

Investigating the Impacts of Teacher-Student Interactions on Improving Learners' Academic Achievements: The Role of Academic Interest

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Abstract

Various predictive research designs have been used to discover the relationship between learners' academic achievement and the degree of teacher-student interactions they receive individually or in a group and the mediating role of their academic interest in learning. How these relationships/correlations work in an English as a Foreign Language (EFL) setting, however, has remained a rarely investigated topic. This study explored the effects of teacher-student interactions on academic achievement by focusing on the mediating role of academic interest. In doing so, 218 EFL learners (102 males and 116 females) who were undergraduate English students at Islamic Azad University, Tabriz Branch were selected out of 645 students through the stratified random sampling method. This number of the learners was determined according to a sample size calculator for structural equation modeling (SEM). A correlational survey design was employed to investigate the purposes of the study through the SEM framework. The results demonstrated a significant correlation among variables and multiple predictions of students' academic achievement through the predictor variables. The outcomes confirmed that the increased interest of the EFL learners in learning and their interactions with their teachers could considerably contribute to improvement of their academic performance.

Keywords: Academic achievement; Academic interest; Teacher-student interaction

INTRODUCTION

Individuals can be successful in an activity when they possess sufficient knowledge (information) about the activity and manages to use the knowledge properly. Another important factor contributing to an individual's achievement in an activity is *interest*. This factor could have a significant function in educational contexts (as in foreign language learning) where learners need to have an "incentive" to achieve educational objectives.

Several scholars have observed that learners' academic achievement is influenced by both cognitive skills and personal non-cognitive skills (Pitt, Powis, Levett-Jones, & Hunter, 2014), such as motivational (Radi, 2013) and situational factors (Rezazadeh & Tavakoli, 2009). Such studies underscore that non-cognitive, motivational factors (e.g. learners' interest) and situational factors (e.g. classroom interaction) are significant in expanding students' capacity to achieve higher scores (Berg & Coetzee, 2014; Pitt et al., 2014).

Numerous investigations have addressed specific *cognitive* aspects of academic

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achievement (e.g. (Koth, Bradshaw, & Leaf, 2008; Veas, Castejón, Miñano, & Gilar-Corbí, 2019), but as the literature suggests no theory has ever been able to encompass all of the complexities of English as a foreign language (EFL) learners' academic achievement. In cognitive psychology, the notion of *interest* can be defined as “people’s willful engagement with a specific object, activity, or event” (Schunk, 2012)(p.23) this

engagement is correlated with positive emotions, undivided attention, and focus (Gogol, Brunner, Preckel, Goetz, & Martin, 2016).

Various interesting facets can contribute to second language (L2) acquisition and can be employed by learners to experience interest as a tendency and/or a psychological state. According to Renninger and Hidi (2015), in order to experience interest as a psychological process, learners have to interact in a specific context and under particular circumstances. These circumstances may involve different contextual specifications of the classroom or factors beyond the setting such as the teacher’s role, classmates, time and place, and psychological dimensions (e.g. the learner’s mood) among other things (Renninger & Hidi, 2015). Of course, the psychological factors that have an impact on a student’s interest in learning are associated with the degree of teacher-student interaction.

However, EFL students, in the process of developing interest in English learning, encounter serious challenges. English seems to be becoming more important than any other language (Satariyan & Mohseni, 2014), and has functions in multifarious aspects of life and technology (e.g. transportation, computer networking). This growing status could impose psychological pressure on non-English speakers who may experience negative attitudes toward the target language or a wide social and psychological distance from the target culture (Satariyan, Chinijani, & Reynolds, 2017). Meanwhile such EFL learners need interaction, which as Allwright (1983, p.54) argues, is “the fundamental fact of pedagogy”; limited interaction could negatively affect precision,

coherence, and appropriateness in L2 learning (Allwright, 1983; Satariyan et al., 2017).

In fact, student–teacher interactions make it possible to inspire a more stimulating atmosphere where students tend to ask more questions, express their ideas more frequently, and can have friendly discussions in the classroom. Moreover, a stronger student–instructor relationship affects teachers’ engagement because a teacher fully involved in the process of teaching invests more in his/her learners. Learners recognize their teachers’ efforts to invest in them (Paswan & Young, 2002). There is a strong correlation between teacher involvement and learner interest (Paswan & Young, 2002).

The purpose of this study is to investigate the effects of teacher-student interaction on academic achievement by focusing on the mediating role of academic interest. More specifically, the study pursues two objectives: (a) to investigate the effects of teacher-student interactions and academic interest on EFL learners' academic achievement; and (b) to determine the extent to which academic interest plays as a mediator variable in learners' academic achievement. To accomplish this, the study relies on a structural equation modeling (SEM) technique to test three hypotheses: (a) teacher-student interaction has a direct impact on EFL learners' language achievement; (b) EFL learners' academic interest has a direct impact on their language achievement; and (c) the impact of teacher-student interactions on EFL learners' language achievement is mediated by academic interest.

In educational research the investigation of the impact of interest on academic achievement has become a trending topic. As Kpolovie (2012) explains:

Interest in learning, could most probably be a very powerful affective psychological trait and a very strong knowledge emotion as well as an overwhelming magnetic positive feeling, a sense of being captivated, enthralled, invigorated and energized to cognitively process information much faster and more accurately ... (p. 76).

In such explorations, interest is often used as the independent variable, and academic success is probed into as the dependent variable. Some studies found interest as a dispositional factor (Ainley, Hidi, & Berndorff, 2002). Findings in various studies have underpinned the view that achievement is affected by interest (Denissen, Zarrett, & Eccles, 2007; Hulleman, Godes, Hendricks, & Harackiewicz, 2010). Jansen, Schroeders, and Lüdtke (2014) observed that learners were intrinsically motivated in fields in which they felt they were competent. This view has been supported by some studies that showed learners with an educational transition experienced an increased degree of perceived competence and were intrinsically motivated.

However, learners who experienced a decrease in their perceived competence were not intrinsically motivated (Jansen, Schroeders, & Lüdtke, 2014). Shirey (2013) argued that a learner's interest in educational materials may attract his/her attention and might consequently increase attract his/her academic success. Shirey examined the impact of interest on learner attention and success, finding that the participants employed a strategy, regardless of attention, to acquire what they perceived as interesting material. In other words, interest in learning does not correlate with learning results or academic success (Kpolovie, 2012). More specifically, interest in learning does not guarantee a learner's academic success.

However, Walkington and Bernacki's (2014) observations were not in line with Shirey's (2013) findings, as they tried to determine whether interest-based personalized lessons had an impact on the learning of abstract concepts. Given the results, Walkington and Bernacki argued that the adaptation of a lesson to a learner's interest could facilitate problem-solving and learning with respect to abstract concepts (Walkington & Bernacki, 2014). Trautwein, Tübingen, Nagy, Lenski, Niggli, and Schnyder (2015) hypothesized that both interest and conscientiousness uniquely predicted academic effort and statistically interacted with each other to predict academic effort. In 4 studies including 2,557, 415, 1,025,

and 1,531 students, conscientiousness and interest significantly and uniquely predicted academic effort. In addition, conscientiousness interacted with interest in a compensatory pattern, indicating that conscientiousness was especially important when a student found a school subject uninteresting; domain-specific interest also played a particularly important role for students with low scores on conscientiousness (Trautwein et al., 2015).

Lee, Lee, and Bong (2014) tried to figure out whether individual interest, as an affective motivational variable, could predict academic self-regulation and achievement, beyond what academic self-efficacy could predict. The observed results were consistent with the findings of other studies and demonstrated that self-efficacy predicted achievement both directly and indirectly through school grade objectives. Similarly, it was confirmed that individual interest functioned as a correlated yet independent and direct predictor of self-regulation. Individual interest also predicted achievement, but only when self-regulation mediated the relationship (Lee, Lee, & Bong, 2014).

McInerney and Liem (2009) explored learners' interest in the United States; 1078 high school learners participated in the study and answered the survey items concerned with their self-esteem and interest in school, high-school expectancy, and parental support. Based on the results, personal expectancy, and parental support significantly affected the learners' interest in school. Moreover, teachers strongly influenced the learners' interest; teachers shaped the most prominent factor in enhancing interest and academic success in academic settings (McInerney & Liem, 2009).

Studies dealing with educational psychology have tried to determine the impact of interest on academic success. Obo (2004) examined the relationship between a number of student-related personal factors and achievement in mathematics. The participants were 550 secondary school learners. A 36-item student questionnaire and a mathematics achievement test were employed to collect the data. Based on the findings, the learners' inter-

est and achievement motivation were significantly correlated with their achievement in mathematics (Obo, 2004). Jansen, Lüdtke, and Schroeders (2016) investigated the instrumental effect of academic interest on achievement, beyond the general cognitive ability and background characteristics, in five domains (math, German, biology, chemistry, and physics). The authors scrutinized a nationally representative German dataset of 39,192 ninth-grade students, and found the unique effect of interest which was more effective than the other predictors across the five domains, both for classroom grades and standardized test scores.

The effect revealed collective outcomes (in a given domain, students with higher interest showed higher achievement) and individual outcomes (the same student showed a higher achievement in domains s/he was more interested in). The effects were stronger for grades than test scores and stronger in math than in other domains. Jansen, Lüdtke, and Schroeders (2016) expanded the literature by emphasizing the role of the achievement measure and the domain as moderators of the interest–achievement relationship and by showing that interest could predict both inter- and intra-individual variation in achievement.

Ozola, and Purvins (2013) highlighted the possible relationship between interest in educational materials and the endeavor to learn them. They argued that learning instructional materials depended on the value which the learners assigned to them. This issue was linked to the relevance of course works to the learners' goals. Therefore, interest motivated the learners to make an endeavor to improve their performance (Ozola & Purvins, 2013).

Obviously teachers try to transfer knowledge to their students by means of education. Teachers and learners have to work with each other and dedicate themselves to the process of learning and to the objectives of their programs. Schools with a clear vision of teaching-learning objectives enable teachers and learners to be efficient in academic settings (Silins & Mulford, 2004). The student–teacher relationship and teachers' responsiveness bring about different pedagogical outcomes, modify

the degree of learner interest, and affect academic success (Ainley et al., 2002); this relationship, in turn, affects learners' perceived learning. Teachers have to recognize their learners' needs and respond to them properly. Student interest has a positive effect on efficient teaching and creates a more rewarding learning environment (Marsh & Yeung, 2001). As the studies reviewed above clarify, the teacher's role and interactions could motivate students' interests in various fields of education. These same concerns are applicable to EFL learners as well, especially at an academic level in which English plays a critical role. English, as the universal language, seems to be becoming more important than any other language (Satariyan & Mohseni, 2014). Not only is it used as a common language when people with different languages speak to one another, it is now the language in the global market, in systems of transportation, computer networking, telecommunications, and scientific and medical research (Satariyan & Reynolds, 2016).

Furthermore, English has become the main source for learning various disciplines as

it is the language commonly used for instruction and in books, journals, magazines, and other printed media. For non-English-speaking learners, however, EFL is a challenge to overcome; learning a highly fluid and ever-changing language like English represents a source of various problems associated with social and cognitive factors (e.g. negative attitudes toward the target language), a continued lack of progress in the L2, a wide social and psychological distance between the learner and the target culture, and a lack of integrative and instrumental motivation for learning (Satariyan et al., 2017). Clearly, exploring the factors mentioned in the literature in an EFL context would shed a new light on how interest is sustained in this sub-field of language studies. The present study investigates the effects of teacher-student interaction on academic achievement by focusing on the mediating role of academic interest. To do so, the study employed a structural equation modeling technique to address the following research questions.

- RQ 1. Does teacher-student interaction have a direct impact on EFL learners' language achievement?
- RQ 2. Does EFL learners' academic interest have a direct impact on their language achievement?

- RQ 3. Is the impact of teacher-student interaction on EFL learners' language achievement mediated by academic interest?

Accordingly, the hypothesized SEM model of predicted and predictor variables was as follows:

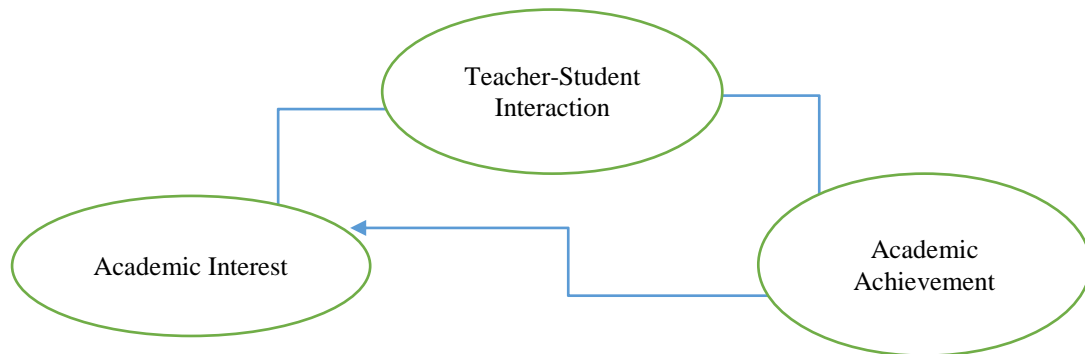


Figure 1. Proposed SEM model

METHODS

Participants

The study drew on a sample size calculator for SEMs to examine the impact of teacher-student interaction and academic interest on EFL learners' academic language achievement. Based on the results of this online calculator (version 4.0), 218 male/female EFL learners (102 males and 116 females), aged 18-45, were required to shape the sample size of the study. The participants were selected from those who study English as their foreign language at Islamic Azad Universities, Tabriz Branch. Because of the administrative restrictions of the university and the number of the EFL learners in this university, the sampling procedure was Stratified Random Sampling. They all shared Azari as their mother tongue.

Materials

To answer the proposed research questions, five instruments were used:

- Questionnaire on Teacher Interaction (QTI): This questionnaire was designed by Wubbels and Levy (2006). QTI measures how students shape perceptions about their teachers. To map the interpersonal teacher behavior, QTI was designed according to the two-

dimensional Leary model and consisted of eight sectors including leadership, strictness, uncertainty, student responsibility/freedom, helping /friendliness, being understanding, being dissatisfied, and being admonishing. The reliability of this questionnaire was already established ($r = 0.81$) (Wubbels et al., 2012).

- The academic interest questionnaire: This questionnaire, which was proposed by Corbière & Mbekou in 1997, assesses academic interest. Rated on a 5-point Likert scale (1=completely disagree; 5=completely agree), the six items in the questionnaire measure three aspects of preference for specific subject areas and the perceived usefulness and importance of achievement in each targeted academic subject. The reliability of this questionnaire was 0.89 (Corbière & Mbekou, 1997).
- Students' grade point averages (GPA) were used to measure learner achievement. The EFL learners self-reported their GPAs. In the

Iranian schooling system, grades range from 0 (the lowest grade) to 20 (the highest grade).

Procedure

The data needed for this study were collected during the academic year 2017. Initially, following the universities' administrative principles, the researchers obtained the necessary permissions for conducting the study. At the outset of the experiment, the researchers explained the purposes and the importance of the study in details. Additionally, the researchers clarified the research process and the ways in which they the respondents were required to complete each questionnaire. Then, the researchers administered the questionnaires to each of the participating English classes on an agreed-upon date. The participants were asked to answer the items in each question according to the instruction on top of the questionnaires.

To receive a high response rate, each item was read out for the students and they were asked to check the choices they found fit in the questionnaires.

Throughout the process, the participants were ensured that their views would not be disclosed. The participants were only requested to precisely write their demographic information including their age, gender, grade, and their GPA. Because academic achievement was measured according to the participants' GPAs, the researchers emphasized the importance of an accurate self-reported GPA. All of the completed questionnaires were computer-coded, and then SPSS 22.0 and LISREL 8.80 were used to test the hypothetical model.

Table 1.
Descriptive Statistics of the Research Variables

Variable	Minimum	Maximum	Mean	
GPA	13.40	20	17.34	1.64
Interest	12	24	19.86	2.91
Teacher-student interaction	110	298	212.97	40.09

For the purpose of determining the normal distribution of the data, the skewness

Design of the study

The current tried to inspect the relative contribution of teacher-student interactions and academic interest to EFL learners' academic achievement. A correlational survey design was employed to investigate the purposes of the study. To develop the model of this predictive contribution, SEM was utilized. In SEM, researchers normally specify a hypothesize-model based on an exploration of the literature and then subject the model to empirical investigation. Thus the first step in this study was to determine the elements that were likely part of the proposed model for the purpose of describing the relationships between the latent and observable variables. In this study, teacher-student interactions, academic interest, and academic achievement were selected as the elements of this process-oriented SEM approach.

Results

To analyze the research hypotheses under investigation, a confirmatory factor analysis was conducted to assess the validity of the measures through maximum likelihood estimation procedures in LISREL 8.80. To begin with, the descriptive statistics of each variable, skewness and kurtosis of the variables, and the correlational relationships of the research variables were found. In order to understand the quantitative features of the variables, the obtained results were reformulated according to descriptive statistics using standard deviation and mean values of each variable. Table 1 illustrates the descriptive statistics for each variable.

and kurtosis of the test scores are shown in Table 2.

Table 2.
Skewness, and Kurtosis of Research Variables

Variable	Skewness	Kurtosis
GPA	-0.59	-0.40
Interest	-0.43	-0.36
Teacher-student interaction	-0.59	0.76

As Table 2 shows, the distributions of academic achievement values showed negative skewness (-0.59) and negative kurtosis (-0.40). Likewise, the distribution of the academic interest variable revealed negative skewness (-0.43) and negative kurtosis (-0.36). Similarly, the distributions of teacher-student interactions confirmed the negative skewness between -0.59 and -0.21 and positive kurtosis between 0.76 and 0.68. However, the its generally agreed that skewness and kurtosis are unacceptable when the absolute values of skewness are greater than 2 and those of kurtosis are greater than 7 (Finney & DiStefano, 2006). The skewness and kurtosis of the distributions of all variables fell within the range of acceptability and normality. Illustrating the relationship among the research variables, Table 3 provides information about the correlations among the variables under study.

Table 3.
Correlational Statistics among Variables

No	Variable	1	2	3
1	GPA	1		
2	Interest	0.25**	1	
3	Teacher-student interaction	0.45**	0.21**	1

According to the information in Table 3, there was a significant relationship between the students' academic achievement and academic interest. As can be seen, the p-value of the academic interest questionnaire was 0.25, which was less than the acceptable p-value (* $p < 0.05$, ** $p < 0.01$). In terms of the relationship between teacher-student interactions and

students' academic success, there was a significant correlation coefficient between these two variables ($p = 0.45$, * $p < 0.05$, ** $p < 0.01$). Moreover, the obtained results of Table 3 reveal the correlation coefficient between teacher-student interaction and academic interest. Teacher-student interaction was significantly associated with learners' academic interest ($p = 0.21$, * $p < 0.05$, ** $p < 0.01$); this suggested that with an increase in the scores on teacher-student interaction, there was an increase in the scores on the latent variables as well. Accordingly it was revealed that the students' academic interest and their interactions with their teachers were positively correlated with their academic achievement.

To estimate the fitness and likelihood of the proposed model, confirmatory factor analysis was utilized to evaluate the validity of measures. This study utilized indices from all classes to assess goodness of data-model fit, namely, absolute fit indices, comparative fit indices, and parsimonious fit indices (Hu & Bentler, 1999). The data-model fit indices were: (a) goodness of fit index (GFI), adjusted goodness of fit index (AGFI), and standardized root mean square residual (SRMR) as absolute fit indices; (b) comparative fit index (CFI), normed fit index (NFI), and non-normed fit index (NNFI) as comparative fit indices; and (c) chi-square/degree of freedom (χ^2/df), Parsimony normed fit index (PNFI), and root mean square error of approximation (RMSEA). Table 4 illustrates the fitness of the proposed SEM.

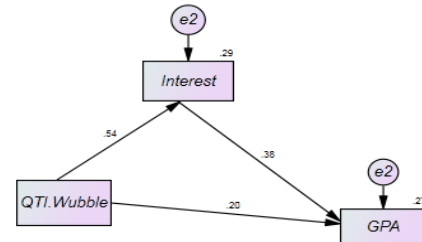
Table 4.**Data-Model Fit Indices**

Absolute fit indices			
SRMR	AGFI	GFI	index
0.02	0.93	0.98	value
<0.05	>0.95	>0.95	Acceptable range
comparative fit indices			
NNFI	NFI	CFI	index
0.98	0.96	0.95	value
>0.95	>0.95	>0.95	Acceptable range
Parsimonious fit indices			
RMSEA	PNFI	X2/df	index
0.05	0.09	1.28	value
<0.09	>0.06	1-3	Acceptable range

The goodness of fit index (GFI) of the proposed model was 0.98 and the adjusted goodness of fit index (AGFI) was 0.93. As it is demonstrated, the standardized root mean square residual (SRMR) was equal to 0.02. All of these measures of absolute fit indices fell within the recommended ranges (GFI=0.95, AGFI=0.95, and SRMR=0.05), indicating the model had a good fit of the data (Schumacker & Lomax, 2010). The normed fit index (NFI) of the model was 0.96, and non-normed fit index (NNFI) was 0.98, which fell within the recommended value of 0.95. The comparative fit index (CFI) of the operationalized model was 0.95 and the root mean square error of approximation (RMSEA) was 0.05. The CFI value of 0.95 fell within the recommended range of 0.95 or higher, indicating that the model was a good fit of the data (Schumacker & Lomax, 2010). The ratio of χ^2 divided by the degree of freedom was equal to 1.28. According to Carmines and McIver (1981), χ^2 divided by the degree of freedom ratio of 1-3

suggests a good fit; this value, then, confirmed that the model fit the data.

As mentioned earlier, the LISREL software (version 8.80) was utilized to report the factor loadings for each measured variable onto the latent construct and the coefficients for the directional paths between the constructs. In path analysis, the paths are represented as equations and illustrated as path diagrams. Figure 1 demonstrates the SEM of the study.

**Figure 2. Structural Equation Model of the study**

The direct and indirect effects of the variables are demonstrated in Table 5 as well.

Table 5.**The Direct and Indirect Effects of Each Variable on Academic Achievement**

Path	Direct effect	Indirect effect	Total effect	R ²
To Academic achievement from				0.29
Academic interest	0.38**	-	0.38**	
Teacher-student interaction	0.20***	0.15**	0.30***	
To academic interest from				0.40
Teacher-student interaction	0.54***	-	0.54***	

p<0.01, *p<0.001

As Table 5 shows, the learners' academic interest had a significant predictive power over their academic success ($\beta=0.38$, $p<0.01$). The amount of teacher-student interaction, too, had a positively significant predictive role in estimating academic achievement ($\beta=0.20$, $p<0.001$). These findings supported the first and second hypotheses, which stated that both teacher-student interaction and academic interest could positively affect learners' academic success. As the findings suggested, the EFL learners would be more successful in their learning with an increased rate of these two variables (teacher-student interaction and academic interest). Additionally, the indirect effect of teacher-student interactions through academic interest on academic achievement was 0.15, which was a considerably significant measure given the standardized level of significance ($p < 0.01$). Therefore, it would be plausible to assert that the learners' academic interest had a mediating role, considering the association between teacher-student interactions and academic achievement. In other words, increasing the degree of teacher-student interaction improved the learners' academic interest, which in turn resulted in a higher degree of academic achievement.

DISCUSSION AND CONCLUSION

This study explored the effects of teacher-student interactions on academic achievement by focusing on the mediating role of academic interest. The findings of this study clarified that academic interest, as a psychological factor, had a significant positive correlation with the learners' academic achievement. As a result, it had a predictive mediating role in the correlation between academic achievement and teacher-student interaction. These observations, however, did not support the findings of Baumert, Schnabel, and Lehrke (1998). These researchers examined a number of German and international studies concerned with student achievement in mathematics for the learners from the Grade 1 up to the end of Grade 7. Based on the results of the analyses, academic interest did not have a significant impact on achievement after background

knowledge was controlled. However, achievement had an effect on interest even when background interest was controlled (Baumert, Schnabel, & Lehrke, 1998).

Similarly the results of the present study were not in line with those of Goulart and Bedi (2011), who explored the impact of Portuguese learners' academic interest in school on their educational achievement; in their analysis, of course, economic factors of education were controlled. Goulart and Bedi focused on the correlation between academic interest in schooling and educational achievement; as the results demonstrated, interest in school did not have any impact on the learners' subsequent educational achievement. That is, interest in school was not a predictor of educational success. It was concluded that the manipulation of the learners' interest in learning might not solve the learners' educational problems (Goulart & Bedi, 2011).

Meanwhile, the results of the present study did not support the findings of Hussin, Maarof and D'Cruz (2001), who investigated Malaysian students and teachers, and tried to figure out how interest in learning English could improve the learners' English language learning. The results of their study showed that the learners' and teachers' interest had an impact on English language learning (Hussin, Maarof, & D'cruz, 2001).

More specifically, Kpolovie, Joe, and Okoto (2014) collected a sample of 518 students, using a table of random numbers representing 14459 students who were enrolled in 2013 May/June Senior Secondary Certificate Examination (SSCE) in Bayelsa State. The results of multiple regression analyses showed that the learners' interest in learning and attitudes toward school accounted for 21.60% of the variance in their academic performance. Therefore, the improvement of the learners' interest in learning and attitude towards school could have an impact on their academic success (Kpolovie, Joe, & Okoto, 2014).

Of course, the results of present study were in line with the observations of Koller, Baumer, and Schnabel (2001); the participants of their study were 602 German school students.

They were tested at three time intervals: end of Grade 7, end of Grade 10, and the middle of Grade 12. The study examined the correlation between academic interest and achievement, sex differences in achievement, academic interest, and course selection. Based on the results, although interest did not have a significant impact on learning from Grade 7 to Grade 10, it left an impact on the selection of the courses. More particularly, the highly interested students were more likely to select an advanced course. Moreover, interest at the end of Grade 10 directly and indirectly affected achievement in upper secondary education. The results highlighted the significance of interest in the case of academic choices and self-regulated learning in unstructured educational settings (Köller, Baumert, & Schnabel, 2001).

Similarly, what the present study found supported the results of Wigfield and Eccles (2000) and of Marsh and Yeung (2001). These researchers argued that the impact of achievement was completely mediated by the academic interest factor. They stated that subjective measures, such as self-perceived competencies, determined academic choices. Nonetheless, achievement levels had an impact on these variables (Marsh & Yeung, 2001; Wigfield & Eccles, 2000). The findings of this study were also in line with those of Silvia (2006) and Paul (2013). Silvia (2006) argued that due to the significant role of interest in the improvement of knowledge/expertise, psychologists have to use the contributions of research into interest to address practical problems of learning, education, and motivation (Silvia, 2006). Plante, O'Keefe, and Théorêt (2013) observed that interest had a significant impact on students' learning because it cognitively engaged them.

Furthermore, the results of present study were consistent with the findings of Schiefele (2009), who focused on a number of factors affecting achievement; Schiefele argued that academic interest was the dominant factor (Plante, O'Keefe, & Théorêt, 2013; Schiefele, 2009). Similarly, the results of the present study, which revealed that interest in learning predicted the learners' academic success, sup-

ported the findings of the studies conducted by Hidi (2001) and Renninger and Hidi (2015). These researchers found that interest, level of effort put in reading, and learning style might have an impact on learners' academic achievement (Hidi, 2001; Renninger & Hidi, 2015).

As these findings and discussions suggest, it can be arguably concluded that this research, providing data-driven evidence, demonstrated that the students' academic interest in learning predicted their academic performance. Academic interest should be thought of not only as an independent factor in the process of learning, but also as a desired outcome. This view of academic interest raises the question how instruction can facilitate the development of interest in academic achievement (Goulart & Bedi, 2011).

Students' academic interest in learning is significantly associated with their academic success. This is, however, not an extremely surprising standpoint because when students show a higher degree of academic interest in learning, they tend to be more engaged in studying, rely on more practical information, and process their learning styles. As demonstrated by Kpolovie (2012), information processing styles and sorts of knowledge remarkably influence students' learning. More precisely, Kpolovie (2012) elucidated that students' academic performance was significantly predicted by their academic interest in learning as well as their interest in school.

Likewise, like the direct impact of academic interest on learner success, the mediated role of this variable in teacher-student interaction and academic achievement was significant. That is, the effect of teacher-student interaction facilitated learners' achievement through the mediating role of academic interest (Kpolovie, 2012). In short, as the findings and the discussion emphasize, it would be reasonable to conclude that learners' academic achievement is positively influenced by the effects of teacher-student interaction and academic interest.

The findings of this study could serve as a basis for instructional design and curriculum

development. The study provides potential benefits to instructors. In the development of new curricula, instructional units/sections could be included in areas which are likely to significantly influence students' EFL skills performance. An awareness of personal, behavioral, and environmental factors which influence students' performance could also inform writing instructors and serve as a basis for targeted instruction. Student success centers could also use the findings of the study to plan interventions. The findings of the study could

also inform EFL skills centers, serving as a measure of their effectiveness. There has been a debate over the importance of academic achievement and of supportive and mediating roles of teacher-student interactions and academic interest in bringing about desirable student outcomes. The findings of this study supported the advantages of these variables in enhancing learners' success. It was also found that the effects of teacher-student interaction on academic growth was mediated by the notion of academic interest.

References

- Ainley, M., Hidi, S., & Berndorff, D. (2002). Interest, learning, and the psychological processes that mediate their relationship. *Journal of educational psychology, 94*(3), 545.
- Allwright, D. (1983). Classroom-centered research on language teaching and learning: A brief historical overview. *Tesol Quarterly, 17*(2), 191-204.
- Baumert, J., Schnabel, K.-U., & Lehrke, M. (1998). *Learning math in school: does interest really matter?* Paper presented at the Seon Conference on Interest and Gender.
- Berg, G. v. d., & Coetzee, L. R. (2014). Academic self-concept and motivation as predictors of academic achievement. *International Journal of Educational Sciences, 6*(3), 469-478.
- Corbière, M., & Mbekou, V. (1997). Academic interest questionnaire. *Unpublished document. Vancouver (BC), Canada: University of British Columbia.*
- Denissen, J. J., Zarrett, N. R., & Eccles, J. S. (2007). I like to do it, I'm able, and I know I am: Longitudinal couplings between domain-specific achievement, self-concept, and interest. *Child development, 78*(2), 430-447.
- Finney, S. J., & DiStefano, C. (2006). Non-normal and categorical data in structural equation modeling. *Structural equation modeling: A second course, 10*(6), 269-314.
- Gogol, K., Brunner, M., Preckel, F., Goetz, T., & Martin, R. (2016). Developmental dynamics of general and school-subject-specific components of academic self-concept, academic interest, and academic anxiety. *Frontiers in psychology, 7*, 356.
- Goulart, P., & Bedi, A. S. (2011). The impact of interest in school on educational success in Portugal.
- Hidi, S. (2001). Interest, reading, and learning: Theoretical and practical considerations. *Educational psychology review, 13*(3), 191-209.
- Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal, 6*(1), 1-55.
- Hulleman, C. S., Godes, O., Hendricks, B. L., & Harackiewicz, J. M. (2010). Enhancing interest and performance with a utility value intervention. *Journal of Educational Psychology, 102*(4), 880.
- Hussin, S., Maarof, N., & D'cruz, J. (2001). Sustaining an interest in learning English and increasing the motivation to learn English: An enrichment program. *The Internet TESL Journal, 7*(5), 1-7.
- Jansen, M., Schroeders, U., & Lüdtke, O. (2014). Academic self-concept in science: Multidimensionality, relations to achievement measures, and gender differences. *Learning and Individual Differences, 30*, 11-21.
- Köller, O., Baumert, J., & Schnabel, K. (2001). Does interest matter? The relationship between academic interest and achievement in mathematics. *Journal for Research in Mathematics Education, 44*8-470.
- Koth, C. W., Bradshaw, C. P., & Leaf, P. J. (2008). A multilevel study of predictors of student perceptions of school climate: The effect of classroom-level factors. *Journal of educational psychology, 100*(1), 96.
- Kpolovie, P. J. (2012). Lumosity training and brain-boosting food effects on learning. *International Research Journals, 2*(6), 217-230.
- Kpolovie, P. J., Joe, A. I., & Okoto, T. (2014). Academic achievement prediction: Role of interest in learning and attitude towards school. *International Journal of Humanities Social Sciences and Education (IJHSSE), 1*(11), 73-100.
- Lee, W., Lee, M.-J., & Bong, M. (2014). Testing interest and self-efficacy as predictors of academic self-regulation and

- achievement. *Contemporary educational psychology*, 39(2), 86-99.
- Marsh, H. W., & Yeung, A. S. (2001). An extension of the internal/external frame of reference model: A response to Bong (1998). *Multivariate Behavioral Research*, 36(3), 389-420.
- McInerney, D. M., & Liem, G. A. D. (2009). ACHIEVEMENT MOTIVATION IN CROSS-CULTURAL CONTEXT. *Culture, Self, And, Motivation: Essays in Honor of Martin L. Maehr*, 213.
- Obo, F. (2004). Some students' personal variables as predictors of mathematics achievement, in secondary schools in central Cross River State, Nigeria. *Unpublished M. Ed. Thesis. Faculty of Education, University of Calabar, Calabar, Nigeria*.
- Ozola, S., & Purvins, M. (2013). Teaching/Learning Theories--How They Are Perceived in Contemporary Educational Landscape. *Bulgarian Comparative Education Society*.
- Paswan, A. K., & Young, J. A. (2002). Student evaluation of instructor: A nomological investigation using structural equation modeling. *Journal of Marketing Education*, 24(3), 193-202.
- Pitt, V., Powis, D., Levett-Jones, T., & Hunter, S. (2014). The influence of personal qualities on performance and progression in a pre-registration nursing programme. *Nurse Education Today*, 34(5), 866-871.
- Plante, I., O'Keefe, P. A., & Théorêt, M. (2013). The relation between achievement goal and expectancy-value theories in predicting achievement-related outcomes: A test of four theoretical conceptions. *Motivation and Emotion*, 37(1), 65-78.
- Radi, S. M. (2013). Baccalaureate nursing students' motivation for attending university and its relationship with their academic achievement. *Int. J. Educ. Res.*, 1(7), 1-12.
- Renninger, K. A., & Hidi, S. (2015). *The power of interest for motivation and engagement*: Routledge.
- Rezazadeh, M., & Tavakoli, M. (2009). Investigating the Relationship among Test Anxiety, Gender, Academic Achievement and Years of Study: A Case of Iranian EFL University Students. *English Language Teaching*, 2(4), 68-74.
- Satariyan, A., Chinijani, M. E., & Reynolds, B. (2017). Investigating discourse socialisation progress of an English as a second language learner using systematic functional linguistic approach. *Journal of Language and Translation*, 7(1), 1-11.
- Satariyan, A., & Mohseni, A. (2014). Writing Skill and Categorical Error Analysis: A Study of First Year Undergraduate University Students. *Research in English Language Pedagogy*, 2(1), 20-30.
- Satariyan, A., & Reynolds, B. (2016). A reflective model for action research: An evolving pedagogical trajectory *What is Next in Educational Research?* (pp. 21-28): Brill Sense.
- Schiefele, U. (2009). Situational and individual interest. *Handbook of motivation at school*, 197-222.
- Schumacker, R. E., & Lomax, R. G. (2010). *A Beginner's Guide to Structural Equation Modeling* (third): Mahwah, NJ: Lawrence Erlbaum Associates.
- Schunk, D. H. (2012). *Learning theories: an educational perspective* 6th ed. *Terjemahan Hamdiah & Rahmat Fajar*. Yogyakarta: Pustaka Pelajar.
- Silins, H., & Mulford, B. (2004). Schools as learning organisations--Effects on teacher leadership and student outcomes. *School effectiveness and school improvement*, 15(3-4), 443-466.
- Silvia, P. J. (2006). *Exploring the psychology of interest*: oxford university Press.
- Trautwein, U., Lüdtke, O., Nagy, N., Lenski, A., Niggli, A., & Schnyder, I. (2015). Using individual interest and conscientiousness to predict academic effort: Additive, synergistic, or compen-

- satory effects? *Journal of personality and social psychology*, 109(1), 142.
- Veas, A., Castejón, J.-L., Miñano, P., & Gilar-Corbí, R. (2019). Early Adolescents' Attitudes and Academic Achievement: The Mediating Role of Academic Self-concept. *Revista de Psicodidáctica (English ed.)*, 24(1), 71-77.
- Walkington, C., & Bernacki, M. L. (2014). Motivating students by “personalizing” learning around individual interests: A consideration of theory, design, and implementation issues *Motivational interventions* (pp. 139-176): Emerald Group Publishing Limited.
- Wigfield, A., & Eccles, J. S. (2000). Expectancy–value theory of achievement motivation. *Contemporary educational psychology*, 25(1), 68-81.
- Wubbels, T., Brekelmans, M., Den Brok, P., Levy, J., Mainhard, T., & van Tartwijk, J. (2012). Let's make things better: Developments in research on interpersonal relationships in education *Interpersonal relationships in education* (pp. 225-249): Brill Sense.

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