Academic Journal Research
Homepage : https://journal.antispublisher.com/index.php/acjoure
Email : admin@antispublisher.com

e-ISSN : 3026-3085
ACJOURE, Vol. 4, No. 1, June 2026
Page 42-52

The Influence of Perceived Teacher Support and Academic Boredom on Student Engagement Among Student at Muhammadiyah Vocational High School in Sidoarjo

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DOI : https://doi.org/10.61796/acjoure.v4i1.503

Sections Info

Article history:
Submitted: March 15, 2026
Final Revised: April 10, 2026
Accepted: May 05, 2026
Published: June 11, 2026

Keywords:
Perceived teacher support
Academic boredom
Student engagement
Vocational high school
Vocational education

ABSTRACT

Objective: *This study aims to examine the influence of perceived teacher support and academic boredom on student engagement among vocational high school students in Sidoarjo. The study investigates how students' perceptions of teacher support and experiences of academic boredom contribute to their behavioral, emotional, and cognitive engagement in learning.* ***Method:*** *This study employed a quantitative survey design involving 182 active students from grades X and XI of one vocational high school in Sidoarjo. Participants were selected using a convenience sampling technique. Data were collected through three instruments: the Student Engagement Scale (19 items), the Perceived Academic Teacher Support Scale (16 items), and the Academic Boredom Scale adapted from the Achievement Emotions Questionnaire (22 items). The data were analyzed using Pearson correlation and multiple linear regression with JASP software.* ***Results:*** *The findings revealed that perceived teacher support and academic boredom simultaneously had a significant effect on student engagement ($F = 35.45$, $p < .001$), explaining 28.4% of the variance in student engagement ($R^2 = 0.284$). Perceived teacher support positively and significantly predicted student engagement ($\beta = 0.462$, $p < .001$), while academic boredom negatively and significantly predicted student engagement ($\beta = -0.198$, $p = .002$). Correlation analysis further showed a positive correlation between perceived teacher support and student engagement ($r = 0.496$, $p < 0.001$) and a negative correlation between academic boredom and student engagement ($r = -0.276$, $p < .001$).* ***Novelty:*** *This study contributes to the educational psychology literature by simultaneously examining the roles of perceived teacher support and academic boredom in predicting student engagement among vocational high school students, a population that remains underrepresented in previous research. The findings provide empirical evidence highlight the importance of supportive teacher-student relationships and boredom reduction strategies to enhance engagement within vocational education settings.*

INTRODUCTION

Education plays an important role in developing human resources and preparing students to face future academic and occupational demands. In Indonesia, the education system consists of several levels, including primary, secondary, and higher education, as regulated in Law No. 20 of 2003 on the National Education System [1]. At the secondary education level, schools are divided into general secondary education, commonly known as Senior High School, and Vocational High School.

Although both institutions aim to support students' development, they differ in orientation and learning objectives. Senior High School primarily emphasizes academic mastery and preparation for higher education, while Vocational High School focuses on preparing students to enter the workforce by strengthening practical competencies, technical skills, and professional readiness through internships and hands-on training

programs. Consequently, vocational students are required to adapt not only to academic demands but also to practical and workplace-oriented learning environments.

Vocational high school students are generally in late adolescence, a developmental stage characterized by increasing cognitive complexity, emotional changes, and self-regulation abilities. At this stage, students are expected to actively engage in learning activities to achhieve academic and vocational competence. Therefore, student engagement becomes a crucial factor in vocational education because it reflects students' behavioral, emotional, and cognitive involvement in the learning process. According to Trowler [2], student engagement refers to students' willingness and active participation in educational activities that support learning success. Similarly, Skinner and Belmont (1993) explained that engaged students tend to demonstrate persistence, concentration, enthusiasm, and positive emotional responses during learning activities. High engagement among vocational students has been associated with better academic achievement, stronger practical competence, and greater readiness for employment [3]. In contrast, low engagement may increase absenteeism, learning difficulties, and the risk of dropping out [4].

Recent studies have emphasized the importance of student engagement in vocational education settings. Student engagement significantly contributes to vocational students' understanding of theoretical and practical material. An international study by Niittylahti found that student engagement predicts positive academic outcomes, social experiences, and career certainty among vocational students [5]. These findings indicate that maintaining students' engagement is essential for achieving optimal learning outcomes in vocational education. However, preliminary survey results in this study indicate that student engagement among vocational students remains relatively low. Several students demonstrated behavioral disengagement, such as being unfocused during lessons, chatting with peers while teachers explained material, and neglecting school regulations. Emotional disengagement was also reflected in students' lack of motivation, feelings of boredom during lessons, and perceptions that school activities were meaningless. In addition, cognitive disengagement appeared when students avoided asking questions, easily gave up on assignments, and showed low effort in problem-solving activities. These findings suggest that vocational students face challenges in maintaining active participation and enthusiasm during the learning process.

One important factor influencing student engagement is academic emotion. Based on the Control-Value Theory of Achievement Emotions (CVTAE) developed by Reinhard Pekrun, students' emotions emerge from their perceptions of control over academic tasks and the value they assign to learning activities [6]. Positive emotions tend to increase attention, persistence, and motivation, whereas negative emotions may hinder engagement and learning performance. One negative academic emotion commonly experienced by students is academic boredom. Academic boredom refers to feelings of disinterest, lack of stimulation, and difficulty finding meaning in academic activities (Pekrun, 2020). Recent research has shown that academic boredom negatively affects

students' learning motivation and engagement [7]. Students who experience boredom are more likely to lose concentration, avoid academic tasks, and become disengaged from classroom activities.

Another factor closely related to student engagement is perceived teacher support. Perceived teacher support refers to students' perceptions of the emotional, academic, and social support provided by teachers during the learning process. Teachers play a significant role in creating a supportive classroom climate that can reduce negative emotions and increase students' motivation to learn. According to Santrock and Wentzel supportive teacher-student relationships help students feel valued, safe, and motivated in educational settings [8], [9]. Previous studies have consistently demonstrated that students who perceive higher teacher support tend to show stronger engagement, confidence, and persistence in learning activities [10]. Research by Ahmed et al. (2010) revealed that students who perceive supportive teachers demonstrate more adaptive functioning at school, while Fall and Roberts found that perceived teacher support positively predicts student engagement among high school students [4], [11] .

Although previous studies have separately examined teacher support, academic boredom, and student engagement, limited studies have simultaneously investigated these variables among vocational high school students in Indonesia, particularly in Sidoarjo. Vocational education has distinct academic and practical demands that may influence students' emotional experiences and perceptions of support differently from general secondary education settings [12]. Therefore, this study aims to examine the influence of perceived teacher support and academic boredom on student engagement among vocational high school students in Sidoarjo. This study is expected to contribute to the development of educational psychology literature and provide practical implications for improving student engagement in vocational education contexts.

RESEARCH METHOD

This This study employed a quantitative survey approach to examine the influence of perceived teacher support and academic boredom on student engagement among vocational high school students in Sidoarjo. Quantitative research was chosen because it allows researchers to measure variables objectively and analyze the relationships among variables statistically. Data collection was conducted by distributing questionnaires through Google Forms, enabling respondents to complete the instruments efficiently and systematically. The research focused on identifying the extent to which perceived teacher support and academic boredom predict student engagement in vocational education settings.

Population, sample, and technique sampling

This study used a population of 308 students from a Vocational High School in Sidoarjo. The sample size was 182 students, calculated using the Kreichi-Morgan table at a 5% level. Of these, 48% were in grade 10, 52% in grade 11, all of whom were male and female, categorized as adolescents. The sampling technique used in research was non-probability sampling with a convenience sampling approach [13]. Participants were

selected based on their availability and accessibility during the data collection process. The participants were selected because vocational students experience both academic and practical learning demands that may influence their engagement during the learning process. The respondents voluntarily completed the questionnaires distributed online during the data collection period.

Instruments and Procedures

Data collection was carried out using three psychological scales measuring student engagement, perceived teacher support, and academic boredom. The questionnaires were distributed online through Google Forms, and the data collection process was conducted within one day. The first instrument used was the Student Engagement Scale, adapted from Fredricks (2004) and modified by Asti [14]. This scale measures three aspects of student engagement: behavioral, emotional, and cognitive. The instrument consists of 19 valid items.

The second instrument was the Perceived Academic Teacher Support Scale (PTASS), modified by **Rahmadani (2022) based on Fredricks' theory** [15]. This scale was designed to measure students' perceptions of teacher support during the learning process. The instrument consists of 16 significant items covering three aspects: emotional support, monitoring or classroom organization, and instructional support.

The third instrument used to measure academic boredom was adapted by **Affandi** from the Achievement Emotions Questionnaire (AEQ) developed by Pekrun based on the Control-Value Theory of Achievement Emotions (CVTAE) [6]. The scale consists of 22 items that measure four aspects of academic boredom: affective (unpleasant feelings), cognitive (perception of time), motivational (desire to withdraw from activities), and physiological (decreased arousal).

Data Analysis Techniques

The data obtained from the questionnaires were analyzed quantitatively using multiple regression analysis to determine the simultaneous and partial effects of perceived teacher support and academic boredom on student engagement. In addition, correlation analysis was conducted to examine the relationships among the variables. All statistical analyses were performed using the JASP 0.96.0.0 program. The analysis results were used to identify the predictive contribution of each independent variable toward student engagement among vocational high school students.

RESULTS AND DISCUSSION

Results

Descriptive analysis of research data was conducted to understand the general description of the research sample's responses to the variables of perception of teacher support, academic boredom, and student engagement obtained in the field.

Table 1. Descriptive Statistics.

Descriptive Statistics			
	PTS	**ABD**	**SE**
Valid	182	182	182
Missing	0	0	0
Mean (arithmetic)	48.79	69.13	56.40
Std. Deviation	4.901	13.82	6.946
Minimum	38.00	34.00	44.00
Maximum	61.00	108.0	75.00

Based on Table 1, the total research data for 182 respondents was 0. There were no missing data (missing = 0). The perceived teacher support (PTS) variable had a mean value of 48.79 with a standard deviation of 4.901. The minimum value of 38 and the maximum value of 61 indicate that most students perceived teacher support in the moderate to high category.

The academic boredom (ABD) variable had a mean value of 69.13 with a standard deviation of 13.82. The minimum value of 34 and the maximum value of 108 indicate significant variation in levels of academic boredom among students. This indicates that some students experience high levels of academic boredom during the learning process.

Meanwhile, the student engagement (SE) variable had a mean value of 56.40 with a standard deviation of 6.946. The minimum value of 44 and the maximum value of 75 indicate that students' levels of engagement in learning tended to be in the moderate to high category.

Table 2. Categorization**.**

Variable	**Categories**	**Frequency**	**Presentage**
Perceived Teacher Support	Low	18	10%
	Medium	128	70%
	High	36	20%
	Total	182	100%
Academic Boredom	Low	5	3%
	Medium	15	8%
	High	162	89%
	Total	182	100%
Student Engagement	Low	0	0%
	Medium	48	26%
	High	134	74%
	Total	182	100%

Based on Table 2, the perceived teacher support variable is dominated by 128 students (70%) in the moderate category, followed by 36 students (20%) in the high category, and 18 students (10%) in the low category. This indicates that the majority of

students feel they receive adequate support from their teachers during the learning process.

For the academic boredom variable, the majority of students (162) fall into the high category, with 15 students (89%) in the moderate category and 5 students (3%) in the low category. These results indicate that the majority of students experience high levels of academic boredom.

Furthermore, for the student engagement variable, 134 students (74%) fall into the high category and 48 students (26%) fall into the moderate category. There are no students in the low category. This indicates that the majority of students exhibit good learning engagement across behavioral, emotional, and cognitive aspects.

1. Assumptions Test

a. Normality Test

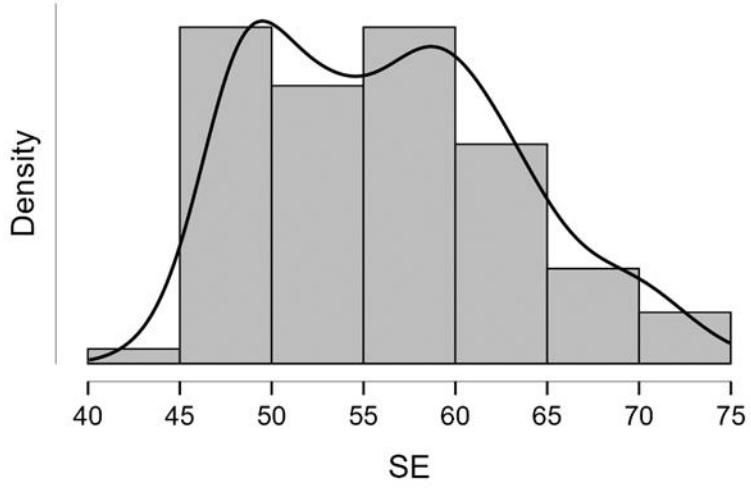

Figure 1. Normality Distribution of Data.

Based on Figure 1, regarding the normality distribution of the data, it can be seen that the data points are spread along the diagonal line and do not exhibit extreme deviations. This indicates that the research data is normally distributed. Thus, the assumption of normality in the regression analysis has been met, making the data suitable for further parametric statistical testing.

2. Hypotesis Testing

a. Correlation Test

Table 3. Pearson's Correlation.

Pearson's Correlations					
			n	**Pearson's r**	**p**
PTS	-	ABD	182	-0.169	.022
PTS	-	SE	182	0.496	< .001
ABD	-	SE	182	-0.276	< .001

Based on Table 3, perceived teacher support has a weak negative relationship with academic boredom, with a correlation value of r = -0.169 and a significance value of p =

0.022 (p < 0,05). This indicates that the higher the perceived teacher support, the lower the level of academic boredom. Perceived teacher support also has a positive and significant relationship with student engagement, with r = 0.496, with p < 0.001. This means that the higher the teacher support, the greater the student's engagement in learning. Meanwhile, academic boredom has a negative and significant relationship with student engagement, with r = -0.276, with p < 0.001. This indicates that the higher the student's academic boredom, the lower the level of student engagement in learning.

b. Regression Test

Table 4. ANNOVA - Multiple Regression Based on f Value.

ANOVA						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**p**
M_1	Regression	2478	2	1239	35.45	< .001
	Residual	6256	179	34.95		
	Total	8734	181			

Note. M_1 includes PTS, ABD

Note. The intercept model is omitted, as no meaningful information can be shown.

Based on Table 4, the F value was 35.45 with a significance level of p < 0.001. These results indicate that perceived teacher support (PTS) and academic boredom (ABD) simultaneously has a significant influence on student engagement (SE). Therefore, the hypothesis that PTS and ABD jointly influence student engagement is accepted. The regression sum of squares value of 2478 indicates the substantial variation in student engagement that can be eexplained by the PTS and ABD variables. The residual sum of squares value of 6265 indicates other variations influenced by factors outside the research model. The total variation in the student engagement variable is 8734.

Table 5. Model Summary - Multiple Regression.

Model Summary - SE				
Model	**R**	**R^2**	**Adjusted R^2**	**RMSE**
M_0	0.000	0.000	0.000	6.946
M_1	0.533	0.284	0.276	5.912

Note. M_1 includes PTS, ABD

Table 5 shows an R value of 0.533, indicating a moderate relationship between the independent variables and student engagement. An R^2 value of 0.284 indicates that perceived teacher support and academic boredom explain 28.4% of the variation in student engagement. The remaining 71.6% is influenced by factors outside the study. The adjusted R^2 value of 0.276 indicates that the regression model is quite stable in explaining the relationship between the study variables. Furthermore, the RMSE value of 5.912 indicates a relatively low level of model prediction error.

Table 6. Coefficients – Multiple Regression Based on t.

Coefficients								
							Collinearity Statistics	
Model		**Unstandardized**	**Standard Error**	**Standardized**	**t**	**p**	**Tolerance**	**VIF**
M_0	(Intercept)	56.40	0.515		109.5	< .001		
M_1	(Intercept)	31.30	5.312		5.892	< .001		
	PTS	0.655	0.091	0.462	7.203	< .001	0.971	1.030
	ABD	-0.099	0.032	-0.198	-3.078	.002	0.971	1.030

Based on Table 6, the perceived teacher support variable has a beta coefficient of 0.462 with a significance value of $p < 0.001$. This indicates that perceived teacher support has a positive and significant effect on student engagement. This means that the higher the perceived teacher support, the higher the student's engagement in learning.

Meanwhile, academic boredom has a beta coefficient of -0.198 with a significance value of $p = 0.002$. This indicates that academic boredom has a negative and significant effect on student engagement. This means that the higher the student's academic boredom, the lower their engagement in learning. Furthermore, the tolerance value of 0.971 and the VIF of 1.030 indicate that there are no multicollinearity issues in the regression model, as the VIF is < 10 and the tolerance value is > 0.10.

Discussion

The findings of this study indicate that perceived teacher support and academic boredom simultaneously have a significant effect on student engagement among vocational high school students. The multiple regression analysis showed that the proposed model was statistically significant ($F = 35.45$, $p < .001$), with a coefficient of determination ($R^2 = 0.284$), indicating that perceived teacher support and academic boredom together explained 28.4% of the variance in student engagement. This result suggests that student engagement is influenced by both environmental and emotional factors, while the remaining 71.6% may be explained by other variables such as self-efficacy, learning motivation, peer support, classroom climate, and self-regulated learning [16]. The findings support previous literature emphasizing that student engagement is a multidimensional construct shaped by interactions between individual and contextual factors.

Partially, perceived teacher support was found to positively and significantly predict student engagement ($\beta = 0.462$, $p < .001$), indicating that students who perceive greater support from teachers tend to demonstrate higher levels of behavioral, emotional, and cognitive engagement. This finding is consistent with Self-Determination Theory (SDT) proposed by Deci and Ryan, which posits that optimal motivation and engagement emerge when three basic psychological needs are fulfilled: autonomy, competence, and relatedness [17]. Teacher support may satisfy students' need for relatedness through positive interpersonal relationships, while instructional guidance and constructive

feedback enhance students' sense of competence. As a result, students become more motivated to participate actively in learning activities and persist when facing academic challenges. In vocational education settings, where students are required to master both theoretical and practical competencies, supportive teacher-student interactions appear to play a crucial role in sustaining engagement throughout the learning process.

The correlation analysis further strengthens this finding, showing a moderate positive relationship between perceived teacher support and student engagement ($r = 0.496$, $p < .001$). This result suggests that students who experience emotional support, classroom organization, and instructional assistance from teachers are more likely to invest effort and attention in learning activities. According to SDT, supportive educational environments facilitate autonomous motivation by helping students feel valued and respected. When teachers create a learning atmosphere that acknowledges students' perspectives and provides meaningful guidance, students are more likely to internalize learning goals and become intrinsically motivated to engage in academic tasks. Therefore, teacher support functions not only as an external resource but also as a catalyst for developing students' internal motivation and commitment to learning.

The study also found that academic boredom negatively and significantly predicts student engagement ($\beta = -0.198$, $p = .002$), with a significant negative correlation between academic boredom and student engagement ($r = -0.276$, $p < .001$). These findings indicate that students experiencing higher levels of boredom tend to show lower participation, concentration, and emotional involvement in learning activities. From the perspective of Self-Determination Theory, boredom may emerge when learning environments fail to satisfy students' psychological needs, particularly autonomy and competence. Students may feel bored when learning activities are overly repetitive, lack meaningful challenges, or provide limited opportunities for active participation. In vocational schools, boredom can also arise when instructional methods are not sufficiently connected to real-world applications or students' future career aspirations. Consequently, students may perceive learning as less meaningful and gradually disengage from academic activities.

Another noteworthy finding is the weak negative correlation between perceived teacher support and academic boredom ($r = -0.169$, $p = .022$), suggesting that teacher support contributes to reducing boredom, although its effect is relatively limited. This result implies that boredom is influenced not only by teacher-related factors but also by students' personal characteristics, task design, classroom environment, and motivational processes. From an SDT perspective, reducing boredom requires educational practices that simultaneously support autonomy, competence, and relatedness. Therefore, vocational schools should encourage teachers to implement student-centered learning approaches such as project-based learning, collaborative activities, problem-based learning, and authentic workplace simulations. These strategies can increase students' sense of ownership over learning, enhance competence development, strengthen social connections, and ultimately foster higher levels of student engagement while minimizing academic boredom.

CONCLUSION

Fundamental Finding: This study highlights the important role of perceived teacher support and academic boredom in shaping student engagement among vocational high school students in Sidoarjo. The findings demonstrate that perceived teacher support and academic boredom jointly and significantly predict student engagement ($F = 35.45$, $p < .001$), explaining 28.4% of its variance ($R^2 = 0.284$). Among the predictors, perceived teacher support emerged as the stronger factor ($\beta = 0.462$, $p < .001$), while academic boredom negatively affected engagement ($\beta = -0.198$, $p = .002$), emphasizing that both supportive learning environments and students' emotional experiences are crucial for sustaining active participation in learning. **Implication:** These findings imply that vocational schools should strengthen teacher-student relationships through emotional support, constructive feedback, and student-centered instructional practices while simultaneously reducing boredom through meaningful, interactive, and workplace-relevant learning activities. **Limitation:** However, this study is limited by its cross-sectional design, the use of convenience sampling, and the inclusion of participants from only one vocational high school, which may restrict the generalizability of the findings. Furthermore, the substantial unexplained variance (71.6%) suggests that student engagement is influenced by additional factors beyond the scope of this study. **Future Research:** Therefore, future research is encouraged to employ longitudinal or experimental designs, involve more diverse vocational school populations, and investigate other potential predictors such as self-efficacy, learning motivation, peer support, classroom climate, self-regulated learning, and psychological need satisfaction to provide a more comprehensive understanding of student engagement in vocational education contexts.

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