Examination of the Relationship Between TEOG Score Transition from Basic to Secondary Education), Self-Confidence, Self-Efficacy and Motivation Level

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Abstract

The relationship between individuals' academic success, motivation and self-confidence and self-efficacy levels cannot be ignored. The aim of this study is to develop and test a theoretical model considering the relationship between academic motivation, self-confidence and self-efficacy levels in transition from middle school to high school. For this purpose, the theoretical model was tested for 9th grade students who received education in Sivas province during the 2015-2016 academic year. The results of present study revealed a direct relationship between students' intrinsic self-confidence variables of motivation, starting, not giving up and sustaining. Extrinsic self-confidence, on the other hand, revealed a direct relationship with motivation only. There is a direct correlation between the motivation variables and the variables of starting, not giving up, and sustaining. Moreover, the mediating effect of motivation was found significant between intrinsic self-confidence variable and starting, not giving up and sustaining, as well as between extrinsic self-confidence and starting, not giving up and sustaining. The starting variability has a mediating effect between motivation and TEOG score and intrinsic self-confidence and TEOG score. Finally, it was reported that the sustaining variable has a mediating effect between motivation and TEOG score as well as intrinsic self-confidence and the TEOG score.

Keywords: Self-efiicacy, Selfconcept, Motivation, TEOG, Structural Equation Modelling

1. Introduction

As the saying *"Success is not the end of the road, rather, the road itself"* implies, success is a process that covers a long period of time and also requires great effort. The academic success of students is also an important indicator for students' own, teachers, school and parents. One of the success indicators of students is the exam success besides skills such as expressing oneself, researching and communication. In Turkey, when students move from one educational institution to another, the success rankings in examinations prepared by the Ministry of National Education (MONE) and Student Selection and Placement Centre (OSYM) are taken into consideration. Indicators of academic success of students also include the international examinations such as PISA, PIRLS and TIMMS. These tests are of importance for examining the cognitive levels of students as well as affective variables, which are thought to affect their cognitive success. According to the OECD (2009) report, Turkey remained below the OECD average in all three areas of mathematics, science and reading skills in the PISA exam. Therefore, it has become a concern at what level academic success of students are and what the variables affecting their academic success are.

Studies investigating the variables that affect students' academic success reveal that such variables include student-induced ones such as intelligence, cognitive and learning styles of students (Çakan, 2002) as well as those originating from school and the social circle. The variables such as leadership of the school principal (Witziers, BokseriKrüger, 2003), number of students in class (Boozer and Rouse, 2001; McGiverin, Gilman and Tillitski,1989; Hedges and Stock, 1983), teacher quality (Darling-Hammond, 2000), socioeconomic status (Hoy, Sweetland, Smith, 2002), pre-school education (Finn-Stevenson, Desimone and Chung, 1998), family support (Bean, Bush, McKenry and Wilson, 2003; Maton, HrabowskiIII, and Greif, 1998), self-confidence, self-efficacy and motivation of students are discussed in those studies.

Self-confidence refers to an individual's point of view regarding their own characteristics (Bong and Clark, 1999; Byrne, 1984; Byrne and WorthGavin, 1996; Shavelson and Bolus, 1982; Shavelson, Hubner and Stanton, 1976; Wilkins, 2010). Shavelson, Hubner and Stanton (1976) supported this definition and added that the individual's self-perception reflects on their acts as well. They pointed out that self-confidence can also be described as a regular, multilateral, hierarchical, stagnant, developable, evaluative and differentiating concept. Academic aspect of individuals' perceptions of their own knowledge and themselves is defined as academic self-confidence (Bryne, 1984; Shavelson and Bolus, 1982; Wigfield and Karpathian, 1991). Discussed from various aspects and reflecting the individual's self perception, the relationship of this concept with success has also been a matter of curiosity for researchers. Kolpack (2003) concluded that academic success is strongly associated with academic self-confidence. In studies comparing self-confidence and success in international context, it is seen that students with higher levels of self-confidence in mathematics have significantly higher levels of success in all countries (Wilkins, 2010; Güzel, 2006; Chui and Classen, 2010; Akyüz and Pala, 2010).

Self-efficacy, like in the case of self-confidence, is perceived as the individual's perception and belief

regarding their feelings, thoughts, and acts. However, self-efficacy stresses an individual's belief in their potential to possess or succeed rather than the skills they have (Bong, Einar and Skaalvik, 2003). While academic self-efficacy is defined as an individual's belief in their potentials for performing at high level (Schunk, 1991; Joo, Bong and Choi, 2000), studies on academic success emphasize that students' self-efficacy levels are a good indicator of mathematical performances (Malpass, O' Neil and Hocevar1999; and Pajares and Graham 1999). There are also studies showing that the level of self-efficacy is positively affected by academic success (Çelik, 2012; Dandy and Nettelbeck, 2002; Eshel and Kohavi, 2003; House, 2004; Yamaç, 2011; Zusho and Pintrich, 2003). In a study conducted with fifth-graders, it is emphasized that students with high self-efficacy levels are higher in their beliefs about their capacities in realizing academic studies and participation in learning activities (Öztürk and Şahin, 2015). Moreover, in their study on a group of high school students, Özgen and Bindak (2011) found out that students' self-efficacy levels increase as parents' education level increases, ultimately leading to higher levels of success.

Motivation is everything that moves the individual. In relation with motivation, Pintrich and Schunk (2002) suggested the description "a process in which activity for direct cause is initiated and sustained". It is also defined as "an internal force that drives, directs and sustains the behaviour" (Thorkildsen, Nicholls, Bates, Brankis and DeBolt, 2002). Woolfolk (2004) defined it as "an internal situation that leads to, guides and maintains a behaviour". Motivation is also an important concept in education. Thus, motivation is also defined as the academic participation that most influences student performance (Francis, Goheer, Haver-Dieter, Kaplan, Kerstetter and Kirk et al., 2004). When the factors affecting student success in education are examined, it is observed that lack of motivation is stated most of all as a reason for failure (Aksan and Koçyiğit, 2011;Cunningham, 2003; Matuga, 2009; Renchler, 1992; Uzbaş, 2009; Zimmerman, 1990). Because motivation is the mental state which puts the individual in action, this situation is thought to affect the individual's self-sufficiency as well. According to Bandura's (1997) self-efficacy theory, individuals' self-efficacy beliefs are closely related to motivating themselves. Individuals with lower self-sufficiency avoid doing the hard work they see as a threat to themselves, and they tend not to make an effort and to give up easily (Bandura, 1994).

When we look at these variables, it is seen that each of the variables is directly related to academic success. In addition to this relationship, a number of studies reveal that self-efficacy has a positive relationship with academic motivation (Bandura and Schrunk, 1981; Betz and Hackett, 1981; Pintrich and De Groot, 1990; Parajes and Miller, 1994; Parajes, 1996; Joo, Bong and Choi, 2000). In addition, studies are available that emphasize the relationship between academic self-confidence and academic self-efficacy (BongandSkaalvik 2003; Ferla, Velcka and Cai, 2009;Schere, 2013;Bong and Clark, 1999; Choi, 2005; Pietsch, Walker and Chapman, 2003).

Given all this, the relationship between individuals' academic success, motivation and self-confidence and self-efficacy levels cannot be ignored. The aim of this study is to develop and test a theoretical model considering the relationship between academic motivation, self-confidence and self-efficacy levels in transition from middle school to high school. The theoretical model formed in line with the theoretical framework is given in Figure 1.
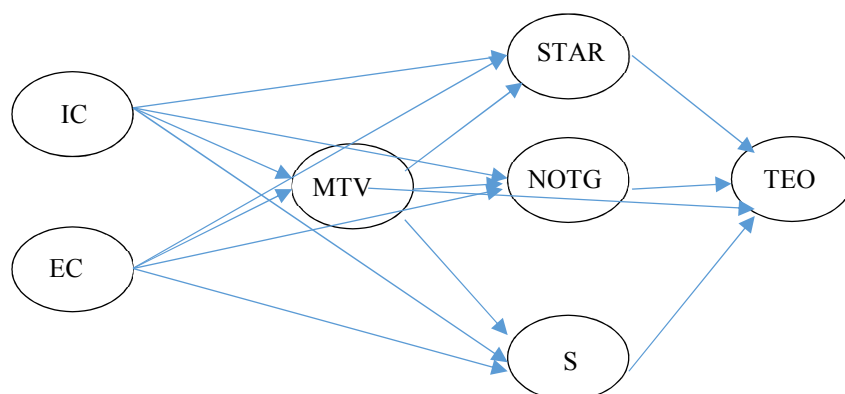

Figure 1. Theoretical Model

For this purpose, the theoretical model was tested for the direct and indirect relationships between motivational variables and the variables of "Starting", "Not Giving Up" and "Sustaining" under the variables of "Intrinsic Self-Confidence", "Extrinsic Self-Confidence" and "Self-Efficacy as sub-dimensions of the TEOG success levels and self-confidence of the 9th grade students who received education in Sivas province during the 2015-2016 academic year".

2. Method

2.1. Research Model

This is a correlational study as a type of quantitative research since it is intended to investigate the relationship between related variables (Karasar, 2005). Correlational studies are designed to examine the relationships between two or more variables (Fraenkel, Wallen and Hyun, 2012; Karasar, 2005). This particular study was carried out to reveal the relationship between TEOG success grade, self-confidence, self-efficacy and motivation.

2.2. Study Group

The study group consisted of 375 students in Sivas Province who are studying in 9th grade in 2015-2016 school year. In selection of participants, care was taken to ensure well-balanced number of males and females (n_F= 202, n_M= 173) and provide sufficient heterogeneity in the high, middle and low success score categories.

2.3. Data Collection Tools

This study was carried out by using the *Self-Confidence Scale* developed by Akın (2007), the *General Scale for Self-Efficacy* developed by Sherer, Maddux and Mercandante (1982) and adopted to Turkish by Yıldırım and İlhan (2010), and the *Academic Motivation Scale* developed by Vallerand et al (1992) adopted by Karagüven (2012).

2.3.1. Self-Confidence Scale

The scale, which was developed by Akın (2007), consists of two dimensions; intrinsic self-confidence and extrinsic self-confidence. During the scale development, validity and construct validity were used as validity studies, and intrinsic consistency and test-retest reliability and item analysis were used for reliability. As a result of the factor analysis, 33 items were obtained which account for 43.6% of the total variance and were collected under two factors as intrinsic self-confidence and extrinsic self-confidence. The factor loads of the scale ranged between .31 and .75. In the confirmatory factor analysis performed to confirm the two-factor construct of the scale, the chi-square value (x^2=700.41, sd=488, p=0.00) was found to be significant. The fit index values were found as RMSEA=.044, NFI=.90, CFI=.96, IFI=.96, RFI=.89, GFI=.94, AGFI=.91 and SRMR=.058. In the current validity testing, Coopersmith's Self-Esteem Inventory was found to be correlated with the scale developed at .87. Internal consistency coefficients of the Self-Confidence Scale were .83 for the whole scale, and .83 and .85 for the intrinsic self-confidence and extrinsic self-confidence subscales, respectively. Test-retest reliability coefficients of the scale were found to be .94 for the whole scale, .97 for the intrinsic self-confidence subscale, and .87 for extrinsic self-confidence. The item-total correlations of the scale varied between .30 and .72.

Besides, the CFA analysis performed to test confirming of the factor structure of the scale in the sample yielded compliance index values (x^2=1590.61, sd=494, p=0.00 RMSEA=.077, NNFI=.91, CFI=.91, IFI=.91, RMR= .09 and SRMR=.072) in good compliance. In addition, Cronbach's alpha reliability coefficient was found to be .90, .83 and .83 for total scale, intrinsic self-confidence and extrinsic self-confidence sub-scales, respectively.

2.3.2. General Scale for Self-Efficacy

The scale was developed by Sherer, Maddux and Mercandante (1982) and adopted to Turkish by Yıldırım and İlhan (2010). As a result of examination of the scale factor structure with exploratory factor analysis principal components method, three factors were determined with eigenvalue above 1. The first factor was found to have an eigenvalue of 4,150, with the variance explained by 20,2%; the second factor by 1,786, the variance explained by 11,9% and the third factor by 1,114 with the variance explained by 9,5%. These factors are called "Starting", "Not Giving Up" and "Efforts for Sustaining- Insistence", respectively. As a result; the three-factor structure accounts for 41.47% of the variance. The internal consistency coefficient of the whole scale (Cronbach's alpha) was found as 0,80.

The CFA analysis performed to test confirming of the factor structure of the scale in the sample yielded fit index values (x^2=388.67, sd=116, p=0.00 RMSEA=.079, NFI=.91, CFI=.93, IFI=.93, RFI=.90, GFI=.90 and SRMR=.07) in good agreement. Furthermore, the Cronbach's Alpha reliability coefficient was found to be .77.

2.3.3. Academic Motivation Scale

It was developed by Vallerand et al. in Canada in 1992. Besides the English version known as "AcademicMotivationScaleAMS", a French version is available called "Echelle de Motivation en Education-EME" (Vallerand, Blais, Brière and Pelletier, 1989). The scale consists of 28 items. It consists of seven different dimensions, three for intrinsic motivation, three extrinsic motivation, and one for the lack of motivation, each consisting of four items. These are Intrinsic Motivation Knowing- İMBİ, Intrinsic Motivation Success-İMBA, Intrinsic Motivation Act-İMH, Extrinsic Motivation Recognition-DMT, Extrinsic Motivation Self-Confirmation DMKİ, Extrinsic Motivation Regulation-DMD and Lack of Motivation -MS dimensions, respectively. In the confirmatory factor analysis confirming the factor structure of the scale, the chi-square value (x^2=1017.74, sd=329, p=0.00) was found to be significant. The fit index values were found as RMSEA=.073, NFI=.91, CFI=.94, IFI=.94, AGFI=.81 and SRMR=.065. The Cronbach's alpha value for the whole test was found to

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be .87.

The CFA which was performed to test whether the factor structure of the scale was confirmed in the sample revealed compliance index values (x^2=867.89, sd=329, p=0.00 RMSEA=.066, NFI=.92, NNFI=.94, CFI=.95, IFI=.95, RFI=.90, and SRMR=.066) in good agreement. In addition, Cronbach's alpha reliability coefficient was found to be.86.

2.4. Data Analysis

The IBM SPSS 20 and LISREL 8.7 programs were used to test the hypothesis of the analysis used in the study and to determine whether the structural model was confirmed. It was observed that the model-data correspondence of the sub-dimensions of all three scales showed a perfect fit. As a result of the CFA performed to check whether the instruments in this study were provided in the relevant sample group, model-data fit of the sub-dimensions of all three scales were found to be perfect. Then, the "Sample Size", "Lost Data" and "Extreme Values" required for the Structural Equation Model (FE) were examined; the assumptions of "Multivariate normality", "Multiple linearity" and "Multiple connection" were tested. After the model was tested, the Sobel test was applied to test the significance of the mediation effect (Sobel, 1982).

In relation with the Sample Size which is one of the assumptions required for the YEM, there are five different proposals for sampling: At least 200 (Kline, 2005), N> 50 + m (m, number of independent variables) (TabachnickandFidell, 2007), at least 10 times the number of observed variables (VanVoorhis and Morgan, 2007), In large samples (usually 200 and above) the chi-square value also has a significant probability level (SchumackerandLomax, 2004), and the minimum sample size is 100-150 for the most likelihood method (Hair, Black, Babin, Anderson and Tatham, 2006). Since there were 528 participants in this study, it was seen that the assumption of sample size satisfies the structural equality model.

Because the structural equation model is sensitive to lost data and extreme values, it was tested whether there was missing data in the data group prior to data analysis. As a result of the lost value and extreme value analysis, no missing data were found. When extreme values were determined, Z scores were checked to see whether there were any data other than +3 and -3. Then, "Mahalanobis Distances" were calculated to determine the multivariate extreme variables. No such values were determined as a result.

Univariate and bivariate normality tests are used to test highly variable normality. In this study, the Kolmogrowsmirnov Test was applied for univariate normality. As a result of significance test, the significance level above .05 indicates that normality is not achieved. If the KS test does not provide normality, the skewness and kurtosis coefficients are examined. The skewness coefficients between +1 and -1 indicate that univariate normality is achieved. In this study, although KS test results were not found significant, the skewness coefficients revealed that univariate normality is achieved because it is in the range of +1 -1 (TEOG=-.83 IC=-.59 ,EC=-.64, MTV=-.47 START=-.42, S=-.37, NOTG=-.36). For bivariate normality, the scatter diagram matrix was investigated.

As for multilinearity, since it is achieved with the linearity of the relationship between the pairs of variables, also the variable pairs were observed to be linear in analysis of the scatter diagram matrix generated for bivariate normality.

In checking of the multicollinearity hypothesis, variance inflation factor (VarianceInflationFactor-VIF) and tolerance values were investigated (Cohen, Cohen, West and Aiken, 2003; Pedhazur, 1997). In the study , (IC=2.48-.40, EC=2.11-.48, MTV=1.40-.71, START=1.44-.70, S=2.01-.48, NOTG=1.38-.73) VIF value was not found to be or above 10; and the tolerance value was not at or below .10, indicating no multicollinearity problem.

3. Results

Table 1 displays the relationship between the variables in the theoretical model and the descriptive statistics of these variables.

Table 1. Correlation, Means and Standard Deviations related to variables in the Theoretical Model

	TEOG	IC	EC	MTV	START	NOTG	S	X	SS
TEOG								385.77	93.23
IC	-.127[*]							3.79	0.59
EC	-.087	.714[**]						3.77	0.60
MTV	-.068	.396[**]	.385[**]					4.73	0.82
START	.148[**]	.269[**]	.153[**]	-.046				3.30	0.73
NOTG	-.002	.567[**]	.447[**]	.312[**]	.500[**]			3.64	0.79
S	-.230[**]	.366[**]	.311[**]	.406[**]	.109[*]	.427[**]		3.61	0.90
* p<.05 **p<.01									

As seen in Table 12, there is no significant relationship between the TEOG score and the variable of "Not Giving Up" as sub-dimensions of Extrinsic Self-Confidence, Motivation and Self-Efficacy variable, or such

relationship between the variable of "Starting" as a sub-dimension of Extrinsic Self-Efficacy and Self-Efficacy variable (p>.05). Apart from that, although there was a significant relationship between TEOG score and Intrinsic Self-Confidence, Starting and Sustaining variables, and between the Starting variable and Intrinsic and Extrinsic Self-Confidence and Sustaining variables, it was lower (p<.05). The highest correlation between variables was found between Intrinsic Self-Confidence and Extrinsic Self-Confidence (p<.01). Examination of the mean and standard deviations of the variables demonstrate that they are close to each other.

Once the relevant assumptions were satisfied, the model was analyzed. First, the t-values of the model were examined. When the T-values were examined, it was observed that the relationship between the "Extrinsic Self-confidence" and "Starting", "Not Giving Up" and "Sustaining" as sub-scales of the "Self-Efficacy" scale, and the relationship between the sub-scale of "Not Giving Up" and "TEOG" score were not at significant level according to the model. Therefore, these paths were removed from the analysis and then reanalyzed.

As a result of the analysis, no insignificant path was observed; however, the proposed modification between the error variations of the variables of "Starting" and "Not Giving Up" was applied to correct the adaptation indices.

The t-values and standard load values of the model obtained as a result of the analysis are given in Fig. 2 and Fig 3.
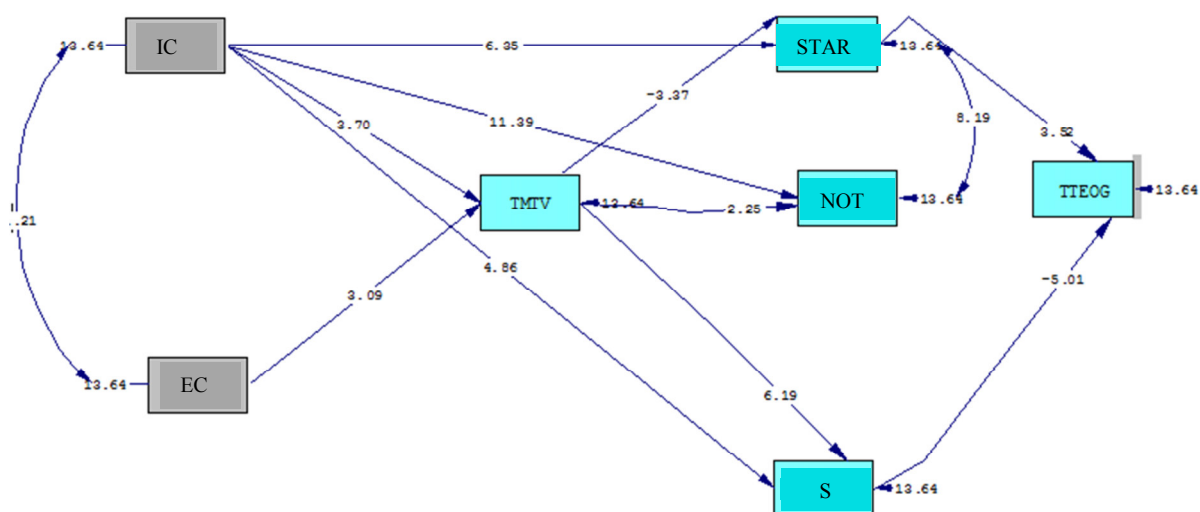

Figure 2. Standard Load Values for the Structural Model
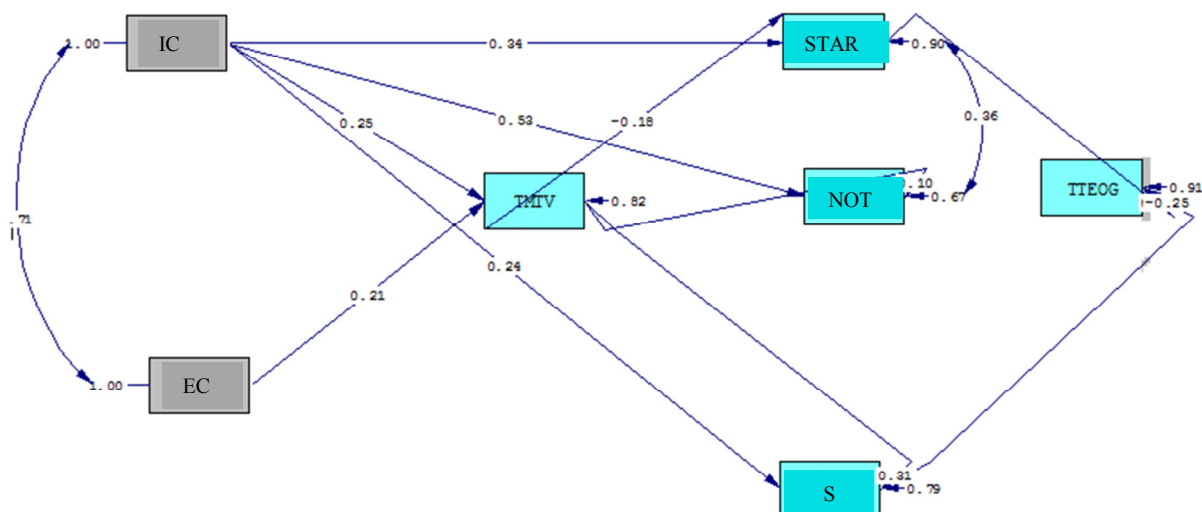

Figure 3. Standard Load Values for the Structural Model

After significance of the t values regarding direct and indirect effects in the model were examined, fit indices were checked. The fit indices for the theoretical model are given in Table 2.

Table 2. Goodness-of-Fit Values for the Theoretical Model

Model	Model Fit Indices								
	x^2	Sd	x^2/sd	RMSEA	GFI	AGFI	SRMR	NNFI	CFI
Theoretical Model	38.54	9	4.28	0.09	0.97	0.91	0.04	0.92	0.97

As shown in Table 2, the chi-square value of the theoretical model (x^2(9)=38.54 p<01) is low and significant at .01 level. The ratio of the chi-square value to the degree of freedom (x^2/sd=4.28) shows the model has a good fit value (x^2/sd<5). When other model fit indices were examined, RMSEA (.09) and SRMR (.04) values were found to be less than .05; while GFI (.97), AGFI (.91), NNFI (.92) and CFI (.97) values were greater than .90. These values indicate that the theoretical model created by the researcher shows good fit (Schermelleh-Engel ., Moosbrugger, and Müller, 2003;Thompson, 2000).

Once goodness-of-fit values were determined to have good fit values; the values in the model such as beta, standard error, t and R^2 values showed good agreement were examined.

Table 3. Theoretical Model β, t and R^2 values

Independent Variable	Dependent Variable	β	SH	t	R^2
Starting (START)	TEOG	0.18	0.05	5.01	0.09
Sustaining (S)		-0.25	0.054	13.64	
Intrinsic Self-Confidence (IC)	Motivation (MTV)	0.25	0.067	3.09	0.18
Extrinsic Self-Confidence (E)		0.21	0.067	13.64	
Motivation (MTV)	Starting (START)	-0.18	0.054	6.35	0.10
Intrinsic Self-Confidence (IC)		0.34	0.054	13.34	
Motivation (MTV)	Not Giving Up (NOTG)	0.10	0.046	11.39	0.33
Intrinsic Self-Confidence (IC)		0.53	0.046	13.64	
Motivation (MTV)	Sustaining (S)	0.31	0.05	4.86	0.21
Intrinsic Self-Confidence (IC)		0.24	0.05	13.64	

When direct effects between the independent and dependent variables were examined, it was observed that all of them were significant (t>1.96). In relation with β coefficients; one unit change in students' Starting behaviours leads to a an increase of .18 unit in TEOG scores, whereas one-unit change in the Sustaining behaviour causes .25 units decrease. A unit change in students' intrinsic and extrinsic self-confidence leads to an increase of .25 and .21 unit in motivation levels, respectively. A unit increase in motivation levels leads to a .18 unit decrease in Starting behaviours, while a unit change in Intrinsic self-confidence variable causes .34 unit increases. The effects of motivational and Intrinsic self-confidence variables on the variable of "Not Giving Up" have a tendency to bring .10 and .53 units increase, respectively. Finally, the change rates of the same variables on the Sustaining variable have a tendency to provide an increase of .31 and .24 units, respectively.

R^2 values illustrate that the starting and sustaining variables together account for about 9% of TEOG score. Intrinsic and extrinsic self-confidence variables together account for 18% of the motivation variable. Motivation and Intrinsic self-confidence variables explain 10%, 33% and 21% of the variables of Starting, Not Giving Up and Sustaining, respectively.

After examining the path coefficients of the theoretical model, Sobel test was performed for the mediation test of these variables. Sobel test results are given in Table 4.

Table 4. Results of Sobel Test Analysis

Mediating Variable	Relationship Orientation	Sobel Test	p
MTV	IC→MTV→START	2.49	.012
	IC→MTV→NOTG	1.88	.03
	IC→MTV→S	3.20	.00
	EC→MTV→START	2.78	.00
	EC→MTV→NOTG	1.79	.03
	EC→MTV→S	2.80	.00
START	MTV→START→TEOG	2.45	.00
	IC→START→TEOG	3.92	.00
S	MTV→S→TEOG	3.89	.00
	IC→S→TEOG	3.46	.00

According to the result of the Sobel test, it was found out that all variables whose mediating effect was tested were significant. Since fit indices and t values of the theoretical model as well as fit indices obtained from the Sobel Test were high, and t values and mediating effects were significant, an alternative model was not proposed, instead, the theoretical model was confirmed.

In path analysis, examination of direct and indirect effects of path coefficients allows interpretation of each effect (Olobatuyi 2006). Thus, the direct and total effects of the confirmed model are given in Table 5.

Table 5. Direct and Total Effects in the Confirmed Model

Dependent Variable	Direct Effect	Total Effect
MTV=	0.25*IC	0.25*IC+0.21*EC
	0.21*EC	
START=	0.34*IC	[0.21*ECSx-0.18MTV]+ [0.34*IC]
	-0.18MTV	
NOTG=	0.53*IC	[0.21*ECx0.10*MTV]+[0.53*IC]
	0.10*MTV	
S=	0.24*IC	[-0.25*ICx0.31*MTV]+[0.24*IC]
	0.31*MTV	
TEOG		[0.34*ICx0.18*START]+[0.24*ICx-0.25*S]

Table 5 reveals that both intrinsic and extrinsic motivation have direct and positive effects on students' motivations. On the variable of starting, which is the sub-dimension of the self-confidence variable, intrinsic self-confidence has a positive direct effect, while motivation has a negative direct effect. These variables, on the other hand, have positive and direct effects on the variable of Not Giving Up and Sustaining.

Regarding standardized path coefficients, values below ⎹.10⎹ are have a weak effect, those close to ⎹.30⎹ have a medium level effect, and those above ⎹.50⎹ have a strong effect (Cohen, 1992). Therefore, the strongest effect on the variable of Not Giving Up is caused by intrinsic self-confidence while the lowest effect is caused by motivation. The effects of other variables on related dependent variables remained at moderate levels.

4. Discussion

The results of our study suggest that motivations of students are affected by self-confidence directly and at significance level. Motivation is defined as an act for an action. As regards the question when we act for an action, the answer is generally that when we trust ourselves. When we trust ourselves, we will act and we will continue this action thanks to motivation. Hence, it would not be exaggeration to say that there is a positive relationship between self-confidence and motivation. Also support is extended by other studies investigating the relationship between motivation and self-confidence. In other words, as the level of self-confidence increases, motivation also increases (Deci and Ryan, 2002; cited by PhD Dissertation thesis; Guay, Green, Nelson, Martin and Marsh2006; Marsh, 2007; Guay, Ratelle, Roy and Litalien, 2010).

No direct relationship was found between intrinsic self-confidence and extrinsic self-confidence, which are sub-dimensions of self-confidence discussed in our study, and success. Conversely, it is stated in the literature that self-confidence is a determinant of academic success, and that self-confidence is a result of academic success (Guay, RatelleRoy and Litalien, 2010). Marsh, Byrne, and Yeung (1999) emphasize that above is too generic, pre-existing self-confidence level brings about success, that pre-existing success also results in self-confidence. It might be inferred that a two-way direct relationship between success and self-confidence is mentioned in the literature (Kolpack, 2003; Wilkins, 2010; Güzel, 2006; Chui and Classen, 2010; Akyüz and Paka, 2010). It is also noteworthy that this relationship differs by age or sample group (Marsh, and Yeung; 1998; Marsh, 2007). Victory goes to who is able to say "Victor is mine". Success goes to who starts by saying "I will succeed" and finally says "I succeeded". As can be understood from this proverb by Mustafa Kemal Atatürk,

there is an interaction between self-confidence and success. It is very likely that an individual will achieve the expected outcome when they start in self-confidence. Psychologist Norman Feathers, in an experiment he conducted with two groups in 1963, gave a very difficult word puzzle to one group, while a very easy one to the other. In the end, success was low in the group that took the difficult tests, but success was high in the group with the easy tests. Later, he informed both groups that he would give more difficult tests and applied word puzzle tests again. It was seen that the group experiencing the difficult test at the beginning performed at around 30%, while the other group performed at 70% success rate. However, the tests given in the second stage were of the same difficulty in the two groups (Feathers, 1966). This study shows that success brings about success in fact. That means that in the group that once achieved success, the success increases, and in the next stage success becomes inevitable. One of the three things suggested for success brought by success is "SELF-CONFIDENCE". It is observed that the individual winning the first round in one game is emotionally avant-garde, that is, the level of self-confidence increases (Sekman, 2016).

In relation with the relationship between academic success and self-confidence, investigation of other factors affecting these two relationships revealed that motivation is an important variable that affects the relationships above (Harter, 1999; Wigfield and Eccles, 2000;Marsh,2007; Fortier, Vallerand, and Guay, 1995; Guay and Vallerand, 1997; Guay et al., 2010; Marsh Trautwein, Lüdtke, Köller and Baumert, 2005). As a result of this research, a direct effect was observed between self-confidence and motivation, but no effect of motivation was observed. This may be due to the fact that the self-confidence variable, which has a high level of relationship with these variables, is included in the model.

In the light of findings in this study, there is a direct relationship between self-confidence and self-efficacy. When the standard load values are examined, the highest coefficients are also observed among these variables. The findings of the study are supported by other studies in that investigate the relationship between academic self-confidence and academic self-efficacy (OECD, 2004; Hall and Ponton, 2005; Linnakyla and Malin, 2008; Lee, 2009; Demir, Kılıç and Ünal, 2010; Catapano, 2013;Lee and Stankov, 2013; Usta, 2014). Another finding of our study is that the variables of starting and sustaining as sub-scales of self-efficacy variable have a mediating effect on self-confidence and success. In a study carried out on fifth-graders, it is emphasized that the students with high self-efficacy levels showed high beliefs in their own capacities for realizing academic studies and higher participation in learning activities (Öztürk and Şahin, 2015).

The positive effects of self-efficacy and self-confidence variables on success cannot be ignored. The increase in motivation through these emotions also brings success.

5.   Conclusion and Suggestions

The results of present study revealed a direct relationship between students' intrinsic self-confidence variables of motivation, starting, not giving up and sustaining. Extrinsic self-confidence, on the other hand, revealed a direct relationship with motivation only. There is a direct correlation between the motivation variables and the variables of starting, not giving up, and sustaining. Moreover, the mediating effect of motivation was found significant between intrinsic self-confidence variable and starting, not giving up and sustaining, as well as between extrinsic self-confidence and starting, not giving up and sustaining. The starting variability has a mediating effect between motivation and TEOG score and intrinsic self-confidence and TEOG score. Finally, it was reported that the sustaining variable has a mediating effect between motivation and TEOG score as well as intrinsic self-confidence and the TEOG score.

In the light of the results of this study; recommendations should focus on the necessity that education system should primarily enhance the level of self-confidence of students. According to Ericson's social learning theory, which covers ages 6 to 11, children should not be compared to their peers or exposed to negative labels during the period of inferiority versus success. Despite being graduated from the Faculty of Education, many teachers need to be educated again and again on this particular matter.

Departing from the result that success brings about success, students should be presented educational environments and opportunities in the class by means of which they can experience success.

Most importantly, students should be directed to the appropriate skill areas and assessed in this area, taking into account the fact that skill areas may differ. It will be difficult to capture success in an area where they have no competence, and thus emotions such as self-confidence, self-efficacy and motivation will be indirectly affected.

As the most specific result and best suggestion from this study, attention should be paid to leaders' sayings as much as to scientific data. "Turk! Study, work, trust!" beautifully exclaimed Mustafa Kemal Atatürk.

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