



New Trends and Issues Proceedings on Humanities and Social Sciences



Volume 4, Issue 1 (2017) 344-351

ISSN 2421-8030

www.prosoc.eu

Selected Papers of 9th World Conference on Educational Sciences (WCES-2017) 01-04 February 2017 Hotel Aston La Scala
Convention Center, Nice, France

An examination of university students' learning and studying approaches

Hakan Karatas ^{a*}, Department of Educational Science, Faculty of Education, Yildiz Teknik University, 34200, Istanbul, Turkey.

Bulent Alci ^b, Department of Educational Science, Faculty of Education, Yildiz Teknik University, 34200, Istanbul, Turkey.

Aydin Balyer ^c, Department of Educational Science, Faculty of Education, Yildiz Teknik University, 34200, Istanbul, Turkey.

Mehtap Bademcioglu ^d, Graduate School of Social Sciences, Yildiz Teknik University, 34200, Istanbul, Turkey.

Suggested Citation:

Karatas, H., Alci, B., Balyer, A. & Bademcioglu, M. (2017). An examination of university students' learning and studying approaches. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 4(1), pp 344-351. Available from: www.prosoc.eu

Selection and peer review under responsibility of Prof. Dr. Jesus Garcia Laborda, University of Alcala, Spain.

©2017 SciencePark Research, Organization & Counseling. All rights reserved.

Abstract

Students' learning and studying approaches have positive effect on the quality of learning, academic achievement and performance. The aim of this study was to explore if the students' learning and studying approaches show significant differences in terms of gender, departments and Undergraduate Placement Exam (UPE) scores. The current study was conducted during 2016-2017 academic year with the participation of 56 female and 122 male students of different departments at Yildiz Technical University. Approaches to Learning and Studying Inventory (ALSI), developed by Hounsell, Entwistle, Anderson et al. (2002) and adapted to Turkish by Topyaka, Yaka and Ogretmen (2011) was used to identify students' approaches to learning and studying. Data were analyzed using One-Way ANOVA and Independent t-test, and Pearson correlation analysis. According to the findings, it was concluded that there were not any significant differences of university students' approaches to learning and studying such as surface, deep, and strategic approaches in terms of their departments. The results also showed that there are significant differences between female and male students regarding their departments. Moreover, it was found out that there is a positive correlation between students' UPE scores and strategic learning approaches, while there is a negative relation between students' UPE scores and deep learning approaches.

Keywords: Studying approaches; learning approaches.

* ADDRESS FOR CORRESPONDENCE: **Hakan Karatas**, Department of Educational Science, Faculty of Education, Yildiz Teknik University, 34200, Istanbul, Turkey.

E-mail address: hkaratas@yildiz.edu.tr / Tel.: +90 212 383 3145

1. Introduction

In many researches such as Gage and Berliner's (1992) study, it is stated that students learn how they become effective learners and take responsibility for their own learning by education. And, these should also be the main objectives of education. Some researchers suggest many variables affect learning. According to Senemoglu (2010), Entwistle (2000), and Woolfolk (2005) there are three main variables which affect the quality and effectiveness of learning outcomes. They are students' background which is related to education, student characteristics such as self-efficacy, motivation, beliefs and attitudes towards learning context, and students' department. However it can be said it is difficult to conceptualize all of them on the process of learning, Entwistle and Ramsden's (1983), Biggs's (1993), Prosser and Trigwell's (2006), and Byrne, Flood and Willis's (2009) researches findings show the approach to learning and study skills are important factors affecting the quality of student learning.

An approach refers to the relationship between student and what he/she learns (Ramsden, 1992). And, learning approach is described as the most basic feature which is created by learning activities of students (Biggs, 1999). Also, it is underlined there could be an intimate relationship between students' perceptions of their academic context and the approaches to studying (Newble & Entwistle, 1986; Cohen-Schotanus, 1999; Richardson, 2011). In terms of studying approach, Peters, Jones and Peters (2007) maintain context-specific nature of approach adopt by students suggest that it can be possible to change adopted approaches by altering the context.

It is stated there are three sub-dimensions of learning and studying approaches. (Biggs & Tang, 2011; Entwistle & McCune, 2004; Svensson, 1977; Zeegers, 2001). These are deep approach, surface approach and strategic approach. While deep approach is defined as an appropriate activities done to overcome the task so that an optimal result can be obtained, surface approach is defined as the way students organize the task (Biggs, 1999). He also describes an appropriate learning as discouraging students to adopt surface approach and encouraging them to adopt deep approach studying factors.

Entwistle, McCune and Walker (2000) suggest that students who adopt the deep approach show active engagement in their studies and monitor the development of their own learning. According to Biggs and Tang (2011), students who adopt deep approach have a tendency to participate the task meaningfully and appropriately. It is also stated it included intention to understand and effortful interaction with content (Rowe, 2001).

It is noted students who prefer the surface approach are constrained by the specific learning task and do not go beyond it (Entwistle & Ramsden, 1983). Rowe (2001) states that students who adopt this approach focus on separate parts without integration. Entwistle (2000) also maintains students have an intention solely to cope with task seen as a collection of irrelevant information that causes more limited learning processes.

Biggs (1987), Entwistle and Ramsden (1983), and Richardson (2009) address students preferring to use the strategic approach are concerned with achieving the highest grades. When they see appropriate, students use both deep and surface approaches. Also, according to Entwistle, McCune and Walker (2000) and Pintrich and Garcia (1994), this approach involves monitoring one's study effectiveness and

Karatas, H., Alci, B., Balyer, A. & Bademcioglu, M. (2017). An examination of university students' learning and studying approaches. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 4(1), pp 344-351. Available from: www.prosoc.eu

alertness to the assessment similar to metacognitive alertness and self-regulation. Moreover, Entwistle (2004) indicates that it is an intention to achieve personal goals depending on managing effort.

The purpose of this study is to explore if the students' learning and studying approaches show significant differences in terms of gender, departments and Undergraduate Placement Exam (UPE) scores. For this purpose, answers to the following questions are sought:

1. Are there any significant differences in students' learning and studying approaches in terms of their departments?
2. Are there any gender differences in university students' learning and studying approaches?
3. Is there a significant relationship between students' learning and studying approaches and their Undergraduate Placement Exam (UPE) scores?

2. Method

2.1. Participants and setting

This study was conducted during 2016-2017 academic year with the participation of 56 female (31.46 %) and 122 male (68.54 %) university students studying at Yildiz Technical University. All participants took part in the study voluntarily. The distribution of the sample with respect to departments is shown in Table 1.

Table 1. The students participating in the survey

	Departments	N	%
1	Social sciences teaching	42	23.6
2	Turkish teaching	38	21.3
3	Science teaching	30	16.9
4	Computer and instructional technologies teaching	30	16.9
5	Classroom teaching	38	21.3

2.2. Data collecting instrument

This study is based on survey design. Approach to Learning and Studying Inventory (ALSI) developed by Hounsell, Entwistle, Anderson et al. (2002) was used to assess learning and studying approaches. It has been adapted in Turkish by Topkaya, Yaka and Ogretmen (2011). This form of the scale has 18 items. ALSI has five-factor structure: Surface Learning (four items), Deep Learning (six items), Monitoring Studying (four items), Effort Management (two items), and Organized Studying (two items). Monitoring studying is related to deep approach examining the associating ideas and using the evidence. Yet, it defines the meta-cognitive aspects of learning. While effort management and organized studying represents the strategic approach, surface learning is covered by surface approach. Participants choose the answer they feel most represents to extent to which a statement is true of them (1=Not at all true of me to 5= very true of me).

2.3. Analysis of data

Data acquired by means of the applications of Approach to Learning and Studying Inventory (ALSI) was analysed using One-Way ANOVA and Independent t-test, and Pearson correlation analysis via SPSS (Statistical Package for Social Sciences) 21.0 software program. One-Way ANOVA was used to define whether there were any significant differences in students' learning and studying approaches in terms of their departments. Also, the analysis of independent samples t-test was used to define whether there were any gender differences in university students' learning and studying approaches. Moreover, the

Karatas, H., Alci, B., Balyer, A. & Bademcioglu, M. (2017). An examination of university students' learning and studying approaches. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 4(1), pp 344-351. Available from: www.prosoc.eu

analysis of Pearson correlation was used to define whether there was a significant relationship between students' learning and studying approaches and their Undergraduate Placement Exam (UPE) scores.

3. Findings

In this section, the differences in university students' learning and studying approaches in terms of their departments are examined. And, it intends to explore gender differences in university students' learning and studying approaches. Also, the relationship between students' learning and studying approaches and their Undergraduate Placement Exam (UPE) scores are analysed.

Table 2 summarizes the following findings which include descriptive statistics on the research's independent variables.

Table 2. Means, standard deviations and maximum scores

Approach	Sub-dimensions	N	Mean	Min.	Max.	Std. D.	Std. Er.
Surface	Surface Learning	178	14.53	4.00	20.00	3.12	.23
	Deep Learning	178	12.28	6.00	27.00	4.18	.31
Strategic	Monitoring Studying	178	7.97	4.00	18.00	2.86	.21
	Effort Management	178	5.14	2.00	10.00	1.91	.14
	Organized Studying	178	6.12	2.00	10.00	2.43	.18

Table 3 focuses on the differences between male and female students in terms of learning and studying approaches.

Table 3. Differences between male and female students in terms of learning and studying approaches

Approach	Sub-dimensions	Gender	N	Mean	S. D.	t	p
Surface	Surface Learning	Female	56	14.37	3.30	.47	.24
		Male	122	14.61	3.04		
Deep	Deep Learning	Female	56	12.05	4.42	.49	.52
		Male	122	12.38	4.08		
	Monitoring Studying	Female	56	8.07	3.14	-.31	.26
		Male	122	7.92	2.73		
Strategic	Effort Management	Female	56	5.25	1.86	-.49	.66
		Male	122	5.09	1.94		
	Organized Studying	Female	56	6.25	2.29	-.46	.38
		Male	122	6.06	2.50		

* The mean difference is significant at the .05 level

In Table 3, differences between male and female students were shown in terms of learning and studying approaches. According to analysed data, it can be seen that there is no significant difference between female and male students regarding learning and studying approaches. In keeping with this finding, it can be suggested that gender is not a significant variable on students' learning and studying approaches. It is focused on the students' departments according to their gender in Table 4.

Table 4. Differences between male and female students in terms of their departments

Departments	Gender	N	Mean	S. D.	t	p
Departments	Female	56	2.80	1.57	.65	.04
	Male	122	2.95	1.43		

* The mean difference is significant at the .05 level

Karatas, H., Alci, B., Balyer, A. & Bademcioglu, M. (2017). An examination of university students' learning and studying approaches. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 4(1), pp 344-351. Available from: www.prosoc.eu

As it is observed in Table 4, there are statistically significant differences between male and female students in terms of their departments ($t=.65$; $p<0.05$). Regarding this analysis, it can be said that gender is a significant variable on students' department choices.

One-Way ANOVA test was conducted to determine if there were any significant differences in students' learning and studying approaches in terms of their departments. Table 5 and 6 show the descriptive statistics and findings of One-Way ANOVA analysis.

Table 5. The descriptive statistics of the students' learning and studying approaches according to their departments

Dimensions	Department	N	Mean	Std. D.	Std. E.	Min.	Max.
Surface Learning	1	42	14.83	2.89	44	8	20
	2	38	14.23	3.38	54	8	20
	3	30	13.96	2.35	43	10	18
	4	30	14.46	3.21	58	4	18
	5	38	15.02	3.56	57	6	20
Deep Learning	1	42	11.19	4.33	66	6	27
	2	38	12.28	3.98	64	7	24
	3	30	12.96	3.13	57	7	19
	4	30	13.93	5.35	97	7	26
	5	38	11.63	3.53	57	6	20
Monitoring Studying	1	42	7.45	2.67	41	4	18
	2	38	8.21	3.22	52	4	16
	3	30	8.13	2.56	46	5	15
	4	30	8.93	3.16	57	4	17
	5	38	7.42	2.54	41	4	15
Effort Management	1	42	4.80	2.03	31	2	10
	2	38	5.15	2.18	35	2	9
	3	30	5.20	1.34	24	3	9
	4	30	5.46	1.99	36	3	10
	5	38	5.21	1.83	29	2	10
Organized Studying	1	42	6.35	2.41	37	2	10
	2	38	6.02	2.72	44	2	10
	3	30	5.70	2.27	41	2	10
	4	30	6.36	2.37	43	2	10
	5	38	6.10	2.41	39	2	10

Table 6. The findings of One-Way ANOVA analysis of the students' learning and studying approaches according to their departments

Dimensions	Groups	Sum of Squares	df	Mean	f	p
Surface Learning	Between Groups	26.11	4	6.52	.66	.61
	Within Groups	1700.10	174	9.82		
	Total	1726.22	178			
Deep Learning	Between Groups	161.98	4	40.49	2.38	.06
	Within Groups	2937.96	174	16.98		
	Total	3099.95	178			
Monitoring Studying	Between Groups	53.54	4	13.38	1.65	.16
	Within Groups	1399.31	174	8.08		
	Total	1452.86	178			
Effort Management	Between Groups	8.09	4	2.02	.54	.70
	Within Groups	640.11	174	3.70		
	Total	648.20	178			
Organized Studying	Between Groups	9.81	4	2.45	.40	.80
	Within Groups	1043.46	174	6.03		
	Total	1053.28	178			

* The mean difference is significant at the .05 level

Karatas, H., Alci, B., Balyer, A. & Bademcioglu, M. (2017). An examination of university students' learning and studying approaches. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 4(1), pp 344-351. Available from: www.prosoc.eu

As seen in Table 5 and 6, it was observed that there was no significant difference in students' learning and studying approaches in terms of their departments ($p>.05$). The result of the ANOVA test demonstrated that departments did not affect learning and studying approaches. It was also confirmed that there were not any differences between groups.

In Table 7, the findings regarding the correlation analysis on the relationship between relationship between students' learning and studying approaches and their Undergraduate Placement Exam (UPE) scores are shown.

Table 7. Correlation Analysis among Students' Learning and Studying Approaches and Their Undergraduate Placement Exam (UPE) Scores

		SL	DL	MS	EM	OS	UPE
SL	R	1	-.46**	-.44**	-.23**	-.13	.06
	Sig. (2-tailed)		.00	.00	.00	.08	.39
	N	178	178	178	178	178	178
DL	R	-.46**	1	.77**	.48**	.31*	-.10
	Sig. (2-tailed)	.00		.00	.00	.00	.17
	N	178	178	178	178	178	178
MS	R	-.44**	.77**	1	.49**	.32*	-.07
	Sig. (2-tailed)	.00	.00		.00	.00	.34
	N	178	178	178	178	178	178
EM	R	-.23**	.48**	.49**	1	.49*	-.01
	Sig. (2-tailed)	.00	.00	.00		.00	.81
	N	178	178	178	178	178	178
OS	R	-.13	.31**	.32**	.49**	1	.03
	Sig. (2-tailed)	.08	.00	.00	.00		.64
	N	178	178	178	178	178	178
UPE	R	.06	-.10	-.07	-.01	.03	1
	Sig. (2-tailed)	.39	.17	.34	.81	.64	
	N	178	178	178	178	178	178

** Correlation is significant at the .01 level (2-tailed).

SL (Surface Learning), DL (Deep Learning), ML (Monitoring Studying), EM (Effort Management), OS (Organized Studying), UPE (Undergraduate Placement Exam Scores)

Based on the results of correlation analysis in Table 7, there was not significant correlation between surface learning and UPE scores ($p>.01$), between deep learning and UPE scores ($p>.01$), between monitoring studying and UPE scores ($p>.01$), between effort management and UPE scores ($p>.01$), and between organized studying and UPE scores ($p>.01$).

4. Discussion

One of the findings of the study is that there is no significant difference between female and male students regarding learning and studying approaches. And, this finding does not corroborate previous

Karatas, H., Alci, B., Balyer, A. & Bademcioglu, M. (2017). An examination of university students' learning and studying approaches. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 4(1), pp 344-351. Available from: www.prosoc.eu

studies. For example, Murphy (1982) and Speth and Brown (1990) found there is a significant relationship between female and male students in terms of learning and studying approaches. But, Richardson and King (1991) stated the findings concerning gender differences in learning and studying approaches are far from conclusive.

Another finding of the study is that there was no significant difference in students' learning and studying approaches in terms of their departments. And, in this study, there are statistically significant differences between male and female students in terms of their departments. Moreover, in the present study, there was not significant correlation between surface learning, deep learning, monitoring studying, effort management, and organized studying and UPE scores. It can be said these findings are new in the literature, since there cannot be found any researches about these subjects.

5. Recommendations

As the findings of the study take into consideration, it can be suggested some ideas for the researchers for further research. For instance, this study investigated and evaluated the information of the students by the questionnaires. For this reason, more qualitative data may be collected through observation or interview techniques. Also, the current study conducted with the participation of 178 university students. Because of this, further studies may be carried out with a larger sample group.

References

- Biggs, J. B. (1987). *Student approaches to learning and studying*. Melbourne: Australian Council for Educational Research.
- Biggs, J. (1993). What do inventories of students learning processes really measure? A theoretical review and clarification. *British Journal of Educational Psychology*, 63, 3-19.
- Biggs, J. B. (1999). What the student does: Teaching for enhanced learning. *Higher Education Research & Development*, 18(1), 57-75.
- Biggs, J. B. & Tang, C. (2011). *Teaching for quality learning at university what the student does*. (4th Edition). New York: The Society for Research into Higher Education & Open University Press.
- Byrne, M., Flood, B. & Willis, P. (2009). An inter-institutional exploration of the learning approaches of students studying accounting. *International Journal of Teaching and Learning in Higher Education*, 20(2), 155-167.
- Cohen-Schotanus, J. (1999). Student assessment and examination rules. *Medical Teaching*, 21, 318-321.
- Entwistle, N. (2000). *Promoting deep learning through teaching and assessment: Conceptual frameworks and educational contexts*. Paper presented at TLRP Conference, Leicester, Great Britain.
- Entwistle, N. J., McCune, V. & Walker, P. (2000). Conceptions, styles and approaches within higher education: analytic abstraction and everyday experience. In R. J. Sternberg & L-F. Zhang (Eds.) *Perspective on cognitive, learning, and thinking styles*. Mahwah, N. J.: Lawrence Erlbaum.
- Entwistle, N. J. & Ramsden, P. (1983). *Understanding student learning*. London: Croom Helm.
- Entwistle, N. J. (2004). *Approaches to learning and levels of understanding: Influences and responsibilities*. [online]. Retrieved from <http://www.ucd.ie/lisu/Entwhistle.pdf> 10 December 2016.
- Entwistle, N. & McCune, V. (2004). The conceptual bases of study strategy inventories. *Educational Psychology Review*, 16(4), 325-345.
- Hounsell, D., Entwistle, N. & Anderson, C. (2002). ETL project progress report for year 2 (January-December 2002). Retrieved from <http://www.ed.ac.uk/etl/project.html> 3 March 2017.
- Murphy, R. J. L. (1982). Sex differences in objective test performance. *British Journal of Educational Psychology*, 52, 213-219.
- Newble, D. I. & Entwistle, N. J. (1986). Learning styles and approaches: Implications for medical education. *Medical Education*, 20(5), 162-175.5
- Peters, D., Jones, G. & Peters, J. (2007). Approaches to studying, academic achievement and autonomy, in higher education sports students. *Journal of Hospitality, Leisure, Sport and Tourism Education*, 6(2), 16-28.
- Pintrich, P. R. & Garcia, T. (1994). Self-regulated learning in college students: knowledge, strategies and motivation. In P. R. Pintrich, D.R. Brown & C-E Weinstein (Eds.), *Student Motivation Cognition and Learning*. (p. 113-134). Hillsdale, N. J.: Lawrence Erlbaum.

- Karatas, H., Alci, B., Balyer, A. & Bademcioglu, M. (2017). An examination of university students' learning and studying approaches. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 4(1), pp 344-351. Available from: www.prosoc.eu
- Prosser, M. & Trigwell, K. (Eds.) (1999). *Understanding Learning and Teaching. The Experience in Higher Education*. Buckingham: The society for research into higher education.
- Ramdsen, P. (1992). *Learning to teach in higher education*. London and New York: Routledge Falmer.
- Richardson, J. T. E. (2009). What can students' perceptions of academic quality tell us? Research using the course experience questionnaire. Malcolm Tight, Ka Ho Mok, Jeroen Huisman & Christopher Orphew (Eds), in *The Routledge international handbook of higher education*. New York: Routledge.
- Richardson, J. T. E. (2011). Approaches to studying, conceptions of learning and learning styles in higher education. *Learning and Individual Differences*, 21, 288–293.
- Richardson, J. T. E. & King, E. (1991). Gender differences in the experience of higher education: qualitative and quantitative approaches. *Educational Psychology*, 11(3&4), 363-382.
- Rowe, J. W. K. (2001) Approaches to study by first year engineering students. Retrieved from <http://www.hull.ac.uk/engprogress/Prog1Papers/SHURowe.pdf> 7 November 2016.
- Senemoglu, N. (2010). *Gelisim, ogrenme ve ogretim: Kuramdan uygulamaya* (17th edition). Ankara: Pegem Yayıncılık.
- Speth, C. & Brown, R. (1990). Effects of college students' learning styles and gender on their test preparation strategies. *Applied Cognitive Psychology*, 4, 189–202.
- Svensson, L. (1977). On qualitative differences in learning. III. Study skill and learning. *Br J Educ Psychol*, 47, 233–243.
- Topkaya, N., Yaka, B. & Ogretmen, T. (2011). Ogrenme ve ders calisma yaklasimi envanterinin uyarlanmasi ve ilgili yapilarla iliskisinin incelenmesi. *Egitim ve Bilim*, 36(159), 192-104.
- Woolfolk, A. (2005). *Educational psychology* (9th ed.). Boston, MA: Pearson Education, Inc.
- Zeegers, P. (2001). Approaches to learning in science: A longitudinal study. *British Journal of Educational Psychology*, 71, 115–132.