



IMPACT OF SELF-EFFICACY AND LEARNING APPROACHES ON ACHIEVEMENT CONTROLLING FOR DEMOGRAPHIC VARIABLES

DEMOGRAFİK DEĞİŞKENLERİ KONTROL ETTİKTEN SONRA ÖZ-YETERLİLİK VE ÖĞRENME YAKLAŞIMLARININ BAŞARI ÜZERİNE ETKİSİ

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ABSTRACT: Educational executives, instructors and future employers aspire students to use the Deep Approach to learning as it inculcates a deeper and enduring understanding of the course content. Leading the student to problem solving skills and tools is important for being creative rather than imitative. Three instruments were administered to 829 Turkish undergraduates in order to collect data on their nationality, age, parents' education, Academic Self-Efficacy and Learning Approaches. Age and students' mothers' education levels were found to have a significant positive direct effect on Academic Self-Efficacy, and while Academic Self-Efficacy was found to have a positive direct effect on the Deep Approach usage, students' mothers' education level was found to have a negative direct effect. The use of the Deep Approach did not have a direct significant effect on course grade, whereas high Academic Self-Efficacy was found to significantly predict the attainment of a higher course grade.

Keywords: academic self-efficacy, learning approaches, deep approach, surface approach, parent education level

Özet: Eğitim yöneticileri, okutmanlar ve geleceğin işverenleri öğrencilere daha derin bir öğrenme ve müfredatlara yeni bir anlayış getiren "Derin Öğrenme Yaklaşımını" benimsemeleri konusunda ilham kaynağı olabilmelidirler. Öğrencinin problem çözme becerileri konusunda bu yaklaşıma yönlendirilmesi taklitçilikten uzaklaşıp yaratıcılığa yakınlaşmaları açısından bu yaklaşım önem arz etmektedir. 829 lisans öğrencisi üzerine gerçekleştirilen bu çalışma, katılımcıların yaş, ebeveyn öğrenim durumu ve cinsiyet değişkenleri bağlamında incelemiştir. Akademik öz-yeterlik ile öğrenme yaklaşımlarının bu değişkenler de gözetilerek başarıyı etkileyip, etkilemediğine bakılmıştır. Derin öğrenme yaklaşımının öğrencilerin notlarında anlamlı bir fark yaratmasada, öz-yeterliklerini anlamlı düzeyde etkilediği söylenebilmektedir.

Anahtar Kelimeler: akademik öz-yeterlik, öğrenme yaklaşımları, derin öğrenme

1. INTRODUCTION

Ever since Marton and Saljö discovered the 'Deep' meaningful and 'Surface' rote memorization learning approaches during their study on how students actually approach their learning (Marton & Saljö, 1976), it has been a much researched and popular topic, especially so in the United Kingdom, United States of America, Australia and Hong Kong. These studies have mainly focused on whether the Deep Approach or Surface Approach leads to academic achievement and in what type of learning environment, teaching and evaluation methods induce the use of the Deep Approach (Marton & Saljö, 1976; Ramsden & Entwistle, 1981; Ramsden, 1989; Butler & Cartier, 2004). Some studies have found the Deep Approach to have a positive effect on academic achievement (Ramsden, 1983; Wigen, Holen, & Ellinsen, 2003; Cano, 2007; Reid, Duvall, & Evans, 2007), and the Surface Approach to have a negative effect (Ramsden, 1983; Purdie & Hattie, 1995). Other studies produced results showing both the Deep and Surface Approach to result in academic achievement (Biggs, 1976; Biggs, 1978; Haggis, 2003) and some found that the use of the Deep Approach did not predict academic achievement at all (Burton & Nelson, 2006; Cassidy & Eachus, 2000; Diseth & Martinsen, 2003; Rollnick, Davidowitz, Keane, Bapoo, & Magadla, 2008). Similar studies conducted in Turkey on whether the Deep Approach predicts success have found mixed results. Studies conducted by Ellez and Sezgin (2002) and Selçuk (2010) on a sample of 25 university students studying Mathematics Teaching and a sample of 251 students studying in the Middle School Sciences and Sciences Field Education department both in the Dokuz Eylül University found the use of the Deep Approach to

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significantly predict academic achievement. Another study conducted on 203 university students studying in the Pre-service Science Teacher department in Sakarya University also found that the use of the Deep Approach was highly correlated with academic success (Önder, Beşolok, & Demirhan, 2009). The study conducted on 630 students studying in the faculties of Education, Arts and Sciences, Communication, Engineering, and Agriculture in the University of Ege found that neither the Deep Approach nor the Surface Approach significantly predicted Academic Achievement (Topkaya, Yaka, & Öğretmen, 2011).

Richardson (1994) defines the features of the Deep Approach to be “Intention to understand, vigorous interaction with content, relate new ideas to previous knowledge, relate concepts to everyday experience, relate evidence to conclusions, examine the logic of the argument” (Richardson, 1994, p. 1) and the Surface Approach to be “Intention to complete task requirements, memorise information needed for assessments, failure to distinguish principles from example, treat task as an external imposition, focus on discrete elements without integration, and unreflectiveness about purpose or strategies” (Richardson, 1994, p. 1). Looking at these definitions it can be understood why the use of the Deep Approach is a preferred learning approach to the Surface Approach as the latter consists of the student memorizing the material and regurgitating it during the exam and remembering very little of the course content after graduation. Administrators and faculty members of educational institutes like to have students who approach their learning in a deep and meaningful manner as it results in the student to understand, remember and use the knowledge and skills in a creative manner which can be put to use much after graduation. Apart from being a prestigious outcome for the university, such students will also present an impressionable image on their prospective employers.

So, although the topic of whether the Deep Approach has an impact on academic success is an important research issue, and has been much researched, results have not always produced desirable outcomes. Such results do not mean that the Deep Approach should not be used as the reasons could stem from the economical difficulties that most universities in Turkey and North Cyprus are facing. These difficulties have come about due to the increasing number of new universities being established bringing with it rivalry which has forced entrance standards to be lowered. So classrooms are filled with students of diverse academic backgrounds which is making teaching and evaluation challenging. Instructors may not be able to provide the best environment to instill the Deep Approach to learning and may have to conduct evaluation that would help Surface Approach learners to pass so that students who fail will not be lost to another educational institution.

Studies may not always show that the use of the Deep Approach leads to academic achievement but they show that students **are** using this approach to a certain extent, some much more than others. Students that are using this approach will be able to remember the knowledge as well as understanding behind it and be equipped with the tools, that will enable them to find solutions to obstacles and problems that they will be faced with after graduation. Regardless of whether the use of the Deep Approach leads to academic achievement or not, the use of this approach is important, therefore the factors that influence or have an impact on the use of the Deep Approach need to be investigated. One such variable is Self-Efficacy. Decades of research on the effects of Self-Efficacy in education has shown it to be a predictor of student motivation, learning, (Zimmerman, 2000) and academic achievement (Ergul, 2004; Çalışkan, Selçuk & Özcan, 2010; Pintrich & Schunk, 1996; Schunk & Pajares, 2002, Zeegers, 2004). Research on learning approaches and Self-Efficacy discovered that students with high Academic Self-Efficacy led to the use of the Deep Approach, and students with low Academic Self-Efficacy led to the use of the Surface Approach (Cassidy & Eachus, 2000; Fenollar, Roman, & Cuestas, 2007; Habel & Habel, 2010; Papinczak, Young, Groves & Haynes, 2008; Prat-Sala & Redford, 2010; Topkaya et al., 2011). This variable together with age, nationality, fathers' education level and mothers' education level will be investigated to see whether they induce the use of the Deep Approach and whether this has an effect on academic achievement.

The following research questions were set for the study:

1. How do age, nationality, fathers' education level, and mothers' education level relate to Learning Approaches and Academic Self-Efficacy?
2. How does Academic Self-Efficacy relate to Learning Approaches?

3. How do Learning Approaches and Academic Self-Efficacy relate to Course Grade after controlling for demographic variables?

2. METHOD

2.1 Sample

All the second, third, and fourth year Turkish and Turkish Cypriot undergraduates studying in the Faculty of Education in the Eastern Mediterranean University during the fall semester of the 2010 – 2011 academic year attending class on the day of administration, formed the sample. Out of 833 participating undergraduates, 829 valid cases were found. Seven hundred and twentyone (87%) were Turkish from Turkey and 108 (13%) were Turkish from North Cyprus, 138 (17%) were 2nd year students, 244 (29 %) were 3rd year students, and 465 (54 %) were in their final year of undergraduate study.

2.2 Instruments

Three instruments were used as part of this study. First, the Personal Information Questionnaire which was designed by the authors with the aim of obtaining the students' age, nationality, father's education level, and mother's education level.

Second, the Academic Self-Efficacy Scale, which is the Turkish version of the original German instrument created by Schwarzer and Jerusalem (1995) translated by Yılmaz, Gürçay, and Ekici (2007). This scale aims to weigh up the students' belief in whether they will complete their academic tasks successfully (Yılmaz et al., 2007). The scale has one dimension with seven items and the seventh item is a reverse coded item. The scale uses a four point Likert scale and has a Cronbach's alpha reliability coefficient of .87. The Turkish translation has a Cronbach's alpha reliability value of .79. Permission to use this version has been obtained. In order for all the instruments that will be used in this study to have a standard format, the Likert scale of the Academic Self-Efficacy Scale was increased from 4 to 5 and the alternatives were changed to read from negative to positive in order to be in harmony with the other instruments. Students were asked to respond to the questions via marking A – this item is never or only rarely true of me, B – this item is sometimes true of me, C – this item is true of me about half the time, D – this item is frequently true of me, and E – this item is always or almost always true of me. The scoring is as follows: A = 1, B = 2, C = 3, D = 4, and E = 5. According to this scoring format the minimum score is 7 and the maximum is 35.

Third, the Two Factor Revised Study Process Questionnaire by Biggs, Kember, and Leung (2001) aims to find out what type of learning approaches students are using, hence it measures two factors: The Deep Approach and the Surface Approach with 10 items per approach. The Cronbach's alpha values for scale reliability for the Deep Approach was found to be .73 and .64 for the Surface Approach (Biggs et al., 2001). Students are asked to respond to the items via marking A – this item is never or only rarely true of me, B – this item is sometimes true of me, C – this item is true of me about half the time, D – this item is frequently true of me, and E – this item is always or almost always true of me. The scoring is as follows: A = 1, B = 2, C = 3, D = 4, and E = 5. The minimum score for each approach is 10 and maximum is 50 (Biggs et al., 2001). As the instrument was in English and the participants were Turkish, it was necessary to translate it into Turkish. Permission to do so was obtained from the authors. The translated version was first checked and corrected by an expert (bilingual and education specialist), then it was checked for grammar and comprehension by an expert, proofread and checked for face validity and comprehension. It was then back-translated into English by an independent professional translator and comparison of the back-translated and the original questionnaires were made. Discrepancies were discussed with four bilingual English Language Lecturers and one bilingual Lecturer and decision on the final changes were reached. Finally, checks for Turkish grammar were made and the questionnaire took its final form. The Turkish version was piloted for face-validity on a small group of 5 students and interview questions were asked regarding face validity, comprehension and ease of answering. The feedback was checked and no corrections

were deemed necessary. Both versions were tested on five bilingual speakers to check whether they found both versions to have the same meaning. Three respondents gave exactly the same answers to the Turkish and English versions of the questionnaires. The fourth respondent had one answer that didn't match in both questionnaires where she marked answers adjacent to each other; "sometimes true of me" for the English version and "True of me about half the time" for the Turkish version. The fifth respondent had three answers that differed in the two versions, again having answers in the boxes next to each other. On consulting the respondents they said it was not due to the unclarity of the questions but to do with not being sure of the answer within themselves. Hence, it was decided that there was no need for any changes. The students' course grade was obtained via the student portal at the end of the semester.

Implementation of the instruments was conducted using the Synchronos Technological Administration Method (STAM) (Yaratan & Suphi, under review) where each item of all the instruments with the choice of answers was presented on a PowerPoint slide to the group. The administrator read out loud the question on each slide and waited until all the students completed filling the appropriate choice on the optic form before going onto the next slide. In this way students completing the questionnaires at a slower rate than their peers would not rush their answers and any problems with the application could be noticed by the participants' body language and tried to be remedied.

3. FINDINGS

3.1 Demographic Findings

The students' ages ranged between 16 and 35 with the majority 603 (72.6%) being between the ages of 20 and 23, 37 (4.6%) between the ages of 16 and 19, 162 (19.5%) between the ages of 24 and 27, 19 (2.3 %) between the ages of 28 and 31, and 8 (1%) between the ages of 32 and 35.

About one fifth (19.5%) of the students' fathers were elementary school (ages 6 – 11 years), 12.5% middle school (ages 11 – 14 years), and 29.3% were High School graduates (ages 14 – 18 years), 11% graduated from a 2-year higher educational program, 23.2% from university, 1.4% had a master's degree, .5% a Ph.D. holder, while 1.1% were illiterate and 1.4% could only read and write. Quite a number of the students' mothers (5.3%) were shown to be illiterate, 4.8% were stated to be able to read and write, the majority (30%) were elementary school graduates (ages 6 – 11 years), 15.4% were middle school graduates (ages 11 – 14 years), 24.5% were High School graduates (ages 14 – 18 years), 6.6% graduates from a 2-year higher educational program, 12.8% were university graduates, only 0.1% had a master's degree, and 0.1% was a Ph.D. holder. Two students (.2%) who left this section blank were contacted for an answer but on learning their mothers were deceased, the students were not pressed for an answer.

The course grade received by the students ranged between 'F' to 'A' with only two students (.2%) failing their course, one receiving 'F' and the other 'D-'. The majority of the students 501 (60.4%) received between 'B-' and 'B+', 144 students (17.4%) received between 'A-' and 'A', 163 students (19.7%) received between 'C-' and 'C+', and only 19 students (2.3%) received between 'D' and 'D+'.

3.2 Academic Self-Efficacy Scale

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was found to be .81 which shows the sample to be 'meritorious' (Kaiser, 1974). The Bartlett's test of sphericity was found to be significant at $X^2(21) = 1107.747$, $p < .000$ (Ho, 2006). Following this result, a confirmatory factor analysis was conducted using AMOS. It was found that on dropping items 1 and 7, goodness-of-fit index (GFI) was found to be .994, comparative fit index (CFI) .991, root mean square error of approximation (RMSEA) .049, and significance (p) of close fit (PCLOSE) .467 showing this model to have a very good fit. The Cronbach's alpha for the scale with the remaining 5 items was found to be .73.

In order to assess discriminant and convergent validities of this instrument SPSS was used to conduct an exploratory factor analysis using Principal Component Analysis on the five items (22, 23, 24, 25 and 26). Direct oblimum for rotation, as all the items are correlated, and eigenvalues above 1.00 criterion was used. All five of the items fell into column one of the component matrix and ranged between .553 to .819 which is higher than the suggested .40 cutoff showing acceptable discriminant validity (Hair, Anderson, Tatham, & Black, 1998). As all the items in the inferred factor have loadings of above .40, this shows that there is also convergent validity for this factor (Hair et al., 1998).

3.3 Turkish version of the Two-Factor Revised Study Process Questionnaire

The Kaiser-Meyer-Olkin measure of sampling adequacy was found to be 0.91 which is considered a 'marvelous' level of adequacy sample (Kaiser, 1974). The Bartlett's test of sphericity was found to be significant at $X^2(190) = 4387.874$, $p < .000$ (Ho, 2006). Following this result, a confirmatory factor analysis was conducted using AMOS. It was found that on dropping item 2 from the Deep Approach factor and item 20 from the Surface Approach factor, GFI was found to be .950, CFI .937, RMSEA .049, and PCLOSE .643 showing this model to have a very good fit. The Cronbach's alpha for both the Deep Approach and Surface Approach with their remaining nine items was each .81.

In order to assess discriminant and convergent validities of this instrument SPSS was used to conduct an exploratory factor analysis using Principal Component Analysis on the eighteen items (1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19). Varimax rotation, as the items were not correlated, and eigenvalues above 1.00 criterion was used. The Rotated Component Matrix, revealed items 16, 4, and 10 to fall into a third category. These items were noticed to also have the lowest loadings (.40, .38, and .33) on the confirmatory factor analysis model and were removed before the exploratory factor analysis was rerun. A second Rotated Component Matrix for exploratory factor analysis was conducted with 15 items suppressing the values below .42 to show two 'clean' factors. All the Deep Approach items fell onto factor one labelled 'Deep Approach' with loadings ranging between .437 to .721 and all the Surface Approach items fell into the second factor labelled 'Surface Approach' with loadings ranging between .543 and .720. Thus showing both discriminant and convergent validity. The Cronbach's alpha for the Deep Approach with 8 items (1, 5, 6, 9, 13, 14, 17, and 18) was found to be .81 and the Surface Approach with 7 items (3, 7, 8, 11, 12, 15, 19) was found to be .80.

Using SPSS, an exploratory factor analysis using Principal Components Analysis was used to conduct discriminant and convergent validities by inputting all the items for the three factors found from the two instruments. Varimax rotation was used. All the items snugly fell into only their own factor showing discriminant validity and the loadings for all the items were above .40 showing convergent validity.

3.4 Correlation

Pearson product-moment correlation analysis was conducted using SPSS among the total of nine variables. The aim was to find the correlation coefficients which show the extent of the relationship between any two variables.

Table 1: Correlations Between Study Variables (N=829)

Variables	1	2	3	4	5	6	7	8
1. Age	1.00							
2. Nationality	-.296**	1.00						
3. Fathers' Educ.	-.047	-.129	1.00					
4. Mothers' Educ.	-.186**	.026	.628**	1.00				
5. Course Grade	.020	-.076*	.023	.058	1.00			
6. Deep App.	.073*	.030	-.061	-.122**	-.046	1.00		
7. Surface App.	-.017	.052	.045	.069*	.035	-.577**	1.00	
8. Aca. Self-Efficacy	.071	-.059	.018	.060	.084*	.280**	-.216**	1.00
9. Prop. of DA usage	.040	-.024	-.056	-.100**	-.051	.860**	-.900**	.276**

** Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Table 1 shows the correlations among course grade, Academic Self-Efficacy, Deep Approach mean, Surface Approach mean, Proportion of Deep Approach usage out of both approaches, age, nationality, fathers' education level and mothers' education level on 829 valid cases. The variable 'Proportion of Deep Approach usage out of the use of both approaches' was calculated by dividing the Deep Approach mean by the sum of the Deep Approach Mean and Surface Approach mean (DA/(DA+SA)). The correlation coefficients between these variables range from $r = -.900$ which is the correlation between Surface Approach mean and Proportion of Deep Approach usage out of both approaches, to $r = .860$ between Deep Approach mean and Proportion of Deep Approach usage out of both approaches.

The results showed Academic Self-Efficacy to be negatively correlated with Surface Approach mean ($r = -.216$) and positively correlated with Course Grade, Deep Approach mean and Proportion of Deep Approach out of both approaches ($r = .084$, $.280$, and $.276$ respectively) showing that students with high Academic Self-Efficacy are using the Deep Approach more, using the Surface Approach less and gaining a higher course grade. These results are in line with the findings of Cassidy and Eachus (2000), Warkentin, Griffin, and Bates, (1994), Pintrich and Schunk (1996), Schunk and Pajares (2004) and Zeegers, (2004).

Proportion of Deep Approach out of both approaches was found to be significantly negatively related to mothers' education level and Surface Approach mean ($r = -.100$, and $-.900$ respectively) and positively related to Deep Approach mean ($r = .860$). This result shows that the students whose mothers' have a lower level of education are using the Deep Approach more than the Surface Approach.

3.5 Path Analysis

A path analysis was conducted using AMOS (v. 18) and the following result was found. The model (Figure 1) was found to be recursive (Kline, 2005) with a sample size of 829. The CMIN/DF was found to be 1.685, the CFI .996, the NFI .990, the RMSEA .029, and the PCLOSE .800, altogether showing this model to be an excellent fit.

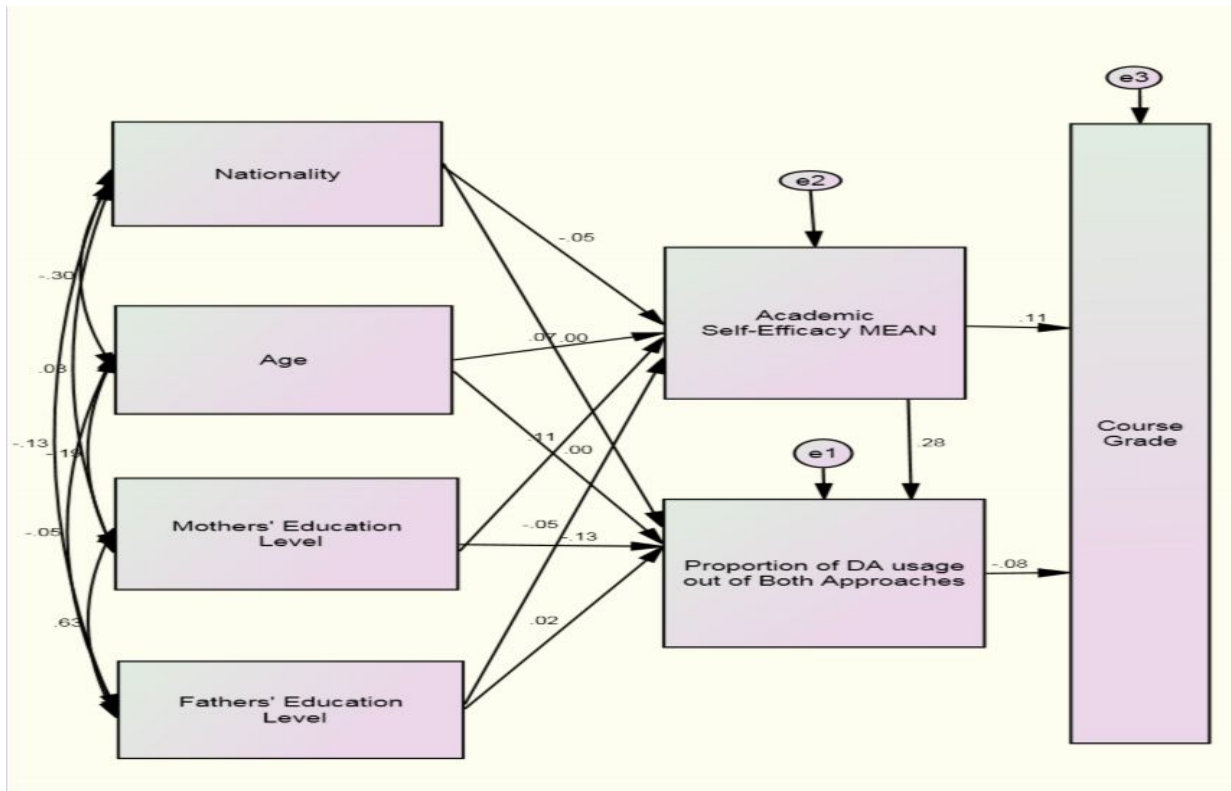


Figure 1. Path Analysis Model

As can be seen from Figure 1, Academic Self-Efficacy shows a direct inverse effect of -0.05 standard deviation decrease for each standard deviation unit increase in nationality and fathers' education level which is considered as a small effect (Kline, 2005). This shows that the Turkish students from Turkey and students whose fathers' have a lower level of education have higher Academic Self-Efficacy. Academic Self-Efficacy shows a direct positive effect of 0.07 standard deviation increase for each standard deviation unit increase in age. This shows that the higher the student's age, the higher the student's Academic Self-Efficacy. This is an understandable result as the students' Academic Self-Efficacy can be increased with positive experience. Academic Self-Efficacy shows a direct positive effect of 0.11 standard deviation increase for each standard deviation increase in mothers' education level showing that the higher the students' mothers' education level the higher the students' Academic Self-Efficacy.

The proportion of Deep Approach usage out of both approaches shows a direct positive effect of 0.02 and 0.28 standard deviation increase for each standard deviation unit increase in fathers' education level and Academic Self-Efficacy respectively. This shows that students whose fathers have higher education levels and those who have high Academic Self-Efficacy are using the Deep Approach more than the Surface Approach. The proportion of Deep Approach usage out of both approaches shows a direct inverse effect of -0.13 decrease for each standard deviation unit increase in mothers' education level showing that the lower the students' mothers' level of education the more they are using the Deep Approach out of both approaches. In this case the highest direct positive effect on Proportion of Deep Approach usage out of both approaches is Academic Self-Efficacy. This is in line with the study conducted by Cassidy and Eachus (2000) on 130 undergraduate students studying in the Faculty of Health, Care and Social Work Studies in a British University where Academic Self-Efficacy was found to positively correlate with the Deep Approach, and also in line with the study conducted by Suphi & Yaratan (2011) on 99 Turkish and Turkish Cypriot undergraduate students taking a Statistics I course in the Department of Educational Sciences in a university in North Cyprus. This result is also in line with similar studies conducted in Turkey (Topkaya, Yaka & Öğretmen,

2011), in Spain (Fenollar et al., 2007), in Australia (Habel & Habel, 2010; Papinczak, Young, Groves & Haynes, 2008), and in the United Kingdom (Prat-Sala & Redford, 2010).

Course grade shows a direct positive effect of .11 standard deviation increase for each standard deviation unit increase in Academic Self-Efficacy. This shows that the students who have higher Academic Self-Efficacy are more apt to receiving higher course grades. Course grade also shows a direct inverse effect of -.08 standard deviation decrease for each standard deviation unit increase in proportion of Deep Approach usage out of both approaches showing that the more the student uses the Deep Approach the lower the course grade they will receive. This could show that the student may not be competent in using the Deep Approach or evaluation may not necessitate or encompass this.

4. DISCUSSION AND CONCLUSION

An interesting finding that affected the use of the Deep Approach was the students' mothers' education level. The higher the students' mother's education level the less likely they were found to use the Deep Approach and more likely to use the Surface Approach when studying and vice versa. Suphi and Yaratan (2011) found similar results when they conducted a study on 99 students enrolled in a Statistics I course in the Educational Sciences department in the Eastern Mediterranean University. The reason for this outcome could be the students with mothers' with low education levels may be more motivated to achieve a better standard of life for themselves and their mothers. On the other hand students whose mothers' have a high level of education have been found to have high Academic Self-Efficacy so this could mean that they feel they do not need to use the Deep Approach to be successful and they have so much Academic Self-Efficacy that they believe they will do well with whatever approach they use. Further research may be required to unearth the reasons for this finding. No similar results were come across to back up these findings. This could be due to studies only incorporating the fathers' education level or using students' parents educational level without separating the two (Engin-Demir, 2009).

Furthermore, when the indirect effects of age and mothers' education level on the use of the Deep Approach is looked at, it can be seen that it passes through Academic Self-Efficacy showing that as mothers' education levels increase and as the student matures, their Academic Self-Efficacy is found to increase which in turn positively affects their use of the Deep Approach. Interestingly, students with higher Academic Self-Efficacy have mothers with a higher level of education which indirectly results in these students preferring the use of the Deep Approach but, on the other hand, the direct effect of low level of mothers' education is also related to students preferring the use of the Deep Approach. This shows that if the level of students mothers' education is high, it has a negative direct effect but a positive indirect effect on the use of the Deep Approach via Academic Self-Efficacy.

A similar but inverse result has been found for fathers' education level, in other words, a high level of fathers' education predicts a low level of Academic Self-Efficacy which in turn predicts indirectly a low level of Deep Approach usage. Maybe just the notion of being in the process of getting a higher level of education than their father can help to increase Academic Self-Efficacy of the students. On the other hand, students whose fathers have a high level of education are confronted with a higher level of educational aspiration which seems to force the students to have a lower level of Academic Self-Efficacy. Nonetheless, these students are more inclined to use the Deep Approach which could be due to the student trying to do better in order to reach their father's expectation for them.

In this study the use of the Deep Approach more than the Surface Approach did not predict a higher academic achievement, and conversely, it predicts a lower academic achievement. The reasons behind this can be further investigated. When the factors which influence the use of the Deep Approach are looked at, it can be seen that Academic Self-Efficacy has the greatest influence. This is not a surprising outcome as being able to use the Deep Approach necessitates the use of certain cognitive skills and competencies which can only be developed in time. Therefore the students who

believe in their ability to master these cognitive skills are the ones who persist until they have mastered the skills required for the use of the Deep Approach. As classrooms are now filled with students from diverse academic backgrounds and with some of these students lacking Self-Efficacy, an important responsibility is placed on the shoulders of instructors to increase students Academic Self-Efficacy and instill deep and meaningful learning. This can be done whilst teaching. Attainable tasks required for the Deep Approach to learning can be steadily given throughout the courses together with continuous support and motivation to make sure the tasks are satisfactorily accomplished. As a result, this may help to increase the students' Academic Self-Efficacy and encourage students to use the Deep Approach to a greater extent. This in return will help them use skills, knowledge and understanding attained during their university years to be productive and have a rewarding life in the future.

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Genişletilmiş Özet

Öğrenme sırasındaki kullanılan öğrenme yaklaşımları önemlidir. Derinsel Yaklaşımı, “anlamaya niyet etmek, işlenen konuyla yoğun etkileşim halinde olmak, yeni bilgileri eskilerle bağlamak, konseptleri günlük tecrübelerle bağlamak, elde edilen kanıtları sonuca bağlamak, tartışmanın mantığını irdelemek” (Richardson, 1994, p.1) gibi öğeleri içerdiğinden tercih edilen bir yaklaşımdır. Bu yaklaşımı kullanan öğrenci, mezun olduğunda bilgi ve becerilerini daha uzun vadede hatırlayıp kullanabilecek ve karşısına çıkacak problemleri daha kolay çözebilecektir. Derinsel yaklaşımlarla ilgili yapılan araştırmalarda değişik bulgular saptanmıştır, bazı sonuçları Derinsel Yaklaşımın öğrencileri başarıya ulaştırdığını (Ramsden, 1983; Cano, 2007), bazılarını ise ulaştırmadığını göstermiştir (Burton ve Nelson, 2006; Cassidy ve Eachus, 2000; Diseth ve Martinsen, 2003). Sonuç ne olursa olsun Derinsel Yaklaşımın öğrencinin mezuniyetinden sonra da çok faydalı bir yaklaşım olacağından eğitim esnasında kullanılması gerekli olmalıdır. Bu araştırmanın amacı, Derinsel Yaklaşımı etkileyen faktörleri tespit etmektir. Yapılan çalışmalarda Akademik Öz-Yeterliliği yüksek olan öğrencilerin Derinsel Yaklaşımı daha fazla kullandığı saptanmıştır (Cassidy ve Eachus, 2000; Habel ve Habel, 2010; Prat-Sala ve Redford, 2010; Topkaya et al., 2011).

Bu amacı gerçekleştirmek için aşağıdaki sorulara yanıt aranmıştır:

1. Yaş, uyruk, babanın öğrenim düzeyi ve annenin öğrenim düzeyi öğrenme yaklaşımları ve Akademik Öz-Yeterliliği nasıl etkiler?
2. Akademik Öz-Yeterlilik Öğrenme Yaklaşımları nasıl etkiler?
3. Öğrenme Yaklaşımlarını ve Akademik Öz-Yeterlilik öğrenci başarısını nasıl etkiler?

Bu çalışmanın örneklemini Doğu Akdeniz Üniversitesi, Eğitim Fakültesinde 2010 – 2011 akademik yılında kayıtlı ikinci, üçüncü, ve dördüncü sınıf Türk ve Kıbrıslı Türk 829 öğrenci oluşturmuştur. Kullanılan ölçme araçları: yazarların kendilerinin oluşturduğu ‘Kişisel Bilgi Envanteri’, Yılmaz ve diğerlerinin Türkçeye uyarladıkları ‘Akademik Öz-Yeterlilik Ölçeği’ (Yılmaz ve diğerleri, 2007), ve yazarlar tarafından Türkçeye çevrilmiş Biggs ve diğerlerinin (2004) ‘Gözden Geçirilmiş 2 Faktörlü Ders Çalışma Süreci Anketi’.

Akademik Öz-Yeterlilik Ölçeği’nin doğrulayıcı faktör analizi için AMOS programı kullanılmıştır. Birinci ve yedinci soru çıkartılınca uygun bir model ortaya çıkararak bir faktör bulunmuştur. Bu faktörün iç tutarlılık katsayısı (Cronbach Alpha) .73 olarak bulunmuştur.

Gözden Geçirilmiş 2 Faktörlü “Ders Çalışma Süreci” Anketi’nin doğrulayıcı faktör analizi için AMOS programı kullanılmıştır. Derinsel Yaklaşımdan ikinci soru ve Yüzeysel Yaklaşımdan yirminci soru çıkartılınca iki faktör olarak iyi bir model çıkmıştır. Her iki faktörün de iç tutarlılık kat sayısı Cronbach Alpha .81 olarak bulunmuştur.

İki ölçme aracında, toplam üç faktörün geçerliliğini ölçmek için SPSS programı ve Temel Bileşenler Analizi uygulanmıştır. Sonuç olarak Derinsel Yaklaşımına ait 8, Yüzeysel Yaklaşımına ait 7 ve Akademik Öz-Yeterliliğe ait 5 madde olarak saptanmıştır.

Korelasyon çalışmasında yine SPSS programı ve Pearson Product-Moment Correlation metodu kullanılmıştır. Sonuçlar Akademik Öz-Yeterlilik ile Yüzeysel Yaklaşımın negatif korelasyon ($r = -.216$) gösterirken, kurs notu (akademik başarı), Derinsel Yaklaşım ve Derinsel Yaklaşımın iki yaklaşımın toplamına olan oranı ile pozitif korelasyon ($r = .084, .280, \text{ ve } .276$) göstermiştir. Bu da öz-yeterliliği yüksek olan öğrencilerin Derinsel Yaklaşımı daha fazla kullandıklarını ve öz-yeterliliği daha düşük olan öğrencilerin ise Yüzeysel Yaklaşımı daha fazla kullandıkları gerçeğini ortaya çıkarmıştır.

Bir diğer sonuç ise annelerin eğitim düzeyleri ile Derinsel Yaklaşım ve Derinsel Yaklaşımın iki yaklaşımın toplamına olan oranı negatif korelasyon ($r = -.122, \text{ ve } -.100$) göstermiştir, ve Yüzeysel Yaklaşım ise pozitif korelasyon ($r = .069$) göstermiştir. Bu da anneleri daha düşük seviyede eğitim gören öğrencilerin Derinsel Yaklaşımı Yüzeysel Yaklaşımından daha fazla kullanmakta olduklarını belirlemiştir.

AMOS programını kullanarak yol (iz) analizi yapılmıştır. Çıkan sonuç modelin CMIN/DF'si 1.685, CFI'si .996, NFI'si .990, RMSEA'si .029 ve PCLOSE'si .800 olduğunu göstermiştir ve bu sonuç da Kline'a (2005) göre modelin 'mükemmel' olduğunu ortaya koymuştur. Model, Türkiyeli ve babanın eğitim düzeyi düşük olan öğrencilerin akademik öz-yeterlilikleri daha yüksek olduğunu gösterir. Ayrıca öğrencilerin yaşları ilerledikçe akademik öz-yeterliliklerinin arttığı da görülmüştür. Bu anlaşılabilir bir sonuçtur çünkü öğrencilerin öz-yeterlilikleri pozitif akademik deneyimle artabilir. İlaveten babanın eğitim düzeyi ve akademik öz-yeterliliği yüksek olan öğrencilerin Derinsel Yaklaşımı Yüzeysel Yaklaşımından daha fazla kullandıkları saptanmıştır. Annenin eğitim düzeyi yüksek olan öğrencilerin ise akademik öz-yeterlilikleri de yüksek olduğu ve annenin eğitim düzeyi düşük olan öğrencilerin de Derinsel Yaklaşımı Yüzeysel Yaklaşımından daha fazla kullandıkları görülmüştür.

Bu durumda Derinsel Yaklaşımı en fazla etkileyen faktör akademik öz-yeterlilik olarak ortaya çıkmıştır. Bu çalışmada akademik öz-yeterliliği yüksek olan öğrencinin kurs notunun da yüksek olduğu ancak Derinsel Yaklaşımı kullanan öğrencilerin kurs notu daha düşük olduğu saptanmıştır.

Model, Akademik Öz-Yeterliliğin Dersinsel Yaklaşım kullanımını etkilediğini, anneleri düşük düzeyde öğrenim gören öğrencilerin daha fazla Derinsel Yaklaşım kullandıklarını ortaya çıkarmıştır. Akademik öz-yeterliliği, yaşı ve annenin öğrenim düzeyi yüksek olan öğrencileri direkt ve pozitif etkilediğini ve babanın öğrenim düzeyi düşük olan öğrencileri direkt ve negatif etkilediğini göstermiştir.

Bu sonuç annenin öğrenim düzeyi yüksek olan öğrencilerin akademik öz-yeterliliklerinin de yüksek olduğunu ve dolaylı olarak Derinsel Yaklaşımı kullanmalarını olumlu etkilediğini, aynı zamanda annelerinin eğitimi düşük düzeyde olan öğrencilerin, direkt olarak Derinsel Yaklaşım kullanımına yatkın olduğunu göstermiştir. Böylece annenin öğrenim düzeyi düşük ise öğrencilerin Derinsel Yaklaşımına daha fazla yöneldikleri, ancak annenin öğrenim düzeyi yüksek ise dolaylı olarak (akademik öz-yeterlilikleri üzerinden) yine Derinsel Yaklaşımına yöneldikleri ortaya çıkmıştır.

Bu sonuç ayrıca öğrencinin akademik öz-yeterliliğinin Derinsel Yaklaşım kullanmasında büyük rol oynadığını göstermiştir. Dolayısıyla öğretmenlere önemli görevler düşmektedir. Öğretmenler ders esnasında öğrencilere sürekli olarak Derinsel Yaklaşım ile ilgili onları fazla zorlamadan yapabilecekleri görevler vererek ve onları yüreklendirerek hem Derinsel Yaklaşım ile ilgili bilgi ve becerilerini artırabilirler hem de akademik öz-yeterliliklerini yükseltebilirler. Böylece bu tür öğrenciler mezun oldukları zaman okul sıralarında öğrendiklerini hayatta karşılaşacakları sorunları çözmede kullanma fırsatı elde etmiş olacaklar.