SCHOOL ANXIETY AS A CORRELATE OF ACADEMIC ACHIEVEMENT AMONG FORM THREE STUDENTS IN KITUI COUNTY, KENYA

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Abstract: **This study intended to examine students' school anxiety, as a predictor of students' academic achievement. The primary objective was to ascertain the existence of a correlation between school anxiety and academic achievement. Social cognitive theory (Albert Bandura, 1989), was used to guide this study. The research used an ex post facto research design, and was conducted in Kitui County, Kenya. This research targeted the entire form three students in government sponsored schools in Kitui County in 2023. The sample consisted of 400 students in form three who were chosen from 10 different schools. The schools and participants were selected through purposive and stratified sampling procedures. Simple random technique was also used. Examination records served as a tool for measuring students' academic achievement. Piloting of the study was done using 20 form three students in schools within Kitui County. The study used descriptive and inferential statistical procedures to analyze the data. Specifically, it used Pearson's Product Moment Correlation Coefficient, Multiple regression. School anxiety had a significant negative relationship with academic achievement (r (386) = -0.24, $P < 0.05$). This study may benefit educational policymakers by providing them with insights on developing educational practices that make a school a more pleasant environment for its students.**

Keywords: **School Anxiety, Academic achievement, Relationship.**

1. INTRODUCTION

Academic achievement is widely regarded as the most important predictor of success worldwide. According to Hagen et al. (2021), academic achievement is the student's class performance as judged by grade reports, teachers' observations, and self-perception. Students with high grades are given priority in training and job positions, which seems to legitimize grade competition in the society (Chan, 2016; Succi & Canovi, 2020). The authors, however, argue that students who receive poor examination results have fewer opportunities for training and employment. As a result, students' academic achievement is a top priority for educators, psychologists, researchers, and policymakers worldwide (Wheatley, 2018).

Poor academic achievement has attracted research attention as it remains a significant international concern. According to the Program for International Student Assessment (PISA) despite the governments worldwide actively engaging in initiatives to enhance student performance, students have consistently continued to record poor grades (Gamazo et al., 2018). In the USA, Perry and Ramon (2016) reported that despite the efforts made by the educators, and the government, student's academic achievement seemed to deteriorate. Further, they reported that among the factors affecting academic achievement was attitude and teaching. Perry and Ramon (2016) give recommendations on other variables that predict academic achievement.

In Africa, despite many governments investing heavily to ensure students achieve academic excellence, academic underachievement has been recorded in various countries. In South Africa, a decline in education standards and quality have been reported in Botswana (Makwinja, 2017). In West Africa, evidence points at academic underachievement as one of the key issues in education in countries like Ghana emphasizing the need to search for factors that may enhance learner's academic achievement and take care of the falling educational standards (Ani, 2017).

In Kenya, good academic achievement in secondary schools is highly valued as it prepares students for vocational training or university education (Kaburi, 2019; Kieti, 2018; Wara et al., 2018). However, performance indices show that academic achievement remains very low among secondary school students (Kaburi, 2019; Kitur et al., 2020). Despite the fact that the candidature for the KCSE has been rising for the past decade, the national pass rate has continually remained low (Kitur et al., 2020). For instance, the KCSE national means for 2017, 2018, 2019, 2020, and 2021 were 4.03, 2.72, 3.95, 3.71, and 3.82, respectively (KNEC, 2021). Additionally, most KCSE candidates have consistently received low grades that have limited their chances to advance in their education and employment. Notably, in the KCSE results for the years 2017, 2018, 2019, 2020, and 2021 where only 123365, 169492, 149717, 117,602, and 121,216 students scored C+ (minimum qualification to university) and above, respectively (KNEC, 2021).

It should be noted that previous KCSE performance reveals consistent county-specific disparities, and Kitui County is notable with contrasts in KCSE performance. In the years 2017, 2018, 2019, 2020, and 2021, for instance, the County registered means of 4.89, 4.10, 4.52, 3.89, and 3.93, respectively. Even more significant, the means for the sub-counties in Kitui showed a stark contrast in KCSE means over the previous five years. Of interest is the Mwingi North Sub-County, which registered KCSE means of 3.48 in 2017, 3.21 in 2018, 2.92 in 2019, 3.10 in 2020, and 2.96 in 2021. These poor performance trends highlight the importance of investigating various predictors of academic achievement among secondary school students in Mwingi North Sub-County.

As part of the effort to come up with knowledge and novel interventions for improving academic achievement in secondary schools, studies on variables that influence secondary school students' academic achievement have been carried out in Kenya (Ireri, 2015; Muthoni & Mutweleli, 2020; Muthui & Mutweleli, 2020; Mutua et al., 2020; Mwangi et al., 2018; Mwaniki et al., 2020; Ngunu et al., 2019; Oyoo et al., 2020; Wara et al., 2018). Despite interventions by researchers, governments, and other stakeholders, the low performance of students in KCSE persists. Although the aforementioned studies were well articulated and can be used to further knowledge about academic achievement, they have not adequately solved the problem of academic underachievement. Some of these studies have focused on generally academic achievement in Kenya, which does not specifically represent the situation in Mwingi North in Kitui County. Most studies have focused on Nairobi and Kiambu Counties, which are largely urban or peri-urban counties. Students from different counties may have educational experiences that contrast those of their counterparts in such counties. Notably, the aforementioned studies have not specifically investigated how school anxiety, relate to academic achievement in Kitui County.

The relevance of school anxiety as a correlate of academic achievement is underscored in several current studies. According to Azeem (2018), anxiety is an excited state of the nervous system, resulting in a sense of tension, nervousness, and worry inflicted on an individual. School anxiety is a type of anxiety connected and related to academic situations (Da et al., 2014). Some students, driven by school anxiety, fail to realize their full academic potential in a setting that allows them to demonstrate their abilities to the greatest extent possible (MacCann et al., 2020). In addition, Steinmayr et al (2018) argue that school anxiety has an inverse relationship with academic achievement through irrelevant thoughts, preoccupation, reduced attention, and concentration. Other researchers argue that learners found with high degrees of test anxiety perform poorly and are to a lesser extent motivated to strive for excellence (Azeem, 2018; Khesht-Masjedi et al., 2019). In light of this background, the proposed study aimed to explore the relationship between school anxiety and academic achievement among secondary schools in Kitui County.

Statement of the Problem

Academic achievement among students in the KCSE examination in Kitui County has declined for the last five years (2017 to 2021). In the same period, compared to the National mean score, Kitui County has recorded a relatively higher mean. However, Mwingi North Sub -County mean scores have remained lower than both the national and the county mean scores. Poor academic achievement within the county may lead to many students losing the opportunity to join higher institutions of learning alongside securing jobs in the competitive global market. Students who miss these rewarding life opportunities may have reduced earning potential, which may be associated with financial problems later in life. Additionally, if this

problem is left unaddressed, students may become disengaged in education and develop a cycle of poor educational attainment. Furthermore, it may lead to the widening of the achievement gap between different socioeconomic groups in the society. Therefore, it is necessary to investigate further some of the variables linked to either low or high academic achievement.

The study's background makes it quite clear that school anxiety, is an essential variable in predicting students' academic achievement. However, most research on this variable has been done in developed countries. Furthermore, few studies concentrated on secondary school students, with the majority concentrating on college and university students. Given different socio-cultural factors, students from developed countries may have different educational experiences from that of their counterparts in mostly, developing countries. Furthermore, from a developmental perspective, the study variable may vary among students attending higher educational institutions of learning and those in secondary schools. For instance, it is unclear how this variable (school anxiety) can predict secondary school student's academic achievement in a developing country like Kenya.

In Kenya, most of the educational researchers who have done related studies on psychological constructs influencing student's academic achievement have focused on academic identity status, achievement goals, academic resilience, academic mindsets, academic motivation, self-regulated learning, self-handicapping and defense pessimism (Ireri, 2015; Mukolwe, 2015; Mutua, 2018; Mutweleli, 2014; Wawire, 2010). Locally, despite school anxiety being reported to have an association with academic achievement, it has not extensively been researched across the counties in Kenya. Furthermore, the majority of these research have been done with university students in some developed countries. In an attempt to fill this gap, this study sought to establish how school anxiety relate to academic achievement among learners in secondary schools in Kitui County, Kenya.

OBJECTIVE OF THE STUDY

The following objective guided the study:

To examine the relationship between school anxiety and academic achievement.

RESEARCH HYPOTHESIS

The following hypotheses guided the study:

H_{a1}: School anxiety and academic achievement are statistically related.

THEORITICAL FRAMEWORK

Social learning theory was used in this research to explain how people feeling anxiety exhibit apprehension and avoidant behaviors which often inhibit their daily performance as also contextualized in academic settings. Social learning theory speculates that children learn by observing and emulating others' behavior. According to this theory, school anxiety may develop when children observe adults around them behaving in anxious or stressed ways in response to school-related demands or tasks. Over time, these children may come to internalize these behaviors and respond to school in similarly anxious ways (Bandura & McClelland, 1977). Additionally, children who have experienced personal trauma or stressors in their lives may be more likely to develop school anxiety, as they may see school as a place that is unsafe or unpredictable.

Applying social learning theory in the context of the growth of children's school anxieties, it is reasonable to anticipate that parents and teachers use direct instruction and modeling techniques to influence their children's levels of school anxiety, both consciously and unconsciously. Within school anxiety, there are three levels. High, moderate and low. A student with higher anxiety levels concerning aggression may experience rapid breathing when people think people criticize them in school. These students may develop a negative attitude towards school and are less likely to achieve academically. Research has also shown that students with lower anxiety levels on social evaluation are likely to ask and answer questions in class and participate fully in class activities without being worried about what others will say about them. This student is likely to achieve higher academically and get good grades. Additionally, a student who is anxious about academic failure may tremble when they show their school report to their parents. These students experiencing elevated levels of anxiety are less inclined to achieve high grades. According to Bandura (1989), it is vital to remember that some methods may be used unintentionally, as the parents or teachers are completely unaware of what they are doing or how it may affect their children in any way. Both the parents and the school should intervene to reduce school anxiety among students and work to create a supportive and predictable environment where children feel safe and know what to expect each day.

Using the same theory, Muta et al. (2020) correlated types of anxiety and female student's academic performance in Dagoretti, Kenya. Muta and colleagues reported a significant correlation between the girls' school anxiety and academic achievement. This theory complements the theory of optimism. For instance, higher optimistic students tend to be higher academic scorers than lower optimistic students. It means that students with higher academic optimism are likely to be low or moderately anxious on school-related matters and have higher fear of failure, and then more likely to achieve better academically. Thus, given that optimism is important in improving academic achievement in students, it is anticipated that optimism, school anxiety, and fear of failure are interdependent.

2. REVIEW OF RELATED LITERATURE

Only a few research have explicitly explored how school anxiety relates with secondary school academic achievement. Martinez-Monteagudo et al. (2012) carried out one such study in Spain to ascertain the correlation between school anxiety and academic outcomes among learners in junior and senior classes in secondary schools. This correlational study involved 520 Spanish students of ages 12 to 18. The results revealed that students who performed well in language had considerably higher ratings in anxiety than their counterparts who performed poorly in this subject. Similarly, students who performed well in mathematics had a considerably higher level of anxiety than their counterparts who performed poorly in this subject. Thus, this study reported that non-clinical anxiety at school generally increases academic achievement. The aforementioned research was done in Spain, a different setup from Kenya. The current study compared the results in Kenyan public schools.

In a related study, Khizar and Anwar (2020) presented results on the correlation between examination anxiety and university students' academic achievement. It used 230 students from the University of Gujrat, Pakistan. The results demonstrated a dearth of statistically significant correlation between examination anxiety and academic performance among university - level students. However, this study by Khizar and Anwar (2020) differs from the present research in that the study focused specifically on examination anxiety. In addition, the research sample was selected from university students, and it is necessary to compare the findings when using high school pupils. Thus, it was interesting to carry out a general study on school anxiety and compare the findings.

In addition, D'Agostino et al. (2022) did a study examining the correlation between anxiety levels and academic achievement in schools. The study comprised of 15-year –old students, in Italy enrolled in upper –secondary schools. A Sample of 7142 students picked from 283 public schools participated in the study. It provided suggestion of a strong and statistically significant inverse correlation between anxiety levels and academic achievement. However, this study involved Italian students. Students in Italy may have different academic backgrounds and socio-economic and educational backgrounds from students in Kenya. Differences in locality, socio-economic status and educational system necessitated the need to conduct a study and examine whether indeed, a relationship existed between school anxiety and student's academic achievement in an African educational context.

PISA 2015 carried out a study across OECD countries to examine school-related anxiety and its influence on student's academic achievement and wellbeing. Using a sample of 15-year-old public school students drawn from the 38 OECD countries, PISA 2015, reported that anxiety was negatively related to academic performance. Evidence from this study reported that students from two countries; Costa Rica and Brazil, which reported the highest degree of school-related anxiety performed below average. In contrast, evidence shows that Singapore, which reported the lowest degree of school-related anxiety, was the top –performing country in PISA 2015 (OECD 2017). This study aims to determine if and how students' levels of school anxiety correlate with their performance in Kitui County, Kenya. The two studies are comparable on the basis of location, educational backgrounds, culture diversity and age of the participants.

3. MATERIALS AND METHODS

Research Design

The research used a correlational research design. According to Frankael et al. (2015), correlational study elaborates the extent where additional constructs correlate without having to manipulate any of the variables. As a result, this study's design was appropriate given that it aimed to establish how school anxiety relate to academic achievement.

Participants and Procedures

The participants of the study population comprised of 400 students enrolled in public secondary schools in Mwingi North Sub County. The targeted student population in Kenya are in their middle to late puberty (Ministry of education, Science and Technology, 2017). The current research utilized three sampling methods. Mwingi North Sub-County, form three

students, and public schools were selected using a purposive sampling technique. According to (Orodho, 2009), purposive sampling depends on the researcher's knowledge to pick a group representative of the whole population. Stratified sampling helped to select participants to provide a fair representation of participants on gender basis. This approach ensures the homogeneity of subjects with similar characteristics (Cohen et al., 2017). Using this method, schools were stratified into boy's boarding, girl's boarding and mixed school. Moreover, the study adopted simple random sampling.

Instruments

School Anxiety Inventory – Short Version Questionnaire (SAI-SVQ, Fernández et al 2014).The study used a tool that was adapted to measure school anxiety. The S.A.I. –S.V.Q has a situation-response format. It has 15 school situations and 15 corresponding responses on school situations to measure cognitive anxiety and behavioral and physiological anxiety. Sample items include. 'If I talk in class, I am worried about what people will say about me.' The frequency with which students feel anxious is measured on a 5- point Likert Scale (with a range of 0 *never*- 4 *always*). A score of 2 or higher shows a high anxiety level toward school-related activities. This scale has been applied to students in grades 7-12 in middle and high schools aged 12-18 years (García-Fernández et al., 2011). According to García-Fernández and colleagues, the S.A.I. –SVQ demonstrated adequate psychometric properties. SAI-SVQ was available in the public domain and the researcher needed not to seek consent to utilize it in this research.

Information regarding academic achievement of the respondents from the school records at the end of term one, 2023). To ensure that the results were comparable across different institutions, the researcher began by converting the scores to Z scores, then proceeded to translate them into T scores.

4. RESULTS AND DISCUSSION

The study's objective was to determine the relationship between school anxiety and academic achievement. For the purpose of testing the null hypothesis, the researcher presents descriptive statistics and inferential statistics.

The results of this analysis are given in Table 4.1.

Table 4.1: Descriptive Analysis of School Anxiety Total Scores

	N	Min	Max	Mean	*SD*	Skewness
TSAS	388	15.00	68.00	36.83	9.49	0.09

Note: N= 388; SD= Standard Deviation; Max= Maximum; Min= Minimum.

TSAS=Total School Anxiety Scores

Data from Table 4.1 implies that the minimum score was 15 while the maximum score was 68. A mean (*M*=36.83, *SD* = 9.49) was reported. The distribution of school anxiety scores was positively skewed (.09) indicating that most participants scored low ratings on the school anxiety measure.

Further, students' school anxiety scores were cross tabulated across gender, age categories and school type and the results summarized in Table 4.2.

Table 4.2: School Anxiety Scores across Gender, Age Categories and School Type

Gender of the Respondent	*N*	Min	Max	Mean	*SD*	Skewness
Male	189	15.00	64.00	35.30	10.10	0.24
Female	199	15.00	68.00	38.29	8.64	0.08
Age Category (Years)						
15-16	143	15.00	68.00	38.13	9.61	-0.04
17-18	182	15.00	62.00	35.95	9.32	0.14
19+	63	17.00	64.00	36.43	9.49	0.26
School Type						
BB	42	15.00	61.00	35.86	12.16	-0.02
GB	46	26.00	68.00	41.83	8.54	0.36
Co-ed	300	15.00	64.00	36.20	8.99	0.15

Note: N= 388; SD= Standard Deviation; Max= Maximum; Min= Minimum.

BB =Boy's boarding; GB= Girl's Boarding; Co-ed- Co-educational school.

According to Table 4.2, the minimum score for both boys and girls was 15, while the maximum score was 64 and 68 for boys and girls respectively. The results show that girls exhibited a greater mean *(M=38.29, SD= 8.64)* compared to boys *(M=35.30, SD=10.10)*. Regarding age, 15–16-year-olds had the highest mean *(M=38.13, SD=9.61)* with 17-18-year-olds reporting the lowest mean score *(M=35.95, SD=9.32)*. Besides, with reference to school type, Girl's boarding had the highest mean score *(M=41.83, SD=8.54)* whereas Boy's boarding reported the lowest mean score *(M =35.86, SD=12.16)*.

Data on student's school anxiety was used to further group the scores into three categories ranging from low, moderate to high. The results of this categorization are presented in Figure 4.1.
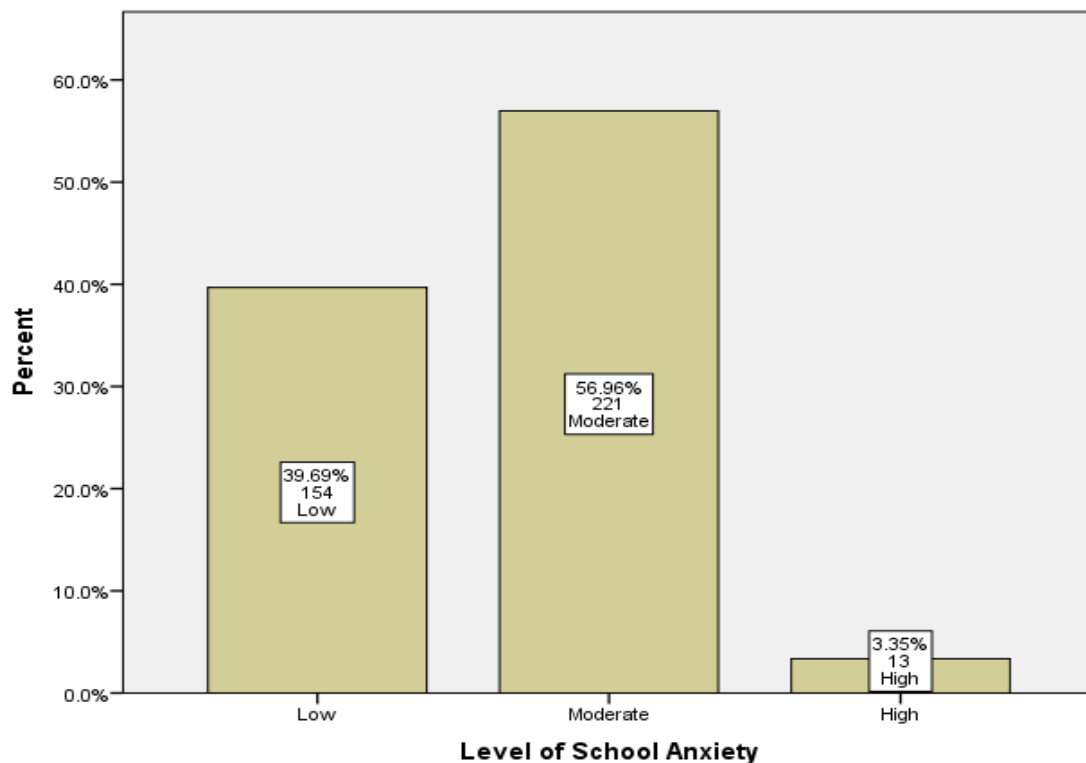

Figure 4.1: Respondents Level of School Anxiety

As shown in Figure 4.2, almost half (39.69%) of the participants had low levels of school anxiety. Nearly 59.96% of participants rated themselves as having moderate levels of school anxiety. Besides, 3.35% of the participants were found to have high levels of school anxiety.

Having analyzed the levels of student's school anxiety, the researcher conducted a more in-depth analysis on academic achievement scores across different levels of school anxiety. The outcomes were reported in Table 4.3.

Table 4.3: Academic Achievement Scores across Different Levels of School Anxiety

Level of School Anxiety	*N*	Min	Max	Mean	*SD*	Skewness
Low	154	30.16	70.91	50.71	9.83	0.01
Moderate	221	30.16	70.91	50.10	11.63	-0.14
High	13	39.22	66.38	49.89	10.06	0.12

Note: N= 388; SD= Standard Deviation; Max= Maximum; Min= Minimum.

As reported in Table 4.3, the computation results indicated that students with highest levels of school anxiety had the lowest mean *(M = 49.89, SD= 10.06)*, followed by students with moderate school anxiety levels *(M=50.10, SD=11.63)*. Moreover, the students who rated themselves as having the lowest levels of school anxiety recorded the highest mean *(M= 50.71, SD= 9.83)*.

Hypothesis Testing

The following null hypothesis was advanced in line with the second objective.

H_{02}: There is no significant relationship between school anxiety and academic achievement.

The researcher conducted a bivariate analysis to test the hypothesis. Table 4.4 outlined findings of the analysis.

Table 4.4: Correlation between School Anxiety and Academic Achievement

		T Score	SATS
	Pearson Correlation	1	-.24**
T Score			.00
	N	388	388

**. $p < .01$

Note: SATS= School Anxiety Total Score

The results from Table 4.4 indicated that a weak negative and significant relationship was found between students' school anxiety score and academic achievement (r (386) = -0.24, $p < 0.05$). Thus, the null hypothesis was rejected.

Discussion of the Results

This study hypothesized that school anxiety was not significantly related to academic achievement. From the results of bivariate correlation analysis, student's school anxiety had a negative significant relationship with academic achievement. The academic achievement of students with a high degree of school anxiety was reported to be poor compared to those who had low anxiety levels.

Further, this study's results supported findings from D'Agostino et al. (2022) among secondary school students in Italy. Results of the study reported that there was a negative relationship between student's school anxiety and their academic performance. The findings that a negative relationship existed between school anxiety and student's academic achievement corroborated a study done by OECD (2017) among elementary school students across OECD countries that school anxiety had a negative relationship towards secondary school student's academic achievements.

However, findings from this study contradicted a study by Martinez-Monteagudo et al. (2012) who studied 520 secondary school students in Spain which stated that students with high levels of school anxiety did well in both languages and mathematics than their counterparts who had low anxiety levels. The sample used by Martinez-Monteagudo et al. (2012), were comparable to the current study's sample in terms of their level of education. The current study's participants were Form three students from Kitui County in Kenya, and the study reported contradicting results. Inconsistencies in these studies may be attributed to the sample's socio-cultural and academic experiences.

5. DISCUSSION

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secondary schools. In addition, this study relied on self-reports which could have introduced an inevitable level of subjectivity. The study was also entirely correlational, thus causal inferences about school anxiety and students' academic achievement could not be drawn.

The study adds to the literature on the relationship between school anxiety and academic achievement. Consequently, policy makers may consider introducing interventions which aim at creating an enabling school environment for students for learning and help them navigate through any kind of issues that cause them school anxieties. School-based intervention may help the students communicate their grievances which is a measure towards managing anxieties associated with school related issues.

This study used a questionnaire to measure school anxiety. A further study should be conducted to investigate representativeness of the current study's results as students may have overrated themselves in these scales. Interviews may be conducted to confirm the consistency of the students' responses. The study utilized correlational study design. This design does not examine causation. Thus, further research may be done using experimental research design which could explain causation among the variables in study.

However, the findings should be viewed in light of its limitations. The study relied on self-reports which could have introduced an inevitable level of subjectivity. The study was also entirely correlational, thus causal inferences about academic optimism, school anxiety, fear of failure, and students' academic achievement could not be drawn.

6. CONCLUSION AND RECOMMENDATIONS

Conclusively, this study added to the literature on the prediction of academic achievement from school anxiety. Findings indicate that school anxiety significantly and negatively predict academic achievement. It contributes to the understanding of psychological constructs that influence students' academic achievement across different cultures. It serves as an inception for further research on student's learning outcomes.

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