The Management Skills of Exam Process for Undergraduate Students

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Abstract
This study aims to identify to what degree undergraduate students are able to manage the exam process to be successful in exams. The study group of the research, which utilizes the survey model, consists of 350 students in total, 185 female and 165 male, attending 4 different teaching programs in Faculty of Education, Gazi University. "The Scale of Exam application techniques", developed by Erisen and Celikoz in 2004, was applied to the study group. This 5-point Likert scale consists of 40 items about techniques used by students (1) before the exam, (2) during the exam, and (3) at the end of the exam. Three factors of the scale explain .68 of the total variance and the Cronbach's Alpha Reliability Coefficient of the scale is .95. In the present study, we compared exam process management skills of students based on variables of gender, grade and academic achievement. It was observed that opinions of undergraduate students about their exam process management skills varied according to independent variables.
Keywords: exams, exam strategy, academic achievement, examination system

1. Introduction
In general terms, education is a process emphasizing the change and progress in individuals' knowledge, skills and behaviors. The performance of this process in a planned and systematical manner is related to teaching. Achieving success in teaching is only possible with quality planning.

Planning in education is to predetermine and put on paper which teaching activities will be selected for specific educational objectives and goals of the program, why and how these activities will be given to students, what sort of supporting and complementary resources and tools will be used and how the achieved success will be evaluated (Demirel, 2002). However, the effectiveness of the plan and the program is closely related to what degree projected targets are achieved and behaviors are gained by individuals going through this process. In order to evaluate above mentioned outcomes, it is necessary to efficiently measure to what degree changes of behavior expected from individuals occurred.

Today, exams and exam results are used to evaluate success of individuals in both schools and institutions outside school. Exams encourage students to demonstrate their capacities and show expected performance and provide feedback about their success level. Exams give information about to what degree program objectives are achieved and effectiveness of the education program (Tekindal, 2009).

One of the most important aspects of the Turkish educational system is that it is academic achievement-oriented. For this reason, students go through a busy process which emphasizes cognitive proficiency and includes numerous exams. This process begins from the first years of the primary school and goes on until the end of student's educational life. However, a exam-oriented process and high decisiveness of exams naturally bring along exam anxiety. Anxiety is a basic human emotion observed when the organism faces a situation perceived as a threat and involves fear and uncertainty (Sarason, 1988).

Nowadays, exams are the biggest factor that causes anxiety in students. Students may show a poor performance in exams due to excessive anxiety. Exam anxiety is an important factor that contributes to adverse situations such as psychological distress, academic failure and feeling insecure (Hembree, 1988). Individuals who feel excessive anxiety may face situations such as not being able to understand situations correctly, not being able to recall information or not being able to think (Horney, 1995). On the other hand, it is suggested that anxiety is not the root cause of low performance shown by students with exam anxiety, but it arises from their lack of appropriate studying habits and their inadequate exam-taking skills (Paulman & Kenelly, 1984). First of all, it is necessary to correctly identify factors that may cause anxiety on an individual basis, since eliminating negative factors that may cause exam anxiety will mean preventing anxiety from dominating the exam process.

It is possible to meet students who fail the exam although they know the subject or are not able to answer all questions due to inefficient use of time, yet cannot explain or make sense of their low performance. One of the basic elements which will explain all these cases is strategies of managing the exam process correctly developed -or not developed- by students. The success of students in exams, which is a process of assessing learning, is possible with students' knowledge and skills and techniques that allow students to use their knowledge in the exam environment.

Exam strategy is a mental process used by students to begin the exam effectively, continue the exam effectively and end the exam effectively. Some students are aware of how to do things properly during the exam and able to mentally intervene with the process when necessary by correctly analyzing the process. Thus,

individuals who use exam strategies efficiently eliminate events that may cause them to fail the exam and turn the situation in their favor at stage of the exam by adopting a positive attitude towards the exam rather than developing anxiety.

From a different perspective, we can say that not those who know how to run fast, but those who know how to control their breath and when to sprint to the finish win the race. Because winners do not think whether they can win the race or not while running, but they develop the most effective strategy for success. In other words, they are able to correctly manage the exam process. The number of studies in Turkey on the relationship between exam strategy and academic achievement is negligible. Therefore, this study aims to determine to what degree undergraduate students are able to manage the exam process and whether opinions of students in this regard vary based on gender, grade and academic achievement.

2. Methodology
2.1. Research Design
The study utilizes the screening model. Studies utilizing the screening model aim to describe a past or present situation as is. The individual or the object, which is the subject of the study, is defined under its own conditions and as is. There is no attempt to change or influence the individual or the object in any way. To this end, such studies use the entire population or a group or sample from the population in order to make a general conclusion about a population consisting of multiple elements (Karasar, 2002).

2.2. Participants
The study group of the research consists of 350 students in total attending 4 different teaching programs in Faculty of Education, Gazi University. 53% of the students are female and 47% are male. Teaching programs included in the study were selected randomly and the measurement tool was applied to students in these programs on a voluntary basis.

2.3. Instruments
"Exam application techniques scale" developed by Erisen and Celikoz in 2004 was used for data collection. This 5-point Likert scale consists of 40 items about techniques used by students (1) before the exam, (2) during the exam, and (3) at the end of the exam. Three factors of the scale explain .68 of the total variance. Load values of factors vary between .37 and .85. The Cronbach's Alpha Reliability Coefficient is .95.

2.4. Data Analysis
SPSS 18 package program was used for data analysis. Independent samples t-test was used in order to determine whether opinions of undergraduate students about their exam process management skills varied based on gender, whereas analysis of variance was used in order to determine whether opinions of undergraduate students about their exam process management skills varied based on academic achievement and grade.

3. Results
In the study, opinions of students about their exam process management skills were analyzed based on variables of gender, grade and academic achievement using the t-test and analysis of variance and presented in tables below. Overall scores of students related to their exam process management skills before the exam, during the exam, at the end of the exam and overall are given in Table 1.

Table 1: Distribution of Opinions of Students about Their Exam Process Management Skills

Exam Process	N	M	SD
Before the Exam	350	3.35	.51
During the Exam	350	3.80	.34
At the End of the Exam	350	3.60	.71
Total	350	3.60	.36

Table 1 shows that students who participated in the study believed that they applied necessary strategies during the exam "very frequently" (M=3.60). However, when scores related to the exam process are evaluated as a whole, students believed they applied necessary strategies before the exam "frequently" (M=3.80), believed that they acted more carefully during the exam and applied necessary strategies "very frequently" (M=3.80) and maintained this sensitivity at the end of the exam as well (M=3.60). Table 2 shows the t test results related to opinions of students about their exam process management skills based on the gender variable.

Table 2: T Test Results Regarding The Remarks Of Students On The Management Of Exam Process In Terms Of Gender Variable

Exam Application Texhniques	Gender	N	M	SD	t	p
Before the Exam	Female	185	3.56	.48	9.002	0.000***
	Male	165	3.12	.45		
During the Exam	Female	185	3.83	.25	1.009	0.314
	Male	165	3.79	.42		
At the End of the Exam	Female	185	3.86	.61	8.216	0.021*
	Male	165	3.30	.68		
Grand Average	Female	185	3.73	.29	7.446	0.000***
	Male	165	3.46	.38		

*p< .05 , ***p< .001

As seen in table 2, opinions of students about their exam process management skills varied based on the gender variable [t=7.446, p< .001]. It was observed that opinions of female students about their exam process management skills (M=3.73) had a higher average compared to male students (M=3.46). It was seen that female students applied necessary strategies *before* [t=9.002, p<.001] and *at the end of* [t=8.216, p<.001] the exam *usually*, whereas male students applied necessary strategies *partially*. It was observed that both female and male students applied necessary strategies to correctly manage the exam process during the exam [t=1.009, p>0.05]. When these results are considered, it can be said that female students showed a positive difference compared to male students in terms of managing the process before and at the end of the exam, whereas they had a higher level of awareness compared to male students regarding the management of the exam process in general. Table 3 shows the results of the analysis of variance related to opinions of students about their exam process management skills based on the grade variable.

Table 3: Results of The Analysis of Variance Related to Opinions of Students About Their Exam Process Management Skills Based on The Grade Variable

Exam Application Texhniques	Grade	N	M	SD	F	p	Intergroup Difference
Before the Exam	1st Grade	73	2.94	.23	53.087	0.000***	1-2,1-3,1-4 2-4,3-4
	2nd Grade	69	3.22	.43			
	3rd Grade	140	3.37	.43			
	4.th Grade	68	3.82	.54			
During the Exam	1st Grade	73	3.77	.18	1.038	.376	---------
	2nd Grade	69	3.80	.35			
	3rd Grade	140	3.80	.35			
	4th Grade	68	3.87	.30			
At the End of the Exam	1st Grade	73	3.13	.82	13.745	0.000***	1-2,1-3,1-4
	2nd Grade	69	3.68	.43			
	3rd Grade	140	3.71	.54			
	4th Grade	68	3.72	.74			
Grand Average	1st Grade	73	3.42	.11	20.496	0.000***	1-2,1-3,1-4,2-4, 2-3,2-4,3-4
	2nd Grade	69	3.49	.41			
	3th Grade	140	3.62	.37			
	4th Grade	68	3.83	.34			

***p< .001

Table 3 provides information related to opinions of students about their exam process management skills based on grade. A significant difference was found between opinions of students about their exam process management skills based on the grade variable [F=20.496, p< .001]. As a result of the Tukey test performed in order to determine which groups caused the difference, it was found that there was a difference of opinion between grades and students at higher grades had higher level exam process management skills compared to students at lower grades. When results are evaluated based on three different dimensions of the exam process, it can be said that there was a significant difference between opinions of students about their process management skills "before" [F=53.087, p< .001] and "at the end of" [F=13.745, p< .001] the exam. As a result of the Tukey test performed in order to determine which groups caused the difference both before and at the end of the exam, it was found that the difference showed parallelism with the overall opinion, in other words, students at higher grades had higher level exam process management skills compared to students at lower grades. This finding may be interpreted as that students gain experience in the busy exam process of our exam-oriented system and increase their awareness. Table 4 shows the results of the analysis of variance related to opinions of students about their exam process management skills based on the academic achievement variable.

Table 4: Results of The Analysis of Variance Related to Opinions of Students About Their Exam Process Management Skills Based on Academic Achievement

Exam Application Texhniques	Success	N	M	SD	F	p	Intergroup Difference
Before the Exam	1.Medium	135	3.01	.35	108.392	0.000***	1-2,1-3,2-3
	2.Good	112	3.37	.48			
	3.Very Good	103	3.79	.38			
During the Exam	1.Medium	135	3.78	.39	1.351	.260	-
	2.Good	112	3.81	.40			
	3.Very Good	103	3.85	.16			
At the End of the Exam	1.Medium	135	3.22	.56	49.413	0.000***	1-2,1-3,2-3
	2.Good	112	3.67	.76			
	3.Very Good	103	4,02	.53			
Grand Average	1.Medium	135	3.40	.31	59.914	0.000***	1-2,1-3,2-3
	2.Good	112	3.61	.38			
	3.Very Good	103	3.85	.23			

***$p < .001$

As seen in table 4, a significant difference was found between opinions of students about their exam process management skills based on the academic achievement variable [$F=59.914$, $p < .001$]. As a result of the Tukey test performed in order to determine which groups caused the difference both before and at the end of the exam, it was found that students who had a "very good" academic achievement level (M= 3.85) had higher level exam process management skills compared to students who had a "good" (M= 3.61) and "moderate" (M= 3.40) academic achievement level. In other words, students' competence in terms of managing the exam process correctly increased as the achievement level increased. When findings are evaluated based on three different dimensions of the exam process, it can be said that there was a significant difference between opinions of students about their process management skills "before" [$F=108.392$, $p < .001$] and "at the end of" [$F=49.413$, $p < .001$] the exam. As a result of the Tukey test performed in order to determine which groups caused the difference both before and at the end of the exam, it was found that the difference showed parallelism with the overall opinion, in other words, students who had a higher academic achievement level had higher level exam process management skills compared to students who had a lower academic achievement level. It can be said based on this finding that successful students manage the exam process more effectively.

4. Discussion

Findings obtained as a result of of the study show that undergraduate students are highly skilled at correctly managing the exam process. On the road to success, exams are both the measure and the target. The main misconception about exams is to take exams in face value. Exams should be considered as opportunities, because they present an opportunity for individuals to use what they learned. These opportunities involve factors such as goal setting, plan development, motivation and controlling components. In other words, it can be said that the word "exam" also involves a process of self-regulation for the individual. The concept of self-regulated learning, regarded as one of the main factors affecting student success, is defined as an active and constructive process in which learners set learning goals, develop plans, monitor themselves throughout the learning process and cognitively, motivationally and metacognitively participate in their own learning process by controlling their motivation and cognition (Zimmerman, 2005; Schunk, 2005). Studies in this field show that students with high self-regulation skills strive to reach their personal goals, consider existing conditions when striving to reach their goals, efficiently use self-regulation strategies, regulate their learning environment and use their time efficiently (Zimmerman et al., 1992; Boekaerts, 2002). Also, previous studies reveal that self-regulation skills of students are highly correlated with academic achievement, quality of learning, performance (Hwang & Vrongistions, 2002), goal orientation (McWhaw & Abrami, 2001; Owens, 2005), self-efficacy (Pajares, 2002), cognitive strategies (Heikkila & Lonka, 2006) and thinking styles (Zhang & Sternberg, 2000).

In the present study, we compared exam process management skills of students based on variables of gender, grade and academic achievement. It was found as a result of the analyses that there were differences between opinions of students about managing the exam process in terms of both overall exam management and three sub-dimensions of the process.

Considering scores obtained by students from the measurement tool based on the gender variable, it was found that female students had a higher level of competence compared to male students in terms of both the overall exam management and managing the exam process before and at the end of the exam. Results obtained show parallelism with findings of studies which are directly related to our study and similar studies which investigate gender as a variable (Pokay & Blumenfeld, 1990; Celikoz & Erisen, 2004; Ozgungor, 2006; Erdogan & Sengul, 2014).

Considering opinions of students based on the grade variable, it was observed that exam process management skills of students varied based on the grade variable and the skill level increased as the greade increased. There was a significant difference in terms of opinions of students about their exam process management skills based on academic achievement in favor of those with higher academic achievement. Research findings support findings related to the relationship between exam success and academic achievement (Basarır, 1990; Line, 1992; Medo, 2000; Bahar, 2006; Ozkal & Cetingoz, 2006).

5. Conclusion

As a result of the study, it was found that undergraduate students had a high level of competence related to managing the exam process. Exams have a decisive role in human life. As long as exams remain to exist, competence in this subject will be on the agenda. Managing this process correctly will help individuals lower their exam anxiety and overcome difficulties in this respect. The fact that research was conducted with a group involving prospective teachers increase the significance of the exam process. Because it is very important to have guides who will set an example and lead the way for raising students with low exam anxiety who can manage the process successfully.

6. Recommendations

A review of the literature on the subject in Turkey reveals that the number of studies on managing the exam process and exam strategies is negligible. Development of new measurement tools in this field and designing studies which employs different variables will increase the diversity of findings on this subject and strengthen the literature.

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