Does self-actualization influence students' readiness? A structural equation model analysis

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Abstract. The study aimed to analyze the influence of self-actualization on the students' learning readiness. The samples were 208 junior high school students in East Kalimantan selected using stratified random sampling. The data were collected using a questionnaire employing the Likert scale. Confirmatory Factor Analysis (CFA) was employed to consider the validity and goodness of fit model. Meanwhile, SEM completed with Lisrel version 8.80 was performed to examine the covariance matrix, R^2 (variable factors), structural equation, and the hypotheses. The test results proved all factors that were used were valid, the structural model was fit, all covariance matrix for each linear correlation among variables were positive, and the t-value had significant influence with the score of 6.57 > 1.96. The research indicated that the students' self-actualization influenced their learning readiness, the score was 29%. It was expected that the findings would help school principals and teachers plan and manage the learning climate at school by facilitating the students to actualize themselves, leading to an increase in their learning readiness.

Keywords: Sel-actualization, learning readiness, Structural equation model

INTRODUCTION

Students' success in learning is the primary goal of education at school. It brings changes to the students, such as the thinking ability, skills, attitude, and the potential development of the students. The success needs strong interaction between the teachers and students in the classroom (Mardati et al., 2019) as well as the facilities and learning environment provided by the schools. However, achieving success is not without difficulty because the students face several problems, either internal or external. Some of the internal problems include motivation, attention span, and learning readiness. In contrast, the external includes parents' support, quality of interaction between teachers and students, facilities, and learning environment at school. The schools, in cooperation with the students' parents, need to find the solution to the problems. Previous studies were found to have proposed the solution for the problems faced by students, but they focused more on the external aspect. It means that the internal problems have not been taken into consideration by parents, teachers, and the principal. Indeed, motivation, attention, and development of learning readiness as part of the students' readiness are necessary for determining the students' success. It contributes to the improvement of students' motivation, learning outcome, and learning goals (Dangol & Shrestha, 2019; Findley, 2018; Saeid & Eslaminejad, 2016).

Learning Readiness

Learning readiness refers to the students' initiative to receive the learning materials with or without the help of others. Besides, it includes their ability to identify their needs, to set their learning goals, to applies the learning strategies, and to evaluate their learning outcomes (Knowles, 1975). The students' concentration and willingness are also categorized into their learning readiness (Dangol & Shrestha, 2019). Students who follow the learning process with full concentration and willingness will gain more

satisfaction in learning. It shows that learning readiness is a must, and students need to develop it to follow all processes up to the most complex level (Deyo et al., 2011). Further, learning readiness becomes the mediator of the stimulus provided by the teachers and the students' responses in the learning process (Amadi, 2018). Several factors influence students' learning readiness. Those are (a) personal readiness, parents' readiness, and school readiness (Dangol & Shrestha, 2019; Rahmatika & Suyatno, 2020), (b) physical maturity, students' emotional condition, learning experience, the teachers' teaching technique, and socio-economic condition (Amadi, 2018; Amurdawati et al., 2020), and (c) students' independence and learning motivation (Demir Kaymak & Horzum, 2013). Personal readiness, physical maturity, students' emotional condition, learning experience, independence, and motivation are the internal factors, while parents' readiness and support, family socio-economic condition, the teachers' teaching technique, as well as the school supports become the external factors.

Learning readiness can be measured by using a personal readiness instrument that diagnoses the attitude, ability, and the students' characteristics that affect the learning process (Fisher et al., 2001). Further, research by Maddox et al. (2000) elaborated on the indicators for the three variables of learning readiness. The first is emotional readiness variables that include responsibility, enthusiasm in learning, openness, adaptation ability, learning comfort, and respect. The second is cognitive readiness, which consists of critical thinking skills, awareness of the potentials, contextual thinking ability, and the ability to integrate the concept of the learning materials. The third is the attitude readiness, comprising of the willingness to be useful for peers or teachers, and time management. Measuring the variables of learning readiness contribute to the utilization of the best teaching method that leads to the development of the students' competencies.

Smedley (2007) concluded several strategies that can be applied by schools to improve the students' learning readiness. They include (a) building a strong interaction between teachers and students, (b) motivating students to perform self-evaluation, and (c) habituating students to think critically and creatively. Students need to develop and enhance their learning readiness because it influences several aspects of learning success, as proven by the previous studies. The elements include motivation, self-efficacy, critical thinking, and learning satisfaction (Turan & Koç, 2018; Yilmaz, 2017; Saeid & Eslaminejad, 2016; Horzum et al., 2015; Triastuti, 2009). Motivation and self-efficacy will significantly encourage students to reach their success and eliminate any obstacles that they may encounter (Maraghi et al., 2018). Besides, learning readiness is proven to influence learning achievement. Ready students will set a particular target and establish clear time management to reach the targets (Dangol & Shrestha, 2019; Ertuğ & Faydali, 2018).

Self-actualization

Self-actualization is human's highest need after four other needs, which are physiology, safety, love, and respect. Self-actualization is characterized by an individual's ability to actualize his or her potentials to determine the best things for their life (Maslow, 1965; Maslow, 1971). Through self-actualization, students will realize about themselves and find the highest meaning to achieve in the learning process by giving their best performance (Hall & Goodenough, 2005). Self-actualization encourages individuals to use their potentials to achieve the targets (Akcay & Akyol, 2012). Jena and Dorji (2016) confirmed that self-actualization helps individuals to understand their potentials, thereby encouraging them to do their best in accomplishing their duties. The encouragement also applies in the context of education (Ferguson et al., 2020). Students with self-actualization will gain their self-confidence, allowing them to show their potentials or abilities (Oktavia et al., 2019). Self-actualization is higher than pride because it helps individuals to reach their highest life experience that allows them to improve their reputation (Gawel, 1997). The theories imply that self-actualization is necessary for individuals to achieve success in life. In other words, it is assumed that self-actualization is one influencing factor of success in accomplishing the duties and responsibilities.

Besides, self-actualization is closely related to the students' learning readiness, which occurs when they have reached their maturity in developing their skills. This way, they can maximize their skills in the learning process (Jensen, 1969). Individuals achieving self-actualization will integrate the skills, confidence, values, and attitudes to obtain the best experience in life (Ridnour, 1985). Moreover, self-actualization is one of the intrinsic factors that motivate students to achieve learning goals and improve their achievement (Melnic & Botez, 2014). It is supported by Kim and Kim (2015), concluding that self-actualization is the most substantial factor that motivates students academically. The students' success in learning will generate learning satisfaction, which is also the component of the students' learning readiness (Monkaresi et al., 2015). Other than academic motivation, self-actualization also influences the students' emotional maturity. Therefore, the level of self-actualization is proportional to their emotional maturity and the ability to understand others' emotions (Koç, 2019; Rastegar & Al-Sadat Fatemi, 2017). In

andragogy learning, emotional maturity affects people's awareness of their learning needs in order to improve their life quality (Tønseth, 2015). Hence, it can be concluded that research on the influence of self-actualization on the students' learning readiness is necessary. Despite the significant correlation between both variables in supporting the learning success, the influence has not been revealed. The present study confirms the need for self-actualization. Besides, the results of the present study contribute to the efforts to improve the students' learning readiness as the key factor of learning success. The problems of the present study are formulated as follows:

1. How does the self-actualization influence students' learning readiness?
2. How significant is the influence of self-actualization on the students' learning readiness?

METHODS

Population and Samples

The research population included junior high school students in East Kalimantan, Indonesia. The samples were determined using a stratified random sampling method by considering three categories: schools with students with high, moderate, and low academic abilities. The selection technique took 208 students as the samples, aged 13-14 years old, consisting of 97 male students and 102 females.

Data collecting technique and instrument

The data were collected using a questionnaire which was distributed to the respondents. Employing the Likert scale, the researcher used two questionnaires: self-actualization and learning readiness. Both questionnaires were filled by the students. In the present study, the items contained in the questionnaire were developed from four indicators: needs for growth, needs for potential achievement, needs for self-fulfillment, and needs for encouragement (Robbins & Coulter, 2010). Meanwhile, the items for learning readiness consisted of three indicators: learning attention, learning motivation, and readiness development (Umam, 2015). Before usage, the questionnaires have been validated by expert judgment and tested empirically. The test showed that all items of the instruments were valid and appropriate to collect the research data.

Data Analyzing Technique

The data taken using questionnaires were analyzed using Lisrel 8.80 software. Confirmatory Factor Analysis (CFA) was employed to assess the validity and the goodness of fit model. Meanwhile, SEM was carried out to examine the results of the covariance matrix, R^2 results (the variables), structural equation, and the hypotheses.

RESULTS

The data were described in the forms of maximum, minimum, mean, and standard deviation in accordance with each variable of the research. The descriptive statistic calculation of each variable was presented in table 1.

Table 1. *Descriptive Statistic Results*

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Learning Readiness	208	45	97	79.27	7.456
Actualization	208	30	50	39.79	4.366
Valid N (listwise)	208				

Table 1 showed the descriptive statistic results of 208 samples, which were from grades 7 and 8 of junior high school. The minimum score of the learning readiness was 45, and the maximum was 97. Meanwhile, the mean was 79.27, with a standard deviation of 7.456. The score for the students' self-actualization was 30 for the lowest and 50 the highest. The mean was 39.79, with a standard deviation of 4.366. Confirmatory Factor Analysis was carried out by testing the validity and the models. The fit test was conducted with each measurement model, particularly the correlation between the latent variable and the manifest variable (observed variable). The measurement was carried out by determining the validity of the indicators within a construct. The validity test aimed to determine the ability of a particular indicator (the manifest) in measuring the latent variable. The results of the validity test were presented in table 2.

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Table 2. *Validity test result*

Latent Variable	Manifest variable	Code	Loading Factor Results	T-Value test results	Explanation
Learning readiness	Attention	LR1	0,82 > 0,40	12,75 < 1,96	Valid
	Learning motivation	LR2	0,70 > 0,40	10,52 < 1,96	Valid
	Readiness development	LR3	0,82 > 0,40	12,88 < 1,96	Valid
Self-actualization	Needs for growth	SA1	0,43 > 0,40	5,42 < 1,96	Valid
	Needs for potentials achievements	SA2	0,82 > 0,40	12,32 < 1,96	Valid
	Needs for self-fulfillment	SA3	0,83 > 0,40	13,15 < 1,96	Valid
	Needs for encouragement	SA4	0,62 > 0,40	9,18 < 1,96	Valid

Every indicator of each latent variable has fulfilled the requirements because the loading factor was above 0.40 and the t-value above 1.96, showing a significant result. It was evident that LR1, LR2, LR3, LR4, SA1, SA2, SA3, and SA4 could be further tested. The results indicated that the manifest variables were valid to measure the proposed latent variables. The analysis was continued by the structural fit model test. The aim was to confirm the relations among the variables in the conceptualization model supported by the empirical data obtained from the survey. The fit model test results were presented in table 3.

Table 3. *Fit Model Test*

Fit index	Accepted Fit level	Value	Notes
GFI	≥ 0,90	0,91	Fit
AGFI	≥ 0,80	0,80	Fit
RMR	≤ 0,05	0,014	Fit
RMSEA	≤ 0,08	0,15	Acceptable fit
NFI	≥ 0,90	0,91	Fit
IFI	≤ 0,90	0,92	Acceptable fit

Table 3 presented the output of Lisrel programs, indicating the structural model proposed in the present study was good. The results reached the chi-square score of 75.92. Similarly, several aspects showed the goodness of fit criteria. Therefore, the variables of self-actualization and learning readiness were considered fit or appropriate to be used in the Structural Second Order (full model). In the second test, the relation among variables was analyzed in a more complex manner. It consisted of a variance test and the results of R^2 to know the influencing factors of the latent variables (self-actualization and learning readiness). Meanwhile, the hypotheses were tested using the structural equation. The covariance matrix test was presented in figure 1.


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    Covariance Matrix

            LR1       LR2       LR3       SA1       SA2       SA3       SA4
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    LR1     0.06
    LR2     0.05      0.15
    LR3     0.06      0.08      0.15
    SA1     0.03      0.03      0.04      0.10
    SA2     0.03      0.04      0.06      0.06      0.25
    SA3     0.04      0.06      0.06      0.04      0.18      0.25
    SA4     0.05      0.08      0.08      0.06      0.11      0.11      0.22
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**Figure 1.** *Results of the Covariance Matrix*

Covariance showed a linear relation occurred between two variables. The concept of covariance was similar to the correlation concept, which is by observing the relationship between two variables. Conversely, covariance emphasizes on the variation of both variables simultaneously. The covariance test

using LISREL is in the Covariance Matrix column presented in figure 1. It was evident that each linear relation was positive. No relation among variables scored negative or zero. Meanwhile, the measurement of the influence of self-actualization on learning readiness was presented in table 4.

**Table 4.** *The magnitude of the influencing factors of the latent variable*

Latent Variable	Manifest Variable (Factors)	Code	R^2 Results	Magnitude (%)
Learning Readiness	Attention	LR1	0,67	67%
	Learning Motivation	LR2	0,49	49%
	Readiness Development	LR3	0,67	67%
Self-actualization	Needs for growth	SA1	0,18	18%
	Needs for potentials achievement	SA2	0,67	67%
	Needs for self-fulfillment	SA3	0,69	69%
	Needs for encouragement	SA4	0,39	39%

Table 4 showed that the factors included in the present study influenced the latent variables with different levels. Attention, learning motivation, and readiness development influenced the students learning readiness, reaching a score of 67%, 49%, and 67%, respectively. Similarly, the need for growth, needs for potential achievement, needs for self-fulfillment, and needs for encouragement influenced the students' self-actualization, with the score of 18%, 67%, 69%, and 39%, respectively. The regression analysis using SEM was also conducted to examine the correlation between self-actualization and learning readiness. The structural equation of both variables was presented in figure 2.
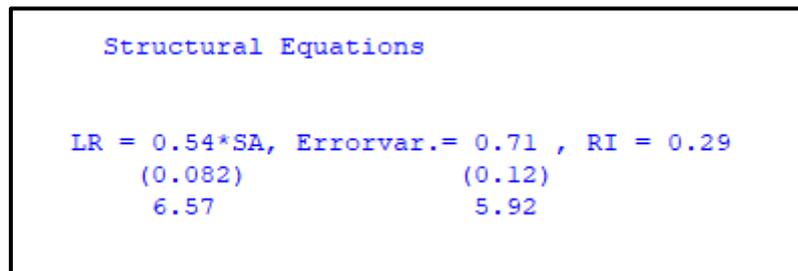
Figure 2. *Structural Equation Results*

The results showed the influence of the students' self-actualization on the learning readiness, with the R^2 score of 0.29. It means that the influence was 29%, with an error variance of 0.71. Meanwhile, the standard deviation of students' self-actualization was 0.082, and learning readiness was 0.12. Standard deviation is the gap between the observed values and the predicted values of each case. The hypothesis test results of the correlation between self-actualization and learning readiness were presented in figure 3.
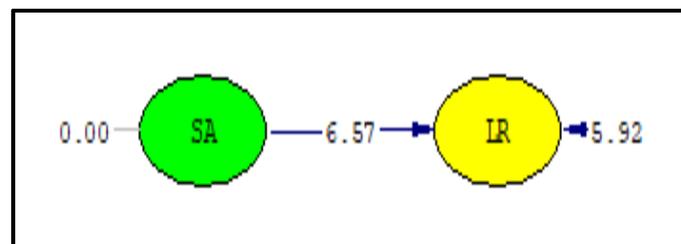
Figure 3. *Hypotheses Test Results*

Figure 3 proved the hypotheses proposed in the present study. It showed that the t-value was 6.57, which was above 1.96. It means that students' self-actualization influenced the students' readiness in learning. In conclusion, self-actualization becomes the indicator of students learning readiness with 29% influence.

DISCUSSION AND CONCLUSION

The research aimed to examine the influence of self-actualization on the learning readiness using SEM data analysis. The results proved a significant influence, reaching a score of 29%. The findings strengthen the previous studies, mentioning that students with high self-actualization tend to achieve higher in learning. Self-actualization is the intrinsic factor that encourages students to establish their readiness, allowing them to reach their goals and success in learning. Self-actualization helps to build the students' awareness and understanding of their potentials. They also know how to use it in learning. The awareness was accumulated into a strong motivation to prepare themselves, reaching the target. Students with self-actualization will find the true meaning of learning through their best performance (Hall & Goodenough, 2005). Similar confirmation was found in other studies, in that self-actualization encourages individuals to use the potentials to reach the target in life and do the best in accomplishing the duties or tasks, including in the learning process (Ferguson et al., 2020; Jena & Dorji, 2016; Kim & Kim, 2015; Melnic & Botez, 2014; Akcay & Akyol, 2012). Learning motivation derived from self-actualization will last longer compared to the one obtained from the environment. The stable motivation will develop a perspective that learning is part of an enjoyable experience, allowing them to prepare to learn. Besides, self-actualization improves the students' confidence to show their abilities (Oktavia et al., 2019). Self-confidence help students feel secure, comfortable, and opened in the learning process. It leads to the stability of emotion, which is the main component of learning readiness. Amadi (2018) revealed that learning motivation, self-confidence, and emotional stability are part of learning readiness. It was similar to other studies, finding that students' readiness, independence, and learning motivation are the influencing factors of learning readiness (Dangol & Shrestha, 2019; Demir Kaymak & Horzum, 2013).

Self-actualization influences learning readiness because the students' emotional maturity, help students to understand others' emotion, and thus it is easier for them to interact with others. As a result, they establish their emotional intelligence (Koç, 2019; Rastegar & Al-Sadat Fatemi, 2017). Stability and emotional maturity influence the students' awareness of their needs for learning to improve their life quality (Tønseth, 2015). Besides, in the learning process, emotional stability influences the ability and readiness to complete the tasks (Ordun & Akün, 2017). Emotional stability, as part of emotional intelligence, allows students to be more humanistic and effective in controlling their emotions during the learning process. This way, they will improve their interaction and participation, leading to the achievement of the expected learning objectives. Besides, emotional stability consisting of safety and comfort, will prepare the students to face the obstacles that may occur during the learning process. Agherdien (2014) explained that students who are ready to learn are the ones with emotional intelligence in overcoming the complex problem. Therefore, stability and maturity are categorized as the variables that measure the students' readiness for learning. Fisher et al. (2001) revealed that the measurement of learning readiness could be carried out by using the instrument that diagnoses the attitude, ability, and personal characteristics of the students. Maddox et al. (2000) mentioned that learning readiness could be measured using three variables. The first was emotional readiness, including responsibility, enthusiasm, openness, adaptability, learning comfort, and respect. The second is cognitive readiness, which includes critical thinking, awareness of the potentials, contextual thinking ability, and ability to integrate the concepts of learning materials. The third is attitude readiness, which consists of a willingness to be useful for friends and teachers and the discipline in managing the time. Koç (2019) concluded that students who are aware of their potentials developed their emotional intelligence in the form of responsibility in planning, monitoring, and evaluating the learning process. Indeed, responsibility is one indicator of students' learning readiness.

Other than motivation, encouragement, and emotional maturity, self-actualization also influences the students' self-efficacy. As mentioned previously, several internal aspects of the students, such as motivation, self-efficacy, and learning satisfaction, influence the learning readiness (Turan & Koç, 2018; Yilmaz, 2017; Saeid & Eslaminejad, 2016; Horzum et al., 2015; Triastuti, 2009). Self-efficacy refers to the students' confidence in their ability to accomplish tasks or duties. The belief will appear when students are aware of their potentials, proven by their self-actualization. Ordun and Akün (2017) concluded that self-actualization influences the students' self-efficacy, which later contributes to their learning readiness. Self-efficacy increases enthusiasm, perseverance, and bravery. It means that self-efficacy prepares the students to learn. The higher is the self-efficacy, the higher the students' learning readiness. Through self-efficacy, students' motivation and performance in learning become much better (Maraghi et al., 2018; Saeid & Eslaminejad, 2016).

Therefore, it can be concluded that self-actualization influenced the students' learning readiness as much as 29%. It influenced several aspects of learning readiness, such as learning motivation, emotional stability, and self-efficacy. Thus, the results recommended three essential matters. First,

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students should be trained and motivated to recognize and understand their learning needs. Besides, they should learn to know their ability in order to reach self-actualization. Second, teachers should use creative and innovative learning strategies and methods to stimulate the students' creativity, belief, and confidence as part of their self-actualization. Third, the school should support the success of the learning process, proven by the students' self-actualization, by providing facilities for creative learning and a comfortable learning environment.

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