An analysis of Undergraduates’ Study Skills

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Abstract

There is a growing need for the integration of various theoretical perspectives on academic achievement such as study skills. Study skills are approaches applied to learning that assist students to be successful in schools in a way of passing an exam or even obtaining good grades. The purpose of this study was to determine the effect of undergraduates’ study skills on academic achievement and significances in their study skills in terms of gender and department. The sample group of the study consists of 210 undergraduates studying in three different departments at School of Education. To determine their study skills, the data were collected using “Study Skills Scale” developed by Bay, Tugluk, and Gencdogan (2005). To determine the correlation between undergraduates’ study skills and academic achievement, the analysis of Pearson correlation was used. Also, to determine significant differences in undergraduates’ study skills regarding gender and departments, the analysis of independent samples of t-test and ANOVA were conducted. The results reveal that there is a positive correlation between study skills and academic achievement and also significant differences were found in undergraduates’ study skills in terms of gender and departments.

Keywords: Study skills, undergraduates, gender, department

1. Introduction

Many researchers have identified some important factors and individual differences that are relating with the adoption of approaches to studying. These factors include students’ perception of the teaching environment and teachers’ teaching strategies (Campbell et al., 2001), perceptions of academic quality (Richardson, 2003), and expectancies and perceived values of the subject (Fransson, 1977). Individual differences include the amount of time spent studying (Svensson, 1977), past successes and failures (Marton, Dall’Alba, & Beaty, 1993), intention to

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engage in the learning environment (Entwistle, 1998), motivational beliefs (Biggs, 1987), self-efficacy beliefs (Cassady & Eachus, 2000), and evaluation anxiety (Rozendaal, Minnaert, & Boekaerts, 2003). Research shows that students’ approaches to learning and their learning outcomes are influenced by the teaching–learning environment involving a number of interrelated components such as the teaching method and assessment, course structure, curriculum, workload, and teacher effectiveness (Biggs 1988; Entwistle & Ramsden, 1983; Ramsden 1992, 1997). As it is indicated in many researches, both approach to learning and study skills are important factors that affect the quality of student learning (Smith & Miller 2005; Byrne, et al., 2009). On the other hand, it is also known that students’ approaches to learning are affected by the quality of teaching-learning environment and assessment procedures (Entwistle, 1991). It is known that one of the main reasons of students’ failure is the inadequacy in the skills and attitudes of their study (Kucukahmet, 2000). Studying skills are generally analyzed under these titles: Regular study, creating a study space, efficient reading, listening to the lectures, noting, efficient written expression, participating the lesson actively, doing homework, preparation to the exams, and attending the exams. (Dodge, 1994; Yıldırım et al., 2000).

1.1. Studying Skills

One of the most effective factors on academic achievement is regarded as studying skills (Gettinger & Siebert, 2002; Erdamar Koc, 2010; Jansen & Suhre, 2010; Steele, 2010; Temelli & Kurt, 2010; Aquino, 2011; Yu, 2011). Studying skills have been defined in various ways by researchers. Gall, Gall, Jacobsen & Bullock (1990) defined studying skills as use of proper strategies when accomplishing a learning task. According to Rafoth & DeFabo (1990), studying skills function as a process including one’s planning what he has to do, organizing and coding information to achieve learning needed.

While studying skills are defined in various ways by different researchers, many researchers accepted that studying skills include the behaviours such as preparing for exams (Purdue & Hattie, 1999); doing homework, doing revision, preparing for presentations and projects (Wagner, Schober & Spiel, 2008); use of library (Demircioglu Memis, 2007; Purdue & Hattie, 1999); taking notes (Neri, 2007); reading, listening, writing (Demircioglu Memis, 2007). These behaviours regarded as studying skills are explained under three factors as motivation, time management and preparing for tests-test anxiety (Bay, Tugluk, & Gencdogan, 2004; Guchu, Yıldız, & Sahran, 2010; Gurung, Weidert, & Jeske, 2010; Kartika, 2007).

Motivation includes desires, wills, needs, stimulations, interests (Cuceloglu, 2009), and is defined as a power starting, sustaining and directing a behaviour to a course or subject (Kara, 2008; Martin & Briggs, 1986). This power directs the students to learning process, and by enabling them to concentrate on the lesson prevent them from doing the activities irrelevant to the course objectives (Hesapçioğlu, 2011). Therefore, motivation plays a driving role in students’ showing their potential effectively (Yazıcı, 2009). The students with high motivation in learning process are willing to solve problems they face and are persistent in hard works (Akbaba, 2006), determined to accomplish and enjoy their duties (Masgoret & Gardner, 2003). The students with low motivation in learning process are reluctant to study and do their homework (Cakmak & Ercan, 2006). It can be said that the students with high motivation are more eager to participate in class activities and make more effort than those with low motivation (Wolters & Rosenthal, 2000).

High motivation affects the students’ achievement positively by enabling them to manage time effectively. However, rather than managing time effectively it should be programmed, as well (Batlas, 1994). At this point, the term of time management comes up. Time management is described as an effort of using time effectively to reach the goals (Karaoglan ve Yaman, 2009). To manage the time effectively, needs should be specified, the goals should be defined to meet those needs, priorities should be determined, time should be planned according to those priorities (Uğur, 2000) and the possible problems should be handled immediately (Gozel, 2010).

Since it was found positive correlations between time management and academic achievement in previous researches (Alay & Kocak, 2003; Campbell & Svenson, 1992; Demirtas ve Ozer, 2007; Macan, Shahani, Dipboye & Philips, 1990; Trueman & Hartley, 1996), it can be said that the more the students’ skills of time management improve, the easier they reach their goals at the end of the education. The other component of studying skills is the management of test preparation-test anxiety (Bay, Tugluk ve Gencdogan, 2004). Tests or exams have a crucial role in the evaluation period of students (Bay, Tugluk ve Gencdogan, 2004; Hancock, 2001). Therefore, using effective
studying strategies and studying systematically are very important to show their real potential (Koruklu, 2010). Test anxiety is the most important factor preventing students from showing their real potential in exams (Spielberger, 1972). The students, who do not study enough, who do not know effective studying methods and who have lack of self-confidence, may experience test anxiety (Piji Kucuk, 2010). The students, having intensive test anxiety during or before the exam cannot be successful and they run out their energy for studying (Karacanta, 2009). In order to decrease the negative effect of test anxiety on academic achievement the students should prefer to study in a specified period of time, take a break while studying, asking themselves questions on relating subject and answering after studying (Canel, 2007), compare their notes with that of their friends (Pressley, Yokoi, Meter, Etten & Freebern, 1997) and analyzing all the exam topics well define their weaknesses (Traister & Brickner, 2004).

When analysing the literature it is seen that there have been lots of researches relating to studying skills such as level of students’ studying skills (Bay, Tugluk ve Gendogan, 2004; Temelli ve Kurt, 2010), correlation between studying skills and academic achievement (Jones, Green, Mahan & Slate, 1993), locus of control (Agnew, Slate, Jones & Agnew, 1993; Jones, Slate, & Marini, 1995; Prociuk & Breen, 1974; Serin, Bulut Serin ve Sahin, 2009), metacognitive awareness (Gettinger & Seibert, 2002; Ozsoy, Memis ve Temur, 2002), self-regulation skills (Zimmerman & Martinez-Pons, 1986).

To define the variables regarding studying skills is very important to contribute to the improvement of students’ studying skills. Especially in university education studying systematically is the key factor of academic achievement. The aim of this research was to define undergraduates’ studying skills, so research questions are the followings:

1. What is the level of undergraduates’ studying skills?
2. Is there a correlation among the components of studying skills as motivation, time management and test preparation-test anxiety?
3. Is there a difference in undergraduates’ studying skills in terms of gender?
4. Is there a difference in undergraduates’ studying skills in terms of departments?

2. Methods

2.1. Participants

In this research, the study group consisted of 159 undergraduates studying at College of Education, Yildiz Technical University, Istanbul, Turkey. The participants included 87 female (%54.7) and 72 male (%46.3) undergraduates from different departments. There were 30 undergraduates (%18.8) form Department of Primary School Teaching, 66 undergraduates (%42.2) form Department of Computer Instructional Technologies, 31 undergraduates (19.5) form Department of Pre-School Teaching and 31 undergraduates (%19.5) from Department of Science Teaching.

2.2. Data Collecting Instrument

The data relation to studying skills were collected via “Studying Skills Scale” including 26 items in the form of five point likert developed by Bay, Tugluk, and Gencdogan (2005). The scale is composed of three components including motivation (11 items), time management (7 items) and test preparation-test anxiety (8 items). As long as the scores relating to any component of the scale increase, the skills increase, too. The fact that the total points gathered from all components is higher means that the studying skills of the students increase. The scale is reported to have high level of reliability (internal consistency) as .89. In this research, the internal consistency of the scale was found as .84.

2.3. Analysis of Data

At this stage, descriptive statistics methods were applied, while determining the studying skills of undergraduates. For the analysis of the data obtained from the Studying Skills Scale, the means, frequency and standard deviation were used to determine if there was a difference between groups. It was analyzed whether there
was a significant difference in undergraduates’ studying skills in terms of gender and departments. Statistical analysis was carried out using t-test analysis and one-way Anova for independent groups since test of normality was ensured. Pearson correlation analysis was applied to find out the correlation among the components of studying skills. The statistics obtained were transferred into the tables by grouping and then interpreted.

3. Findings

In this chapter, we allow for the analyses, carried out with the aim of determining the academic motivation of undergraduates. Table 1 indicates the minimum and maximum scores, means and standard deviations for undergraduates’ academic motivation.

| Scale          | Factor                        | Min. | Max.  | M    | sd  |
|----------------|-------------------------------|------|-------|------|-----|
| Studying Skills Scale | Motivation                   | 11.00| 51.00 | 34.96| 7.18|
|                | Time Management               | 7.00 | 32.00 | 19.96| 4.40|
|                | Test Preparation-Test Anxiety| 8.00 | 40.00 | 23.51| 6.10|
|                | Total                         | 26.00| 118.00| 78.48| 14.38|

As a result of the findings obtained from undergraduates regarding the factor named “Motivation”, it was seen that the scores changed ranging from 11.00 to 51.00. The mean relating to this factor was 34.96. The score on the factor, named “Time management”, changed ranging from 7.00 to 32.00. The mean of undergraduates’ scores relating to this factor was 19.96. The scores regarding the factor, named “Test Preparation-Test Anxiety”, changed ranging from 8.00 to 40.00 and the mean of undergraduates’ scores on this factor was 23.51. The total score changed ranging from 26.00 to 118.00 and the mean of undergraduates’ scores on total scale was 78.48. Taking the mean of undergraduates scores relating to these three factors and total score consideration, it was seen that undergraduates’ studying skills from all the components and total scale was quite high.

In Table 2, the findings regarding the correlation analysis among university students’ academic procrastination, personality traits and academic achievement are shown.

|                      | Motivation | Time Management | Test Preparation-Test Anxiety |
|----------------------|------------|-----------------|-------------------------------|
| **Motivation**       | r          | .46**           | .44**                         |
| Sig. (2-tailed)      |            | .00             |                               |
| N                    | 159        | 159             | 159                           |
| **Time Management**  | r          | .46**           | .55**                         |
| Sig. (2-tailed)      | .00        | 1               |                               |
| N                    | 159        | 159             | 159                           |
| **Test Preparation-Test Anxiety** | r          | .44**           | .55**                         |
| Sig. (2-tailed)      | .00        | .00             | 1                             |
| N                    | 159        | 159             | 159                           |

* Correlation is significant at the .05 level (2-tailed)  
** Correlation is significant at the .01 level (2-tailed)

As can be seen in Table 2, as a result of correlation analysis there have been found significant positive correlations among the components of studying skills. It was found significant positive correlations between motivation and time management (r=.46, p<.01); between motivation and test-preparation-test anxiety (r=.44, p<.01) and between time management and test preparation-test anxiety (r=.55, p<.01). It can be said that all the components of studying skills are related to each other and total score of studying skills.
Table 3: T-test results of undergraduates studying skills with respect to gender

| Factor                     | Gender     | N  | M    | sd  | t-test | t  | df  | p    |
|----------------------------|------------|----|------|-----|--------|----|-----|------|
| Motivation                 | Female     | 87 | 34.88| .74 | -1.16  | 149.92 | .82 |
|                            | Male       | 72 | 35.06| .88 |        |     |     |      |
| Time Management            | Female     | 87 | 20.36| .42 | 1.28   | 137.71 | .03*|
|                            | Male       | 72 | 19.47| .56 |        |     |     |      |
| Test Preparation-Test Anxiety | Female   | 87 | 23.49| .60 | -0.05  | 137.62 | .33 |
|                            | Male       | 72 | 23.54| .79 |        |     |     |      |
| Total                      | Female     | 87 | 23.49| .60 | .25    | 133.04 | .42 |
|                            | Male       | 72 | 23.54| .79 |        |     |     |      |

* Correlation is significant at the .05 level (2-tailed)
** Correlation is significant at the .01 level (2-tailed)

Based on t-test results in Table 3, it was seen that undergraduates’ gender indicated a significant difference in only time management component. It was found that in terms of time management skill, female and male undergraduates differed significantly, and this difference was in favour of female undergraduates \( t \ (159)=-.16 \) \( p<.05 \). The mean score of female undergraduates’ time management skill (20.36) was higher than that of male undergraduates (19.47). For the other components and total score of undergraduates’ study skills significant differences were not found.

Table 4: One-way Anova analysis regarding undergraduates’ studying skills in terms of departments

| Departments               | Sum of Squares | df  | Mean Square | F    | Sig. |
|---------------------------|----------------|-----|-------------|------|------|
| Between Groups            | 3864.68        | 3   | 1288.23     | 6.932| .00* |
| Within Groups             | 28620.8        | 154 | 185.84      |      |      |
| Total                     | 32485.5        | 157 |             |      |      |

* The mean difference is significant at the .05 level

Table 5: Scheffe analysis regarding undergraduates’ studying skills in terms of departments

| Departments | Departments | Mean Difference | Std. Err. | Sig. |
|-------------|-------------|-----------------|-----------|------|
| 1           | 2           | 10.38           | 3.49      | .03* |
| 3           | 4           | 10.60           | 3.49      | .02* |
| 2           | 1           | -.54            | 3.00      | .99  |
| 3           | 3           | 9.83            | 2.96      | .01  |
| 4           | 1           | 10.06           | 2.96      | .01  |
| 3           | 2           | 10.38           | 3.49      | .03* |
| 2           | 3           | -.83            | 2.96      | .01  |
| 4           | 1           | 10.06           | 3.46      | 1.00 |
| 1           | 2           | 10.61           | 3.49      | .02* |
| 2           | 3           | 10.06           | 2.96      | .01* |
| 3           | 1           | -2.22           | 3.46      | 1.00 |

* The mean difference is significant at the .05 level
*1 (Primary School Teaching), *2 (Computer Instructional Technologies), *3 (Pre-School Teaching), *4 (Science Teaching)

The findings in Table 4 and 5 point that according to one-way Anova analysis regarding undergraduates’ studying skills in terms of departments, the significant difference was observed in favor of the departments of Primary School Teaching and Computer Instructional Technologies. The score of studying skills of undergraduates studying at the departments of Primary School Teaching and Computer Instructional Technologies were higher than those of the departments of Pre-School Teaching and Science Teaching.
4. Results

Especially in university education studying systematically is the key factor of academic achievement (Erdamar Koc, 2010; Jansen & Suhre, 2010; Steele, 2010; Temelli & Kurt, 2010; Aquino, 2011; Yu, 2011). The aim of this research was to define the level of undergraduates’ studying skills; correlation among the components of studying skills as motivation, time management and test preparation-test anxiety; whether there is a difference in undergraduates’ studying skills in terms of gender and departments. As a result of the findings it was seen that undergraduates’ studying skills from all the components and total scale was quite high. As a result of correlation analysis it can be said that all the components of studying skills are related to each other and total score of studying skills. As a result of t-test analysis it was seen that undergraduates’ gender indicated a significant difference in favor of female undergraduates in only time management component. The findings according regarding undergraduates’ studying skills in terms of departments, the significant difference was observed in favor of the departments of Primary School Teaching and Computer Instructional Technologies.

In addition to increasing undergraduates’ studying skills, a better understanding of additional variables having positive and negative effects on students' studying skills and their relative importance can have benefits. Similarly, by increasing our understanding of students' perceived sources of test anxiety, educators and school counselors may be better able to develop effective test anxiety-reduction interventions. Specifically, different interventions may be required to address different perceptions. It is recommended that in future researches the factors that affect studying skills positively should be examined elaborately. Moreover, follow up researches may increase the numbers of participants to enable a more powerful analysis, and use various measures of studying skills.

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