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Academic achievement and opinions of CEIT students graduating from vocational high school

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Abstract

This study aims to compare the academic achievement and opinions of the students in the department of CEIT who graduated from vocational schools and general high schools. It is a descriptive. The study sample consists of 38 junior students. The study data were collected through the records in the Student Information System and a student opinion form. As results, graduates of general high schools were found to be significantly more successful. Only a few graduates of vocational high schools stated that they were fully satisfied with the education they received in vocational high schools.

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1. Introduction

Evaluation is an inseparable and supplementary part of the education systems as well as all systems (Sönmez, 2007; Tekin, 1993). Evaluation has important functions for the system and the individuals who receive education. Evaluation enables the system to renew and improve itself while it also recognizes individuals with their different characteristics (knowledge, emotion, skill, ability etc.) and lead them properly. One of the most important elements of evaluation process is the tests. In this framework, tests which serve different purposes are included in the evaluation level of the Turkish Education System. The most important aspect of these tests is that they are “selection” tests. The entrance to university in Turkey has been regulated through a central exam prepared by Student Selection and Placement Center (OSYM) since 1974. While test scores are being calculated, the parallelism between the areas from which the students graduated and the areas they prefer is very important. Every single candidate’s calculated weighted high school cumulative GPA is multiplied with 0.8 in the case that the candidate is placed into a university program related to his area or is multiplied with 0.3 in the case that the candidate is placed into a university program unrelated to his area and then it is added to the candidate’s exam grade. Candidates’ placement scores are calculated in this way (ÖSYM, 2008). The multipliers of these additional scores sometimes change. However, they are very useful in the sense that they enable the vocational high school students to be placed in their areas, especially when regular high school students are taken into consideration. However, in the case that vocational high school students prefer a university program different than their area they lose substantial amount of

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scores which prevent them from competing with regular high school students. The main aim of additional scores is to encourage vocational high school graduates to prefer their areas (Arslan, 2004).

Within the implementation of multiplier, students graduated from the information technologies area of the Girls' Vocational High Schools, Industrial Vocational High Schools and Technical High School can gain substantial additional scores in the case that they prefer the computer and education technologies teaching department of the faculties of education. Therefore, a considerable part of the students placed into these departments may be students graduated from vocational high schools. Some studies on the Student Selection Examination (ÖSS)'s predictive strength and content validity have been carried out; in some studies it was presented that there are some problems with ÖSS's content validity (Çoban and Hançer, 2006, Çoban, Uludağ ve Yılmaz, 2006, Dursun ve Çoban, 2006). However, there is not enough evidence in the literature regarding the multiplier's reflections in the academic success. From this premise, the aim of this research is to compare the academic success of the students graduated from vocational high schools and the students graduated from regular high schools in the department of computer and education technologies teaching; to determine the students' opinions regarding the education given in the computer departments of vocational high schools and to describe the education given in the computer departments of vocational high schools, therefore, to present the effects of the implementation of multiplier for the vocational high school students in their entrance to the departments of computer and education technologies teaching on the prediction of academic success in university.

1.1. Sub Problems

1. Does the academic success of the students graduated from Vocational High School differ from the students graduated from regular high school?
2. What are the students' opinions on the high school choice?
3. What are the students' opinions on the vocational high schools' level of preparing their students for university education?

2. Method

This study is a descriptive research which was carried out in a scanning model and in which both qualitative and quantitative research methods were used. The study group of the research composes of 38 students who were placed in Ahi Evran University Faculty of Education Department of Computer and Education Technologies in the 2008-2009 academic year and have been studying in this department for four semesters. The distribution of the students according to their gender and high schools are presented in the Table 1.

Table 1. The Students' Distribution According to Gender and High School

Vocational High School			Regular High School		
Female	Male	Total	Female	Male	Total
11	11	22	6	10	16

The quantitative data were obtained by determining the students' academic success scores of their field courses at the end of the two-year of education with the help of the Ahi Evran University Student Information System records. The qualitative data were obtained with the feedback form prepared to determine the students' opinions on the contributions of their high schools to the academic success in university.

Average grades for each course was calculated by using the midterm and final exam grades of each course. Then the courses were grouped as Professional Knowledge (PK), Area Knowledge (AK) and General Knowledge (GK) based on the course descriptions and course types determined by the National Committee for Teacher Training of the Higher Education Institution. In this framework, pedagogic formation courses were included in the professional knowledge group, courses related to computer and education technologies were included in the area knowledge group and other courses were included in the general knowledge group. In addition to this grouping, courses are grouped as Computer Courses, Verbal Courses and Quantitative Courses according to their content. Total weighted

averages were calculated for each group. While calculating weighted average, credits were multiplied with the success points and then were divided to the total credits. Arithmetic average, standard deviation and t test were used for the analysis of the quantitative data. A significance level of 0.05 was found to be sufficient for the analyses. Quantitative data obtained were analyzed by the researcher using the document review method. During the analysis, similar views were grouped and their frequencies were calculated. However, some answers' frequency totals are more than the number of study group since some students had more than one opinion.

3. Findings and Interpretations

3.1. Students' Academic Success According to High School Types

The findings regarding the academic success of students graduated from vocational high schools and students graduated from regular high schools in different course groups were summarized in the Table 2.

Table2. Students' Academic Success According to High School Type

Course Groups/High School Types		N	X	Ss.	t	Sd	p
Professional Knowledge	Regular High School	16	70,53	3,77	2,340	36	,025
	Vocational High School	22	66,84	5,40			
Area Knowledge	Regular High School	16	57,90	7,01	-1,306	36	,200
	Vocational High School	22	60,42	4,88			
General Knowledge	Regular High School	16	70,86	6,68	5,395	36	,000
	Vocational High School	22	60,30	5,38			
Computer	Regular High School	16	55,52	7,89	-1,305	36	,200
	Vocational High School	22	58,49	6,13			
Verbal	Regular High School	16	68,32	5,90	,395	36	,695
	Vocational High School	22	67,67	4,30			
Quantitative	Regular High School	16	69,48	10,45	5,325	36	,000
	Vocational High School	22	54,33	7,12			
General Average	Regular High School	16	64,87	5,50	1,510	36	,140
	Vocational High School	22	62,58	3,88			

When the table 2 is examined it is seen that there is not a significant difference between the academic success of the students graduated from vocational high schools and the ones graduated from regular high schools ($t(2-36)=1,510$, $p>0,05$). Therefore, it may be said that the academic success of both student groups are similar in terms of general average. When the averages regarding the course groups are examined, however, there is a significant difference between two student groups in terms of the averages regarding the courses of professional knowledge ($t(2-36)=2,340$, $p<0,05$), averages regarding the courses of general knowledge ($t(2-36)=5,395$, $p<0,01$) and averages regarding the courses of quantitative courses ($t(2-36)=5,325$, $p<0,01$). When the averages are examined it is seen that this significant differences are in favor of the students graduated from regular high schools. There is no difference between the groups regarding the area knowledge and verbal courses. Therefore, it may be said that the students graduated from regular high schools are significantly more successful in the courses related to professional knowledge, general knowledge and the quantitative courses than the students graduated from vocational high schools while two groups' academic success is similar regarding the area knowledge and verbal courses.

It is noteworthy that although the students graduated from vocational high schools have taken especially the computer-related area courses before, the academic success regarding in general the area knowledge and in particular the computer course groups did not differ with reference to the students graduated from regular high schools ($t(2-36)=-1,306$, $p>0,05$).

It is not sufficient that the averages of the students graduated from vocational high schools regarding these courses are a little higher than the averages of the students graduated from regular high schools. Therefore, it may be said that the academic success of the students graduated from vocational high schools and the students graduated from regular high schools regarding in general area knowledge and in particular the computer group courses is similar.

3.2. Students' Opinions on High School Choices

Students' reasons to choose vocational high schools may be summarized in this way:

- *My score was not enough for other Anatolian high schools. I chose Anatolian vocational high school only because it is an Anatolian high school (4 students).*
- *The score I got from the High School Entrance Exam (LGS) was only sufficient for here (3 students).*
- *It wasn't my decision. My family wanted it (9 students).*
- *I chose vocational high schools because of the encouragement of my teachers and my friends (3 students).*
- *I chose because I was interested in computer (2 students).*
- *I chose vocational high schools because I wanted to be employed as soon as it was possible (1 student).*
- *I chose vocational high school because additional scores were given for the entrance to university (1 student).*
- *I chose because I thought that the professions related to computer had a promising future (1 student).*

Therefore, it may be said that families and the scores of high school entrance exams were quite effective in the choices of a substantial part of the students. In addition, reasons such as having additional scores for entrance to university or being successful in university were not observed. The reasons of students to choose vocational high school may be summarized in this way:

- *My first aim was to enter science high schools or Anatolian high schools. There were two possibilities after failing the exam. I chose the regular high school because I would be able to have more choices after graduation. After graduating from vocational high schools, on the other hand, only one area can be chosen otherwise there is a deduction in scores in the Student Selection Examination (ÖSS) (10 students)*
- *My score of High school entrance exam was only sufficient for here (8 students).*

Therefore, the main reason for students to choose regular high schools may be summarized in this way: It may be said that the students who could not get enough scores from the high school entrance exams to enter science or Anatolian high schools, mostly choose regular high schools without considering the vocational high schools because of their disadvantaged situation in entrance to universities.

3.3. Students' Opinions on the High Schools' Level of Preparing Students for University

Students' opinions on the contributions of the education they received in vocational high schools to their academic success in this department may be summarized in this way:

- *It contributes but not much (3 students).*
- *It contributes partially. Because it can be said that we did not receive much education in vocational high school (4 students).*
- *The education I received about my branch in the vocational high school had no contribution. Because the level of education was quite low (5 students).*
- *It contributed at first but when the courses started to be more complex it did not contribute at all. (3 students).*
- *It contributed a lot (6 students).*
- *It contributes. But are having difficulties in the general knowledge courses because we have not seen them before (3 students).*

Therefore, it may be said that a considerable part of the students think that the education they received in vocational high schools do not contribute to their academic success in this department sufficiently, and that the main reason for this is the lack of quality in the education in vocational high schools. Only 6 of the students graduated

from vocational high schools stated that they are completely satisfied with the education they received in vocational high school. Students' opinions on the contributions of the education they received in regular high schools to their academic success in this department may be summarized in this way:

- *It contributed a lot to the general knowledge courses such as mathematics, Turkish, Physics and History. Besides we used much mathematical knowledge in the framework of programming logic (10 students).*
- *It contributed to the general knowledge courses. But it did not contribute to the area courses (4 Students).*
- *It did not contribute much (4 students).*

Therefore, it may be said that a considerable part of the students think that the education they received in high school contributed to their academic success in this department and that this contribution was especially to the general knowledge courses and quantitative courses.

4. Conclusion and Discussion

The academic success of both groups is similar in terms of general average. When the course groups are examined, however, the students graduated from regular high schools are significantly more successful in the professional knowledge, general knowledge and quantitative courses than the students graduated from regular high schools while the academic success in area knowledge and verbal courses are similar. The academic success related in general to the area knowledge and in particular to the computer-group courses of the students graduated from vocational high schools and regular high schools are similar. This may be caused by that the students received very insufficient education regarding quantitative courses in girls' vocational high schools and industrial vocational high schools. Especially the computer-programming skills can be directly considered to be a problem-solving process and one of the prominent elements of this process is the thinking skills (Özden, 2006; By: Canan-Günhan, Başer, 2009). According to (Özden, 2006; By: Canan-Günhan, Başer, 2009), critical thinking skill is among the most known thinking skills. According to Elias, Kress (1994), it is a natural result that the students who have critical thinking skills are more successful academically. The situation is different in technical high schools. As a matter of fact, Sönmez (2008) states that when the structures of vocational and technical high schools are examined, it is seen that Anatolian Technical and Technical high schools curriculums and structures are not only aimed at educating technicians but also aimed at preparing students for university education. When looked at the numbers and weekly course hours of the general knowledge courses it is seen that the curriculum of the science department of regular high schools is used in the Anatolian technical and technical high schools and the course books are the same. Besides, the education period of these high schools was 2 years longer than the regular high schools and 1 year longer than the industrial vocational high schools in order to enable to instruct professional courses. With the last amendment done in 2005, the foreign language preparation year was abolished in the Anatolian technical high schools and foreign language courses distributed to the 4-year education period were introduced (Sönmez, 2008). Therefore, the reason why students are not successful in these courses is not just that they do not receive enough quantitative and general knowledge courses, but it may be that the education they receive in vocational high schools lacks quality. Therefore, it can be said that the implementation of multiplier lowers the education quality in vocational high schools and that this situation affects the academic success of the students who graduated from vocational high schools and who entered to university with the additional scores negatively. It is possible to observe researches supporting these findings in the literature (Demirtaş, Küçük, 2008; Sönmez, 2008; Arslan, 2004; Kazu and Demirli, 2002; 2003).

The reason to choose a vocational high school for a considerable part of the students graduated from vocational high schools is their families and the scores they got from the high school entrance exam. Reasons such as gaining additional scores for entrance to university or being successful in university were not observed in the vocational high school choices. The main reason to choose a regular high school for the students graduated from regular high schools is similarly the scores they got from the high school entrance exam. The students who could not get enough scores from the high school entrance exams to enter science or Anatolian high schools mostly choose regular high schools without considering the vocational high schools because of their disadvantaged situation in entrance to universities. In the recent years, a considerable change in the ratio between the student numbers of regular high schools and the student numbers of vocational high schools has been observed in favor of the regular high schools

(Arslan, 2004). The main reason for this change may be the students' opinions presented above. As the result of these opinions, students move away from the vocational high schools and accumulate in the regular high schools. The students who graduate from the regular high schools and cannot enter university may become unskilled labor. On the other hand, less skilled students may be placed to the available vocational high schools (Sönmez, 2008; Kazu and Demirli, 2002). This may be another reason which lowers the quality of education given in the vocational high schools. As a matter of fact, a substantial part of the students graduated from vocational high schools think that the education they received in vocational high schools did not contribute to their academic success in their departments enough and that the main reason for this is the lack of education quality in the vocational high schools. A very small part of the students graduated from vocational high schools state that they are completely satisfied with the education they received in vocational high schools. A considerable part of the students graduated from regular high schools, on the other hand, state that the education they receive in regular high schools contributed their academic success in their departments and that this contribution was especially to the general knowledge and quantitative courses. The reason for this may be the quality of education given in the regular high schools along with that the education related to the general knowledge courses is more and that in the scope of these courses students are more prepared for the university exam.

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