International Online Journal of Educational Sciences, 2014, 6 (3), 638-647

iojes
www.iojes.net

International Online Journal of Educational Sciences

ISSN: 1309-2707

The Effect of Study Process Approaches and Learning Modalities on the Achievement Goal Structures in Physical Education Teacher Candidates*

Ferudun Dorak[1], A.Meliha Canpolat[2] and Lale Yıldız[3]

[1,2,3] *Ege University, School of Physical Education and Sports, Izmir, Turkey*

ARTICLE INFO

Article History:
Received 14.06.2014
Received in revised form
14.10.2014
Accepted 24.10.2014
Available online
02.12.2014

ABSTRACT

This study aims to research the effects on the Achievement Goal Orientations of the Study Process Approaches and Learning Modalities for students attending the department for physical education teaching. At the total of 677 students from six different universities volunteered to participant in this study. The study process, learning modality and achievement goal levels of students were determined. The presence of relationship between Study Process and Achievement goal and mediation effect in the Study Process Approaches for the relationships between the Learning Modalities and the Achievement Goal Orientation are the two main findings of this study. According to these findings the teacher candidates should know well the Study Process Approaches and Learning Modalities that provide for the students to learn in a more comprehensible manner, for them to avoid factors that pave the way to mental confusion and that will facilitate attaining success.

© 2014 IOJES. All rights reserved

Keywords:
Study process, achievement goal, learning modality

Introduction

Thanks to the developing science and technology in the present-day, the perception in the education-learning institutions is also encountering changes together with many different fields. Consequently, it is necessary for the educators to be able to conform to changing environmental conditions in order to be able to realize an effective education-learning framework (İzci & Koç, 2012). Teachers should take into consideration the different attributes used in the learning process by students for fulfilling in a sound manner their own duties and functions (Şimşek, 2002). Accordingly, it is discussed to what extent the factors that determine the behaviors of individuals are effective in the educational process.

According to Akın (2010), the Theory of Achievement Goal Orientations is the criterion of what beliefs and reactions individuals have towards success and sets forth how they evaluate performances." This value has been used for many years in studies and has two subscales related to the different behaviors and personal attributes in the form of "Learning" and "Performance" orientations (Senko et al., 2011). In the advanced studies, the criterion was developed as a 2×2 Model of Achievement Orientations. This model includes four achievement orientations in the form of learning-approach, learning-avoidance, performance-approach and performance-avoidance (Elliot & McGregor, 2001). While the learning-avoidance goal orientation expresses not encountering failure and trying not to lose the skills and capabilities of the individual, the learning-approach goal orientation expresses becoming expert at the job and making efforts

*The data used in this manuscript represent the results of original work that was presented as oral presentation in 8th National Physical Education and Sports Teaching Congress which was organized between the dates of 25-27 April 2013 in Mersin University, Mersin / TÜRKİYE

[2] Corresponding author's address: Ege University, School of Physical Education and Sports, Izmir, Turkey
Telephone: +90 232 342 57 14
Fax: +90 232 339 90 00
e-mail: monursal@yahoo.com

DOI: http://dx.doi.org/10.15345/iojes.2014.03.012

© 2014 International Online Journal of Educational Sciences (IOJES) is a publication of Educational Researches and Publications Association (ERPA)

for development. While the performance-avoidance goal orientation expresses trying not to be worse than other individuals, the performance-approach goal orientation expresses the efforts shown for doing better than other individuals (Elliot & Thrash, 2001).

It is also known that individuals have different learning approaches in the learning process (Prosser et al., 1999). The basic objectives of the learning approaches can be explained with the dual model in the forms of Surface Learning for passing a course and Deep Learning for perceiving the information completely (Chan, 2003). The basic objectives of individuals using the deep approach are to internalize within the process of integration by understanding the subject studied in a course. Whereas, the first goals of individuals who learn by using the surface approach is to pass the class with the least effort (Zhang, 2000). It was stated in the study made by Meece et al. (1988) that there is a significant relationship between performance goal orientation and deep and surface learning approaches. In a similar study made by Coutinho & Neuman (2008) on university students it was stated that there was a weak, negative relationship between the deep learning approach and the performance goal orientation.

Besides learning approaches, learning styles are another one of the factors that plays an important role for the student attaining success. These are the learning styles, which set forth how the student perceives the surroundings and what sort of reaction is shown in learning. It is necessary to know the structures of learning styles, theories and objectives in order to be able to develop an educational plan suitable to the various needs of the students in a course (Pallapu, 2007). All of these factors are called "Learning Modalities". The generally accepted learning modality is separated into three as Visual, Auditory and Kinesthetic. In time, students show a tendency to become expert in one of these modalities (Şimşek, 2002). Individuals who have a visual modality draw attention to visuals, such as paintings, drawings, map, colors, etc. These individuals can portray in their minds what they read or hear. Individuals who have a tendency for auditory modality are sensitive to vocalic stimulants, such as music, talk, tone of voice, language, etc. Individuals who have kinesthetic modality feel an inclination to do something themselves rather than listen or observe. These individuals prefer to express with bodily language their feelings and thoughts (Pallapu, 2007; Gilbert & Swanier, 2008). There is a means of learning possessed by every individual and in this connection, it can be stated that the learning modalities and study process approaches are effective on the learning processes.

This study aims to research the effects on the Achievement Goal Orientations of the Study Process Approaches and Learning Modalities for students attending the department for physical education teaching. This is to learn what are the study process approaches of the students, to what extent the learning processes are effective and is of importance from the aspect of setting forth that it is realized sufficiently.

Methods

Participants

Participants of this study were consisted of 272 volunteer undergraduate female (M±SD = 20.56 ± 2.05) and 405 male (M±SD = 21.58±2.26) students, at the total of 677 students, who were attending at the physical education and sport teaching department in six different universities. The procedures in this study were reviewed and approved by the Scientific Research and Publication Ethics Committee of Ege University.

Measures

Study process questionnaire. This questionnaire was developed by Biggs in 1986. Later, the scale was revised again by Biggs, Kember and Leung (2001). The revised scale included 20 items and two subscales. This scale was adapted into Turkish by Yılmaz and Orhan (2011). In this adaptation scale is consisted of two subscales. These two basic subscales are Deep Approach (DA, 10 items) and Surface Approach (SA, 10 items). The scale is designed in five evaluation steps (1=not convenient at all, 5=totally convenient). The Cronbach Alpha internal consistencies for Deep Approach and Surface Approach were .82 and .86, respectively (Yılmaz and Orhan, 2011).

Big16 learning modality inventory. This inventory was adapted into Turkish by Şimşek in 2002. This inventory consists of 48 items and three subscales. Kinesthetic (K= 16 item), Auditory (A=16 item) ve

Visual(V= 16 item). Candidates responded to a five-point Likert-type scale. Cronbach alfa internal consistencies of Kinesthetic, Auditory and Visual sub-test were found to be .68,.77 and.79, respectively.

2×2 achievement goal orientation scale. The validity and reliability of this scale was performed by Akın (2006). The scale consists of 26 items and four subscales. Learning-Approach Goal Orientation (LPGO = 8 item), Learning-Avoidance Goal Orientation (LVGO=5 item), Performance-Approach Goal Orientation (PPGO=7 item) and Performance-Avoidance Goal Orientation (PVGO=6 item). Physical education teacher candidates gave responses on a five-point likert-type scale (1 = strongly disagree; 5 = strongly agree). Statical results showed that Cronbach alfa internal consistencies were. 92, .97, .97 and. 95, respectively. In addition, three-week test re-test Cronbach alfa internal consistencies were found to be .77, .82, .84 and. 86 respectively.

Procedure and Data Analyses

During the statistical analysis and evaluation of the data, firstly, the description statistics regarding the changing's based on the study have been examined. Then, Independent samples t-test was used to assess the possible differences in the scores of subscales between genders and effect sizes (Cohen's d) were calculated by "Effect Size Determination Program (2001, Wilson, D.B., University of Maryland, College Park). Pearson correlation analysis was performed to identify the relationships between subscales. Multiple regression analysis with stepwise method was applied in order to control whether subscales of "Learning Modality Scale" and "The Study Process Approach and Learning Scale" are determinants of "Achievement Goal Orientation". By path analysis method, the effect of mediating among the structures has been examined.

Findings

Descriptive Analyses

Means, standard deviations, normality statistics and internal consistency coefficients of all subscale variables have been given in Table 1. It was determined in the study that the Cronbach alpha values of the subscales were at an acceptable level (Kalaycı, 2005). The Skewness and Kurtosis points were examined and it was observed that the points displayed a normal distribution (Peat & Barton, 2005).

Table 1. Means standard deviations, normality statistics and internal consistency coefficients of all subscale variables

	M	SD	α	Skewness	Kurtosis
Kinesthetic	9.64	9.17	.79	-1.03	1.67
Auditory	9.60	9.23	.80	-.86	1.51
Visual	12.59	10.02	.86	-1.30	2.65
Deep Approach	34.42	6.92	.79	-.39	-.12
Surface Approach	32.18	7.11	.74	-.29	-.13
Learning-Approach Goal Orientation	3.96	.63	.79	-.38	-.49
Learning-Avoidance Goal Orientation	3.10	.75	.62	.21	-.10
Performance-Approach Goal Orientation	2.75	.85	.76	.06	-.74
Performance-Avoidance Goal Orientation	2.45	.74	.62	.31	-.21

The t test results made related to the average points received according to the subscales of the 272 female and 405 male physical education teacher candidates who participated in the study were given in Table 2. According to gender, excluding the Performance-Approach Goal Orientation and Performance-Avoidance Goal Orientation, there was a significant difference between the average points for all of the other subscales. Accordingly, the average points of the female physical education teacher candidates who participated in the study were higher in a statistically significant manner for the "Kinesthetic" ($t=2.79$, $p<0.01$, $d=0.22$), "Auditory" ($t=4.76$, $p<0.00$, $d=0.37$), "Visual" ($t=3.54$, $p<0.001$, $d=0.27$), "Deep Approach" ($t=5.61$, $p<0.001$, $d=0.44$), "Learning-Approach Goal Orientation" ($t=3.53$, $p<0.00$, $d=0.28$) and "Learning-Avoidance Goal Orientation" ($t=4.07$, $p<0.001$, $d=0.32$) compared to the average points of the males. On the other hand, the average points of the male physical education teacher candidates were found to be higher in a statistically significant manner for the "Surface Approach" ($t=-4.46$, $p<0.001$, $d=-0.35$) compared to the average points of the female physical education teacher candidates.

Table 2. Comparison of the variables according to gender

Scale	Subscale	Women		Men			Effect
		M	SD	M	SD	t	Size
Learning Modality Inventory	Kinesthetic	10.83	8.51	8.84	9.51	2.79**	0.22
	Auditory	11.63	8.87	8.24	9.23	4.76***	0.37
	Visual	14.24	9.13	11.48	10.44	3.54***	0.27
Study Process Questionnaire	Deep Approach	36.20	6.05	33.22	7.21	5.61***	0.44
	Surface Approach	30.72	7.23	33.17	6.86	-4.46***	-0.35
2X2 Achievement Goal Orientation	Learning-Approach Goal Orientation	4.06	.60	3.89	.64	3.53***	0.28
	Learning-Avoidance Goal Orientation	3.24	.72	3.00	.76	4.07***	0.32
	Performance-Approach Goal Orientation	2.79	.86	2.73	.84	.92	0.07
	Performance-Avoidance Goal Orientation	2.46	.76	2.44	.72	.29	0.02

**p<0.01, ***p<0.001, d=Cohen's d (Effect Size)

When the Pearson correlation coefficients among scales are examined, it was determined that there was a low relationship in a positive direction between the "Kinesthetic Learning Modality" subscale, the Deep Learning Approach (r=.13, p<.01) and the Learning-Approach Goal Orientation (r=.17, p<.01), and a low relationship in a negative direction between the Performance-Avoidance Goal Orientation (r=-.11, p<.01). There was a low relationship in a positive direction between the "Auditory and Visual Learning Modalities" subscales, the Deep Learning Approach and the Learning-Approach Goal Orientation and a low relationship in a negative direction between the Surface Learning Approach and the Performance-Avoidance Goal Orientation.

A relationship at a medium level and was determined among the "Deep Learning Approach," which is one of the subscales of the study process approaches, the Learning-Approach (r=.54, p<.01) and the Learning-Avoidance Goal Orientation (r=.40, p<.01) and a relationship at a low level in a positive direction with the Performance-Approach Goal Orientation (r=.13, p<.01). While it was determined that there was a low relationship in a negative direction between the "Surface Learning Approach" subscale and the Learning-Approach Goal Orientation (r=-.26, p<.01), it was determined that there was a low relationship in a positive direction between the Performance-Approach (r=.17, p<.01) and the Performance-Avoidance Goal Orientation (r=.30, p<.01).

Table 3. The correlation results of the subscales for the study process approaches, learning modalities and 2x2 scale of achievement goal orientation

	K	A	V	DA	SA	LPGO	LVGO	PPGO	PVGO
K	**-**	.73**	.79**	.13**	.02	.17**	.02	-.02	-.11**
A		-	.75**	.20**	-.09*	.22**	.07	.03	-.08*
V			-	.18**	-.09*	.24**	.05	.02	-.14**
DA				-	-.34**	.54**	.40**	.13**	.02
SA					-	-.26**	-.06	.17**	.30**
LPGO						-	.40**	.16**	-.06
LVGO							-	.34**	.39**
PPGO								-	.56**
PVGO									**-**

*p<.05, **p<.01

K = Kinesthetic, A = Auditory, V = Visual, DA = Deep Approach, SA = Surface Approach, LPGO = Learning-Approach Goal Orientation, LVGO = Learning-Avoidance Goal Orientation, PPGO = Performance-Approach Goal Orientation, PVGO = Performance-Avoidance Goal Orientation

When the multi-stepwise regression analysis results for the subscales of the Learning Modalities inventory and Study Process Approaches scale are examined from the aspect of projecting the achievement goal orientation (Table 4), it was determined that there was a positive projection for the Deep Approach (β=0.48, t=13.97, p<0.001) and Auditory (β=0.15, t=4.63, p<0.001) and it was determined that there was a negative projection for the Learning-Approach Goal Orientation scale of the Surface Approach (β=-.09, t=-2.56, p<0.01) structure. It was observed that 29% of the total variance was explained by the Deep Approach structure.

When the Learning-Avoidance Goal Orientation subscale was considered, it was determined that the subscales of Deep Approach (β=0.43, t=11.45, p<0.001) and Surface Approach (β=0.08, t=2.24, p<0.05) provided a positive projection to the Learning-Avoidance Goal Orientation subscale. It was determined that 16% of the total variance was explained by the Deep Approach structure.

When another subscale of the achievement goal orientation was considered, it was observed that the Surface Approach (β=0.24, t=5.93, p<0.001) and Deep Approach (β=0.21, t =5.24, p<0.001) subscales provided a positive projection to the Performance-Approach Goal Orientation scale. It was observed that 3% of the variance was explained by the Surface Approach structure and 4% of the total variance was explained by the Deep Approach structure.

Finally, it was found that the Surface Approach (β=0.35, t=9.08, p<0.001) and Deep Approach (β=0.15, t=3.91, p<0.001) structures were positive determinators for the Performance-Avoidance Goal Orientation subscale, and in contrast to this, it was found that the Kinesthetic (β=-.13, t=-3.65, p<0.001) structure was a negative determinator. It was observed that 9% of the total variance was explained by the Surface Approach structure.

Table 4. Results of the multiple regression analysis related to relationships among "achievement goal orientation", "learning modality" and "study process"

MODEL	B	Beta	t	Δ R^2	R^2
Learning-Approach Goal Orientation					
Deep Approach	.04	.48	13.97***	.29	.29
Auditory	.01	.15	4.63***	.02	.31
Surface Approach	-.01	-.09	-2.56**	.01	.32
Learning-Avoidance Goal Orientation					
Deep Approach	.05	.43	11.45***	.16	.16
Surface Approach	.01	.08	2.24*	.01	.17
Performance-Approach Goal Orientation					
Surface Approach	.03	.24	5.93***	.03	.03
Deep Approach	.03	.21	5.24***	.04	.07
Performance-Avoidance Goal Orientation					
Surface Approach	.04	.35	9.08***	.09	.09
Deep Approach	.02	.15	3.91***	.01	.10
Kinesthetic	-.01	-.13	-3.65***	.02	.12

*p<.05, **p<.01,***p<.001, **Δ=**Change

Mediation Analyses

In this study, it was attempted to show whether or not Study Process Approaches had a mediation effect between Learning Modalities and Achievement Orientation and to what extent. First of all, the direct effect of Learning Modalities on Achievement Goal Orientation was examined and the t values that showed this relationship were not found to be significant. Subsequently, the significances' according to the t values of the relationships defined from independent variables to dependent variables were examined together with the mediation model formed. It was determined that according to these t values there was not a statistical significance between the Kinesthetic and Auditory Learning Modalities and the Deep Learning Approach (t=-1.51, t=1.89, p>0.05, respectively). Consequently, it was removed from this route model and the model was re-evaluated. An alternative model was established that was different from the first model established and was re-tested (Figure 1). The correction indices proposed by the program aimed at relating the error variances of some subscales were examined by taking into account this result.

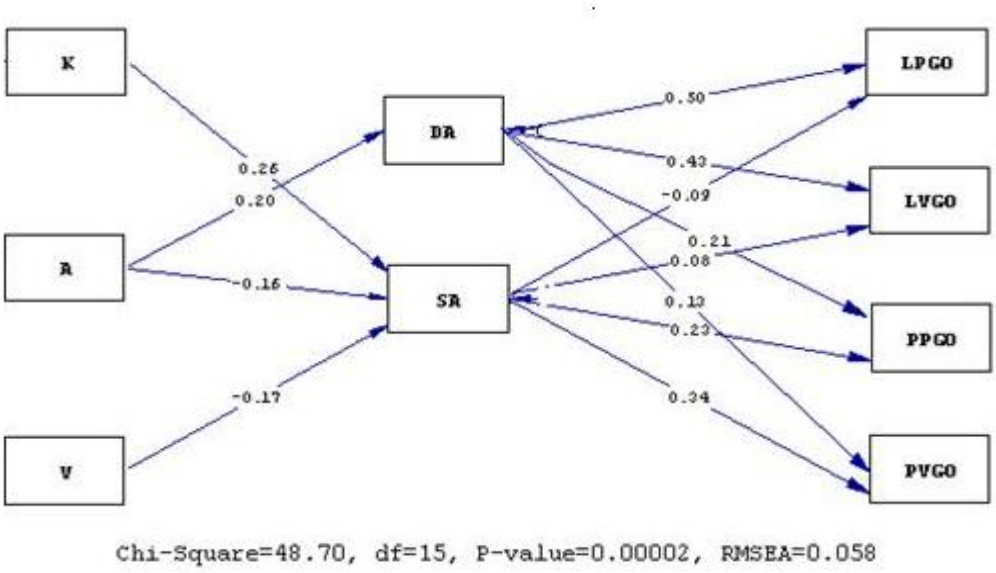


Figure 1. The Standardized coefficient values of the mediation model

The conformity index values obtained at the end of the corrections made indicated that the model and the data showed a good conformity. The conformity indices obtained for the alternative model were χ^2 (15)=48.70, p=0.00002, NFI=0.98, CFI=0.99, GFI=0.98, SRMR=0.49 and RMSEA=0.058. It can be stated that the final form of the model is a mediation model. The standard coefficients of the figure related to the alternative model and the estimated parameters have been given in Figure 1.

Discussion and Conclusion

It has become necessary in recent years to know what are the study process approaches of teacher candidates, to set forth how effective are the learning and teaching processes and if they are realized sufficiently and to determine the factors related to learning that affect achievement goals within the educational system. In this study, it was aimed to research the effects on Achievement Goal Orientations of the Learning Process Approaches and Learning Modalities of students attending the department of physical education teachers.

The subscales of the Learning Process Approaches, Learning Modalities and Achievement Orientations were examined for gender. Accordingly, it was found that the average points of the female physical education teacher candidates participating in the study were significantly higher statistically for the "Kinesthetic", "Auditory" and "Visual" Learning Modalities, the "Deep Approach", the "Learning-Approach Goal Orientation" and "Learning-Avoidance Goal Orientation" compared to the males. However, it was determined that excluding the Performance-Approach Goal Orientation and Performance-Avoidance Goal Orientation, all of the other subscales were not statistically different for gender. In parallel with the findings obtained in studies related to "Kinesthetic", "Auditory" and "Visual" Learning Modalities, in the study made by Csapo & Hayen (2006) on 2,170 students (grades 4-12), they determined that female students adopted more the auditory and visual learning modalities. In the study made by Özgen, Unaldı and Bindak (2011) on 281 teacher candidates at the Gazi University, School of Education, they found that female teacher candidates preferred more the kinesthetic and visual learning modalities compared to male teacher candidates. In the same study, they stated that the auditory learning modality subscale did not differentiate for gender. In the study made by Özbaş (2013), it was found that female students adopted the visual learning modality more compared to male students. In the same study, it was stated that there was not a difference for gender in the kinesthetic and auditory learning modalities. Nevertheless, in the study made by Li (2012) on university students, it was reported that there was not a significant relationship between the gender of the students and learning modalities. According to all of these results obtained, it can be thought that it is necessary for teaching staff to take these differences into consideration when making education plans due to the use of different learning modalities by female and male teacher candidates.

Related to the "Learning-Approach Goal Orientation" and "Learning-Avoidance Goal Orientation" subscales of the achievement goals, in the studies made by Howell and Buro (2009) and Kazak Çetinkalp (2010) on university students, they stated that female university students adopted more the Learning-Avoidance Goal Orientation compared to male students. Nevertheless, there are studies that set forth that there are no differentiations in the levels of Learning-Avoidance Goal Orientation for gender (Splan, Brooks, Porr and Broyles, 2011; Diaz, 2012).

When the literature related to the "Deep Approach" is examined, in the study by Başoluk and Önder (2010) made on 2,022 students attending the Sakarya University, School of Education graduate and post-graduate programs, they stated that the female students had a higher average for the deep learning approach compared to male students. Also, in a study made by Cano (2005) on 1,600 Spanish students in their final year of high school, it was found that statistically female students adopted more the deep learning approach. These studies made support this study. In contrast to the results obtained, in a study made by Senemoğlu (2011), on college students in the United States and Turkey, even if there was not a statistically significant difference between the learning approaches of female and male students, it stated that the male students preferred the deep learning approach more compared to female students. Studies that set forth that the deep learning approach does not differentiate for gender draw attention (Smith & Miller, 2005; Özgür & Tosun, 2012).

In this study, the Surface Approach average points of the male physical education teacher candidates were statistically higher in a significant manner compared to the average points of the female physical education teacher candidates. In the studies made related to the "Surface Approach" by Salamonson et al. (2013) on 919 students attending different departments at a university in Sidney, Australia, it was found that the male students had a higher average for the surface learning approach compared to female students. Also, in the study made by Özgür & Tosun (2012) on the students attending the Trakya University, School of Education, they stated that the male students adopted even more the surface learning approach. Since females are disregarded and left in the background even more in Turkey, it can be thought that they place greater importance on education for developing themselves and consequently, it causes them to adopt the deep learning approach even more. In a study made by Duff (1999) on 179 students attending an accounting department at a university in Scotland, it was determined that the female students had higher values for using the surface approach compared to male students. Besides, there are studies that set forth that the surface learning approach does not differentiate for gender (Chamorro-Premuzic & Furnham, 2009; Taher & Jin, 2011; May, Chung, Elliot and Fisher, 2012). It can be stated that all of these results obtained could stem from the study process approaches of the individuals and their social and cultural differences.

It was determined that there was a significant relationship among the Study Process Approaches, Learning Modalities and Achievement Orientations when the relationship among variables is examined with the Pearson correlation analysis. At the same time, at the conclusion of the regression analysis made for setting forth the relationship among the Learning Modalities, Study Process Approaches and the Achievement Orientations, it was found that some subscales of the Study Process Approaches and Learning Modalities provided a significant projection for the subscales of the Achievement Orientations. According to the results of the analysis made, the "deep approach" subscale explained the highest proportion of the variance of the "Learning-Approach Goal Orientation" and "Learning-Avoidance Goal Orientation" scores. This can be evaluated as an expected result. In this study, findings were obtained that were consistent with the results of the studies realized previously. In a study made by Coutinho & Neuman (2008) on 629 students at Northern Illinois University, they stated that there was a positive relationship between learning-approach goal orientation and the deep learning approach. When different studies are examined, it was found that the learning goal orientation was a positive indicator for the deep learning approach (Nolen & Haladyna, 1990; Green & Miller, 1996). The following result was obtained in the studies made: students who adopt the learning goal orientation believe that there is a high effort at the foundation of successful learning. In this connection, it was observed that they prefer to use the deep learning approach (Pitrich & DeGroot, 1990; Ames, 1992).

In the other subscales of the Achievement Goal Orientation, it was observed that especially the subscales of the "Performance-Approach Goal Orientation" and "Performance-Avoidance Goal Orientation" of the Surface Approach structures were positive indicators. Elliot et al. (1999) stated that students who

adopt the "Performance-Avoidance Goal Orientations" have different learning styles together with the surface learning approach. Also, in the study made by Coutinho and Neuman (2008) findings were obtained that had the attribute of supporting the results of our study and stated that students who adopted the Performance Goal Orientation expended efforts to prevent their own insufficiencies rather than internalizing the knowledge. However, in some studies it was determined that there was no relationship between the Performance Goals and the Surface Learning Approaches (Green & Miller, 1996).

It was attempted to determine whether or not there was a mediation effect in the study process approaches for the relationships between the Learning Modalities and the Achievement Goal Orientation. When the relationships among the Auditory Learning Modality, Learning-Approach and Learning-Avoidance Goal Orientation were examined, it was found that the mediation effect of the subscale for the Deep Learning Approach was statistically significant. This situation can make one think that the teacher-centered educational system that is implemented in Turkey by starting at an early age, could make students orient towards the deep learning approach auditorially. In the study made by Dweck & Leggett (1998), they found that there was an indirect effect on academic success through learning goals, deep cognitive assignment of duties and expending efforts.

It was determined that there was a statistically significant mediation effect for the subscale of the Surface Learning Approach in the relationships among Kinesthetic and Visual Learning Modalities, Performance-Approach and Performance-Avoidance Goal Orientations. In the study made by Lie, Lau and Nie (2008) on students studying in Singapore, while it was determined that the Performance-Approach Goal Orientations had a direct effect on the Deep Learning Approach, it was determined that the Performance-Avoidance Goal Orientations had a direct effect on the Surface Learning Approach. In another study, it was stated that the Performance-Approach and Avoidance Goal Orientations only had a direct effect on the Surface Learning Approach (Azar, et al. 2010). In studies that support in a consistent manner the Achievement Goals of students, while it is thought that the Performance-Approach Goal Orientations have an important place (Senko, Hulleman and Harackiewicz, 2011), for learning, it is not certain whether or not both the learning and the performance approach goal orientations are a clear advantage for students as well as for teachers. In the studies made related to the learning goals for teachers, while the benefits of the learning goals are shown in a clear manner, the benefits of the performance goals were not reported (cited in Cho & Shim, 2013).

Cano (2005) stated that on the subject of developing the learning of students, it does not only have the attributes aimed at learning approaches and that it is necessary for us to take into account in the teaching-learning system all of the 3 components (goals, learning and evaluation) within the effect. The teacher candidates should know well the study process approaches and learning modalities that provide for the students to learn in a more comprehensible manner, for them to avoid factors that pave the way to mental confusion and that will facilitate attaining success. Since the teacher candidates know their own learning modalities, it is expected that they will increase the awareness of their students on the subject of the learning modalities after they become teachers. Consequently, the teacher candidates will be able to determine more easily how they will be able to implement a teaching activity for the students and will provide for a contribution in a suitable manner to an effective teaching model.

Reference

Akın, A. (2006). 2×2 başarı yönelimleri ölçeği: Geçerlik ve güvenirlik çalışması[2×2 achievement goal orientation scale: The validity and reliability study]. *Sakarya Üniversitesi Eğitim Fakültesi Dergisi*, 12, 1-13.

Akın A. (2010). Achievement goals and academic locus of control: Structural equation modeling. *Eurasian Journal of Educational Research*, 38, 1-18.

Ames, C. (1992). Classrooms: Goals, structures and student motivation. *Journal of Educational Psychology*, 84, 261-271.

Azar H.K., ,Lavasani M.G., Malahmadi E.,& Amani J. (2010). The role of self- efficacy, task value, and achievement goals in predicting learning approaches and mathematics achievement. *Procedia - Social and Behavioral Sciences*. (5): 942–947. http://dx.doi.org/10.1016/j.sbspro.2010.07.214.

Beşoluk, Ş., & Önder, İ. (2010). Öğretmen adaylarının öğrenme yaklaşımları, öğrenme stilleri ve eleştirel düşünme eğilimlerinin incelenmesi [Investigation of teacher candidates' learning approaches, learning styles and critical thinking dispositions]. *Elementary Education Online*. 9(2), 679-693.

Biggs, J., Kember, D., & Leung, D. (2001). The revised two-factor SPQ: R-SPQ-2F. *British Journal of Educational Psychology*. 71(1), 133–149. http://dx.doi.org/10.1348/000709901158433.

Cano F. (2005). Epistemological beliefs and approaches to learning: their change through secondary school and their influence on academic performance. *British Journal of Educational Psychology*. 75, 203–221.

Chan K.W. (2003). Hong Kong teacher education students' epistemological beliefs and approaches to learning. *Research in Education*, 69 (1), 36-50.

Chamorro-Premuzic T.,& Furnham A. (2009). Mainly openness: The relationship between the big five personality traits and learning approaches. *Learning and Individual Differences.* 19, 524–529. http://dx.doi.org/10.1016/j.lindif.2009.06.004.

Cho Y.J.,& Shim S.S. (2013). Predicting teachers' achievement goals for teaching: The role of perceived school goal structure and teachers' sense of efficacy. *Teaching and Teacher Education.* 32, 12–21. http://dx.doi.org/10.1016/j.tate.2012.12.003.

Coutinho S.A., & Neuman G. (2008). A model of metacognition, achievement goal orientation, learning style and self-efficacy. *Learning Environ Res*. 11:131–151. http://dx.doi.org/10.1007/s10984-008-9042-7.

Csapo, N. & Hayen, R. (2006). The role of learning styles in the teaching/learning process. *Issues in Information Systems, 7(1), 129-133.*

Devellis, R.F. (1991). *Applied social research methods series: 26.Scale development: Theory and applications* (L.Bickman&D.J.Rog, Series Eds.). Newbury Park, CA:Sage.

Puente-Diaz, R. (2012) The effect of achievement goals on enjoyment, effort, satisfaction and performance, *International Journal of Psychology*, 47(2), 102-110. http://dx.doi.org/10.1080/00207594.2011.585159.

Duff A. (1999). Access policy and approaches to learning. accounting education: *An international journal*. 8 (2), 99-110. http://dx.doi.org/10.1080/096392899330955.

Dweck, C.S., & Leggett, E.L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*. (95) 256–273.

Eliot A.J.,& Thrash, T.M. (2001). Achievement goals and hierarchical model of achievement motivation. *Educational Psychology Review*. 13 (2), 139–156. http://dx.doi.org/10.1023/A:1009057102306.

Elliot, A.J., Mcgregor, H., & Gable, S.L. (1999). Achievement goals, study strategies, and exam performance. *Journal of Educational Psychology*. 91(3), 549–563.

Elliot, A.J., Mcgregor, H.,(2001). A 2x2 Achievement goal framework, *Journal of Personality and Social Psychology,* 80(3): 501-519. http://dx.doi.org/10.1037//0022-3514.80.3.501.

Green, B.A., & Miller, R.B. (1996). Inxuences on achievement: Goals, perceived ability, and cognitive engagement. *Contemporary Educational Research*. 21 181–192.

Gilbert E.J., & Swanier A.C. (2008). Learning styles: How do they fluctuate? *Institute for Learning Styles Journal*. 1, 29-40.

Howell A.J.,& Buro K. (2009). Implicit beliefs, achievement goals, and procrastination: A meditational analysis. *Learning and Individual Differences,* 19, 151–154. http://dx.doi.org/10.1016/j.lindif.2008.08.006.

Kalaycı, Ş. (2005). *Spss uygulamalı çok değişkenli istatistik teknikleri [Spss applied multivariate statistical techniques]* Ankara: Asil Yayın Dağıtım.

Kazak Cetinkalp Z. (2010).The relationship between academic locus of control and achievement goals among physical education teaching program students. *World Applied Sciences Journal* 10(11): 1387-1391.

Liem A.D., Lau S.,& Nie Y. (2008). The role of self-efficacy, task value, and achievement goals in predicting learning strategies, task disengagement, peer relationship, and achievement outcome. *Contemporary Educational Psychology*. 33(4), 486–512. http://dx.doi.org/10.1016/j.cedpsych.2007.08.001.

May W., Chung E-K., Elliott D., & Fisher D. (2012). The relationship between medical students' learning approaches and performance on a summative high-stakes clinical performance examination. *Medical Teacher*. 34 236–241. http://dx.doi.org/10.3109/0142159X.2012.652995.

Meece, J., Blumenfeld, P.C., & Hoyle R.. (1988). Students' goal orientation and cognitive engagement in classroom activities. *Journal of Educational Psychology* 80(4), 514-523.

Özbaş, S. (2013). The investigation of the learning styles of university students. *The Online Journal of New Horizons in Education*, 3(1), 53-58.

Özgür H., & Tosun N. (2012). Examination the deep and durface learning approaches of pre-service teachers in terms of some variables. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*, 12, (24), 113 – 125.

İzci E., & Koç S. (2012). Analyzing success intention levels of students having pedagogical formation training. *Dicle Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* 4(8), 31-43.

Li C. (2012). An investigation of Chinese students' learning styles at an English-medium university in Mainland China, *Theory and Practice in Language Studies*, 2, (1). 6-13. http://dx.doi.org/10.4304/tpls.2.1.6-13.

Pallapu P. (2007). Effects of visual and verbal learning styles on learning. *Institute for Learning Styles Journal*. (1):34-39.

Peat J. & Barton B. (2005). *Medical statistics: A guide to data analysis and critical appraisal*. Massachusetts: Blackwell publishing.

Pintrich, P.R., & De Groot, E. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82, 33-40.

Prosser, M. & Trigwell, K. (1999). *Understanding learning and teaching. The experience in higher education.* Buckingham: The society for research into higher education.

Salamonson Y., Weaver R., Chang S., Koch J., Bhathal R., Khoo C., & Wilson I. (2013). Learning approaches as predictors of academic performance in first year health and science students. *Nurse Education Today*, 33(7), 729-733. http://dx.doi.org/10.1016/j.nedt.2013.01.013.

Senemoglu, N. (2011). College of education students' approaches to learning and study skills. *Education and Science*, 36 (160), 66-80.

Senko C., Hulleman C.S., & Harackiewicz, J.M. (2011). Achievement goal theory at the crossroads: Old controversies, current challenges, and new directions. *Educational Psychologist,* 46, 26–47. http://dx.doi.org/10.1080/00461520.2011.538646.

Smith, N.S.,& Miller, R.J. (2005). Learning approaches: examination type, discipline of study and gender. *Educational Psychology*. 25(1), 43-53. http://dx.doi.org/10.1080/0144341042000294886.

Splan R.K., Brooks R.M., Porr S. & Broyles T.W.(2011). Resiliency and achievement goal orientation among agricultural students, *NACTA(North American Colleges and Teachers of Agriculture-Conference) Journal*, 31-38.

Şimşek N. (2002). BİG16 Öğrenme biçemleri envanteri,[BİG16 learning modality inventory] *Eğitim Bilimleri ve Uygulamaları*, 1(1), 33-47.

Taher A.M.M. & Jin C. (2011). Assessing learning approaches of Chinese local MBA students: an investigation using the revised two factor study process questionnaire (r-spq-2f). *Educational Research and Reviews*, 19(6), 974-978.

Yılmaz B., & Orhan F. (2011). The validity and reliability study of the Turkish version of the study process questionnaire. *Education and Science, 36*(159), 70-85.

Zhang L.F. (2000). University students' learning approaches in three cultures: an investigation of Biggs's 3p model. *The Journal of Psychology*. 134: (1), 37-55. http://dx.doi.org/10.1080/00223980009600847.