy and social support which together affect the SRL.

Another finding in this study is the discovery of the significant effect of social support on the SRL. More specifically, the significant variable is the dimension of social support called family support. The data shows that the higher the family support, the higher the SRL. This finding is in line with a study conducted by Oktariani et al. (2020) shows that self-efficacy and social support together provide a significant positive relationship with the SRL.

In this study, it was also found that perception feedback is a variable that can bridge the causal relationship between self-efficacy and the SRL. These findings are in line with the study conducted by Ekholm et al. (2015) who found that perception feedback is a mediator between self-efficacy and the SRL. When students can self-evaluate and be aware of the feedback given by people around them, such as teachers, family, friends, and other people around them, then the learning objectives can be achieved (Aldowah et al., 2019).

This shows that perception feedback can also be a mediator between social support variables affecting the SRL. In the results of this study, the social support variable, the significant others dimension, does not have a significant relationship either through direct influence or through a mediator. Significant other in this study is the form of support from special people outside the scope of family and peers or in other terms the support of lovers (boyfriends or girlfriends). It is not significant because most Islamic students do not date. After all, it is under one of the visions of the UIN Palembang is about Islamic character. It means that unmarried Islamic students are more careful not to date or have lovers who are not halal.

In addition, there were also research findings regarding descriptive statistics of the SRL, self-efficacy, social support, and perception feedback made by students during online learning. The SRL is done by students in online learning by structuring the environment, setting goals, time management, seeking help, task strategies, and self-evaluation (Barnard et al., 2009). In the arrangement of the environment, students choose the right location to avoid noise, choose the time with the least disturbance and find a comfortable and efficient place to study online. Setting student goals in online learning is done by setting goal standards, setting GPA standards above 3.0, making long-term goals, and making a list of achievement targets for online lectures. In addition, students also carry out task strategies in the form of taking careful notes during online lectures, reading lecture instructions, preparing questions, and reading a lot during online lectures.

Time management is done by setting specific time allocations for online learning, making daily and weekly schedules, and trying to learn every day. With the SRL, it does not mean that students do not need the help of others, but with the SRL, students know the suitable help for themselves. As the results of this study, students find the right person to consult, try to get help from lecturers through online media, and share problems with classmates to find solutions. Furthermore, self-evaluation, during the online learning period, the form of self-evaluation carried out by students was summarizing online learning materials, asking themselves about understanding the material, and communicating with classmates to find differences in understanding in online learning. Students' self-efficacy during online learning is on average in the medium category. Self-efficacy consists of three dimensions, namely initiative, effort, and persistence (Bosscher & Smit, 1998). The form of student initiative during online learning is to keep learning and not give up studying online lecture material that looks complicated. Furthermore, the efforts made by students are making plans to complete online lecture assignments, and continuing to try to understand material that has not been understood, even though online lectures are not fun, students continue to attend online lectures and directly do the assignments given by the lecturer, and for student's failure only makes them try even harder. Persistence is an individual's persistence in facing difficulties, during online learning students try to be persistent, this can be seen when students can overcome existing problems, can handle unexpected problems, and believe in themselves to be able to complete online lecture assignments.

As the results of previous studies reveal that during online learning, students need social support to carry out the SRL. Social support consists of three dimensions, namely family support, friend support, and significant others (Zimet et al., 1988). Based on the results of the study, there were only two significant effects on self-regulated learning during the online learning period, namely family support and friend support. Family support is given to students in online learning in the form of help and emotional support and becomes a place for discussion in making decisions. Unlike the case with the form of support from friends who always try to solve problems, there is online learning and for students, peers are a place to share joys and sorrows.

Based on the results of research on perception feedback, the average perception feedback of students in online learning is in the medium or good category. Perception feedback consists of five dimensions, namely fairness, usefulness, acceptance, willingness to improve, and affect. In the fairness dimension, it can be seen that students feel satisfied, and fair and can consider feedback given by external parties on their assignments. Furthermore, in the usefulness dimension, students perceive the feedback given during online learning as useful and useful, and through feedback, students feel they are supported. In the acceptance dimension, students show acceptance and do not reject feedback given by external parties on their assignments. Willingness to improve is an act of acceptance to take action on the development of abilities and knowledge, in this dimension, students are willing to improve and take the time to make improvements from the feedback provided. In the affected dimension, it can be seen that students who were given feedback during the online learning period felt satisfied, felt successful, and not feel offended or frustrated with the feedback given.

Implications

Based on this study, it was found that the factors that influence the SRL are self-efficacy and social support (the dimension of family support). This finding has several very useful implications for society. First, the importance of building high self-efficacy in students. Because high self-efficacy can increase the chances of students having high SRL. Simply put, students who have high confidence that they can achieve their goals will have a high level of SRL.

Second, social support (the dimension of family support) has an influence on the SRL in online learning. What can be done by the family is to provide students with emotional assistance and support in making decisions. For peers, always sharing and providing support to one another, such as helping to solve problems that exist during online learning and being a place to share joys and sorrows. Therefore, in improving the SRL for Islamic students, it is highly recommended that the surrounding environment, especially lecturers and practitioners can convince students that they are capable of dealing with all the obstacles they face in carrying out online learning.

Finally, based on this study, it was found that perception feedback is a variable that can provide a mediating effect between social support and self-efficacy. Therefore, every student must have a good level of perception feedback. By having good perception feedback, students can receive suggestions about their weaknesses in learning, so they can improve their performance in learning. In the end, the learning objectives are achieved.

Limitations and Suggestions for Further Research

This research still has many limitations and shortcomings. First, in this study, the method used for data analysis is path analysis. In future studies, it is recommended to use more sophisticated methods such as structural equation modeling (SEM). This is crucial because SEM can directly correct measurement errors in the model (Raykov & Marcoulides, 2012). In simple terms, by using SEM, researchers can get more precise parameter estimation results.

Second, in this study, social support scores are still broken down based on dimensions. Future research should be able to carry out an analysis by combining all social support dimension scores (family support, friends support, and significant others) into just one score (Ex: using second-order CFA). By doing so, it is hoped that the researchers will have a more comprehensive understanding of the influence of social support on the SRL. Lastly, the independent variables in this study are self-efficacy, social support, and demographic variables (gender & age). In future research, it is better to add other variables such as motivation or teaching models which are postulated to influence the SRL.

CONCLUSION

The results showed that there was a joint influence of self-efficacy, social support, and demographic variables on the SRL. The results showed that the self-efficacy variable affecting the SRL was partial mediation. It means that either directly or through perception feedback as a mediator variable, self-efficacy still has a significant and positive influence on the SRL. Then, the results show that the effect of social support (dimensions of family support) on the SRL is partial mediation. It means that either directly or through perception feedback as a mediator variable, the dimensions of family support still have a significant and positive influence on the SRL. Another result shows that the effect of social support (dimensions of friend support) on the SRL is perfect mediation. It means that peer support has a significant and positive effect on the SRL when there is perception feedback as a mediator variable. Simply put, peer support can affect self-regulated learning only when the individual has perception feedback. Another finding is that the influence of the social support variable (significant others dimension) does not affect the SRL, either directly or through perception feedback as a mediator. Then, the results showed that the male gender had higher self-regulated learning abilities than women. Then, the gender variable affects the SRL which is perfect mediation. It means that the male gender will have a positive and significant influence on the SRL, if the male gender has perception feedback. Lastly, the age variable does not affect the SRL significantly.

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AUTHOR CONTRIBUTION STATEMENT

DM is responsible for conceptual, writing and analysis. MP is responsible for interpreting research and design results. MDKP is responsible for the analysis and interpretation of data processing results.

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