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Academic Goal Orientation: New Insights and Cultural Adaptation of Academic Goal Orientation Questionnaire into the Turkish Language

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Academic Goal Orientation: New Insights and Cultural Adaptation of Academic Goal Orientation Questionnaire into the Turkish Language

Abstract

This study aims to review and provide new perspectives for academic goal orientation. The study introduces first chronological history of goal orientation and depicts how goal orientation evolved into a new construct in learning from the discussion on motivational factors. At first, this study isolates goal orientation from motivation and provides novel insights into goal orientation as a separated factor affecting learning. Then, this study provides analyses of the adaptation work of the academic goal orientation questionnaire into the Turkish language. The translated scale was applied to a sample of 729 undergraduate students, 376 (51.6%) of which were female and 353 (48.4%) of which were male students at a state university in Turkey. For the structure validity of the translated scale, exploratory and confirmatory factor analyses were carried out. Exploratory factor analysis yielded a three-factor structure of thirteen items accounting for 66.5% of the variance. Confirmatory factor analysis results suggested that the tested model of the translated scale yielded satisfactory goodness of fit. The total score of the translated academic goal orientation instrument is reliable (Cronbach's $\alpha = .84$). The literature and the results from the application of the instrument suggest that the translated instrument offers valuable input into the curricula and syllabi in higher education in addition to providing insights to lecturers about the perceptions of the students towards the courses.

Keywords

academic goal orientation, learning, academic achievement, adaptation, CFA, EFA

Introduction

The journey of learning for individuals has long been standardized and compartmentalized, in a penetrating and successive manner, into different levels of learning as primary, elementary, middle, high, and college for some time now, and one often tends to think that this has always been the case. In addition, Keniston (1960) stated these standard compartments or levels had happened to come into existence with specific pressure from the increase in the amount of population to be educated, and the need to better and smoothly administrate the educational system, which, in the end, have come to be perceived as discrete autonomous segments. Though all those segments have their particular significance to themselves, higher education, which happens to be the final stage of the individuals' learning journey, shapes the individuals' professional formation and characterizes them in the society in terms of the workforce qualities they have attained through their educational cycle.

While the factors affecting the learning of the individuals are mainly concentrated around the transition from one level to another, the factors affecting the learning in higher education are concentrated around attaining the qualities of qualified members of the workforce and the professional skills required in the business world, which bears little difference against the description that the goal of higher education was to grow the individuals into self-actualized members of the society and preparing them for fulfilling career paths as phrased by Keniston (1960).

As a matter of fact, it would not be inappropriate to view the individual as navigating within and through these autonomous segments one after another. Although it is natural to think that these segments would have their own targeted curricula and methodologies to suit the age groups which they offer their services to, the individual students who are the main input of the educational systems largely shape all the elements of the curriculum and system which the authorities of education are dependent upon in that the performance that the students, as the output of the educational system of the certain segment, will exert will be one of the stages of evaluation of the curriculum and the system. On the aspect of students, the pile of literature is significantly focused on the content from the aspect of the students' learning rather than the teaching for that matter. To this end, the factors affecting learning are the specific focus of interdisciplinary research, among which the pile of research on motivation seem to have been piling for the last century. On top of that, "the secrets" to learning have yet to remain to be fully understood. This is mainly because the processes regarding learning in the brain have not fully been

understood and the different approaches to education still determine how these processes regarding learning are handled. However, the bottom line in all the issues involved in the research on learning and education is that the output of an educational or instructional process must be observable and for the moment, we can still determine this from the behaviors exhibited no matter what stance we take toward the education, learning or teaching.

In addition, Lai (2011), based on her review of the empirical research, documented that motivation could actively be influenced by the variables involved in instructional and educational processes for better or for worse. And, according to Atkinson and Birch (1970), the tricky nature of motivation as not being available as a concrete construct but rather observed behavior or behaviors that are benchmarked against certain constructs, are comprised of specific areas of investigation on motivational patterns. These patterns and constructs are also indirect ways as the subjects of research into learning because they are factors of interest having some of kind of influence on learning through their observed effect on motivation.

In addition, due to the idiosyncratic and multifarious nature of motivational constructs, which involves perspectives such as self-efficacy, value expectancy, intrinsic motivation, and achievement goals (Belenky and Nokes, 2009); Schunk (2000) describes motivation as a discipline attributing to it the quality of inexactitude, which explains the elusive nature of motivation in the study of learning. Why the factors affecting learning matters a big deal in educational and instructional processes would be mainly because the individual students who are the main input of the educational systems must obtain the qualities expected from them as outputs. As a system, education; and as an integral part of the system, the curriculum must be providing amendments and interventions into how well a student is navigating through the stages of education. The question of whether the student has learned something or not has over time eventually transformed into the questions of whether the student is willing to learn or he/she has the required qualities or the tendency to learn, which then constituted the issues involved in the research of motivational patterns.

Educational settings, as formative structures, put students through formative procedures, which are concrete, measurable, and normative. The students must carry out some activities and pursue certain goals set in the curriculum and subsequently in the course plans (Wentzel, 2000). At this point, motivation as a construct which had been the focus in educational settings from the beginning of the early twentieth century transformed into the theory of goal orientation which

has proved a significant perspective of motivation and it can account for positive orientation guiding achievement-related behavior and task-engagement (Kaplan and Maehr, 2007). As a matter of fact, motivation, alone, was not very well accounting for all the behaviors involved in achievement behavior of the individuals, students for this matter. In her very sophisticated chapter, Kanfer (1990) listed three elements for a definitive definition of motivation, all of which focused on behavior; moreover, these elements directly correlate to Schunk (2012)'s definition of learning having the qualities of a constant change in behavior or behavioral responses in certain situations which are the results of the ongoing practices or experiences. Also, these three elements focused on dependent and independent variables affecting the behaviors.

The pile of studies, which will constitute the literature review of this study, yield that the research of motivation has evolved into the research on goal orientation with the reason that adaptive and maladaptive motivational patterns give more concrete insight on behavior and those behaviors can be better manipulated and deployed in the educational settings. According to Ames (1992), classrooms where all the issues involved in learning are in place can be designed to serve the attainment and achievement of the goals set for ultimate learning of the students. Finally, a few years back, the underlying origins of goal orientation which constituted the construct of goal orientation had been discussed within a framework of cross-referencing of different factors at play in the process of learning of the students by Dweck (1986). She contrasted a mere understanding of ability affecting the students' learning against other possible factors with an incremental criticism of entertaining other possible factors that may have been at play during the process of learning.

Literature Review

Theoretical framework of academic goal orientation

Although the study of goal orientation in flesh and blood goes to a study by Dweck (1986), where she identified the learning and performance goals; the roots of goal orientation lie in another study by Ames and Ames (1984), where they provided novel insights into the study of motivation by describing it as a construct being conceptualized by learning and performance goals. As mentioned before, goal orientation explains motivational behavior; in other words, motivational behavior can be observed through goal orientation.

Further back, Diener and Dweck (1980)'s prior study had already provided some insights towards the study of motivation evolving into goal orientation. They found out that goal orientation, for the time being achievement-related behavior, was a factor affecting lack of learning as well as learning. They compared and contrasted helpless and mastery-oriented children and their study yielded that the individuals' orientation towards performance would determine the outcome, which has long been the ultimate goal of education. An earlier study pioneering the goal orientation and task-involvement of the individuals in academic settings was carried out by Crandall et al. (1965). They put forward that personal beliefs on task involvement could be determinants of achievement-oriented behavior. Belenky and Nokes (2009) emanate a clearer ground to the reason why goal orientation has transformed into a construct rather than a perspective to motivation by stating that because the nature of motivation was handled by researchers on its effect on the learning of the individuals, the angle the researchers took mostly became congruent with the focus on achievement goals.

Before going further into the origins of goal orientation and its transformation from a motivational construct into an isolated factor alone, it is also necessary to state that goal orientation does also have its own practical existence as part of self-regulated learning by penetrating into it and becoming an integral factor in it.

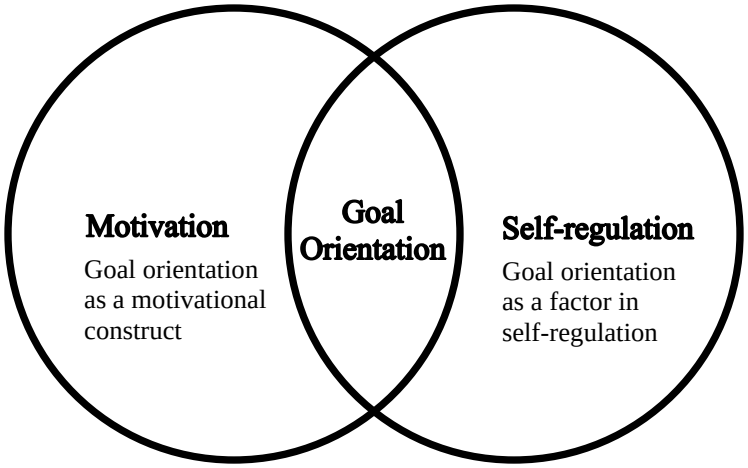

Figure 1.

The Evolving Nature of Academic Goal Orientation

In his chapter, Schunk (1989) emphasizes that self-efficacy, which is widely associated with self-regulation, can be improved through the mental monitoring of the tasks the students are performing by the students themselves. Zimmerman (1995) and Schunk (1996) refer to the fact that achievement behaviors such as choice of tasks, effort and persistence are influenced by self-efficacy. This shows that the goal orientation levels of the students can in fact determine whether the students are going to attain the desired behaviors, thus making goal orientation a factor affecting learning.

Although it is elusive to clearly determine the journey of goal orientation from being a motivational construct to a factor in self-regulation, it is clear that, even though it was not always handled as a sole construct on its own, it has clearly been studied as a factor affecting learning in terms of the perspective of attainment of the achievement-oriented behaviors.

The construct of academic goal orientation

As a general definition of education, the learning of the individuals is observed through the behaviors of the individuals. From a traditional stance to education, the goal of education was to observe the behavioral changes in individuals. And, according to Nicholls et al. (1989), the action, the behavior to be performed, was to be interpreted from the aspect of the goals which were predetermined for the action. As Kanfer (1990) put it, among all the approaches such as self-regulation, motivation, and goal orientation, one thing they share is that the goals determined or presumed by the individuals will have a negative or positive impact on the performance of the individuals in work settings as well as in learning environments. The study of goal orientation happened to be more evident as researchers primarily involved in motivational processes and learning strategies started to take a growing interest in the stance the students take towards learning (Bandura, 1982; Schunk, 1984; Ames and Archer, 1988; Covington, 1985). In his integrative review, Covington (2000), relying on the mass of research until then, bases the quality of student learning on the social and academic goals students associate with the instructional goals and processes. And achievement goal orientations were divided into three types as mastery goals, performance-approach goals, and avoidance goals (Elliot, 1999).

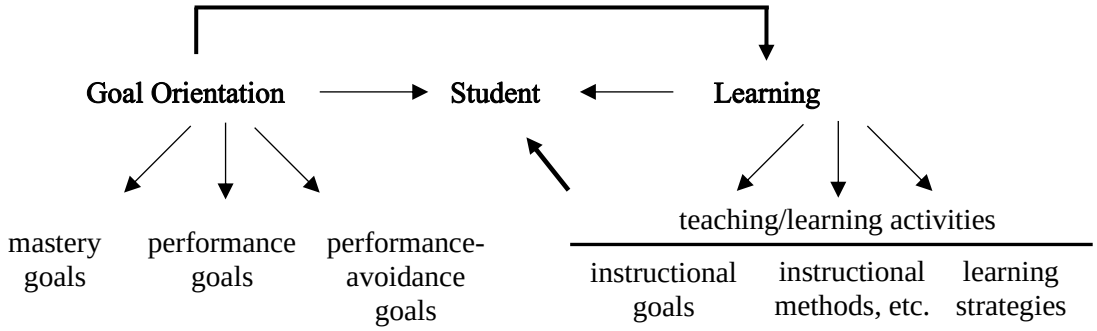

Figure 2.

Relationship between Learning and Academic Goal Orientation

This study takes a specific stance at the construct of goal orientation from an academic perspective by acknowledging that goal orientation levels of the students can be dependent upon domains such as academic and work (VandeWalle, 1997; VandeWalle et al., 2001). As this study takes the academic goal orientation questionnaire at the center developed and validated by Vandewalle et al. (2001), the construct of goal orientation is treated specifically in the academic domain. Koestnar and McClelland (1990) put forward that achievement motivation related to achievement behavior and goals may be domain specific, in that an individual may have different predispositions in learning environments and workplaces.

As natural as it sounds, Dweck (1999) also suggested that individuals may behave differently in different domains. VandeWalle et al. (2001) also emphasize that goal orientation should be treated in a domain-specific manner to obtain reliable data and results. Of all the designations made by the researchers as to the dimensions of goal orientation (Button et al., 1996; Fisher and Ford, 1998); VandeWalle (1997), in tune with Heyman and Dweck (1992)‘s designation, laid out three dimensions for goal orientation, which are a learning goal orientation, proving goal orientation and an avoiding goal orientation. Learning goal orientation could be pertaining to mastery goals, proving goal orientation could be pertaining to performance goals and avoiding goal orientation could be pertaining to performance-avoidance goals.

According to DeShon and Gillespie (2005), goal orientation can also be treated as an individual difference in education and it is a reliable source of reference for students’ academic performance (VandeWalle, 2003). Similarly, as

put by Woolfolk and Hoy (2006), goal orientation is a set of beliefs deployed by the students so as to ensure good quality learning. At the least, the system of goal orientation can be used to pave the way to desirable learning by the students themselves.

The importance of academic goal orientation

Goal orientation can be deployed by the students to connect to the goal structures in the classroom (Anderman and Maehr, 1994). So, goal orientation of the students can help them attain the instructional goals and moderate or better learning for the students can be ensured thanks to academic goal orientation. Goal orientations are the data the instructors have as to why students would or not perform the learning tasks at hand (Dweck, 1986; Meece et al., 1988; Ames, 1992). Therefore, determining the goal orientation levels of the students can yield good data on student performance in the classroom. Also, students with higher levels of goal orientation will be better performers and more learning-oriented than the ones with lower levels of goal orientation (Pensgaard and Roberts, 2003). Another good aspect of this is instructors can count on the students in that they will try to perform challenging learning tasks (VandeWalle, 2001).

However, they should also keep in mind that too much challenging goals may have some adverse effects in terms of avoiding goal orientation.

As can be seen above, the literature largely dwells on the studies relating goal orientation to motivation, achievement, and self-regulation. However, this study relates goal orientation to the learning of the students as part of their education and it is specifically designed to investigate the academic goal orientation of undergraduate students and its relation to tertiary education.

Although the fact that the construct of goal orientation which is the focus of this study places its roots in motivational theories, and industrial and organizational psychology, the following discussion and conclusion and hard data analyses from the instrument adapted into the Turkish language suggest that the construct of goal orientation can and should be viewed as a factor on its own affecting learning as well as being a motivational construct. By isolating the constructs of motivation and self-regulation, this study concentrates on the construct of academic goal orientation on its own and implications that can be made from the application of the instrument.

A reasonable ground for this isolation is that many recent studies have been published investigating the relationships between the construct of goal orientation and self-efficacy (Curelaru, 2020); goal orientation and emotional intelligence and burnout (Supervía et al., 2020a); goal orientation and engagement and self-concept (Supervía et al., 2020b); goal orientation and emotional intelligence and burnout (Supervía and Bordás, 2020); goal orientation and positive coping strategy and motivational beliefs (Subaşı, 2020); goal orientation and academic achievement (Giota and Bergh, 2020; Moghimi, 2020); goal orientation and individual characteristics (Lamm et. al., 2020); and goal orientation and motivation (Hidajat et al., 2020).

Purpose of the Study

With input provided above from the literature suggesting that the construct of goal orientation be treated as a factor affecting the learning of the individuals, the present study seeks to treat academic goal orientation as a sub-construct of the construct of goal orientation. Isolating it from the constructs of motivation and self-regulation, this study also aims to adapt Goal Orientation Instrument developed by Brett and VandeWalle (1999) into the Turkish language to suggest for use for needs analysis purposes in curriculum development or for use as an indirect measurement of the perceptions of the students towards courses in higher education.

Although Brett and VandeWalle (1999) did not specify a clear title of the scale they developed, the title was translated into the Turkish language with the title "Akademik Hedef Yönelimi Ölçeği (Academic Goal Orientation Instrument)" as the items of the instrument dwelled on the academic qualities of the students focusing on academic achievement. Also, the literature review of the present study treated academic goal orientation as a sub-construct of goal orientation, which was the same approach taken by one of the developers of the original scale in his other studies (VandeWalle, 1997; VandeWalle et al., 2019).

There are also other similar instruments measuring goal orientation or other instruments measuring similar dimensions which were used in other studies (Gafoor and Kurukkan, 2015; Radosevich et al, 2004; Durik et al., 2009; Niepel et al., 2014; van Dierendonck and van der Gaast, 2013; Pulkka and Niemivirta, 2013; Creed et al, 2013; Dierdorff and Ellington, 2012; Dishon-Berkovits, 2014; Bong et al., 2013; Horvath et al., 2006; Taing et al, 2013; Narayan and Steele-Johnson, 2007; Payne et al., 2007; Bråten and Strømsø, 2006; Eppler and Harju, 1997; Cao and Nietfeld, 2007; Ng'ang'a et al., 2018; Mattern, 2005; Magno, 2012; Chen and

Wong, 2015; Wolters et al., 1996; Ong, 2014; Yaghoubi, 2013; Cron et al., 2005; Bell and Kozlowski, 2002); however, this instrument was not frequently used, and it seems that the introduction of its adaptation into the Turkish language along with the new perspectives provided in the literature review section of this study into the existing literature would prove useful and practical.

Finally, this study focuses on goal orientation as a sole construct and elaborates on it, specifically the academic domain. With this respect, it also provides results of the adaptation of academic goal orientation instrument in Turkey. For that, the instrument is targeted for use with the undergraduate students in several other government of foundation universities in Turkey. Further studies in this matter will concentrate on the explanation of the goal orientation scores of the students and how they relate to the curriculum outcomes. While doing that, further aims will attempt to attribute those implications to possible use in other countries where the original instrument in English can be applied. For this reason, to confine the results within the boundaries of this two-phase research, the interrelations between academic goal orientation and other constructs such as self-regulation, self-efficacy, motivation, self-confidence, and such Also, it is important to note a few recent studies where different goal orientation instruments were adapted from the English language to different languages (Kadıoğlu-Akbulut and Uzuntiryaki-Kondakçı, 2019; Ahmad et al, 2020; Tomczak et al., 2020), or developed and validated (Mascret et al., 2020), which mean that measuring goal orientation is of growing interest among researchers.

Method

The Turkish Translation of the Academic Goal Orientation Instrument

First things first, corresponding author, Don VandeWalle, of the article "The role of goal orientation following performance feedback" (VandeWalle et al., 2001) was contacted through e-mail in order to seek permission for the adaptation of the academic goal orientation instrument which was originally developed, validated and presented by VandeWalle (1996).

The original instrument in the English language was e-mailed to five lecturers of English as a second language, who have extensive and sophisticated knowledge and command in both source (English) and target (Turkish) languages. They translated the instrument into the Turkish language. Then, at a meeting attended by the researchers of this study, a translation expert, and a linguist, who is

an expert in the Turkish language, the translated versions were cross-examined and evaluated, and the final form of the translated version was produced. After that, another translation expert translated the final form of the scale back into the English language.

Finally, the back translation of the translated version and the original instrument was cross-examined and evaluated by two TESOL experts, who are native speakers of the English language. Both experts reported that the original and back translation versions were identical. As a result, the agreed final form of the Turkish version of the academic goal orientation instrument became ready for application to the participants of this study with the title of "Akademik Hedef Yönelimi Ölçeği", which is the exact equivalent of the title of the original instrument.

Participants

This adaptation study was carried out as a prerequisite to a master's thesis study (Findikoglu, 2019)[1] in order to ensure that the data obtained through the deployment of the adapted version of the instrument would be scientific and accurate. The participants were selected from a state university, located in Istanbul, Turkey. There was a total of 729 undergraduate students whose ages ranged from 17 to 31 (*M*= 21.79, *SD*= 1.76, *Skewness*= 0.193), 376 (51.6 %) of which were female and 353 (48.4%) of which were male.

The participants were selected from 3 departments of three faculties of the university, which were the Department of Mechanical Engineering of the Faculty of Mechanical Engineering (*N*= 169, 23.2%), Department of Mathematical Engineering of the Faculty of Chemical and Metallurgical Engineering (*N*= 310, 42.5%), and the Department of Business Administration of the Faculty of Economics and Administrative Sciences (*N*= 250, 34.3%). The instrument was applied to the freshmen (*N*= 187, 25.7%), sophomores (*N*= 156, 21.4%), juniors (*N*= 142, 19.5%), and seniors (*N*= 244, 33.5%).

[1] In the master's thesis, the sample size is *N*=1286. The undergraduate students were selected from 9 departments (*M* = 4.85, Skewness = 0.048 *SE of Skewness* = 0.068), which means that the sample size for the implementation of the instrument is even larger and the findings are also statistically significant.

Instrument

Academic Goal Orientation Instrument is a scale targeted at providing information on individuals from the perspectives of their own performance in learning environments, especially towards courses and their related performance. It interprets the attitudes the individuals take towards the course at hand and provides insights regarding their learning. It is comprised of 13 items deploying a 7-point Likert-type scale from strongly disagree (1) to strongly agree (7). The instrument has 3 subscales: Learning, Proving and Avoiding. As a whole, the instrument measures the participants' (learners') attitudes, perspectives, and tendencies regarding the course at hand preferably at higher education.

Learning. With the data obtained through this subscale of four items; the teachers, curriculum developers or experts in the field can get insights regarding the level the teachers or curriculum developers should set, how hard they can push the individuals (learners) for further learning, or for how long they can maintain the individuals' (learners') interests, etc.

Proving. With the data obtained through this subscale, which is comprised of four items; the teachers, curriculum developers or experts in the field can get insights regarding how committed the learners are towards their learning and whether they are inclined to show performance and whether they are ready to go at great lengths, etc. or not.

Avoiding. With the data obtained through this subscale of five items; the teachers, curriculum developers or experts in the field can get insights regarding whether the participants (learners) will surrender when they are challenged by the content or the teachers, how the learners will react to challenges (embracing them or avoiding them), or even at the very beginning, if they think they will score poorly, whether they will take the course no matter what or not.

Procedure

The consent from the state university where the study was carried out had been obtained through a two-step procedure. First, an official application was submitted to the academic ethical board of the relevant state university; and, as a prerequisite part of the master's study, another official application was submitted to the graduate school of social sciences of the same university. Second, before the application of the instrument to each class of the students of each undergraduate

program, the researchers asked each professor for their consent and for a required period of time. The instrument was applied to the students during the first ten minutes before the courses started and after detailed explanations had been made and consent forms had been signed.

Data Analyses

The feasibility of the translated instrument was tested through psychometric features such as construct validity (exploratory and factor analyses) and internal consistency (Cronbach's alpha). Initially, the Kolmogorov-Smirnov test was used to test the normality of the distribution of the data. EFA was carried out to examine the factor structure of the instrument. Before EFA could be carried out, KMO and BTS were implemented to determine the suitability of the data for factor analysis. EFA was conducted through Principal Components Analysis as the extraction method and Varimax with Kaiser Normalization as the rotation method. CFA was deployed for the confirmation of the factor structure of the translated instrument. SPSS 23.0 and AMOS 23.0 were used in the analyses of the data.

Results

Exploratory Factor Analysis

The total scores for each of the items of the instrument were calculated and skewness was analyzed through the Kolmogorov-Smirnov test. According to the Kolmogorov-Smirnov test (Razali and Wah, 2011), the data obtained through the implementation of the instrument distributed normally ($p > .05$). Then, at the beginning of factor analysis, KMO and Bartlett's test was conducted, which showed whether the sampling size was sufficiently large to ensure satisfactory analysis.

Table 1.

KMO and Bartlett's Test Results

Kaiser- Meyer-Olkin Measure		.851
Bartlett's Test of Sphericity	*Chi-square*	4435.350
	df	78
	Sig.	0.000

Table 1 indicates that Bartlett's Test result ($\chi 2$ = 4435,350, p<.001) and KMO coefficient of academic goal orientation instrument, which is .851 confirmed that the data were suitable for factor analysis. It is widely acknowledged that KMO coefficient must be between .80 and .90 and BTS value must be below .05 (Büyüköztürk et al., 2018; Tabachnick and Fidell, 2007; Leech et al., 2005). These suggest that there was a significant difference between the correlation matrix and the identity matrix at 99% confidence level, thus making the instrument factorable.

After making sure that the data above proved appropriate (Pallant, 2007) for factor analysis, the initial eigenvalues were checked. The first eigenvalue was 4.65, the second eigenvalue was 2.45, the third eigenvalue was 1.53 and the fourth eigenvalue was 0.79, which confirms the three-dimensional structure.

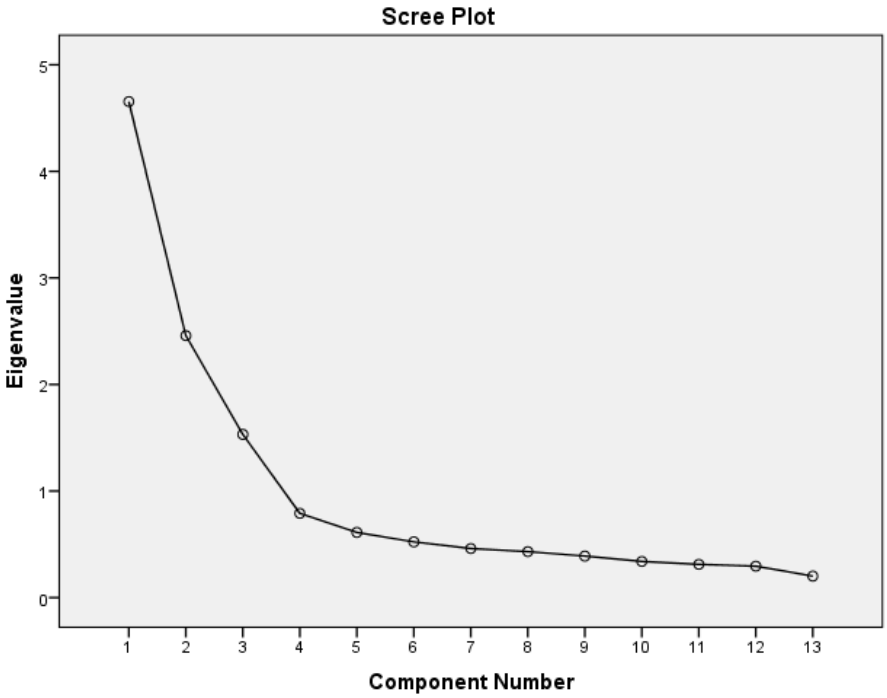

Figure 3.

Scree Plot for the Eigenvalues of the Items of the Translated Instrument

The scree plot above and the eigenvalues from the principal component analysis, and the results of the factor analysis showed that the three-dimensional

structure of thirteen items was feasible. The construct validity was tested through EFA and Table 2 shows that all the 13 items are great in magnitude ranging from .59 to .91.

Table 2.

Factor Loadings of the Items of the Translated Academic Goal Orientation Instrument

Item Number	*Rotated Component Matrix*		
	Factors		
	Avoidance	*Proving*	*Learning*
12	.80		
10	.78		
13	.77		
11	.64		
9	.59		
7		.91	
5		.85	
6		.79	
8		.78	
3			.85
2			.81
4			.79
1			.69
Total Variance Explained (%): 66.5			

According to Kline (1994), the value of the total variance explained for instrument development and adaptation studies should at least be 40%. As a result of EFA, the three factors identified accounted for 66.5% of the variance, which is a sufficient value. EFA also showed that items 1, 2, 3, and 4 were placed under the factor of learning; items 5, 6, 7, and 8 were placed under the factor of proving and

items 9, 10, 11, 12, and 13 were placed under the factor of avoiding. Factor loadings were between .69 and .85 for the factor of learning, between .78 and .91 for the factor of proving, and between .59 and .80 for the factor of avoiding. In terms of magnitude, it can be said that factor loadings ranged from moderate to very high.

For the determination of the internal consistency reliability of the instrument, Cronbach's alpha reliability coefficient was calculated for the 13 items in general and for that 3 three factors separately. For the 13-item instrument, Cronbach's alpha was .84, which was quite sufficient (Pallant, 2007; Fraenkel et al., 2012). Table 3 shows internal consistency reliability coefficients for the three factors of the translated instrument.

Table 3.

Internal Consistency Reliability Coefficients for the 3 Factors of the Translated Instrument

Factors	*Cronbach's α*
Factor 1 (Learning)	.80
Factor 2 (Proving)	.86
Factor 3 (Avoiding)	.83
Overall Cronbach's α of the Instrument	.84

To finalize EFA, inter-correlation among the factors was examined. Table 4 shows the inter-correlation values among the factors.

Table 4.

Factor Correlation Matrix of the Translated Instrument

	Factor 1	*Factor 2*	*Factor 3*
Factor 1 (Learning)	1.00		
Factor 2 (Proving)	.25	1.00	
Factor 3 (Avoiding)	.49	.21	1.00

Table 4 suggests that three factors of the translated instrument are significantly correlated. There was a statistically significant positive correlation between Factor 1 (Learning) and Factor 2 [(Proving) (*r*= .25)], and there was a statistically significant positive correlation between Factor 1 (Learning) and Factor 3 [(Avoiding) (*r*= .49)]. Also, there was a statistically significant positive correlation between Factor 2 (Proving) and Factor 3 [(Avoiding) (*r*= .21)].

Confirmatory Factor Analysis

After the exploratory factor analysis, the measurement modal validity of the translated instrument was tested through confirmatory factor analysis.

Table 5.

Academic Goal Orientation Instrument CFA Goodness of Fit Statistics

X^2	*df*	X^2/df	*RMSEA*	*NFI*	*CFI*	*GFI*	*AGFI*	*IFI*
249.297	56	4.452	.069	.944	.956	.949	.917	.956

The $\chi 2$ value used in the testing of the goodness-of-fit index and in the testing of the proposed model in CFA (Schumacker and Lomax, 2016) is ($\chi 2$) = 249.297 and the degree of freedom is (df) = 56. The value of $\chi 2$/df is 4.45. As it is lower than five, this value suggests that the goodness-of-fit index is perfect (Büyüköztürk et al., 2018; Kline R. B., 2015; Schumacker and Lomax, 2016; Tabachnick and Fidell, 2007). RMSEA value is .069, which ensures a goodness-of-fit index according to Büyüköztürk et al. (2018).

The CFA resulted perfect goodness-of-fit indices (*NFI*= .944, *CFI*= .956, *GFI*= .949, *AGFI*= .917, and *IFI*= .956). The goodness-of-fit index values over .90 suggest perfect model fit (Hooper, Coughlan, and Mullen, 2008; Marsh et al., 2009; Schermelleh-Engel et al., 2003; Sümer, 2000).

CFA confirmed that the Turkish version of the Academic Goal Orientation Instrument (Akademik Hedef Yönelimi Ölçeği) was a 13-item and 3-factor instrument with goodness-of-fit indices, all of which were more than satisfactory. The results of CFA showed that the hypothesized model of the original instrument had also been confirmed.

As a whole, the goodness-of-fit indices obtained as a result of CFA indicated that the tested model yielded satisfactory goodness of fit (Schumacker and Lomax, 2016) and those results suggest that the translated instrument (Akademik Hedef Yönelimi Ölçeği) be valid in the Turkish language. The diagram produced as a result of CFA is given in Figure 4.

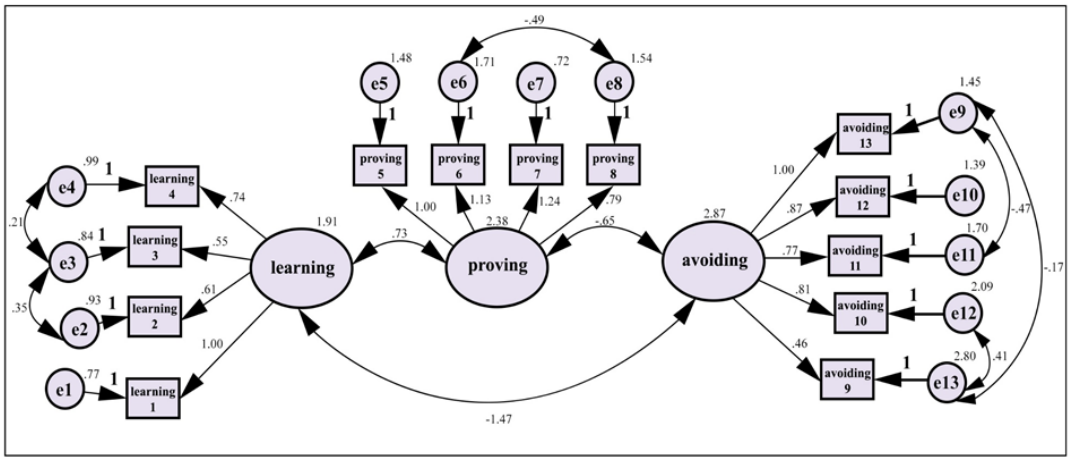

Figure 4.

CFA Results of the 3-Factor Model [($\chi 2$)= 249.297, *N*= 729, (*df*)= 56]

Discussion

The present study was carried out in order to adapt and validate the Turkish-language adaptation of the Academic Goal Orientation Instrument (VandeWalle, 1996), an instrument developed and validated to determine the academic goal orientation levels of the individuals – specifically targeted for discovering undergraduate students' reactions to academic performance in achievement settings. To serve this purpose, the factorial structure of the Academic Goal Orientation Instrument was examined with EFA and confirmed with CFA. Internal consistency reliability indices for the subscales and the instrument as a whole were calculated.

The EFA findings were in consistence with the results obtained by VandeWalle (1996)'s original development and validation study and confirmed the successful replication of the three-dimensional structure of Academic Goal Orientation Instrument. CFA provided a good fit to the data and strong fit of indices. Furthermore, the perfect goodness-of-fit indices (*CFI*= .95, *GFI*= .94) were

also similar to the CFA results in another study (*CFI*=.97, *GFI*=.89) by VandeWalle et al. (2001), where they deployed Academic Goal Orientation Instrument as part of a comprehensive study, whose participants were also junior- and senior-level undergraduate students.

Statistically significant positive correlation was found between Factor 1 (Learning) and Factor 2 (Proving). Also, statistically significant negative correlation was found between Factor 1 (Learning) and Factor 3 (Avoiding). Finally, statistically significant negative correlation between Factor 2 (Proving) and Factor 3 (Avoiding).

As past studies found, positive correlation was also found between learning and proving dimensions of goal orientation levels (Gafoor and Kurukkan, 2015; Nitsche et al., 2011; Yerdelen et al., 2014; Buldur, 2014; Roebken, 2007; Eppler and Harju, 1997; Vu, 2016). Likewise, as per the results of this study, negative correlation was found between learning and avoidance dimensions of goal orientation levels (Gafoor and Kurukkan, 2015; Eryenen, 2008; Payne et al., 2007); and negative correlation was found between proving and avoiding dimensions of goal orientation levels (Pulkka and Niemivirta, 2013; Jones et al., 2017).

Conclusion

In this study, the Turkish adaptation of Academic Goal Orientation Instrument developed and validated by (VandeWalle, 1996) was carried out. First, structure validity of the translated instrument was tested with EFA and CFA. Accounting for 66.5% of the variance, EFA confirmed the three-factor structure of the instrument. CFA results yielded a good fit to the data and strong fit of indices. Internal consistency reliability indices for the factors and the 13-item instrument were satisfactory.

In conclusion, the findings of this study showed that the 13-item instrument adapted into the Turkish language worked well with undergraduate students like the ones in the original study (VandeWalle, 1996) and the later study (VandeWalle et al., 2001). The literature and the results from the application of the instrument suggest that the translated instrument offers valuable input into the curricula and syllabi in higher education in addition to providing insights to lecturers about the perceptions of the students towards the courses.

Also, Chistolini (2015) emphasized that, in Italy, a majority of a specific group of students could not keep up with the course of the study because of a lack of motivation and cultural interest. For that, they found a solution to collect data from the students as to find out about the causes, which could easily be collected by the use of academic goal orientation instrument. O'Sullivan and Curry (2015) also discuss the efficiency of the undergraduate programs and refer to a problem of the ways of improving student performance in the United States of America and they talk about different views as to encouraging them to take demanding courses or else, from which can be concluded that academic goal orientation of the undergraduate students is a pressing issue of utmost importance.

On the other hand, because very recently published studies have still taken a vague approach to the study of goal orientation, this study is particularly significant from the perspective that it elaborates a detailed explanation and historical background in the literature review section as well as offering an adapted instrument for immediate use. For example, Supervía et al. (2020a), suggested that goal orientation and emotional intelligence are used interchangeably, which call for suspicion as the adapted instrument is capable of yielding hard data as to the levels of the goal orientation in students. They also regard goal orientation as a psychological variable, which is unlike any other previous core literature. Moreover, the vast literature taken into consideration in this study hardly yielded any source of literature or results providing a linkage between goal orientation and emotional intelligence.

One proof reinforcing that the construct of goal orientation is being measured with other constructs such as engagement, self-concept, burnout and academic performance in terms of mediation and relationships for students at different stages of education (Supervía et al., 2020a; Supervía et al., 2020b; Supervía and Bordás, 2020). It is evident that this literature review and adaptation study will shed further light into the study of goal orientation of the students and help researchers take advantage of the instruments both English and Turkish further. Another important aspect of this instrument for the avoiding subscale is that it gives clear explanation on the ways the undergraduate students avoid from performance. According to Giota and Bergh (2020), there usually are insufficient indicators of performance in the form of avoidance. Finally, the adapted version of the Academic Goal Orientation into the Turkish language was provided in the Appendix A. of this study.

Limitations and Recommendation

First things first, this adapted instrument, after the translation and cross-examination studies, was applied to undergraduate students in isolation for the purpose of adaptation and validation of the instrument. Although, the literature review section of this study sheds light on the interrelatedness between motivation and goal orientation with implications from self-regulation, it is certain that another application study accompanied by an instrumental measurement of motivation towards courses/subjects and instrumental measurement of self-regulatory skills of the undergraduate would yield valuable results.

Also, the results of the correlation studies among those instruments would make invaluable contributions to the field. Also, these kinds of implementations, if carried out as part of curriculum development or evaluation studies, would yield hard data into the design and evaluation of courses and programs in higher education.

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Appendix A - The Adapted Instrument

AKADEMİK HEDEF YÖNELİMİ ÖLÇEĞİ *ACADEMIC GOAL ORIENTATION INSTRUMENT*								
Madde Numarası *Item Number*	**Bu ölçeğin amacı, Üniversite Öğrencilerinin Akademik Alanda Hedef Yönelimi Düzeylerini belirlemektir.** **Aşağıdaki ölçekteki ifadelerin size uygunluk derecesini "7-Kesinlikle Katılıyorum"; "1-Kesinlikle Katılmıyorum" olmak üzere, ifadelerin karşısındaki kutucukları işaretleyerek belirtiniz. Lütfen her ifade için bir kutucuğu işaretleyiniz.**	**Kesinlikle Katılıyorum** *Strongly Agree*	**Katılıyorum** *Agree*	**Biraz Katılıyorum** *Somewhat Agree*	**Kararsızım** *Neutral*	**Biraz Katılmıyorum** *Somewhat Disagree*	**Katılmıyorum** *Disagree*	**Kesinlikle Katılmıyorum** *Strongly Disagree*
1	Daha çok şey öğrenebilmem için beni zorlayacak ağır dersleri tercih ederim.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
2	"Öğrenmek için öğrenmek"ten gerçekten zevk alırım.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
3	Beni gerçekten iyice düşünmeye mecbur bırakan dersleri severim.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
4	Eğer çok şey öğrenebileceksem zor bir derse isteyerek kaydolurum.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
5	Başkalarının iyi bir öğrenci olduğumu bilmeleri benim için önemlidir.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
6	Bence ne kadar zeki olduğunuzu göstermek için yüksek notlar almak önemlidir.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
7	Sınıftaki diğer öğrencilerden daha iyi olduğumu göstermek benim için önemlidir.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
8	Dürüst olmam gerekirse, yeteneklerimi başkalarına göstermek hoşuma gider.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
9	Zor bir derse kaydolmuşsam, düşük bir not almaktansa o dersi bırakmayı tercih ederim.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
10	Başarısız bir ödev yapmaktan kaçınabilmek için bildiğim bir konuda ödev yapmayı tercih ederim.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
11	Bir derste benim için düşük not almamak konuları öğrenmekten daha önemlidir.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
12	Derslerde düşük performans sergileme riskim olan durumlardan kaçınmayı tercih ederim.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
13	Başarılı olma ihtimalimin yüksek olduğunu düşündüğüm derslere kaydolurum.	**(7)**	**(6)**	**(5)**	**(4)**	**(3)**	**(2)**	**(1)**
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