

The Synthesis of Self-Efficacy of Academic Resilience Capacity (SEARC) as the Implication of Self-Efficacy Contribution to Student Academic

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Abstract. Many students in the educational process need more resilience. This research aims to determine the academic resilience of students' self-efficacy aspects, such as mastery experience, vicarious experience, social persuasion, and emotional state. It also aims to synthesize a framework for modifying students' academic behavior, namely Self-Efficacy of Academic Resilience Capacity (SEARC). A quantitative approach with regression and literature analyses was used to develop a synthesis framework based on the field findings. The random sampling method was used to collect data on students' self-efficacy. The instrument used in this research was the Academic Self-Efficacy Scale (ASES) developed by Alfaiz with a 0.898 reliability. The collected data were analyzed descriptively and regression analysis was used to test the hypothesis. The results showed that mastery experience, vicarious experience, and emotional state significantly increase students' resilience but social persuasion is insignificant when viewed partially. It implies that self-efficacy ability contributes to academic resilience.

Keywords: Academic Resilience Capacity, Self-Efficacy Ability, Synthesis Study

INTRODUCTION

In the process of learning, both resilience and student engagement are crucial in facilitating better activities and helping students achieve self-actualization through the acquisition of knowledge. Montenegro (2019) suggests that engagement in learning is determined by the students' confidence in their decision-making abilities and their learning goals, which in turn impact their resilience and efficacy. Academic learning is a vital component for any country, and students from primary to higher education levels should possess it to maximize their cognitive, affective, and conative potentials (Alfaiz, 2014, 2021).

Educators consider resilience as one of the most critical aspects of learning because it is essential for students' strengths and is inseparable from their agentic power. This aspect of learning also makes students feel comfortable and committed to their studies (Bandura, 1986, 1987, 1997). According to Alfaiz et al. (2019; 2020), self-efficacy is the key to activating this commitment, which allows students to become agents for themselves. Individuals with good resilience are always eager to engage and participate in academic activities, and they confidently complete academic-related tasks (Montenegro, 2019). Several factors, such as self-efficacy and internally activated agentic

potential, contribute to students' engagement in the learning process and create a resilient capacity (Reeve et al., 2011; Pajares, 1994; Pajares et al., 2002).

Self-efficacy is a concept that refers to an individual's belief in their ability to perform successfully in a particular situation. This belief is based on the experiences and knowledge that an individual has acquired through various means, including recognition and vicarious learning processes. Through observational learning and assimilation of their internal knowledge, individuals can modify their learning experiences (Bandura, 1986, 1994, 1995, 2000). The development of self-efficacy is influenced by both internal and external motivational factors. The mastery experiences of an individual, where they have succeeded in the past, can lead to a higher sense of self-efficacy (Hergenhahn et al., 2008; Bandura, 2002). Vicarious experiences, where individuals observe others' successes and failures, can also contribute to the development of self-efficacy (Bandura, 1997, 2004, 1977; Alfaiz et al., 2015; Alfaiz et al., 2017a & b).

Social persuasion is another important factor that affects the development of self-efficacy. The feedback and support that individuals receive from their social networks can impact their self-confidence and emotional state, ultimately influencing their belief in their abilities (Alfaiz et al., 2015, 2021; Cauce, 2012; Boeree, 2004). This feedback can take various forms, including encouragement, positive reinforcement, and constructive criticism. When individuals receive positive feedback, they are more likely to feel confident in their abilities, which can enhance their self-efficacy. Conversely, negative feedback can undermine an individual's belief in their abilities and lower their self-efficacy.

Reeve's (2011) research suggests that the development of self-efficacy in students can lead to increased engagement and resilience in the academic process. This is because self-efficacy is closely linked to an individual's self-confidence, capability, and growth, all of which are critical for academic success. Over the years, several studies have explored the relationship between self-efficacy and academic resilience from different perspectives. One such study examined the impact of student engagement and self-efficacy on academic resilience (Reeve et al., 2011). The findings showed that students who had high levels of self-efficacy and were actively engaged in their learning were more likely to exhibit academic resilience, even in the face of challenges or setbacks.

Another study explored the role of agentic potential and self-efficacy in promoting academic resilience and engagement (Montenegro, 2019). The results suggested that students who possessed high levels of agentic potential and self-efficacy were more likely to be academically resilient and engaged in their learning. Other studies have focused on the relationship between self-efficacy, agentic potential, self-regulation, and academic potential (Alfaiz et al., 2015, 2017, 2021) and academic resilience to potential self-efficacy with developed learning settings (Allred et al., 2013).

However, there is a scarcity of research that directly tests academic resilience through the self-efficacy variable, by examining every aspect of self-efficacy that contributes to academic resilience. Moreover, there is a need to develop a framework for learning or counseling strategies that can enhance the self-efficacy of academic resilience capacity, known as SEARC. The research question that arises is to what extent do mastery experience, vicarious experience, social persuasion, and emotional state contribute to academic resilience, and how can the synthesis of learning and counseling strategies improve students' academic resilience, as most research only connects academic resilience to other variables in the learning context. This study not only explains the contribution of these variables but also synthesizes them in the SEARC model, which is the novelty of this research article, as no other articles have done so.

METHOD

This study employs a quantitative research design that utilizes the multiple regression analysis approach to test the hypothesis and identify the contribution of each independent variable to the dependent variable. The research design aims to capture the conditions experienced by the sample without any intervention or treatment (Umar, 2008). In multiple regression analysis, normality and homogeneity tests are crucial to ensure the statistical test process's accuracy. Thus, this research aims to fulfill the normality and homogeneity tests to ensure that the data passes the distribution phase, with each aspect represented by the regression analysis.

The stratified random sampling method was used to select the research participants from a private university in West Sumatra, Indonesia. A total of 100 students were chosen as the sample, and they were selected based on their experience in studying at the university and their record in field exercises. These criteria were used to select the sample for the research.

To measure academic resilience and self-efficacy, the researchers used the Academic Self Efficacy Scale (ASES) developed by Alfaiz (2019). This scale consists of four aspects: mastery experience (e.g., ability to master oneself in facing different learning situations), vicarious experience (e.g., ability to adjust oneself with friends in the learning environment), social persuasion (e.g., ability to persuade others to learn through communication), and emotional state (e.g., ability to motivate oneself and feel comfortable in the campus environment). Each aspect is rated on a scale to determine the student's capacity in that particular attribute. The ASES has undergone validity and reliability tests with a reliability value of 0.898, indicating that it is a reliable instrument for measuring academic resilience and self-efficacy.

The data collected were analyzed using descriptive statistics through the percentage technique to examine each aspect of students' self-efficacy and academic resilience. The data were then assessed for normality to ensure they met the statistical regression test's requirements. Once the data passed the normality test, the researchers used multiple regression analysis to determine the significance of each independent variable's contribution to academic resilience. They also calculated the R and F-count values to determine the strength of the relationship between the variables at < 0.05 .

FINDINGS

Students' Academic Self-Efficacy Condition

Based on the results of the questionnaire filled out by 100 respondents, the data collected on the instrumentation of self-efficacy and academic resilience show that students generally have very good self-efficacy conditions, with an average percentage of 82.3%. However, the social persuasion aspect has a lower condition than the percentage of respondents, with an average percentage of 72.8%. Tabel 1 in the research article describes the data with the student frequency distribution percentage technique, presenting the results of the respondents' self-efficacy and academic resilience scores for each aspect.

Table 1. Description of Student's Self-Efficacy Condition in Academic

Efficacy Aspects	Self-Efficacy in Academic			
	High (80 – 40)		Low (39 – 0)	
	F	%	F	%
Mastery Experience	83	83 %	17	17 %
Vicarious Experience	78	78 %	22	22 %
Social Persuasion	40	40 %	60	60 %
Emotional State	85	85 %	15	15 %

Table 1 shows that out of the 100 respondents who randomly responded to all self-efficacy questionnaire items, 83%, 78%, and 85% were in the high score range driven by their mastery, vicarious and emotional experiences. Meanwhile, only 40% of respondents were in the high score range related to self-efficacy and driven by social persuasion. It is because social support and interaction did not have a good influence on individual motivation and needs. The interaction and stimulation work interchangeably to ensure that experience and persuasion effectively increase individual self-efficacy (Zimmerman et al., 2001; Krumboltz, 2011).

Students' Academic Resilience Condition

Meanwhile, student response results are good for the academic resilience variable, with the percentage distribution in the very high and high categories. Table 2 describes the data with the student frequency distribution percentage technique.

Table 2. Description of Student's Academic Resilience Condition

Variable	Academic Resilience			
	High (80 – 40)		Low (39 – 0)	
	F	%	F	%
Academic Resilience	87	87 %	13	13 %

Table 2 shows that from a total of 100 respondents who gave answers to the academic resilience questionnaire using the percentage technique, 87% had a high academic resilience condition. It explains that students' potential for academic resilience is good, and their scores are in the high range. Some of the items with the high score were when respondents were asked to provide their answer to the following statement, "I have confidence in my learning process and academic tasks." For this item, 60 out of 100 responded "very confident." It reflects that resilience is related to self-efficacy and confidence in one's internal abilities. According to Reeve (2011), individuals who want to be engaged in academic matters have high internal confidence; hence they are resilient in these activities (Reeve, 2011; Montenegro, 2012).

Normality Test

The next stage is using a hypothesis test with regression analysis to reveal the effect of self-efficacy on students' academic resilience. Before the regression test, normality and homogeneity tests need to be conducted; hence the data is proven to be normally distributed and a good regression calculation. The normality test results of data on student self-efficacy and academic resilience variables are shown in Table 3.

Table 3. Normality Test

Self-Efficacy	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
High	.398	100	.139
Low	.276	100	.202

The normality Test of Academic Resilience with high and low Self-Efficacy, as indicated by the Kolmogorov-Smirnov Test, shows a sig. value of 0.139 and 0.202. The data on Academic Resilience with high and low Self-Efficacy is normally distributed because of the sig. value is more than alpha (0.139 and $0.202 > 0.05$). These findings indicate that the data can be continued for a regression test.

Regression Analysis

After passing the data normality test, regression analysis was conducted to determine the contribution of the independent variable (self-efficacy) to the dependent (academic resilience). The statistical processing results of regression analysis are shown in Table 4.

Table 4. Regression Analysis of Self-Efficacy to Students' Academic Resilience

Variable	Coefficient R	T	Significant
Self-Efficacy (X)	0.687	1.350	.001

Table 4 shows that the contribution of self-efficacy as an independent variable (X) to academic resilience as a dependent (Y) has a regression coefficient (r-count) of 0.687 with a significance of $0.001 < 0.005$. It implies that self-efficacy significantly contributes to the increase in students' academic resilience by 68.7%.

Furthermore, Table 4

DISCUSSION

The findings suggest that an overall sense of self-efficacy contributes to a natural increase in students' academic resilience as a result of their engagement in learning, leading to greater confidence in completing tasks. It is important to note that students' academic engagement is closely linked to their self-efficacy and agentic power to persist in learning under challenging conditions, as well as their motivation to learn from experiences during social learning (Reeve, 2011; Montenegro, 2012).

This finding confirms previous research that has established self-efficacy as a manifestation of motivation, needs, and positive emotional states that empower individuals to remain active and resilient in pursuing their life goals, including those related to academics (Alfaiz, 2015; Alfaiz et al., 2021; Bandura, 1997, 1986). Furthermore, the ability to be resilient impacts students' potential to regulate themselves in learning engagement and act with agency (Pajares, 2002; Kadafi et al., 2021; Gao, 2001). These findings also contribute something new to the literature and support preliminary studies that suggest academic resilience emanates from self-efficacy (Bandura et al., 1977; Bandura, 2000; 2006).

Synthesis of Students' Academic Resilience Capacity Seen from Self-Efficacy

Based on the total score obtained from the respondents, the majority of students exhibit good levels of self-efficacy and academic resilience. When these scores were analyzed using a regression equation, it was found that the self-efficacy variable contributed 68.7% to student academic resilience. Allred et al. (2013) have emphasized that self-efficacy involves cognitive and practical aspects of experience, as well as self-confidence in one's abilities. Thus, when individuals engage in enjoyable activities, they tend to become more resilient and comfortable (Allred et al., 2013; Bandura, 2000, 2006).

As a result, this study synthesizes the students' condition and formulates the concept of Self-Efficacy of Academic Resilience Capacity (SEARC) as seen in Table 5.

Table 5. Synthesis of Students' Self-Efficacy Condition Resulting in Academic Resilience

Self-Efficacy Aspects	Internal Condition	External Condition	Academic Resilience
Mastery Experience	Individuals who explore and personalize their direct learning experience find it easy to motivate themselves and break the deadlock in the activities they enjoy and pursue. Therefore, their engagement and persistence in activities are maximized. Educators must focus their independent learning capacity on students and provide them with direct experience.	The activities carried out not only have influenced their capacity to be resilient with these activities, but it also has social impacts that make them role models in certain activities. Therefore, the higher the self-efficacy, the higher the resilience.	This mastery experience aspect produces academic resilience in Cognitive, Behavioral, and Social aspects.
Vicarious Experience	Vicarious experience is one condition of observational learning, in which the individual observes the environment and subjects. The more the individual projects a model and its success, the greater their motivation ability and activeness in activities. Educators should act as models and invite all students to conduct individual projects following others' capacities.	The ability to obtain vicarious from the modeling aspect and the impact of this indirect experience will not significantly impact the individual, supposing no feedback from the model. It means that communication and interaction between each other are needed. The sole reliance on the observer's interpretation will lead to misperceptions that weaken self-efficacy and resilience.	Cognitive and Social Resilience
Social Persuasion	Social persuasion is part of the vicarious experience. An individual's interaction with the model or others influences the observer. An educator needs to provide good persuasion to students by influencing them positively in academic education. This process helps them to become positively influenced, confident in academics, and resilient with their activities depending on the persuasion of their self-efficacy.	The impact of social persuasion is that it can decrease and increase self-efficacy. The social persuasion or feedback from the environment on the student's academic process failed to appear. It indicates that many students experience problems in their academic resilience and self-efficacy.	Social, Cognitive, and Emotional resilience

Self-Efficacy Aspects	Internal Condition	External Condition	Academic Resilience
Emotional State	The emotional state is an individual's internal process from human genetic conditions, social learning, and the information interpretation results. The emotional state determines how humans behave. Therefore, it is necessary to form a conducive and humanistic academic learning environment capable of generating a sense of self-confidence and resilience from within the individual.	The external impact is that humans have the power to think healthily and behave like they have the potential to complete their academic tasks. Educators facilitate a healthy academic climate to create self-efficacy capacities that impact the potential for good academic resilience.	Affective, behavioral, and social resilience.

CONCLUSION

In conclusion, the self-efficacy condition determines the academic resilience capacity of students. It is because the mastery experience of humans determines the extent to which they are skilled in these activities. Furthermore, the vicarious experience proves that individuals tend to be more comfortable learning in the presence of a model that becomes their projection. Establishing positive social persuasion in the student's academic learning process is also necessary to trigger self-confidence and agentic self-activation. Proper development of academic resilience will help students become professional individuals in their various fields of study.

This research is an inferential statistic analysis throughout the hypothesis test. In this finding, we also synthesize an approach in counseling prototype such as Self Efficacy Academic Resilience Capacity (SEARC). This idea will continue we validated and tested in future research so that we will contribute to counselling. If there are any new developments in counseling, we need advice and information for developing our SEARC model.

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Author	Contribution
Azhariah Fatia	Corresponding author, searching for a reference, revising an article also developing ideas in resilience academic in self-efficacy view.

Author	Contribution
Alfaiz	Developer of ASES (Owner) also contributed to psychometric analysis in this research and synthesized a SEARC Model.
Yuzarion	Helping to add more references and review language and typing good sentences as a proofreader.
Andre Julius	Helping with data analysis, data inputing, and reviewing content articles.
Ryan Hidayat Rafiola	Helping with data analysis, data inputing, and reviewing the content article.
Fendahapsari Singgih Sendayu	Helping with data analysis, data inputing and reviewing the content article
Anabelie V. Valdez	English proofreader
Dosi Juliawati	Helping with data analysis, data inputing and reviewing the content article