



# The Impact of Teacher-Student Interaction and Academic Self-Concept on EFL Learners' Academic Achievement

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## Abstract

While previous academic achievement studies have investigated a wide range of cognitive variables, certain non-cognitive variables such as teacher-student interaction and academic self-concept in relation to academic success have remained under-researched. To this end, a coefficient correlation research method was used to observe the academic self-concept, and the interaction between teacher and student features which had been identified as having significant roles in English students' academic achievement. The participants of the study consisted of 218 Iranian EFL university learners, with an age range of 18 to 45. Structural equation modeling hypothesis-testing procedures demonstrated that there exists a reasonable fitness between the data and the model ( $\chi^2 = 0.37$ , GFI = 0.99, CFI = 0.99, RMSEA = 0.01). It was confirmed that the amount of student and teacher relationships meaningfully and directly affected EFL students' academic success ( $r = 0.35$ ,  $p = 0.45$ ). Moreover, academic self-concept was known to be a significant factor in improving students' achievement ( $r = 0.24$ ,  $p = 0.32$ ). The obtained results also indicated the mediating role of learners' academic self-concept in enhancing learners' academic achievement via increasing the interaction between students and their teacher. The fundamental role of psychosomatic features, comprising of students and teacher relations and academic self-concept to foreign language students' educational success was authenticated. The outcomes of this empirical study have some implications for educational settings.

**keywords:** academic achievement, academic self-concept, correlational method, structural equation modeling, teacher-student interaction

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## Introduction

Student accomplishment or growth is considered as being of essential concerns for educational institutions that value economic as well as universal progress (Brown & Ryan, 2015). Learners experience different kinds of emotions that are related to educational activities (Raccanello & De Bernardi, 2013). According to (Pekrun, 2006), learners' academic achievement consists of characteristics of students, for instance the notions of self-concept and societal and educational issues. In preceding experiential study (Pekrun & Perry, 2014), the influential role of learners' self-concept in improving their success has been confirmed, while the starring role of the superiority of students and teacher interactions is not fully deliberated. As well, it has been proposed that students' relationship with their teacher significantly improves their success in academic context (Belsky & Pluess, 2009). However, fewer researches have investigated the mediated contribution of learners' academic self-concept in the topic of the association amongst the teacher–student interaction and academic achievement. The present study has two goals: First, to explore the roles of the student and teacher communication and academic self-concept in learners' accomplishment progress. Second: to ascertain the direct and mediated roles of these two variables on learners' academic achievement.

## Literature Review

Academic achievement is regarded as a significant principle to evaluate a person's total potentialities and capabilities (Berg & Coetzee, 2014). The concept of academic achievement is well-established as the students' understanding of numerous abilities and educational materials through applying consistent and validated analyses (Joe et al., 2014). Scholars agree that cognitive and non-cognitive skills (Pitt et al., 2014; Veas et al., 2019), such as motivational (Wolff et al., 2018), and situational factors (LoCasale-Crouch et al., 2018) contribute to learners' academic achievement and growth in academic setting. The literature demonstrate a great deal of consideration to the understanding of the ways in which non-cognitive variables such as motivational and situational factors have an effect on students' ability to achieve higher grades (Berg & Coetzee, 2014; Pitt et al., 2012).

The optimistic self-beliefs that concentrates on how healthy, normal, and exceptional people may obtain the thoroughgoing from a lifespan are centered at the core of the positive psychological revolution (Grygiel et al., 2017; Simonsmeier et al., 2020). This positive psychology initiative that concentrates on academic self-concept, draws a vast amount of attention in educational and psychological fields (Marsh et al., 2017). The term self-concept is explained as “a construct of pervasive significance” (Craven, 2008, p. 1) that supports the comprehension of required psychological, behavioral, and educational consequences that reinforce human potential.

The notion of self-concept was primary familiarized by Carl Rogers and Abraham Maslow, addressing how people perceive themselves as pertaining to their capabilities, attitude, values, and uniqueness (Garn & Shen, 2015). In educational settings, self concept is considered as a significant consequence of learning and assists as an indicator of scholastic outcome. It is demonstrated that the notion of self concept is correlated with accomplishment, and academic self-concept is a momentous predictor of professional preference in and out of school (Parker et al., 2015). Khalaila (2015) pointed out that academic self-concept is one of vital key

elements to learners' academic success. He distinguished that the foundation of scholars' academic superiority is the academic achievement in which understanding the various features responsible in predicting, identifying, intervening, or having an effect in academic achievement is critical (Khalaila, 2015).

A number of empirical findings provide numerous illustrations for the constructive weights of a learners' high academic self-concept. According to Harter (2012), academic self-concept (ASC) is defined as an individual estimation of personal cognitive capabilities in academic achievement contexts. The researchers illustrated that high amount of achievement, persistence at the time of failure, interest, and academic choice are all associated with learners' academic self-concept (Gogol et al., 2017; Köller et al., 2006; Marsh et al., 2017). Students who have positive academic self-concept attain advanced educational accomplishment levels and are further successful in professional domains (Marsh et al., 2017; Schneider & Preckel, 2017). In addition to the relationship with performance consequences, constructive academic self-concept is related to other areas of academic success, for instance not as much of university failure (Schiefele & Schaffner, 2015). Accordingly, it is increasingly recognized that a student's positive academic self-concept can simplify a vast amount of educational consequences (Trautwein & Möller, 2016). A plethora of literature have clarified the substantial effect of academic self-concept on achievement (Chen et al., 2013; Marsh et al., 2015). For instance, whenever students are self-confident in their capability to be academically effective, their self-concept will affect their interest, causing them to be more satisfied about learning. At the point when learners reveal passion or enthusiasm for learning they will undoubtedly turn out to be motivated to learn new materials and notions, which will help them to obtain the intentions of pedagogic excellence (Guo et al., 2018; Niepel et al., 2014; Pinxten et al., 2014). Teachers as well as parents should establish a strong academic self-concept which would be considered as the first priority over the enhancement of long-term academic achievement (Marsh et al., 2015). Knowledge of students' perceptions of their own academic competencies, feelings, and experiences is noteworthy, since these perceptions will impact how they in turn value academics. Moreover, students' perceptions of the importance of academics will ultimately influence how well or ineffectively they perform academically (Trautwein & Möller, 2016).

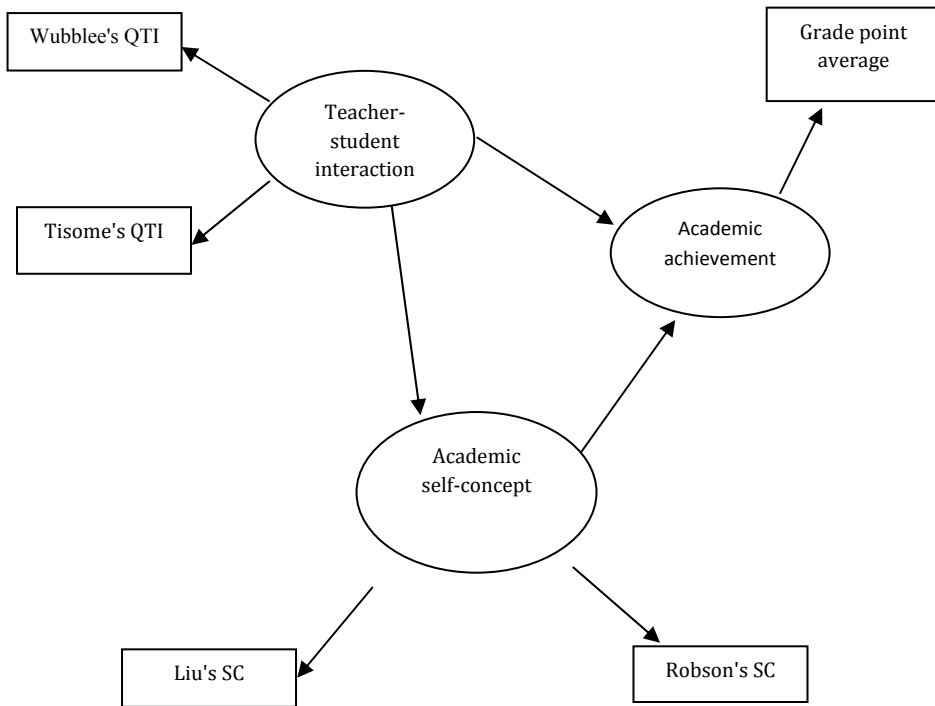
Conversely, in the face of the strong practical provision for the relationships of educational achievement and self-concept, rare studies have considered the mediated role of this concept concerning the relationship of academic achievement and the amount of teacher-student contact. As an alternative, most of the existing achievement motivation studies have relied mainly on the direct consequence of academic self-concept on achievement, even though the ASC's mediated role might be the most important variable in the establishment of learners' strong achievement (Guo et al., 2018) and fast progress in cognitive and academic skills (Harter, 2012). Some researchers (e.g. Cadima et al., 2010) elucidated that educators' interaction quality with students in the class is increasingly acknowledged as of having dominant significance for learner achievement in classroom (Cadima et al., 2010). The relationship between educator and students is observed as the utmost influential feature in educational situation. This sort of relation that is considered as academic motivation and school engagement, expresses the basis of the social context in which learning takes place (Clem et al., 2020; Pekrun & Perry, 2014). A number of variables such as gender have an influential effect on the interactions

between teacher and students which in turn influence a learner's academic outcomes and performance. Hughes & Chen (2011) consider that supportive and positive relations that occur between students and teachers ultimately stimulate a "sense of school belonging" and inspire learners to "participate cooperatively in classroom activities" (p. 278).

Generally speaking, teacher-student interactions are considered at two levels, the classroom level and the dyadic level. An attachment-based perspective is frequently utilized in educational researches (Pekrun & Perry, 2014; Verschueren & Koomen, 2012). This perspective concentrates on the emotional constituents of the dyadic relations that exist among the students and teachers. More explicitly, it focuses on three major components, namely dependency, closeness, and conflict, in the relationship between the educator and a specific learner (Verschueren, 2015). Closeness discusses the amount of warmth, open communication between the student and instructor, and affection, while conflict encompasses the amount of undesirable affect communicated and experienced in the interaction (Ahnert et al., 2012). Dependency speaks about the student's insecure behavior toward the instructor and the high degree of reliance on the teacher (Ahnert et al., 2012; Vervoort et al., 2015). Nevertheless, these dyadic relationships are surrounded by the wide-ranging classroom environment, which have an impact on learner's progress in its own manner (Howes et al., 2011). Teacher-student interactions are increasingly noteworthy for the adjustments of students' socioemotional features and their success in educational settings (Lei et al., 2018; Pakarinen et al., 2018). Numerous theoretical explanations have been proposed as to why the quality of teacher-student interaction is expected to similarly be associated with learners' achievement. For instance, supportive and close teacher-student interactions can improve learners' common sense of belonging and social relatedness within the class, which, consecutively, may possibly stimulate positive and impede negative feelings towards learning (Clem et al., 2020; Lei et al., 2018; Skinner et al., 2014).

Furthermore, whereas empirical studies have noticeably determined the significance of societal, temporal and dimensional contrasts for academic self-concept construction, rare researches have experimentally examined their joint influence as mediator in learners' achievement and interaction relationship (Wolff et al., 2018). As such, in spite of an overabundance of self-concept researches, most of the individual studies focused only on the reciprocal effects of ASC and achievement, in actual fact none have exclusively juxtaposed the contributive role of this notion in relation to the developmental perspective of achievement. In this context, the present paper designed to rigorously test: a) the developmental interplay between teacher-student interaction and a standardized academic achievement measure at university level; b) the actual magnitude of the special impressions of academic self-concept on EFL university students' success; c) the magnitude to which academic self-concept play a mediator role in learners' academic achievement, respectively. Data was collected from among university students. Following Marsh and Martin (2011), structural equation modeling (SEM) was utilized in this study to account for measurement error and so was anticipated to produce supplementary precise parameter assessments (Marsh et al., 1998) (Figure 1).

**Figure 1**  
*The Hypothesized SEM Model*



### The Current Study

In the mainstream of researches discovered heretofore, it was demonstrated that academic achievement is a major determinant in the increase concept model. According to this model, self-concept tends to enhance on the involvement in explicit and implicit trainings of the scholars (Ahmed & Bruinsma, 2006). As an indicator of accomplishment in any systematic attempt, student's success and other variables have an effect in any educational system in which this concerns persuades and attract numerous researchers. Generally, it is still open whether the different models for considering the association between self-concept and achievement obtain comparable consequences. As well, the teacher-student relationship was presumed to be predicator and academic achievements were considered as an outcome, thus it is commonsense to hypothesize that academic outcomes are influenced by interactions with teachers (Goetz et al., 2013; Westphal et al., 2018). By contrast, almost nothing is known about whether learners' academic self-concept have a mediator role in achievement-related outcomes and teacher-student interaction relationship, even though there exist good explanations to express that this might be the case (Nelson & Schunn, 2009). The current study aimed to fill the aforementioned gap by scrutinizing whether academic self-concept mediate the association between learners' academic success and the extent of their interaction with teacher. In this research paper facets of expectancy value theory (Eccles & Wigfield, 1995) and self-determination theory (Deci & Ryan, 1985) were combined, to expand our knowledge of the notions of academic achievement, academic self-

concept, and teacher-student interaction along with the relationships that exist among them. More specifically, this paper attempted to scrutinize effects of the research variables on improving EFL learners' academic achievement. The study was conducted to investigate a series of research questions, as follows:

- *Is there a direct relationship between teacher-student interaction and EFL students' success?*
- *Does EFL students' self-concept have a direct effect on EFL students' success?*
- *Is the effect of teacher-student interaction on EFL learners' success mediated by self-concept?*

## **Materials and Methods**

### ***Design of the Study***

This investigation was an attempt to survey the relative contribution of the amount of teacher-student relations and academic self-concept to EFL learners' success. The study utilized the descriptive correlational survey research design. Parametric statistical tools were employed to determine students' level of self-concept, their achievement in academics, the amount of teacher-student interaction, and the direct and indirect relationships that exist among these variables (Creswell, 2008). Likewise, the present research was a cross sectional design that involves collecting of the required information from the sample group on one occasion. In this research method, the investigator is able to infer and generalize required data in relation to a larger population according to the obtained data of smaller sample group (Creswell, 2008).

### ***Participants***

For the purpose of inspecting the contributive role of teacher-student interaction, self-concept to learners' academic success, a-priori Sample Size Calculator for SEM was utilized. The sample size required for this study that drew on the SEM was calculated to be 218 EFL learners. Accordingly, a total number of 218 Intermediate EFL learners varying in age from 18 to 45 were participated in this study. The participants were EFL learners in Islamic Azad University, Tabriz Branch, Iran. Of the entire number of these 218 students, 46.8 % were male, and 53.2 % were female, with Turkish and Farsi as their native language.

### ***Procedure***

Once the research framework was established, the required data to conduct this research were gathered throughout the educational year 2017. The researchers secured the appropriate permissions from the aforementioned university's administrative offices. At the start of the study, the researchers personally visited the learners at the university and briefed the participants about the resolution and the prominence of the study. As such, we explained the research procedure and the methods in which they were supposed to respond the questions of each questionnaire. The students were required to provide their own opinion for each question as stated by the determined instruction of each questionnaire. With the aim of getting high response and authentic rate, the researchers read each question out loud and the students were asked to choose one answer of their own desired reply in the questionnaires. During the procedure, the students were assured that their opinions would not be shared with anyone. They were just demanded to exactly

provide their biographical data containing their age, sexual category, score, and their grade point average (GPA). Since, the learners' success was assessed in line with the students' grade point average score, we emphasized precise self-reporting of their GPA. Every questionnaire was coded by the computer, and then two statistical software, named SPSS 22.0 and LISREL 8.80, were utilized to examine the proposed model.

**Measures**

To answer research questions, the following instruments were utilized:

**Self-Concept Ability:** learners' academic self-concept ability was assessed via utilizing two questionnaires: a) Robson's (1986) self-concept questionnaire – this 7-item questionnaire measures five sub-categories of self-concept, i.e., attractiveness and approval by others, contentment and worthiness, confidence value of existence, determinism and significance, and resilience. The Cronbach's alpha reliability measure for the self-concept questionnaire was calculated to be 0.80; and b) Liu and Wang's (2008) Academic Self-concept Questionnaire (ASCQ) which aims to assess the emotional states and insights of the students' academic competence. Twenty items are included in the questionnaire with 6-Likert scale (yes, no, no always, no sometimes, yes sometimes, yes always). Two major subscales measured in this questionnaire are confidence and effort. This questionnaire was, also, evaluated in terms of its reliability and the results indicated the reliability measure of .92. An example of a sample item of this questionnaire is as follows:

<i>Question</i>	<i>Yes</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>Yes</i>	<i>Yes</i>
			<i>always</i>	<i>sometimes</i>	<i>sometimes</i>	<i>always</i>
<i>I can follow the lesson easily</i>	.....	.....	.....	.....	.....	.....
.....						

**Teacher-Student Interaction:** The quality and the features of the learners' relations with their instructors were measured through the use of two different questionnaires, too. a) Questionnaire on Teacher Interaction (QTI): The scale was designed to measure learners' experience of leadership, strict, uncertain, responsibility/freedom, helping/friendly, understanding, dissatisfied, and admonishing on a Likert scale, ranges from letter A (never, A stands for 1) to letter E (always, E stands for 5). The amount of Cronbach's alpha for the feature of closeness was demonstrated to be 0.82, and for conflict, it was 0.76. The Cronbach's alpha reliability of this questionnaire was indicated to be agreeable (r = 0.81). b) a self-reporting Questionnaire on teacher-student interaction (QTI) modified by Nugent (2008). The questionnaire includes 48 items about the students' performance in the class and the numbers range from 1 to 5 (1 = never, and 5 = always). The reliability of the instrument was calculated as 0.80. The following sample item is an example of this questionnaire:

1. This instructor talks enthusiastically about her/his subject.	1	2
3 4 5		

**Academic Achievement:** Students' grade point averages (GPA) were utilized to exhibit the learners' academic success, and were observed to serve as measurements of the English achievement achieved at the university level. EFL learners were required to self-report their grade point average score which ranges from 0 to 20.

### Data Analysis

To investigate the research questions, the various questionnaires were submitted to the students and required data were collected. The collected data were coded and scrutinized via the use of the program Statistical Package for the Social Sciences (SPSS) version 22.0. At the outset, the demographic data of the students were analyzed by the use of statistical analysis to scrutinize the descriptive data involving of the standard deviations, the mean, and the standard error of means. Moreover, the coded data in SPSS were imported into LISREL Software version 8.80. Then, the researchers applied Confirmatory Factor Analysis (CFA) to determine the relationship among latent and observable variables. The foremost intention of confirmatory factor analysis is to check the fitness of the data to a theorized measurement model through the use of different indices of model fit index. In Model fit the researchers aims to explore the comparative fit index (CFI), the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), and the Tucker–Lewis index (TLI). A model characteristically fits the data while the value of  $p$  is not significant. Whenever the value of RMSEA is lower than 0.06 and SRMR values is under 0.08, it is demonstrated that there exists a comparatively good fitness between the theorized model and the obtained data (Hu & Bentler, 1999). Because of the sensitivity of the  $\chi^2$  test to sample size, applying relative goodness-of-fit indices is correspondingly suggested in large sample size cases (Bentler & Bonett, 1980). At last, Structural equation modeling (SEM) of the research variables was provided using LISREL software. Structural equation modeling is defined as a statistical analysis procedure that is utilized to evaluate the structural associations.

### Results

To begin with, the researchers calculated Skewness and Kurtosis of the research variables along with the correlational association of these variables. In order to indicating the data normal distribution, kurtosis and skewness of the scores are revealed in Table 1.

**Table 1**  
*Skew and Kurtosis of Research Variables*

Variable	Mean	Standard Deviation	Skewness	Kurtosis
GPA	17.34	1.64	-0.59	-0.40
Robson's SC	53.20	12.29	0.19	-0.87
Liu's SC	51.02	11.62	-0.42	0.30
Wubble's QTI	212.97	40.09	-0.59	0.76
Tosome Nugent's QTI	162.32	31.82	-0.21	0.68

As it is demonstrated in Table 1, the distributions of the academic success showed negative skewness (-0.59) and negative Kurtosis (-0.40). The skewness of academic self-concept variables ranged from 0.19 to -0.42 and the kurtosis of these variables was between -0.87 and 0.30. Correspondingly, the distributions of teacher-student interaction variables authorized positive kurtosis between 0.76 and 0.68 as well as negative skew between -0.59 and -0.21. Generally speaking, the absolute skewness value of more than 2 and the absolute kurtosis value of over 7 are demonstrated to be unacceptable (Finney & DiStefano, 2006). In the present paper, the kurtosis and skewness of the distributions of research variables were surrounded by the range of acceptability and normality. Table 2 below provides information on



the correlational statistics that exist among the study variables.

**Table 2**  
*Correlational Statistics among Variables*

No.	Variable	1	4	5	7	8
1	GPA	1				
4	Robson's SC	0.31**	1			
5	Liu's SC	0.32**	0.47**	1		
7	Wubble's QTI	0.45**	0.40**	0.39**	1	
8	Tisome Nugent's QTI	0.41**	0.35**	0.31**	0.71**	1

\*\*  $p < 0.01$

As demonstrated in Table 2, there were significant average correlations among the research variables ( $p < 0.01$ ).

In the current study, the researchers applied Confirmatory factor analysis to evaluate the rationality of measures. This research paper used indices from different classifications to evaluate goodness of data-model fit, to be precise, comparative fit indices, absolute fit indices, and parsimonious fit indices (Hu & Bentler, 1999). The data-model fit indices are: a) Comparative Fit Index (CFI), Normed Fit Index (NFI), and Non-Normed Fit Index (NNFI) as comparative fit indices, b) Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), and Standardized Root Mean Square Residual (SRMR) as absolute fit indices, and c) Chi-Square/Degree of Freedom ( $\chi^2/df$ ), Parsimonu Normed Fit Index (PNFI), and Root Mean Square Error of Approximation (RMSEA) as parsimonious fit indices. Table 3 illustrates the fitness of the proposed structural equation modeling.

**Table 3**  
*Data-Model Fit Indices*

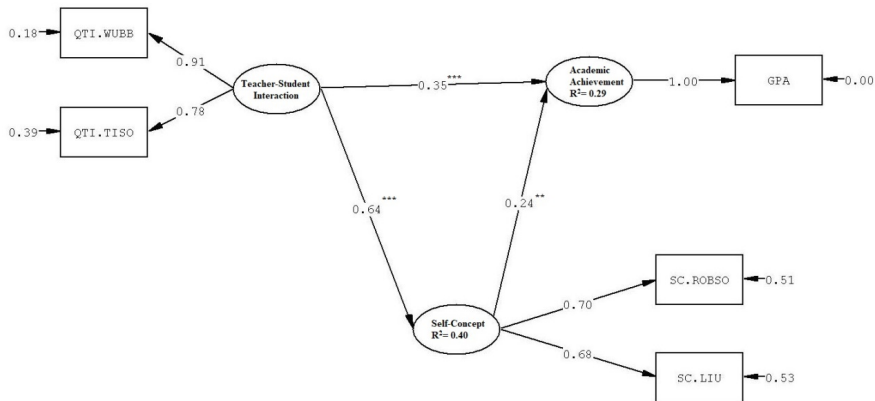
<u>Absolute fit indices</u>			
SRMR	AGFI	GFI	Index
0.01	0.99	0.99	Value
<0.05	>0.80	>0.90	Acceptable range
<u>Comparative fit indices</u>			
NNFI	NFI	CFI	Index
0.99	0.99	0.99	Value
>0.90	>0.90	>0.90	Acceptable range
<u>Parsimonious fit indices</u>			
RMSEA	PNFI	X <sup>2</sup> /df	Index
0.01	0.61	0.37	Value
<0.08	>0.60	<3	Acceptable range

The goodness of fit index (GFI) of the proposed model was 0.99 and the adjusted goodness of fit index (AGFI) was 0.99. Based on the obtained outcomes, the Standardized Root Mean Square Residual (SRMR) equaled 0.01. The entire measures of absolute fit indices are within the accepted ranges (GFI = 0.90, AGFI = 0.08, and SRMR = 0.05), representing that the hypothetical model was a good fit of the data (Schumacker & Lomax, 2010). The normed fit index (NFI) of the model calculated to be 0.99, the comparative fit index (CFI) of the operationalized model

was 0.99 and the root mean square error of approximation (RMSEA) equaled 0.01, and non-normed fit index (NNFI) signifying the value of 0.99 is within the significant value of 0.90. The value of CFI (0.99) falls within the meaningful range of 0.90 or higher, designating this model was a good fit of the data (Schumacker & Lomax, 2010). The  $\chi^2$  ratio that is divided by degree of freedom was equal to 0.37. Consistent with Carmines and McIver (1981), a  $\chi^2$  ratio of less than 2.00 advocates a good fit, consequently approving that this model fits the data.

As aforementioned, the researchers employed LISREL software (version 8.80) to survey factor loadings of the research variables on the latent construct and coefficients for the constructs' directional paths. In path analysis, the pathways are characterized as equations and exemplified as path diagrams. Figure 2 exhibits the structural equation model of the study.

**Figure 2**  
Structural Equation Modeling of the Study



\*\*p<0.01, \*\*\*p<0.001      Chi-Square=1.11, df=3, P-value=0.77398, RMSEA=0.000

Correspondingly, the direct and indirect effects of variables are revealed in Table 4.

**Table 4**  
The Direct and Indirect Effects of Each Variable on Academic Achievement

Path	Direct effect	Indirect effect	Total effect	R <sup>2</sup>
To Academic achievement from				0.29
Academic Self-concept	0.24**	-	0.24**	
Teacher-student interaction	0.35***	0.15**	0.50***	
To Academic Self-concept from				0.40
Teacher-student interaction	0.64***	-	0.64***	

\*\*p < 0.01, \*\*\*p < 0.001

As established in Table 4, learners' academic self-concept had a significant prognostic influence on their educational achievement ( $\beta = 0.24, p < 0.01$ ). The amount of the relationship between educator and learner, harmoniously, had a momentous and significant prognostic role in signifying academic success ( $\beta = 0.35, p < 0.001$ ). The findings provided the required data for confirming the first two research questions, appealing that both teacher-student relations and academic self-

concept definitely influenced students' academic success. Additionally, the indirect effect of teacher-student relations via academic self-concept on academic achievement was designated to be (0.15), which confirmed to be noticeably significant in line with standardized significant level ( $p < 0.01$ ). Accordingly, it is rational to claim that students' academic self-concept had a mediating role regarding teacher-student relations and academic success relationship. That is to say that improving the quantity of the relationship between teacher and students caused the enhancement in students' academic self-concept which resulted in the expansion of academic success.

### **Discussion and Conclusion**

The research variables multifaceted nature that were influential in the learners' academic procedure entails the prerequisite to consider their diverse levels of relations, since this is an imperative phase in which motivational, contextual, and cognitive mechanisms can be incorporated as noticeable features in improvement. The current research extended upon preceding studies on teacher-student interaction, academic self-concept, and academic success (Goetz et al., 2013; Goetz et al., 2012; Westphal et al., 2018) by displaying that learners' academic self-concept moderated the association between learners' academic success and the amount of the interaction with their teacher. The primary resolution of this paper was to explore the direct effect of learners' academic self-concept on their academic growth. Correspondingly, the hypothesized relationship between teacher-student interaction and students' academic achievement was examined. As a final point, the study attempted to scrutinize the contributive role of academic self-concept and teacher-student relations in EFL students' academic success. Consistent with the previous studies and expectations on direct effect of teacher-student interaction on achievement (hypothesis 1), learners' academic success was established to be directly influenced by the quality of teacher-student communication. This authorized the prospect that learners learn more when they positively communicate with their teacher and their classmates (Abrantes et al., 2007; Kiuru et al., 2020). Learners better understand the knowledge and become more committed to learn more and more through interacting with others (Hay et al., 2004). The results for estimating academic achievement according to the amount and the quality of teacher-student interaction demonstrated that a students reached advanced levels of achievement and lower levels of tediousness and anxiety when their interaction with the teacher was closer and less conflictual, whereas conflictual teacher-student association was correlated with higher anxiety levels. As theorized, the obtained results of the study are in accordance with preceding researches indicating that the teacher and students relationships' quality has a noteworthy effect on student academic performance (Frenzel et al., 2007; Goetz et al., 2013; Lei et al., 2018; Skinner et al., 2014). Likewise, the current research results are consistent with the outcomes of many preceding investigations which made significant contribution to the well-established body of investigation on the importance of teacher interaction in the class (Arbeau et al., 2010; Elmelid et al., 2015; Goetz et al., 2013; Jellesma et al., 2015). Findings support the view of various researchers (Kenny & Adriana, 2009; Košir & Tement, 2014; Kyriakides, 2005; Wubbels & Brekelmans, 2005) that, in fact, learner perceptions of teacher interaction have a remarkable role in student success and can be utilized as a predictor for student achievement. The consequences are as well in accordance with previous studies indicating that caring and supportive

interpersonal relationships among teachers and students in school reveal supplementary positive attitudes and values and more satisfaction with education. This authorizes the belief that students learn more when they positively communicate with their teacher (Bakadorova & Raufelder, 2016; Clem et al., 2020; Sakiz, 2012). It is conceivable that in a supportive teacher–student relationship, learner’ rudimentary psychosomatic requirements for relatedness are satisfied and teachers are more sensitive and responsive to students’ individual learning-related desires. This may allow learners to involve in educational tasks with satisfaction and interest (Skinner et al., 2014).

In the previous studies on self-concept impacts on achievement, various consequences have been stated with reference to the direction and the extent of effects between learners' academic self-concept and their academic success. Nevertheless, as expected in the second hypothesis, the results of the current study evidenced that academic self-concept has a predicted role in learner academic achievement. This result corroborates other experiential conclusions in this domain (Ganley & Lubienski, 2016; Gujare & Tiwari, 2016; Marsh et al., 2015; Marsh & Martin, 2011; Niepel et al., 2014; Pinxten et al., 2014). The obtained results agree to the notion that learners' academic self-concept is a more concrete and noticeable variable for students' development and, consequently, impact their achievement during scholastic tasks. Considering the prominent influence of academic self-concept in enhancing academic progress, Grygiel et al. (2017) proposed that self-concept is a contributing factor of academic success (Grygiel et al., 2017). Many researchers have supported the contention that there exist a constructive association between students' academic self-concept and performance in acquiring a language (Hoferichter et al., 2018; Kulakow, 2020; Rady et al.,) that investigated the associations between learners’ performance and their academic self-concept. The consequences authorized the existence of a momentous statistical correlation between students’ educational performance and their academic self-concept. The learners who have high level of academic accomplishment receive reward and have more opportunities in future.

The consequences of the existing study similarly advocate the third research hypothesis which claims that academic self-concept mediates the association between the students' academic performance and the amount of teacher-student contact. To our knowledge, fewer studies are known to explore the associations between the achievement and interaction that is mediated by the role of academic self-concept. The obtained consequences of the study indicated that academic self-concept had a noteworthy relationship with academic success, which is confirmed to be a fundamental mediator in the interplay between teacher-student interaction and academic success in previous socio-cognitive principles. These consequences strengthen the reliable sound effects attributable to the interaction among students and teacher and the self-concept that is essential to be regarded in existing achievement models, according to an interactional framework (Greenwald et al., 2002). Likewise, the prominence of self-concept as a mediator is in accordance with earlier researches (Díaz et al., 2016; Green et al., 2012; Pinxten et al., 2013; Rady et al., 2016; Sabol & Pianta, 2012) which established it as a fundamental factor to academic achievement. According to the consequences of the current study and above-mentioned data, the mediating consequence of learners' academic self-concept in the relationship between teacher-student interaction and academic achievement allows us to confirm significant implications. Societal communications among

teachers and their students are considered as essential variable in academic success, since they can result in enhanced emotional support and prosocial behaviors (Kraft & Rogers, 2015; Pino-Pasternak et al., 2010). The current outcomes provided supplementary confirmation for the mediated role of academic self-concept regarding teacher-student interaction and academic achievement which are in accordance with previous studies (Gutiérrez et al., 2017; McFarland et al., 2016; Veas et al., 2019; Verschueren et al., 2012). Generally, the study confirmed the significant relationship between the amount and the quality of teacher-student interaction and learners' academic development, indicating that as the students provided with the opportunity to interact sincerely and warmly with their teachers, they'll be more successful in educational domains. Furthermore, the research outcomes revealed a closer association between academic self-concept and academic performance measures. In the mainstream of research findings revealed heretofore, it would be sensible to declare that academic self-concept strongly and definitely foretells learners' academic success and mediates the relationship between teacher-student interaction and academic success. In this sense, teachers and students formal and informal interactions entail worthy levels of societal self-support, given constant feedback, which can strengthen learners' self-concept to accomplish achievement (Díaz et al., 2016; Gutiérrez et al., 2017).

One limitation of the present study is that, rather than longitudinal studies, this study is grounded on a cross-sectional research design. Longitudinal designs permit the investigator to highlight the probable causativeness, along with trends and designs respecting to alterations in learners' beliefs and attitudes during education and may provide responses several questions with reference to behaviors related to academic achievement. One more limitation to this research is that it makes use of only self-reported data. Several detriments are accompanied with the use of self-completion questionnaires. Finally, the survey instruments, although developed from previously-tested and reliable resources and research, has never been tested in a study.

The exceptional theoretical and methodological attitudes to this study created numerous major theoretical implications on the subject of above-mentioned variables. Considering various disciplinary viewpoints and paradigms, the theoretical framework administered in this study characterizes the primary endeavor to incorporate the entire range of academic achievement and teacher-student interaction. Numerous previous studies have reliably replicated the benefits of constructive teacher-student relations in enhancing amended student consequences. Improving a positive teacher-student relationship should be one of numerous objectives to assist develop new teachers and preserve effective tenured teachers. A very significant section of this study is the fact that information is available on what constitutes "quality teaching" (Wubbles & Levy, 1993). The teachers who are best in their profession are very strong in controlling their classroom and have sincere and friendly relations with the students, therefore, they are less dissatisfied, critical, and uncertain. On the whole, best teachers are extremely cooperative, supportive, and dominant (den Brok et al., 2002). Teachers play pivotal roles facilitating classroom instructions. As such they should adopt a variety of effective practices to successfully promote both students' academic achievement and the degree of relationship with learners. The structural equation modeling applied in the current study offers indication of teacher-student interaction influence on student accomplishment. The consequences of the study make available a robust

consideration of the procedures that generate students' educational success by signifying that student achievement necessitates a mishmash of teacher's sincer and support.

On the topic of the limitations of this research, forthcoming surveys should reproduce the outcomes originated in this research to provide investigators and instructors with more assurance in the meaningful sound effects of close teacher-student relations, self-regulation, and interest on student academic performance. In this research paper, the non-cognitive variables were measured using different questionnaires and academic achievement was evaluated by the use of learners' grade point average. Furthermore, although this was a cross-sectional study, the effect of aforementioned variables on student academic achievement also needs to be examined in a longitudinal study. Alternative domain of forthcoming studies could take account of specific sub-groups, for instance, sexual category and social and economic position to attempt to diminish variables' variability. The findings of this study could be beneficial for curriculum development and instructional design. Curricula could be developed that would comprise instructional components in domains which are indicated to considerably impact learners' language performance. The outcomes of the study could also notify language learner centers and serve as an evaluation of their efficiency. There has been an argument about the significant academic performance and sympathetic and mediated contribution of teacher-student interaction and academic self-concept to achieve best student consequences. The conclusions of the current study reinforced the benefits of these variables in augmenting students' achievement. It was correspondingly found that the effects of the relationship between teacher and student on academic progress was mediated by the concept of academic self-concept.

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