Academic Resilience: The Role of Self-Esteem and Self-Regulated Learning Among Vocational Student

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ABSTRACT

Abstract - Vocational High School (SMK) is a high school emphasizing students' practical capabilities and immediate work readiness. Various restrictions during the COVID-19 pandemic hampered the learning process of SMK students, most of which were practical. The magnitude of these challenges shows the importance of academic resilience for students. Academic resilience is the ability to increase success in learning despite experiencing difficulties. This study examines the effect of self-esteem and self-regulated learning on academic resilience in SMK students. The self-esteem, self-regulated learning, and academic resilience scales were used as data collectors. Class X and XI of SMK students constitute the population in this study, with cluster random sampling as the sampling technique used to select research participants. 110 student was selected as a participant in this study. Multiple linear regression analysis techniques are used to examine the hypothesis. The results show that self-esteem and self-regulated learning influence vocational students' academic resilience. Further analyses were also made to measure each independent variable's contribution amount. This research can be used as a basis for compiling programs to increase academic resilience with activities that can increase students' self-esteem and self-regulated learning.
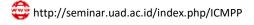
Keywords: _academic resilience; covid-19 pandemic; self-esteem; self-regulated learning; vocational student_
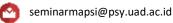
Introduction

Vocational high school (SMK) is an educational institution that specifically aims to prepare students to enter the world of work and to continue their education to a higher level. According to Djohar (2007) vocational education is an educational program that prepares students to become professionals and are ready to continue their education to a higher level. Vocational education basically has to prepare students to become professional and competent workers in their respective fields of expertise. This makes it different from other secondary schools. Because, the burden of material and theory obtained is different. Vocational schools have more hours of study in practice than theory.

The Covid-19 pandemic has hit Indonesia, which has had an impact on all elements of society and government. The pandemic has an impact not only on health but also on the education sector. The existence of a social distancing policy or keeping this distance has stopped face-to-face learning. This policy is implemented by schools following the Ministry of Education and Culture Circular Letter Number 1 of 2020 concerning Prevention of the Spread of Covid-19 in educational environments. The implementation of this policy has had a major impact, especially in changing face-to-face learning activities into virtual face-to-face learning.

The application of virtual face-to-face learning results in the emergence of various problems that occur to students and teachers. Obstacles faced such as signal difficulties, limited

internet quota, lack of availability of smartphone media for schools and students, and parents' lack of understanding of applications that support learning, difficulty understanding practical learning even though they already use video, limited interaction between students and teachers (Irwanto, 2023; Putranto, 2020; Rahmida, 2021) is a complaint that is often conveyed. These various obstacles have an impact on the delivery of subject matter to students and a decrease in student enthusiasm for learning. KPAI published a survey which stated that during a pandemic, 77.8% of students found it difficult to do assignments because of the minimal interaction between teachers and students (Febriyatko, 2021). A survey of 1,700 students regarding distance or virtual face-to-face learning methods showed 76.6% did not like learning from home and only 23.3% said they liked it (CNN Indonesia, 2020).This is possible related to the following survey which stated that 81.8% of students indicated that their teacher paid more attention to assignments and provided little material explanation, discussion, or question and answer about learning topics (CNN Indonesia, 2020). In accordance with the survey results, the results of the preliminary study stated that vocational students complained about the increasing number of assignments given by teachers during a pandemic. To be able to complete the task until you need to stay up late. Students also admit that they still experience difficulties in practical subjects even though they have used videos, so students apply to be allowed to continue practicing at school (Azvitasya, 2023; Mahmuda, 2023).

Based on the above data, the majority of students are unhappy and have difficulty with distance learning and it affects students' enthusiasm for learning. Especially if the school is a vocational school which has more practical learning hours. There is a pandemic condition, making ideal learning difficult to implement. If strategic efforts are not made to overcome this, it is feared that it will affect the ability of students' skills and their ability to compete in the world of work. The high challenges of vocational students to be successful in learning, coupled with the conditions of the pandemic, have made students' internal strengths, one of which is resilience, a point of hope for success.

Resilience is a person's skills in maintaining his skills and abilities in various problems (Hendriani, 2018). Academic resilience is a high achievement of motivation and attitude at school in the midst of stressful situations (Cassidy, 2015) A student who is academically resilient, in dealing with problems that occur in the academic environment, will not easily feel hopeless. He has the ability to think more positively and optimistically even though they are in academic difficulties, and still have a sense of belief that there are solutions to deal with academic problems and difficulties (Amalia, 2017). In the school context, the level of academic resilience influences three factors related to psychology and education, namely (1) self-esteem, (2) enjoyment or enjoyment of school, and (3) participation in class (Martin & Marsh, 2006). Rosenberg stated that individuals who have high self-esteem will respect themselves and consider themselves useful individuals, and vice versa (Sholichah et al., 2019). When a student has self-esteem within him, students will better understand and respect themselves to understand all the conditions that exist around them or their environment such as the educational environment. If students can understand and respect themselves, students will be able to have strong resilience within themselves to face all pressure conditions around them. Jowkar et al. (2014) stated that there are protective factors and risk factors that affect academic resilience. The ability to plan and organize is one part of the internal protective factor. Self-regulated learning is the skill of someone who actively participates in learning activities, motivationally, metacognitively and behaviorally (Zimmerman, 1989), including learning to control learning activities, monitoring academic goals and motivation, and organizing material and human resources, as well as decision-making actions and implementation of learning (Bandura, 1997). Self-esteem and self-regulated learning will be variables in this study which are predicted to affect the academic resilience abilities of SMK students.

Many previous studies have examined the relationship between the two independent variables, self-esteem and self-regulated learning separately as predictors of academic resilience

(Mohan & Verma, 2020; Salsabela, 2021; Sholichah et al., 2019). In this study, both variables were tested together as predictors of academic resilience which represent internal protective factors. Strengthening internal protective factors is assumed to be an effective strategy to optimize academic resilience.

Method

This study uses a quantitative approach to examine the factors within students that contribute as predictors of the academic resilience of vocational students, such as self-esteem and self-regulated learning. Cluster random sampling (Azwar, 2014b) was used to select research samples. 110 participants involved in this study were students of class X and XI SMK (see Table.1).

Table 1.
Distribution of research respondents

Class	Frequency
X TP 1	33
X TP 3	35
XI TP 1	15
XI TP 4	27
Total	110

Academic resilience scale, self-esteem scale, and self-regulated learning scale were used to collect research data. The academic resilience scale used modifies the scale compiled by Pitaloka (2021) based on the aspects put forward by Cassidy (2015). This scale consists of 18 items. The total corelated item ranging from 0.377 to 0.833 and the reliability coefficient is 0.949.

The self-esteem scale was developed by researchers based on aspects of Rosenberg (1976). It consists of 38 items, with total corelated item ranging from 0.303 to 0.718 and a reliability coefficient of 0.943. The self-regulated learning scale uses a modified scale from the scale compiled by Putri (2015) based on the aspects put forward by Zimmerman (1989). This scale consists of 16 items, with total corelated item ranging from 0.332 to 0.754 and a reliability coefficient of 0.924.

All instrument are a Likert scale using four options: (1) Strongly disagree to (4) Strongly agree. The scale was distributed to the participants with the help of the Google form application. The data collection was carried out on 8 - 10 June 2022.

The research data were analyzed using SPSS. As for testing the hypothesis using multiple linear regression statistical analysis techniques (Azwar, 2014). All data in this study were normally and linearly distributed, and there was no multicollinearity.

Results

Description of research data can be seen in table 2.

Table 2.
Description of research data

Variable	N	Min	Max	Mean	SD
Academic Resilience (Y)	110	45	68	55,63	4,850
Self-Esteem (X1)	110	75	140	1,091	12,84567
Self-Regulated Learning (X2)	110	36	58	46,92	4,402

Researchers also categorize using the basis of a hypothetical score. The categorization for academic resilience scale scores can be seen in table 3.

Table 3.
Academic resilience scale categorization

Interval	Category	Frequency	Percentage (%)
X < 36	Low	0	0
36 ≤ X < 55	Medium	44	40
X ≥ 55	High	66	60
Total		110	100%

The categorization for self-esteem scale scores can be seen in table 4.

Table 4.
Self -esteem scale categorization

Interval	category	Frequency	Percentage (%)
X < 90	Low	1	0,9
90 ≤ X < 126	Medium	95	86,4
X ≥ 126	High	14	12,7
Total		110	100%

The categorization for self-regulated learning scale scores can be seen in table 5.

Table 5.
Self-regulated learning scale categorization

Interval	Category	Frequency	Percentage (%)
X < 32	low	0	0
32 ≤ X < 48	medium	68	61,8
X ≥ 48	high	42	38,2
Total		110	100%

Based on the research data obtained, multiple regression analysis was carried out with the help of the SPSS application to test the hypothesis. It is proven that academic resilience can be predicted by self-esteem and self-regulated learning. The correlation value R is 0.660 with a total contribution of the two variables together at 43.6%. The results of the analysis can be seen in table 6.

Table 6.
The results of multiple linear regression analysis

Model	R	R^2	Adj. R^2	R^2 Change	F	p
H_1	0,660	0,436	0,425	0,436	41,279	< ,001

Further analysis to examine the relationship between self-esteem and academic resilience, by controlling for self-regulated learning variables, shows a very significant positive relationship. The amount of self-esteem's effective contribution to academic resilience is 16.263%. The self-regulated learning variable is proven to have a very significant positive relationship with academic resilience. The effective contribution of self-regulated learning to academic resilience is 27.23%. The complete regression coefficient can be seen in table 7.

Table 7.
Regression Coeficient

Predictors	b	Std. Error	β	t	p	Zero order	Partial
Self-esteem	0,127	0,029	0,336	4,400	< 0,001	0,484	0,391
Self-regulated learning	0,520	0,084	0,472	6,180	< 0,001	0,577	0,513

Discussion

The purpose of this research is to test whether self-esteem and self-regulated learning simultaneously or separately can predict academic resilience. Based on the results of research data analysis, it shows that self-esteem and self-regulated learning simultaneously can predict the academic resilience of vocational students. The test results on each predictor by controlling for other predictors, show that each predictor is able to predict academic resilience. This shows that SMK students who have high self-esteem, as well as have high self-regulated learning abilities will have a positive impact on their academic resilience abilities.

Previously it was explained that resilience in the field of education or academic resilience is influenced by self-esteem, pleasure or enjoyment of school, and participation in class (Martin & Marsh, 2006). Another theory states that there are other factors that affect academic resilience, namely protective factors and risk factors that affect academic resilience (Jowkar et al., 2014). The results of this study show support for the results of previous studies (Mohan & Verma, 2020; Salsabela, 2021; Sholichah et al., 2019). Students who have high self-esteem will respect themselves more, understand themselves and their environment. If they are able to understand and respect themselves, students will have strong survival skills to be able to face all the challenges in front of them. Equipped with high self-regulated learning abilities as an internal protective factor, students are not only able to understand and respect themselves so that they can manage themselves to survive, but are also able to plan and organize all the potential they have both within themselves and their environment to achieve academic goals. Thus, students are stronger to survive and bounce back when they are in unfavorable academic conditions for themselves. These dynamics can explain why the two predictors can affect the academic resilience abilities of vocational students during the Covid-19 pandemic.

An interesting finding from this study is that self-regulated learning makes a greater contribution to academic resilience than self-esteem. The difference is 9%. Although the two predictors can fulfill the elements as internal protective factors (Bernard, 1991), however, based on this study, the ability to be able to plan, organize, and manage oneself and the resources one has, has a greater contribution in shaping students' academic resilience abilities. This means that students who have the ability to plan, organize, and manage themselves and their resources better will have a higher chance to become academically resilient and then be quicker to rise to face the obstacles and challenges that are in front of them.

Another interesting finding from this research comes from demographic variables. It should be noted that the participants in this study were male vocational students. This is because the majors in the schools that are the research locations are engineering majors, so most of the students who choose these majors are male students. In table 3 it can be seen that the participants' academic resilience ability of 60% is in the high category. This finding is consistent with previous research which stated high resilience scores in men (Bonnano, et.al, 2010; Sujadi et al., 2021; Wahyuni & Wulandari, 2021). Based on the research data, the most dominant aspect of the academic resilience variable is the aspect of reflecting and adaptive help seeking, namely recognizing one's own strengths and weaknesses and then seeking help at the right time. Having

this ability makes students able to be able to control conditions. This finding is in line with earlier research which stated that men tend to be able to recognize and master the environment so that it affects their resilience abilities (Boardman, et.al, 2008).

This research has limitations. First, this study only used male participants. The next researcher is advised to use male and female participants so that the academic resilience abilities of male and female students can be compared. Second, this study has not conducted a more in-depth analysis of the differences in scores in each aspect. This is deemed necessary to obtain a more complete dynamic related to the academic resilience abilities of SMK students.

Conclussion

The academic resilience of vocational students can be predicted by self-esteem and self-regulated learning. This means that SMK students with high self-esteem and self-regulated learning abilities will have high academic resilience skills to face learning challenges and obstacles during the covid-19 pandemic. Both self-esteem and self-regulated learning variables, separately by controlling other variables, can still contribute positively to academic resilience. The ability of self-regulated learning contributes a higher contribution than self-esteem. This shows that the ability to control and manage oneself and the resources has a more dominant role in academic resilience in a pandemic. Thus, to maintain or even increase the academic resilience abilities of SMK students, assistance or structured programs are needed that can help train their ability to manage themselves and the resources possessed by SMK students.

Acknowledgement

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