UYARLANIR ÖĞRENME ÖRÜNTÜLERİ ÖLÇEKLERİNDEN ALGILANAN BİREYSEL VE AİLE HEDEF YÖNELİMLERİ BOYUTLARININ TÜRKÇEYE UYARLANMASI

Ali BOSTANCIOĞLU
İskenderun Teknik Üniversitesi, Yabancı Diller Yüksekokulu, Yabancı Diller Bölümü
malibostancioglu@gmail.com
ORCID No: 0000-0002-3901-857X

Hülya YILDIZLI
İstanbul Üniversitesi-Cerrahpaşa, Hasan Ali Yücel Eğitim Fakültesi, Eğitim Bilimleri Bölümü
hulyayildizli@iuc.edu.tr
ORCID No: 0000-0003-4450-2128

ÖZ

Motivasyonel inançlar içerisinde yer alan hedef yönelimleri ve sosyal çevrenin bu yönelimler üzerine etkisi son zamanlarda araştırmacıların dikkatini çekmeye başlamıştır. Araştırmacıların Türk öğrencilerin kendi hedef yönelimlerini ve algıladıkları ebeveyn hedef yönelimlerini inceleyebilmelerine olanak sağlayacak araştırma araçları geliştirmek adına, bu çalışma Uyarlanır Öğrenme Örüntüleri Ölçeklerinden öğrenci bireysel hedef yönelimleri ve algılanan ebeveyn hedef yönelimleri kısımlarının Türkçeye uyarlanmasını amaçlamıştır. Çalışmaya Türkiye'de lise düzeyinde öğrenim görmekte olan (9-12. Sınıflar) 358 öğrenci katılım göstermiştir. Öğrencilerin Likert ölçeği olarak hazırlanan maddelere verdikleri cevaplar açımlayıcı faktör analizi (AFA) ve doğrulayıcı faktör analizi (DFA) yapılmıştır. AFA sonuçlarına göre aşağıda adlandırılan beş faktör ortaya çıkmıştır; Algılanan Ebeveyn Performans Hedef Yönelimi, Algılanan Ebeveyn Ustalık Hedef Yönelimi, Öğrenci Performans Hedef Yönelimi, Öğrenci Performans Kaçınma Hedef Yönelimi ve Öğrenci Ustalık Hedef Yönelimi. Ortaya çıkan bu yapı DFA analizleri sonucunda desteklenmiştir. Anketin son halinin güvenilirlik ve geçerliliğine ve analiz süreçlerinde silinen maddelerin neden geçerlilik kriterlerini sağlayamadığına dair detaylar, tartışma bölümünde sunulmuştur.

Anahtar Kelimeler: Başarı hedef teorisi, Hedef yönelimleri, Performans hedef yönelimi, Ustalık hedef yönelimi, ebeveyn, öğrenci

ADAPTATION OF PERCEIVED PERSONAL AND PARENT GOAL ORIENTATIONS DIMENSIONS OF THE PATTERNS OF ADAPTIVE LEARNING SCALES (PALS) INTO TURKISH

ABSTRACT

Goal orientations (as part of motivational beliefs) and the effects of the social environment on learners' goal orientations have gained attention by researchers in recent years. In an attempt to develop tools that researchers can utilize to collect data regarding Turkish students' personal goal orientations and perceived parent goal orientations, the present study aimed to adapt the personal and perceived parent goal orientations sections of the Patterns of Adaptive Learning Scales (PALS). A total of 358 students studying in high schools across Turkey participated in the study. The responses to the Likert-scale items were analyzed in the SPSS software for Exploratory Factor Analysis (EFA) and in the AMOS software for Confirmatory Factor Analysis (CFA). EFA results indicated the latent structure of five factors: Perceived Parent Performance Goal Orientation (PPGO), Perceived Parent Mastery Goal Orientation (PMGO), Student Performance Goal Orientation (SPGO), Student Performance Avoidance Goal Orientation (SPAGO), and Student Mastery Goal Orientation (SMGO). This factor structure was confirmed via CFA. The validity and reliability of the final

version of the questionnaire as well as the reasons for why the deleted items did not pass validation criteria are discussed in detail.

INTRODUCTION

In recent years, researchers have started paying more attention to the effects of motivational beliefs on learning, and, among motivational beliefs, goal orientations have become one of the most researched variables. The relationship between student goal orientations and various variables has been studied in the literature. For example, some studies have investigated achievement goal theory and classroom goal orientations (i.e. Bae & DeBusk-Lane, 2018; Ballard, 2010; Bardach, Popper, Hochfellner, & Lüftenegger, 2019; Church, Elliot, & Gable, 2001; Yıldızlı, 2020), others focused on the relationship between individual differences and achievement goal theory (i.e. Daniels, Haynes, Stupnisky, Perry, Newall, & Pekrun, 2008), few researchers investigated the relationship between motivational beliefs and achievement goal theory (i.e. Bong, 2004), and few studied the relationship between achievement goal theory and family profile/support (i.e. Friedel et al., 2007). The effects of motivational beliefs on students' academic achievement has also attracted researchers' attention (e.g. Gonida, Kiosseoglou, Voulala, 2007). And, recent studies on goal orientations underline the need to study it in different cultural contexts (i.e. Urdan & Kaplan, 2020). These indicate the need to develop research tools which can support investigations in the dealing with goal orientations and related variables (i.e. to find answers to questions such as "What are Turkish students' perceptions of their parents' goal orientations?", "What is the relationship between academic achievement and students' perceptions of their/parents' goal orientations?". Thus, in the present study, we aimed to adapt family and student (revised) goal orientations sections of Midgley et al.'s (2000) Patterns of Adaptive Learning Scales (PALS) into Turkish and develop a tool that researchers can utilize in their investigations regarding perceived goal orientations and perceived family goal orientations.

Goal orientations theory is less interested in *what* individuals try to achieve and, instead, focuses on understanding the *reasons* for why individuals want to be successful (Urdan & Maehr, 1995). For example, the theory concentrates on why students want to have high grades, be successful, and want to learn; thus, it scrutinizes the meanings people attribute to the goals they set. Various models have been proposed in relation to achievement goal theory by researchers studying motivation. While those models describe goals and goal orientations using different terms; the main structure of those models resemble each other and, in general, are classified within the framework of mastery and performance goal orientations (Ames, 1992; Dweck, 1986, Elliot & Harackiewicz, 1996; Elliot & McGregor; 2001; Elliot, Murayama & Pekrun, 2011). To illustrate with an example; a student wants to have high grades because s/he wants to understand the lesson and considers the high score s/he would receive in the exam to reflect and be a proof of his/her level of understanding. Alternatively, another student wants to have high grades because s/he wants to show others (i.e. colleagues, parents, and/or teachers) that s/he is clever (Maehr & Zusho, 2009). In this case, the former student prioritizes learning; thus, can be considered to have mastery goal orientations, and the latter prioritizes being considered a successful student in his/her environment; thus, can be considered to have performance goal orientations. Mastery goal orientations highlight the positive dynamics in learning. These include; eagerness to develop skills (Elliot & Harackiewicz, 1996), eagerness to learn and understand (Linnenbrink & Pintrich, 2002), having a high level of self-efficacy, exerting effort, personal development, personal growth, use of effective strategies in learning, dealing with difficult tasks, high academic achievement, resistance to adverse conditions, searching for help, and having a positive attitude towards school work (Gonida, Voulala, & Kiosseoglou, 2009). On the other hand, performance goal orientation has "approach" and "avoidance" sub-categories. Performance avoidance includes incompatible learning patterns (Ames, 1992). Examples of performance avoidance include a person's avoidance from evaluation and assessment processes in order to prevent others from observing one's inefficacy. And in performance approach, an individual's desire to show others how successful they are is prioritized (Elliot & Church 1997; Elliot & Harackiewicz, 1996).

The effects of social environment on motivation are highlighted in the achievement goal orientations theory. The reason for this is the adoption of the idea that motivation has socio-cognitive features (Maehr & Zusho, 2009). The socio-cognitive model of achievement motivation theory discusses the reciprocal relationship between environmental and individual factors in endorsing goals and it underlines the importance of perceptions (Dweck & Leggett, 1988). As such, parents are among the prominent factors in the environment and their impact on their children's motivation is significant (Schunk, 2012). Similarly, the meanings parents attribute to their children's academic achievement plays an important role in the children's goal orientations. Parents attribute various meanings to achievement. To provide contextual examples; parents –when the family has mastery goal orientations- focus on their child's skill development, having fun while learning, and having higher-order thinking skills (Ablard & Parker 1997; Tong & Lam 2011), and they organize the factors supporting learning at home in accordance with the family goal orientations. When the family has performance goal orientations, on the other hand, parents prioritize comparison of their child's achievement with other children. Such parents generally focus on the exam results and performance of their child (Ablard & Parker, 1997). Therefore, the criteria such parents use in relation to assessing their child's achievement is the achievement/failure the child has had in comparison to other children. The following scenario is an illustration to this; a student has studied hard for his/her exam and received a high score. Then s/he informs his/her father about the results. If the father's reaction is like "Is there any other student who scored higher than you?" then the meaning the child attributes to his/her success and effort can start to have negative connotations. Such negativity might even damage the child's self-efficacy perceptions. Thus, student' perceptions of their parents become an important source of students' goal orientations. When parents focus on development and growth of their children, it will have positive impacts on the children. In contrast, when parents focus too much on the exam results and question their child's achievement in relation to other children then this can create the perception that the criteria for achievement are based on how (less) successful the individual is in comparison to others. Therefore, the meanings the family attaches to success and the resulting behavioral patterns become important. As such there are studies in the literature focusing on whether perceived goal orientations increase or decrease as individuals progress in their education life. For example, Gonida Kiosseoglou and Voulala (2007) found students' perceived parent performance (both approach and avoidance) goal orientations gradually decreased from the 7th to the 11th grade indicating that the importance students attached to their parents' goal orientations decreased from early adolescence towards late adolescence. Gonida et al. (2007) also found that students' perceptions of their parents predicted classroom participation, albeit the power of prediction was low. Likewise, Gonida, Voulala and Kiosseoglou's (2009) investigation showed that students' perceived parent mastery goal orientations predicted students' perceived mastery goal orientations, and perceived parent performance approach goal orientations predicted students' performance avoidance goal orientations. In another study, Gonida, Karabenick, Makara and Hatzikyakou (2014) found that perceived parent goal orientations predicted students' orientations towards help seeking or avoidance from help seeking. Similarly, He, Gou and Chang (2015) observed that students' perceived performance approach orientations were positively predicted by perceived parent performance orientations. They also observed that the former was negatively predicted by perceived parent mastery orientations.

The present study aimed to adapt perceived personal goal orientations and perceived parent goal orientations parts of the Patterns of Adaptive Learning Scales (PALS) into Turkish. This is because, as highlighted above, family characteristics which affect student motivation is among the variables that need to be investigated in learning environments. Considering that social contexts have an impact on learning, the need to investigate student perceptions of their families on their motivation within different cultural contexts becomes apparent. In fact, this argument is more valid in countries such as Turkey where academic achievement provides vertical social mobility and students' families become one of the most significant factors in this process. Likewise, it has been found that children pay more attention to the messages conveyed at home from their parents in comparison to the variety of messages they receive from different teachers at school, which increases the likelihood that perceived parent goal orientations can have a higher impact on student goal orientations (i.e. Friedel

et al., 2007). The analysis of related literature suggested that a number of research studies have been conducted in Turkey in relation to PALS. For example, Parlak-Yilmaz and Çikrikçi-Demirtaşli (2010) adapted the perceived teacher goal orientation scales within PALS. And Kahraman (2012) investigated the effects of perceived parent goal orientations on student's self-efficacy levels. Kahraman (2010), however, did not provide sufficient details as to how the validity and reliability of the adapted perceived parent goal orientations were established. To the best of our knowledge, no studies aiming to adapt the revised versions of the personal goal orientations parts into Turkish have been conducted so far. In line with the above, the present study was conducted to adapt the following PALS scales developed and revised by Midgley et al. (2000) into Turkish: "Perceived Parent Mastery Goal Orientation", "Perceived Parent Performance Goal Orientation", "Personal Achievement: Mastery Goal Orientation", "Personal Achievement: Performance Goal Orientation", and "Personal Achievement: Performance Avoidance Goal Orientation".

METHODOLOGY

This section presents details regarding the participants, data collection tools, the processes involved in adapting the scales into Turkish, and the process of collecting and analyzing data.

Participants

The participants in this study were Turkish students (n=358) who studied in high schools (9th -12th grades) across different cities in Turkey during the 2020-2021 Academic Calendar. 255 of these students were female and 103 were male. There were 90 students who studied in the 9th grade, 152 in the 10th grade, 54 in the 11th grade, and 63 in the 12th grade. There were 51 students who studied in private schools and 307 in public schools.

Data Collection Tools: The Patterns of Adaptive Learning Scales

The Patterns of Adaptive Learning Scales (PALS) have been developed by Midgley, Maehr, Hruda, Anderman, Anderman, Freeman, Gheen, Kaplan, Kumar, Middleton, Nelson, Roeser, and Urdan in 1997 and then revised in 2000. The scales have been grouped under five categories: 1) personal achievement goal orientations; 2) perceptions of teacher's goals; 3) perceptions of the goal structures in the classroom; 4) achievement-related beliefs, attitudes, and strategies; and 5) perceptions of parents and home life. The present study adapted the first (personal achievement goal orientations) and the fifth (perceived parent goal orientations) parts of PALS. The revised PALS was designed to include not only mastery and performance goal orientations but also divided performance goal orientations in a way that performance approach and performance avoidance dimensions can be differentiated. While the revised items are prepared in a general way to allow their flexible use, the items can be reworded in a way to make it specific to a subject area. For example, Student Personal Mastery Goal Orientation (SMGO) item 2 ("SMGO2- One of my goals in class is to learn as much as I can") can be changed into "One of my goals in Science classes is to learn as much as I can" so that it aims to measure science-specific goal orientations. Confirmatory factor analyses conducted by researchers suggested a good fit for the 14 items dispersed around three factors within personal achievement goal orientations (mastery, performance approach, and performance avoidance; GFI= .97, AGFI= .95). On the other hand, only Cronbach's alpha reliability levels were reported for the perceived parent goal orientations sections; .71 for both perceived parent performance and mastery approaches. The items from the revised PALS in the present study were designed following Likert-scale design with five anchor points (1= "Strongly Agree", 3= "Neither Agree nor Disagree", and 5= "Strongly Agree").

Translation of the Scales into Turkish

Initially, University of Michigan Office of Technology Transfer was contacted to ask for permission for the adaptation of PALS. Our request was approved on 18th of December 2019. Afterwards, two language experts were provided with the English texts of the related scales and were asked to do the translations. The translations were then evaluated by researchers and a third language expert and discussions were held to decide on the final version of translations (see Appendix 1).

Data Collection and Analysis

The translated PALS sections (student personal achievement and perceived parent goal orientations) and a section including questions to collect demographic data from the participants (i.e. year of study, gender, and age) were used in the present research. The questions were integrated into an online tool to be accessed by potential participants. As part of ethical considerations, an application to the ethics committee at the institution where the lead researcher worked was made and received. The link to the online questionnaire was active for one month following the receipt of ethical approval. Participation in the research was voluntary and no harm to participants was envisaged.

The online questionnaire aimed to collect data from high schoolers (9th to 12th grade). Therefore, anyone who did not specify that they were a high school student was not able to complete the questionnaire and, instead, was directed to a page where they were provided with an explanation. The link to the questionnaire was advertised in different teacher groups on the social media and teachers were asked to promote the link to their students. The link directed students to the information page of the questionnaire which was followed by a consent form. In addition, during the data collection stage, three items in the questionnaire -which were reverse items- were used to check for mechanic answers (i.e. answering questions without reading them). A decision was made to delete the answers of respondents if there was a discrepancy with at least two of their answers to the reversed items. In the end, there were 358 valid answers. The collected data were then transformed into numbers for statistical analyses in the SPSS (descriptive analyses and exploratory factor analysis) and AMOS (confirmatory factor analysis).

Exploratory factor analysis (EFA) was used to explore the underlying factor structure of the scales. Prior to conducting EFA, Keiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were conducted to check whether the collected data were suitable for EFA. Following this step, principal component analysis as part of EFA was conducted. The criterion to label a factor was that at least three items with loading levels higher than .40 were grouped together. Varimax rotation was used to observe the factor structure and eigenvalues above 1 (the Keiser criterion) were set as threshold limit for the software to extract factors.

Confirmatory factor analysis (CFA), on the other hand, was used to test and confirm the factor structures resulting from the EFA stage. Various indices such as chi-square distribution (χ^2/sd), root mean square error of approximation (RMSEA), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), Tucker Lewis Index (TLI), and comparative fit index (CFI) were used to evaluate CFA results. The criteria to consider results as "good" or "acceptable" was set based on the threshold limits suggested by Hair et al. (2010; see Table 1).

Table 1. Good and acceptable values for modification indices in CFA

Modification indices	Good	Acceptable
x2/df	<2	$2 < x2/df \leq 5$
RMSEA	$\leq .05$	$.05 < RMSEA \leq .08$
GFI	$.95 \leq$	$.90 \leq GFI \leq .95$
AGFI	$.90 \leq$	$.85 \leq AGFI \leq .90$
CFI	$.97 \leq$	$.95 \leq CFI \leq .97$
TLI	$.95 \leq$	$.90 \leq TLI < .95$

FINDINGS
Results of Exploratory Factor Analysis

The analyses of the collected data were carried out separately for the student personal goal orientations and perceived parent goal orientations parts just like what the researchers who developed the original PALS did. The results of the KMO tests indicated that the sample size was sufficient and the results of Bartlett's test of sphericity showed that correlations between items were large enough to conduct EFA (KMO=.802; χ^2=1157.62; df=28; p=.000 and KMO=.884; χ^2=2622.58; df=78; p=.000 for perceived parent goal orientations and student personal goal orientations respectively;

Field, 2009). Next, the factor structures were examined using Varimax Rotation and the Kaiser Criterion (factors with an eigenvalue of 1 or above were retained).

The factor analysis of perceived parent goal orientations part indicated the retention of two factors that were named; Perceived Parent Performance Goal Orientations (PPGO) and Perceived Parent Mastery Goal Orientations (PMGO). The analysis of the rotated factor structure suggested the deletion of three items (namely; PPGO2, PMGO2, and PMGO3) since they had similar factor loadings on both factors (see Table 2). The factor analysis of student personal goal orientations part, on the other hand, suggested the retention of three factors which were named; Student Performance Goal Orientation (SPGO), Student Performance Avoidance Goal Orientation (SPAGO), and Student Mastery Goal Orientation (SMGO). The analysis of the rotated factor structure suggested the deletion of one item (namely; SPAGO4) since it did not sufficiently load onto any factor at a value above the threshold limit of 0.4 (Field, 2009; see Table 3).

Table 2. Exploratory factor analysis results of perceived parent goal orientations

Factors	Items	Factor loading	Eigenvalue	Percentage of variance	Reliability*
PMGO			3.587	44.841	.82
	PMGO6	.904			.78
	PMGO4	.893			.79
	PMGO5	.752			.79
	PMGO1	.567			.78
PPGO			1.537	19.209	.75
	PPGO1	.807			.82
	PPGO4	.762			.79
	PPGO5	.695			.78
	PPGO3	.643			.78
Percentage of total variance explained				64.050	
Overall scale reliability					.81

*Right aligned reliability values represent the Cronbach's alpha value of the TPACK subcomponent it is included in, left aligned reliability values represent a particular section's alpha level if the item with which it is aligned is deleted.

**Table 3.** Exploratory factor analysis results of student goal orientations

Factors	Items	Factor loading	Eigenvalue	Percentage of variance	Reliability*
SMGO			5.498	42.290	.87
	SMGO5	.900			.88
	SMGO1	.879			.88
	SMGO2	.805			.88
	SMGO4	.783			.87
	SMGO3	.743			.88
SPGO			2.605	20.040	.87
	SPGO3	.898			.83
	SPGO2	.847			.86
	SPGO4	.633			.87
	SPGO5	.617			.86
	SPGO1	.604			.87
SPAGO			.1217	5.553	.86
	SPAGO1	.780			.87
	SPAGO2	.603			.88
	SPAGO3	.514			.87
Percentage of total variance explained				67.883	
Overall scale reliability					.88

*Right aligned reliability values represent the Cronbach's alpha value of the TPACK subcomponent it is included in, left aligned reliability values represent a particular section's alpha level if the item with which it is aligned is deleted.

The loadings of the eight items under PPGO and PMGO factors ranged between .567 and .904 and explained 64 % of the total variance. The loadings of the 13 items under the SPGO, SPAGO, and SMGO factors, on the other hand, ranged between .514 and .900, and explained 68 % of the total variance. The above "total variance explained" values are considered acceptable in the field of social sciences (Netenmeyer et al., 2003). The Cronbach's alpha reliability coefficients for students and perceived parent goal orientations parts were calculated as .88 and .81 respectively indicating a good level of reliability.

Results of Confirmatory Factor Analysis

The eight items within the perceived parent goal orientations part and the 13 items within the student personal goal orientations part were subjected to confirmatory factor analysis (CFA) separately. While some values (i.e. GFI= .922) were at acceptable levels for perceived parent goal orientations part, others were not (i.e. x2/df was above the threshold limit of five). Following the analysis of modification indices for standardized regression weights, a decision to delete an item (namely PMGO1) was made (due to having a low regression weight) and the analysis was re-run. The results of the second CFA test indicated a good model fit with three items loading under the PMGO factor and four under the PPGO (see Figure 1 and Table 4).
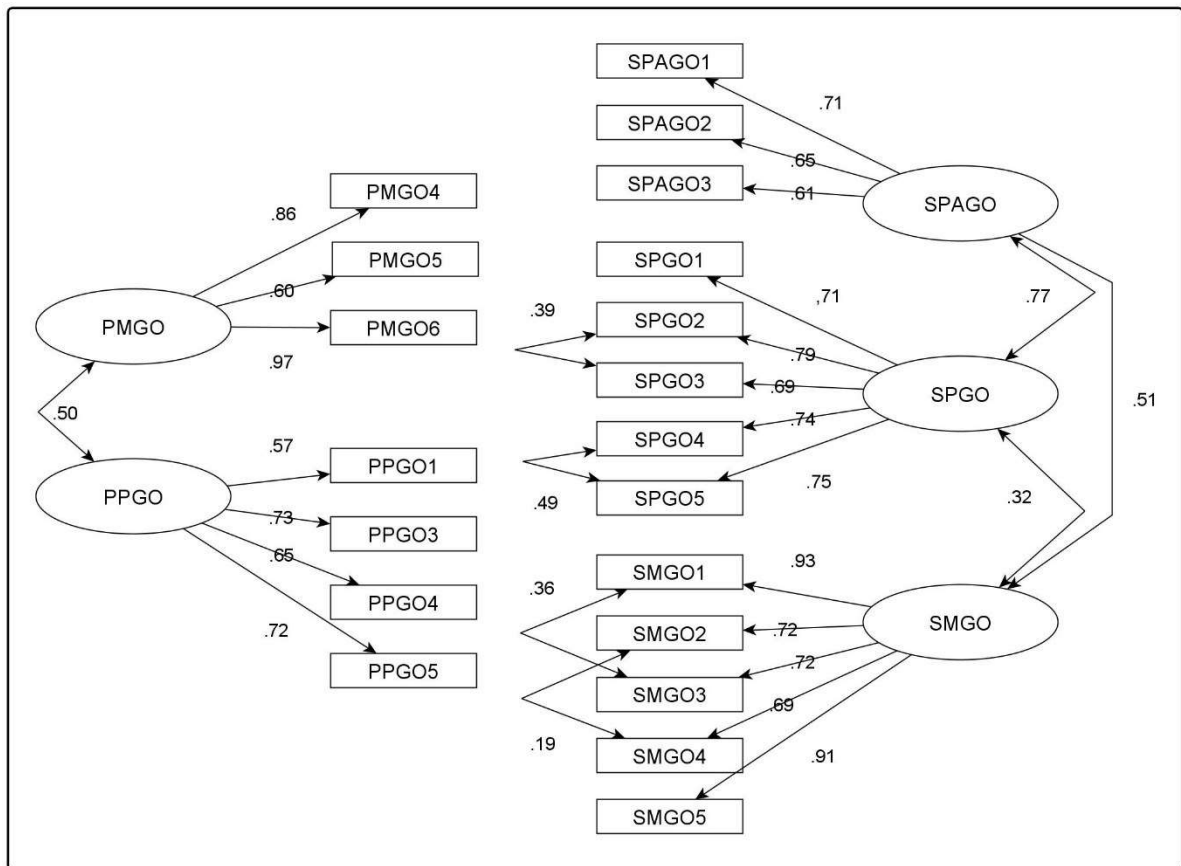
Figure 1. Finalized version of the questionnaire

As for student goal orientations part, the initial CFA values met some of the criteria (i.e. x2/df = 4.534) and other values did not (i.e. GFI= .906). Modification indices were checked for correlated residuals and a decision was made to correlate SPGO2 and SPGO3, SPGO4 and SPGO5, SMGO1 and SMGO3, and SMGO2 and SMGO4 due to high levels of covariance. The results of the second CFA analysis indicated an acceptable model fit with the retention of all items (see Figure 1 and Table 4). The correlation between PMGO and PPGO factors was moderate (r= .50). The correlation was low (r= .32) between SMGO and SPGO, moderate (r=.51) between SMGO and

SPAGO, and high between SPGO and SPAGO (.77). The final version of the questionnaire highlighting the standardized regression weights and the correlations between factors are presented in Figure 1. All in all, the results of EFA and CFA suggest that both perceived parent and student goal orientations parts are valid and reliable, and have logical consistency.

Table 4. CFA model fit indices for perceived parents' goal orientation and student goal orientation parts

Suggested values	Parents' goal orientations	Comment	Student goal orientations	Comment
x2/df	3.068	Acceptable	2,736	Acceptable
RMSEA	.076	Acceptable	.700	Acceptable
GFI	.972	Good	.932	Acceptable
AGFI	.936	Good	.901	Good
CFI	.975	Good	.965	Acceptable
TLI	.956	Good	.955	Good

DISCUSSION AND CONCLUSION

The present study aimed to adapt the student personal goal orientations and perceived parent goal orientations sub-sections of the patterns of adaptive learning scales (PALS) into Turkish. Perceived parent goal orientations part of PALS included performance and mastery approach sub-dimensions, and student personal goal orientations part included performance avoidance in addition to performance and mastery sub-dimensions. Exploratory and confirmatory factor analyses were carried out to establish validity and reliability of the adapted scales. Five of the translated items were removed from the final version of the questionnaire at different stages of the analysis. Those items were PMGO1, PMGO2, PMGO3, PPGO2 ("My parents would like it if I could show that I'm better at class work than other students in my class"), and SPAGO4 ("One of my goals in class is to avoid looking like I have trouble doing the work").

PMGO1 ("My parents want me to spend time thinking about concepts") is about the concepts learned in the classroom. Achievement goal theory provides an important theoretical framework that takes the learning environment into account. As such the theory assumes that the classroom environment plays an important role in learning (Deemer 2004; Pintrich & Schunk, 2002). Teaching activities in the classroom environment affect and direct student learning. If the activities are oriented at getting students to think about the learning process and what they learn, then students' tendency to question what they learn and think critically will increase. Considering that the parents support such learning processes then it can be argued that parents' goal orientations will also be affected by this. On the other hand, if classroom activities are mostly chalk and talk activities then there will be limited opportunities for students to think about the concepts that they learn. Thus, the way students are expected to behave will be regulated and organized around this limited framework. As such, studies that have explored teaching/learning activities at high school level in Turkey has found that activities were mostly teacher centered (Çöğmen & Saracaloğlu, 2016). Additionally, researchers highlighted that the lack of time and equipment to support learning prevent students from sufficiently thinking about the concepts they learned about (Ipek, Atik & Erkoç, 2021). Consequently, learners may have not recognized PMGO1 as part of perceived mastery goal orientations and the item failed to pass the validation criteria.

PMGO2 ("My parents want my work to be challenging for me") and PMGO3 ("My parents would like me to do challenging class work, even if I make mistakes") were originally constructed using the word "challenging". This word was translated into Turkish as "iddialı". Although "iddialı/challenging" is considered to be part of the mastery goal orientation, it is also possible that it was perceived by students to be performance-oriented. It is known that language is arbitrary and there are situations where words cannot be fully translated from one language to another (i.e.

1403

Blenkinsopp & Pajouh, 2010). In other words, it is possible that the translation of "challenging" into the Turkish language/culture as "iddialı" might not have matched the meaning attached to it in the English language/culture. In the Turkish language, various meanings such as "being better than others" (performance-oriented) or "having self-confidence" (mastery-oriented) is attributed to the word "iddialı". Therefore, it is possible that some students have perceived "challenging" in its mastery-oriented translation and others in its performance-oriented translation. Similarly, research has identified that individuals (based on their character and the context) may possess different goal orientations concurrently and one goal orientations might be embraced more strongly in comparison to others (i.e. Levy, Kaplan, & Patrick, 2004; Yıldızlı, 2020). More specifically, researchers have argued that the idea of having the tendency to try to show others that the self if more successful than others supports the development of mastery goal orientations (i.e. Barron & Harackiewicz, 2001; Linnenbrink, 2005). This indicates the possibility that those two orientations are contextually contrast. Therefore, it is not surprising that PMGO2 and PMGO3 did not pass the validation criteria.

SPAGO4 ("One of my goals in class is to avoid looking like I have trouble doing the work" was another item that did not pass the validation criteria. The analysis of other items in the SPAGO section suggested that the verbs of the sentences in SPAGO1, 2, and 3 were positive/neutral verbs. In this sense, SPAGO4 can be considered as a reverse item. It has been stated in the literature that reverse items may not load on factors at satisfactory levels (Field, 2009). This might be the reason why SPAGO4 was not validated in the present research. It is also worth noting that original version of SPAGO4 did not include a direct statement and, instead, it had a complicated sentence structure, which might have made it more difficult to understand. Hence, students may have failed to recognize is as part of SPAGO.

In spite of the above, however, the results of the present study indicated that a valid and reliable research tool aiming to measure perceived personal goal orientations (mastery, performance, and performance avoidance) and perceived parents goal orientations (mastery and performance) in Turkish has been developed. Although there are plenty research studies focusing on student goal orientations, the number of studies focusing on how their environments affect students' goal orientations is limited. Thus, the developed questionnaire can be used by researchers to gather information from Turkish students in relation to their perceptions of their self and parent goal orientations and investigate the relationship among the identified factors. Likewise, as part of a replication study, future research can focus on the translation of the items which have failed to pass the validation criteria in an attempt to find a better meaning match in the target language.

REFERENCES

Ablard, K. E., & Parker, W. D. (1997). Parents' Achievement Goals and Perfectionism in Their Academically Talented Children. *Journal of Youth and Adolescence, 26*(6), 651–667. DOI: 10.1023/A:1022392524554.

Aksan, D. (1982). *Dilbilim Seçkisi: Günümüz Dilbilimiyle İlgili Yazılardan Çeviriler,* Ankara: Türk Dil Kurumu Yayınları.

Ames, C. (1992). Classrooms: Goals, Structures and Student Motivation. *Journal of Educational Psychology, 84*(3), 261‒271.

Bae, C. L., & DeBusk-Lane, M. (2018). Motivation Belief Profiles in Science: Links to Classroom Goal Structures and Achievement. *Learning and Individual Differences, 67,* 91- 104. DOI: 10.1016/j.lindif.2018.08.003

Ballard, A. C. (2010). *Student Achievement, Personal Achievement Goal Orientations, and Perceptions of Classroom Goal Structures in a Standards-Based Reporting System* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3434231)

Bardach, L., Popper, V. Hochfellner, E., & Lüftenegger M. (2019). Associations between Vocational Students' Perceptions of Goal Structures, Mastery Goals, and Self-efficacy in Five Subjects - Practical Relevance as a Potential Mediator. *Empirical Research in Vocational Education and Training, 11*(9). DOI: 10.1186/s40461-019-0084-0

Blenkinsopp, J. & Pajouh, M. S. (2010). Lost in Translation? Culture, Language and the Role of the Translator in International Business. *Critical Perspectives on International Business, 6*(1), 38-52, DOI: 10.1108/17422041011017612

Bong, M. (2004) Academic Motivation in Self-Efficacy, Task Value, Achievement Goal Orientations, and Attributional Beliefs, *The Journal of Educational Research, 97*(6), 287-298, DOI: 10.3200/JOER.97.6.287-298.

Church, M. A., Elliot, A. J., & Gable, S. L. (2001). Perceptions of Classroom Environment, Achievement Goals, and Achievement Outcomes. *Journal of Educational Psychology, 93*, 43–54. DOI:10.1037/0022-0663.93.1.43

Çöğmen, S. & Saracaloğlu, A. S. (2016). Liselerde Görev Yapan Öğretmenlerin Öğrenme ve Öğretme ile İlgili Görüşleri. *Eğitimde Kuram ve Uygulama, 12*(5), 1081-1103.

Daniels, L. M., Haynes, T. L., Stupnisky, R. H., Perry, R. P., Newall, N. E., & Pekrun, R. (2008). Individual Differences in Achievement Goals: A Longitudinal Study of Cognitive, Emotional, and Achievement Outcomes. *Contemporary Educational Psychology, 33*, 584–608. DOI:10.1016/j.cedpsych.2007.08.002

Deemer, S. (2004). Classroom Goal Orientation in High School Classrooms: Revealing Links Between Teacher Beliefs and Classroom Environments. *Educational Research, 46*(1), 73-90, DOI: 10.1080/0013188042000178836

Dweck, C. S., & Leggett, E. L. (1988). A Social-cognitive Approach to Motivation and Personality. *Psychological Review, 95*(2), 256-273

Dweck, C., S. (1986). Motivational Processes Affecting Learning. *American Psychologist, 41*(10), 1040. DOI: 10.1037/0003-066X.41.10.1040.

Elliot, A. J., & Church, M. A. (1997). A Hierarchical Model of Approach and Avoidance Achievement Motivation. *Journal of Personality and Social Psychology, 72*(1), 218-232.

Elliot, A. J., & Harackiewicz, J. M. (1996). Approach and Avoidance Achievement Goals and İntrinsic Motivation: A Mediational Analysis. *Journal of Personality and Social Psychology, 70*, 461–475. DOI: 10.1037//0022-3514.70.3.461

Elliot, A., Murayama, K., & Pekrun, R. (2011). A 3 x 2 Achievement Goal Model. *Journal of Educational Psychology, 103*, 632–648. DOI: 10.1037/a0023952

Elliot, A.J., & McGregor, H.A. (2001). A 2×2 Achievement Goal Framework. *Journal of Personality and Social Psychology, 80*(3), 501–519. DOI: 10.1037/0022-3514.80.3.501

Field, A. (2009). *Discovering Statistics Using SPSS*. London: Sage.

Friedel, J. M., Cortina, K. S., Turner, J. C., & Midgley, C. (2007). Achievement Goals, Efficacy Beliefs and Coping Strategies in Mathematics: The Roles of Perceived Parent and Teacher Goal Emphases. *Contemporary Educational Psychology, 32*(3), 434-458, DOI: 10.1016/j.cedpsych.2006.10.009

Friedel, J. M., Cortina, K. S., Turner, J. C., & Midgley, C. (2007). Achievement Goals, Efficacy Beliefs and Coping Strategies in Mathematics: The Roles of Perceived Parent and Teacher Goal Emphases, *Contemporary Educational Psychology, 32* (3), 434-458, DOI: 10.1016/j.cedpsych.2006.10.009.

Gonida, E. N., Karabenick, S. A., Makara, K. A., & Hatzikyriakou, G. A. (2014). Perceived Parent Goals and Student Goal Orientations as Predictors of Seeking or not Seeking Help: Does Age Matter?. *Learning and Instruction, 33*, 120-130.

Gonida, E. N., Kiosseoglou, G., & Voulala, K. (2007). Perceptions of Parent Goals and Their Contribution to Student Achievement Goal Orientation and Engagement in the Classroom: Grade-level Differences Across Adolescence. *European Journal of Psychology of Education, 22*(1), 23-39.

Gonida, E. N., Voulala, K., & Kiosseoglou, G. (2009). Students' Achievement Goal Orientations and Their Behavioral and Emotional Engagement: Co-examining the Role of Perceived School Goal Structures and Parent Goals During Adolescence. *Learning and Individual Differences, 19*(1), 53-60.

Hair, J. F., William, C. B., & Barry, J. B. (2010). *Multivariate Data Analysis: A Global Perspective*. New York: Pearson.

He, T. H., Gou, W. J., & Chang, S. M. (2015). Parental İnvolvement and Elementary School Students' Goals, Maladaptive Behaviors, and Achievement in Learning English as a Foreign Language. *Learning and Individual Differences, 39*, 205-210.

Ipek, Z., Atik, A. D., & Erkoç, F. (2021). Ortaöğretim Biyoloji Öğretmenlerinin Biyoloji Öğretiminde Karşılaştıkları Güçlükler. *Turkish Journal of Educational Studies, 8*(2), 241-290.

Kahraman, N. (2012). Sosyo Kültürel Etkinin Öğrencilerin Öz- Yeterlilik İnancına Etkisi. *Buca Eğitim Fakültesi Dergisi, 33*, 14-24.

Levy, I., Kaplan, A. & Patrick, H. (2004). Early Adolescents' Achievement Goals, Social Status, and Attitudes towards Cooperation with Peers. *Social Psychology of Education, 7*, 127–159. DOI:10.1023/B:SPOE.0000018547.08294.b6

Linnenbrink, E. A. & Pintrich, P. R. (2002). Achievement Goal Theory and Affect: An Asymmetrical Bidirectional Model, *Educational Psychologist, 37*:2, 69-78, DOI: 10.1207/S15326985EP3702_2

Maehr, M. L., & Zusho, A. (2009). Achievement Goal Theory: The Past, Present, and Future. In K. R. Wenzel and A. Wigfield (Eds.), *Educational Psychology Handbook Series. Handbook of Motivation at School* (p. 77–104). Routledge/Taylor and Francis Group.

Midgley, C. et al. (2000). The Patterns of Adaptive Learning Scales (PALS) 2000. University of Michigan.

Netemeyer, R., Bearden, W., & Sharma, S. (2003). *Scaling Procedures*. Thousand Oaks, CA: Sage.

Parlak-Yilmaz, N. & Çikrikçi-Demirtaşli, N. (2010). Adapting a Portion of the Patterns of Adaptive Learning Scales for Research in Turkish Schools. *International Journal of Educational Reform, 19*(4), 287-297, DOI: 10.1177/105678791001900404

Pintrich, P. R. & Schunk, D. H. (2002). *Motivation in Education: Theory, Research, and Applications* (2nd ed). Englewood Cliffs, NJ: Prentice-Hall.

Schunk, D. H. (2012). *Learning Theories: An Educational Perspective (Sixth Edition)*. Person Education Inc.

Tong, Y., & Lam, S. (2011). The Cost of Being Mother's İdeal Child: The Role of İnternalization in the Development of Perfectionism and Depression. *Social Development, 20*(3), 504–516. DOI: 10.1111/j.1467-9507.2010.00599.x.

Urdan, T. C., & Maehr, M. L. (1995). Beyond a Two-goal Theory of Motivation and Achievement: A Case for Social Goals. *Review of Educational Research*, *65*(3), 213-243.

Urdan, T., & Kaplan, A. (2020). The Origins, Evolution, and Future Directions of Achievement Goal Theory. *Contemporary Educational Psychology*, *61*, 101862. DOI: 10.1016/j.cedpsych.2020.101862

Yıldızlı, H. (2020). Classroom Assessment Practices and Student Goal Orientations in Mathematics Classes. *Journal of Qualitative Research in Education, 8*(1), 294-323. DOI:10.14689/issn.2148-2624.1.8c.1s.13m

APPENDICES

Appendix 1. Item codes and items' translations into the Turkish language

Item code	Item in Turkish	Item in English	Did the item pass EFA and CFA stages?
PMGO1	Ebeveynlerim benden derslerde öğrendiğim bilgiler üzerine düşünmem konusunda daha fazla zaman harcamamı isterler.	My parents want me to spend time thinking about concepts.	*No*
PMGO2	Ebeveynlerim yaptığım işin benim için iddialı olmasını isterler.	My parents want my work to be challenging for me.	*No*
PMGO3	Ebeveynlerim, hatalar yapsam dahi, sınıfta kendimi zorlayıcı çalışmalar yapmamı isterler.	My parents would like me to do challenging class work, even if I make mistakes.	*No*
PMGO4	Ebeveynlerim benden, sınıf çalışmalarımın nasıl yapıldığını sadece ezberlememi değil, onları anlamamı isterler	My parents want me to understand my class work, not just memorize how to do it.	Yes
PMGO5	Ebeveynlerim, sınıfta yaptığım çalışmaların okul dışındaki hayatla nasıl bir ilgisi olacağını anlamamı isterler	My parents want me to see how my class work relates to things outside of school.	Yes
PMGO6	Ebeveynlerim verilen görevleri sadece yapmamı değil, o görevleri yaparken öğrendiğim kavramları da anlamamı isterler.	My parents want me to understand concepts, not just do the work.	Yes
PPGO1	Ebeveynlerim sınıf çalışmalarımda hata yapmamdan hoşlanmazlar.	My parents don't like it when I make mistakes in my class work.	Yes
PPGO2	Sınıf çalışmalarımda sınıfımdaki diğer öğrencilerden daha iyi olduğumu gösterebilirsem, ebeveynlerim bundan hoşlanacaklardır.	My parents would like it if I could show that I'm better at class work than other students in my class.	*No*
PPGO3	Ebeveynlerim sınıf çalışmalarında başkalarına (arkadaş, öğretmen, vb.) iyi olduğumu göstermemi isterler.	My parents would like me to show others that I am good at class work.	Yes
PPGO4	Ebeveynlerim sınıfta sorulan sorulara doğru cevap vermenin çok önemli olduğunu düşünürler.	My parents think getting the right answers in class is very important.	Yes
PPGO5	Sınıf çalışmalarının benim için çok kolay olduğunu gösterebilmem durumunda ebeveynlerim bundan memnun olacaklardır.	My parents would be pleased if I could show that class work is easy for me.	Yes
SPGO1	Sınıftaki diğer öğrencilerin sınıf çalışmalarında iyi olduğumu düşünmeleri benim için önemlidir.	It's important to me that other students in my class think I am good at my class work.	Yes
SPGO2	Hedeflerimden birisi başkalarına sınıf çalışmalarında iyi olduğumu göstermektir.	One of my goals is to show others that I'm good at my class work.	Yes
SPGO3	Hedeflerimden birisi başkalarına sınıf çalışmalarının benim için kolay olduğunu göstermektir.	One of my goals is to show others that class work is easy for me.	Yes
SPGO4	Hedeflerimden birisi sınıfta diğer öğrencilere kıyasla daha zeki görünmektir.	One of my goals is to look smart in comparison to the other students in my class.	Yes
SPGO5	Sınıftaki diğer öğrencilere kıyasla, daha zeki görünmem benim için önemlidir.	It's important to me that I look smart compared to others in my class.	Yes

SPAGO1	Sınıfta hiçbir şey anlamayan biri gibi görünMEmek benim için önemlidir.	It's important to me that I don't look stupid in class.	Yes
SPAGO2	Hedeflerimden birisi başkalarının zeki olmadığımı düşünmesine mani olmaktır	One of my goals is to keep others from thinking I'm not smart in class.	Yes
SPAGO3	Öğretmenimin benim diğer öğrencilerden daha az şey bildiğimi düşünMEmesi, benim için önemlidir.	It's important to me that my teacher doesn't think that I know less than others in class.	Yes
SPAGO4	Sınıfta, hedeflerimden birisi verilen görevi yaparken zorlanıyormuşum gibi görünmekten kaçınmaktır.	One of my goals in class is to avoid looking like I have trouble doing the work.	*No*
SMGO1	Bu yıl yeni birçok kavram hakkında bilgi edinmem benim için önemlidir.	It's important to me that I learn a lot of new concepts this year	Yes
SMGO2	Sınıftaki hedeflerimden biri öğrenebildiğim kadar çok şey öğrenmektir.	One of my goals in class is to learn as much as I can.	Yes
SMGO3	Bu yılki hedeflerimden biri birçok yeni beceride uzmanlaşmaktır.	One of my goals is to master a lot of new skills this year	Yes
SMGO4	Sınıf çalışmalarını layıkıyla anlamak benim için önemlidir.	It's important to me that I thoroughly understand my class work.	Yes
SMGO5	Bu yıl bilgi ve becerilerimi geliştirmem benim için önemlidir.	It's important to me that I improve my skills this year.	Yes