

## Perceived Instrumentality Of Educational Sciences Courses By Prospective Teachers

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### ABSTRACT

Teacher training is regarded as a fundamental mechanism for developing pedagogical content knowledge of teachers' and emerging training applications to reach high standards. The purpose of this study is to investigate views of faculty of education students' and pedagogical formation training certificate program students' about perceived instrumentality of educational sciences courses. The cross-sectional study was used to investigate the research questions. Data were collected from 415 teacher candidates using the Perceived Instrumentality of Educational Sciences Courses Survey. Results revealed that faculty of education students' opinions towards the functionality of educational sciences courses were more positive than pedagogical formation training certificate program students' opinions.

**Keywords:** educational science courses; perceived instrumentality; prospective teachers

### INTRODUCTION

Teacher training is regarded as a fundamental mechanism for developing pedagogical content knowledge of teachers' and emerging training applications to reach high standards. In this process, both pedagogical content knowledge of teachers and their teaching skills have a strong influence on success of students. Several studies were conducted to investigate the issue (Atik Kara, 2012; Kartal and Afacan, 2013; Kılıç ve Acat, 2007; Yüksel, 2009).

Kılıç ve Acat (2007) conducted a study determine the essentiality and job-utility levels of the courses offered in elementary school teacher education programs. The data were collected by a survey developed by the researchers. 296 senior students attending on the education faculty participated in the study. The order of the job-utility and essentiality of the courses within groups and across all courses were determined. The result of study indicated that pedagogy courses are viewed as essential and useful by the students. However, students indicated that subject area courses are not as useful as pedagogy courses for their prospective profession.

In a study Yüksel (2009) investigated the opinions of students about education courses. Participants were selected among the education faculty students of the Uludağ University and the Gazi University. 414 students participated in the study. The data for the study were collected through a survey. The result of the study revealed that students have positive opinions about the teaching profession and their instructors but their opinions about the education courses are not that much positive. Yüksel (2009) recommended a future investigation to investigate the reasons.

Atik Kara (2012) conducted a study to evaluate the subject area courses and pedagogy courses found in teacher training programs in terms of teacher candidates' competencies regarding the learning and teaching process. The qualitative research method was used in the study. Initially the Teaching Profession General Competencies were determined. Then the study investigated;

- How these indicators reflect upon the content and objectives of the Teaching Profession Knowledge courses,

- To what extent these Teaching Profession General Competencies courses help gain these performance indicators from the perspectives of faculty members and teacher candidates, and
- To what extent teacher candidates use these performance indicators in teaching-related applications.

Data for the study were collected from 7 faculty members from the Department of Educational Sciences 14 teacher candidates from seven different teaching programs of an education faculty in one public university. Structured and semi-structured interviews, observations, diaries and document analysis were used to collect data for the study. The descriptive analysis of the qualitative data was conducted for the data analysis.

The results of the study revealed that the courses were taught rather on theoretical basis via direct instruction without the use of different methods, techniques or materials depending on the faculty members' views about the teaching of Teaching Profession General Competencies courses. It was also found that because of the work-load of the faculty members, the high number of the students and because of the fact that the teacher candidates found the courses unimportant, the faculty members and the teacher candidates were not able to fulfill responsibilities in an accepted level. Development and Learning (Educational Psychology) and Instructional Technologies and Material Development courses were identified as having the biggest contribution among the Teaching Profession General Competencies courses.

In a study Kartal and Afacan (2013) investigated the attitudes of prospective teachers who attended the pedagogy program. In this descriptive research homogeneous case sampling was used to select the participants. 135 prospective teachers who attended the pedagogy program offered by a state university involved in the study. The attitudes of prospective teachers who attended the pedagogy program were above the average. It was also found that participants of the study view themselves sufficient for the teaching profession.

It is important to reveal teacher-candidates' perceived instrumentality of educational sciences courses. The purpose of this study is to investigate views of faculty of education students and pedagogical formation training certificate program students' about perceived instrumentality of educational sciences courses. Following research questions were developed;

- Is there difference between the education faculty students' perceived instrumentality of educational sciences courses and the pedagogy program students' perceived instrumentality of educational science courses?
- Is there difference in students' perceived instrumentality of educational science courses for genders?
- Is there any relationship between students' perceived instrumentality of educational science courses and academic achievement?
- To what extent does the academic achievement of students explain the students' perceived instrumentality of educational science courses?

## METHOD

The cross-sectional study was used to investigate the research questions. The perceived Instrumentality of Educational Sciences Courses Survey which was developed by the researchers was used in the study for the data collection purposes. The perceived Instrumentality of Educational Sciences Courses Survey has 7 items. It is one factor Likert type Survey with 5 choices. The factor loads of the survey range between 0.61 and 0.83. The Cronbach Alpha value of the survey is 0.83.

258 sophomore studying at the education faculty of the public university and 157 students attending the pedagogy certificate program offered by the education faculty of the public university participated in the study. Participants were selected among the ones completed the Introduction to Educational Sciences, Teaching Principles and Methods, Measurement and Evaluation, Classroom Management and Counselling courses.

## ANALYSIS

For the analysis of the data, independent samples t-test was used to determine influences of independent variables on dependent variables. Also, Pearson's product-moment correlation and regression analysis were used to present relationship between students' perceived instrumentality of educational science and academic achievement.

## FINDINGS

The first research question investigated whether there is a difference between the education faculty students' perceived instrumentality of educational sciences courses and the pedagogy program students' perceived instrumentality of educational science courses. The result of the independent t-test revealed that education faculty students' perceived instrumentality of educational science courses ( $X=4,20$ ;  $ss=0,88$ ) is significantly higher than the pedagogy program students' perceived instrumentality of educational science courses ( $(X=3,90$ ;  $ss=0,88)$  ( $t(413)=3,86$ ;  $p<0,05$ )) (Table 1). This result shows that education faculty students view education courses more beneficial than pedagogy program students.

Table 1: The Comparison of Education Faculty Students' View and Pedagogy Program Students' View

Groups	N	X	ss	sd	t	p
Education faculty students	258	4,20	0,88			
				413	3,86*	0,00
Pedagogy program students	157	3,90	0,88			

The second research question investigated whether there is a difference in students' perceived instrumentality of educational science courses for genders. The result of the independent t-test revealed that female education faculty students' perceived instrumentality of educational science courses ( $X=4,36$ ;  $ss=0,81$ ) is significantly higher than male education faculty students' perceived instrumentality of educational science courses ( $X=4,01$ ;  $ss=0,98$ ) ( $t(256)=2,79$ ;  $p<0,05$ ) (Table 2). On the other hand, The result of the independent t-test revealed that female Pedagogy Program students' perceived instrumentality of educational science courses ( $X=3,89$ ;  $ss=0,87$ ) is not significantly different from male Pedagogy Program students' perceived instrumentality of educational science courses ( $X=4,01$ ;  $ss=0,93$ ) ( $t(155)=0,89$ ;  $p>0,05$ ) (Table 2).

Table 2: The Comparison of Students' View by the Gender

Groups	Gender	N	X	ss	sd	t	p
Education Faculty Students	Female	177	4,36	0,81			
	Male	81	4,01	0,98	256	<b>2,79*</b>	<b>0,00</b>
Pedagogy Program Students	Female	117	3,86	0,87			
	Male	40	4,01	0,93	155	0,89	0,37

The third research question investigated whether there is any relationship between students' perceived instrumentality of educational science courses and academic achievement. The result revealed that there is low level significant relationship between education faculty students' perceived instrumentality of educational science courses and academic achievement ( $r=0,19$ ;  $p<0,01$ ). However, there is no significant relationship between pedagogy program students' perceived instrumentality of educational science courses and academic achievement ( $r=0,05$ ;  $p>0,01$ ) (Table 3).

Table 3: The Relationship Between Academic Achievement and Students' View

	Views
Education Faculty Students' Achievement	<b>0,19**</b>
Pedagogy Program Students' Achievement	0,05

The forth research question investigated the extent to which the academic achievement of students explains the students' perceived instrumentality of educational science courses. The result of the analysis revealed that education faculty students' perceived instrumentality of educational science courses explains the academic achievement of education faculty students ( $R^2= 0,035$ ,  $p<0,001$ ) (Table 4).

Table 4: The Extent to Which the Academic Achievement of Students Explains the Students' Perceived Instrumentality of Educational Science Courses

Model	R	R <sup>2</sup>	F	p
1	0,188	0,035	9,346	0,002

## DISCUSSION AND CONCLUSION

This study has four findings to explain the views of faculty of education students' and pedagogical formation training certificate program students' view about perceived instrumentality of educational sciences courses. Initially it shows that education faculty students view education courses more beneficial than pedagogy program students. Also female education faculty students' perceived instrumentality of educational science courses is higher than male education faculty students' perceived instrumentality of educational science courses while female Pedagogy Program students' perceived instrumentality of educational science courses is not significantly different from male Pedagogy Program students' perceived instrumentality of educational science courses. Moreover, the result reveals that there is low level significant relationship between education faculty students' perceived instrumentality of educational science courses and academic achievement. Finally, this study indicates that education faculty students' perceived instrumentality of educational science courses explains the academic

achievement of education faculty students. Kartal and Afacan (2013)'s study showed that the attitudes of prospective teachers who attended the pedagogy program are higher. Pedagogy courses are viewed as essential and useful by the students (Kılıç ve Acat, 2007). On the other hand, Yüksel (2009) found that students' opinions about the education courses are not that much positive. One possible reason for this can be the work-load of the faculty members and the high number of the students (Atik Kara, 2012). Even though there are areas that require future investment, prospective teachers who attended the pedagogy program view themselves sufficient for the teaching profession (Kartal and Afacan, 2013). Future qualitative data should be collected to explain the quantitative findings achieved in this study.

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