

# ÜNİVERSİTE ÖĞRETMEN ADAYI ÖĞRENCİLERİN PROBLEM ÇÖZME BECERİLERİNİN FARKLI DEĞİŞKENLERE GÖRE İNCELENMESİ

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## ÖZET

Bu araştırmanın amacı, üniversite öğretmen aday öğrencilerin problem çözme becerilerinin farklı değişkenlere göre araştırmaktır. Araştırmada, betimsel nitelikli tarama modeli kullanılmıştır. Araştırmanın 2013-2014 Eğitim-Öğretim yılında Ahi Evran Üniversitesi, Erciyes Üniversitesi, Gaziosmanpaşa Üniversitesi, Kahramanmaraş Sütçü İmam Üniversitesi ve Gaziantep Üniversitesi Beden eğitimi ve spor yüksekokulu ile sınıf öğretmenliği bölümlerinde eğitim-öğretim gören toplam 1005 öğretmen aday öğrencileri oluşturmuştur. Araştırmanın verileri araştırmacı tarafından hazırlanan "Kişisel Bilgiler Formu" ve Heppner ve Peterson (1982) tarafından geliştirilen problem çözme envanteri kullanılmıştır. Bu ölçeğin Türkçe çevirisi Şahin, Şahin ve Heppner (1993) tarafından gerçekleştirilmiştir. Toplanan veriler üzerinde t testi, LSD, ve ANOVA gibi farklı çıkarımsal analizler yapılmıştır (p<0.05). Elde edilen sonuçlar çalışmaya katılanların sınıf ve yaş değişkenleri alt boyutlarında fark bulunmazken öğrenim görülen program, cinsiyet, barınılan yer, anne eğitim, baba eğitim, anne meslek, baba meslek ve aile gelir düzeyi değişkenlerinde anlamlı fark olduğu sonucuna ulaşılmıştır.

**Anahtar Kelimeler:** Problem çözme, Beden eğitimi, Öğretmenlik

## THE STUDY OF THE CANDIDATE STUDENTS OF UNIVERSITY LECTURER'S THE SKILLS OF SOLVING PROBLEM ACORDING TO THE DIFRENT VARIABLES

## ABSTRACT

The goal of this study is to study the candidate students of university lecturer's the skills of solving problem according to the difrent variables. In the study , the descriptive survey model has been used. the stduy of 2013-2014 education-teaching academic year involves one thousand students of candidate teacher from the department of classroom teaching and the department of physical education and sports from different universities such as the university of Ahi Evran the university of Gazi Osman Paşa, the university of Kahramanmaraş Sütçü İmam and the university of Gaziantep. The form of personal in formation prepared by the resarcher and the inventory of solving problem developed by Heppner Peterson ( 1982) have been used as the datas of the study. The scale has been translated by Şahin and Heppner (1993). The inferential Analyses have been done on the collected datas such as t-test, LSD,and ANOVA (p<0.05).

According to the results, there is no difference between the variable of class and age of the attendants on the other hand , there is a meaning ful difference between the variable of educating programme, sex, living place, the education of mother and father, the profession of mother and father and the level of family income .

**Key words:** Solving Problems, Physical Education, Teaching.

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## INTRODUCTION

While the problem is a notion that expresses the troublesome and undesirable situations, problem solving is defined as the defeating process of difficulties when some wants to achieve a purpose. Problem solving not only requires knowledge but also requires creativity and solving methods to get benefit (Yalçın, Tetik, & Açıköz, 2010).

Solutions of the problems may show difference according to kind of the problem and complexity. For example some problems can be solved totally with logic some of them requires a new perception to consider the issues. Common point in the solving of the problems is to remove the obstacle for reaching the purpose (Cüceloğlu, 2002).

According to Senemoğlu (2000) problem solving skill is important for creating a suitable environment to the individual and group and therefore individuals need to know the problem solving to comply with the environment (Senemoğlu, 2000).

When we look at the definition made on problem solving it is probable to define the hard situations on the way of achieving the purpose as defeating process. Problem solving process searches for ways to carry the organism to an internal balance through obeying the rules or decreasing the obstacles. When it is viewed from this aspect problem solving is a skill that requires

energy, effort, time and practicing and it is needed to be developed continuously (Bingham, 1998).

Creative problem solving process initiates with stimulants that are coming from inside and outside. If the individual cannot realize the difference between current and desired situation then process fails. If the person realizes the difference and gets disturbed he begins to resolve the problem. Yet, if the solving is quitted then process will end up. If the person feels the difference and gets disturbed then he will begin to solve the problem and uses the standard ways after then if he is happy with the result then the problem solving process will be done. However, after this part if the process is continued then the creative thought will take part. Reconsidering of the problem will take part with the new stimulants and defining of the redefinition. If the process is carried without finishing then the process will be ended with a creative result (Terzi Işık, 2000).

It is not possible that a person has not got problems in his life or in every moment he will coincide with a new problem. It is impossible to have a problem-free life or finding a problem-free place. For this reason instead of expecting a problem-free life it is important to learn how to solve the problems (Türkçapar, 2007).

## METHOD

### Research Pattern

Research is in the depictive quality, and five different university students', from classroom teaching and physical education and sports teaching departments, problem solving levels were examined. Research is in the scanning model. Scanning models are the research approaches that includes large groups and a sample group chosen

from the population aims to examine a situation exist before and still existing. Issue, individual or an object that takes part in the research is tried to be defined as in its conditions and as so (Karasar, 1994).

### Study Group

There are 1000 teacher candidate students from Ahi Evran University, Erciyes University, Gaziosmanpaşa

University, Kahramanmaraş Sütçü İmam University and Gaziantep University Physical Education and Sports Teaching departments consisted the research in 2013-2014 academic year Ahi Evran University. Sample of the Research's sample is consisted of 1005 teacher candidate students from 1,2,3,4 grades, 507 of them are physical education students and 498 of them are classroom teaching students.

### Data Collecting Tools

To determine the students' demographic characteristics 'Personal Information Form' used. This form is consisted of articles like; your university, your department, your grade, gender, age, place you live, education status of mother, education status of father and monthly level of family income.

To determine the participants' problem solving skills problem solving inventory used. Purpose of this inventory is to evaluate how the individual perceives the attitude and behaviors about problem solving. Here the problem notion expresses the personal problems like; depression, incompatibility with friends, choosing a job, making a decision he/she

will divorce or not. The inventory reflects the individual's problem solving skills or evaluating his style and realizing of them. It evaluates how individual perceives the problem solving skills; it does not evaluate the real problem solving skills (Albayrak, 2002).

The scale that was developed by Heppner ve Peterson (1982) adapted into Turkish by Şahin, Şahin and Heppner (1993). Problem solving inventory is an individual evaluation scale with 35 articles, 1-6 grading likert type evaluates the individual's perception on problem solving skills. Point range is 32-192"dir. Highness of the points gathered from scale shows that individual feels insufficient in problem solving. At the moment of grading 9, 22, 29 articles are omitted. 1, 2, 3, 4, 11, 13, 14, 15, 17, 21, 25, 26, 30. and 34. Articles are graded conversely. It is considered that these articles represents the enough problem solving skills (Savaşır & Şahin, 1997).

### Analysis of the Data

To have an expressive information about individuals participated into study inferential analyses done like; t test, LSD and ANOVA ( $p < 0.05$ )

## FINDINGS

**Table 1:** Problem solving levels skills' analysis results according to research's group program variance (t-test)

	Program	n	Mean	SD	T	p
Problem solving	Physical Education Teaching	507	92,46	20,34	-4,184	,000*
	Classroom Teaching	498	97,76	19,82		

\* $p < 0.05$

According to Table 1's research's group program variance if there is a difference between problem solving skills there is a statistical difference determined ( $t = -4,184$ ;  $p < 0.05$ ).

**Table 2:** Problem solving levels skills' analysis results according to classroom variance (ANOVA)

	Class	N	Mean	SD	F	p
Problem solving	1 <sup>st</sup> grade	241	94,34	21,06	2,505	,058
	2 <sup>nd</sup> grade	249	96,72	19,61		
	3 <sup>rd</sup> grade	263	92,63	19,42		
	4 <sup>th</sup> grade	252	96,74	20,75		

\* $p < 0.05$

According to Table 2's research's group program variance if there is a difference between problem solving skills there is not a statistical difference determined ( $F(3,1001)=2,505$ ;  $p>0.05$ ).

**Table 3:** Problem solving levels skills' analysis results according to gender variance(t-test)

	Gender	N	Mean	SD	t	p
Problem solving	Female	549	93,75	19,63	-2,295	,022*
	Male	456	96,69	20,88		

\* $p<0.05$

According to Table 3 and research group's gender variance there is a difference among the problem solving skills for the goodness of male group and this difference is determined that it is positive. ( $t=-2,295$ ;  $p<0.05$ ).

**Table 4:** Problem solving levels skills' analysis results according to age variance (ANOVA)

	Age	n	Mean	SD	F	p
Problem solving	18-20	324	93,60	20,14	2,350	,071
	21-23	532	95,40	19,35		
	24-26	123	98,61	22,47		
	27 and +	26	90,34	26,44		

According to Table 4 research group's age variance there is not a statistically meaningful difference between problem solving skills ( $F(3,1001)=2,350$ ;  $p>0.05$ ).

**Table 5:** Problem solving levels skills' analysis results according to living variance (ANOVA)

	Living	n	Mean	SD	F	P	Fark LSD
Problem solving	1.with Family	306	92,13	20,63	3,565	,014*	1<2
	2. Student house	377	97,09	20,47			
	3. State dormitory	216	95,18	19,42			
	4. Private dormitory	106	96,32	19,26			

\* $p<0.05$

According to Table 5's research group's living variance it is determined that there is a difference between problem solving skills ( $F(3,1001)=3,656$ ;  $p<0.05$ ). In the LSD test done for finding out the resource of difference; It is determined that this

difference is between students living in student houses and living together.

**Table 6:** Problem solving levels skills' analysis results according to education of mother situations (ANOVA)

	Education of mother	N	Mean	SD	F	p	Difference LSD
Problem solving	1.she is not literate	155	94,49	21,78	3,304	,006*	3<5,6
	2.she is Literate	85	95,70	21,07			
	3. Primary school	457	93,22	19,33			
	4. Secondary school	137	95,55	19,83			
	5. High school	124	101,60	18,59			
	6. University and over	47	100,48	23,02			

\* $p<0.05$

According to Table 6 research group's there is difference between education of mother variance and problem solving skills this difference is determined that it is statistically meaningful ( $F(5,999)=3,304$ ;  $p<0.05$ ). To find out the

resource of difference in the LSD test; It is determined that there is a difference between primary school graduated mother and high school and university graduates.

**Table 7:** Problem solving levels skills' analysis results according to education of father situations (ANOVA)

	Education of father	N	Mean	SD	F	p	Difference LSD
Problem solving	1.He is not literate	42	95,85	21,29	3,008	,011*	4<1,5,6
	2.He is literate	41	94,76	20,91			
	3. Primary school	326	94,05	19,24			
	4. Secondary school	184	92,68	19,83			
	5. High School	269	103,65	17,42			
	6. University and over	143	98,46	21,47			

\* $p<0.05$

According to Table 7 research group's there is difference between education of mother variance and problem solving skills this difference is determined that it is statistically meaningful ( $F(5,999)=3,008$ ;  $p<0.05$ ). To find out the

resource of difference in the LSD test; It is determined that there is a difference between secondary school graduated father and high school and university graduates.

**Table 8:** Problem solving levels skills' analysis results according to Job of Mother situations (ANOVA)

	Job of Mother	N	Mean	SD	F	p	Differenc e LSD
Problem solving	1.House wife	875	94,38	20,18	2,915	,021*	1<2
	2. Officer	48	102,47	19,72			
	3. Worker	44	99,63	17,07			
	4. Retired	25	99,80	24,73			
	5. Other	13	90,92	21,92			

\* $p<0.05$

According to Table 8 research group's there is difference between job of mother variance and problem solving skills this difference is determined that it is statistically meaningful

( $F(4,1000)=2,915$ ;  $p<0.05$ ). To find out the resource of difference in the LSD test; It is determined that this difference derived from officer mothers group and house wives.

**Table 9:** Problem solving levels skills' analysis results according to Job of Father situations (ANOVA)

	Father profession	n	Mean	SD	F	p	Fark LSD
Problem solving	1. Officer	191	98,94	19,83	5,814	,000*	1>4,5,6 2>4,5,6
	2. Farmer	140	98,95	20,81			
	3. Artificer	141	97,73	18,65			
	4. Worker	226	92,3319	20,78			
	5. Retired	260	92,3231	20,11			
	6. Other	47	88,5319	17,64			

\* $p<0.05$

According to Table 9 research group's there is difference between job of father variance and problem solving skills this difference is determined that it is statistically meaningful ( $F(5,999)=5,814$ ;  $p<0.05$ ). To find out the resource of difference in the LSD test; It is determined that this difference derived from the difference between officer, farmer and tradesman' profit and jobs in other groups.

**Table 10:** Problem solving levels skills' analysis results according to Level of Family Income (ANOVA)

	Family Income (TL)	N	Mean	SD	F	p	Difference LSD
Problem solving	a)0-750	122	95,83	21,33	2,424	,047*	b<d
	b) 751-1500	395	92,91	19,51			
	c) 1501-2250	285	95,63	19,98			
	d) 2251-3000	131	98,57	19,89			
	e) 3000 and Over	72	97,27	23,12			

\* $p<0.05$

According to Table 9 research group's there is difference between level of income variance and problem solving skills this difference is determined that it is statistically meaningful ( $F(4,1000)=2,424$ ;  $p<0.05$ ). To find out the resource of difference in the LSD test; This difference determined that between 751-1500 TL income and 2251-3000 TL income.

## RESULT AND DICUSSING

According to the program variances of the study group it is found that there is a statistically meaningful difference between the level of problem solving skills. Nitekim, Dönmez (2010) in their research they reached to the result that Physical Education and Sports Teaching department meaningful differences in terms of students' problem solving skills scores on secondary schools they graduated it concluded. This situation parallels with the results of our study show Çilingir's (2006) in his study of high school students with science high school students that differ in Problem Solving Skills.

According to the research group class variables it has been found to be a statistically significant difference between problem-solving skills. However Katkat and Mızrak (2003), students with teachers in continuing to different classes of the Faculty of Education investigated the effects of problem-solving skills, pedagogical and except for 1 and 2 grades it is found that increasing of other classes in the class increasing problem-solving skills except for classes. This is to show parallels our study.

Problem-solving skills according to the gender of the study group were found to have statistically significant difference between groups in favor of men. A review of research carried out; Serin and Derin (2008) 'in the 8th grade Primary school students, Cenkseven and Akar Vural (2006)' s high school student ratios of girls to boys in the survey conducted by themselves solve problems more positively perceive their skills, Koray and Azar (2008) 's high school In their study of the students, male students were found to be higher than girls' problem-solving skills. However, Tümkaya and İflazoğlu (2000) with the work they perform classroom teaching department with students, Altay (2011) 's secondary work with and Kışkır (2011) conducted with students seem to correlate with the work carried out by teachers. İflazoğlu (between 2000) classroom teaching students about their problem-solving skills by gender, Altay (2011) among secondary school students' problem-solving gender with skill and Kışkır (2011) did not found a significant relationship between gender and problem-solving skills of teachers.

Variable depending on the age of the study group were found to have statistically significant difference between problem-solving skills. Nitekim Çağlayan (2007) study carried out in Physical Education and Sports School with students of Physical Education and Sports School student gender with problem solving skills, type of high school that year and graduates have found no significant association between variables. This situation shows parallelism with our work does not start (2010), Güçlü (2003), İnce and Şen (2006), Tekin et al. (2006) in their studies they reached to the result that age is not an effect on problem solving skills.

According to the living variance of the study group it is found that there is a statistically meaningful difference between problem-solving skills. Uzun (2010) in his study, elementary school students problem-solving skills and all the dimensions of different places, reaching the conclusion that there is a significant difference between students resident in the level of success, Dönmez (2010) in his study of physical education teaching students about their problem-solving skills points spent on life no significant difference in the score reached the conclusion that the settlements.

Education of mother level of the participants were found to have statistically significant difference between problem-solving skills based on variable. This difference against the high school and the elementary school her mother was determined that among university graduates. Uğurluoğlu (2008) has found that increased confidence in the students' problem-solving skills by increasing levels of maternal education. Hamarta (2007) 8th grade students in social problem-solving skills, perceived parental attitudes maternal education of illiterate students' problem-negative approach to the study describing the pain, intrinsic and avoidant approach

points; mother, middle school, high school and higher students with a university degree, as well as non-maternal educational status literate children rational problem solving and overall social problem-solving mean scores of the mother's level of education, middle school, were lower than those with high school and college. Mother's education level of problem-solving skills that result in the creation of a difference in significantly been reached. Korkut (2002), Gökbüzoğlu (2008) 's in their work with students in high school, Serin and Derin (2008) in 8th grade in their research with students their mother's level of education that students create a difference in their problem-solving skills have been identified. Aslan and Sağır (2012) in their study of science and technology teachers examining problem-solving skills, according to the parents' education level problem-solving skills in perception of teachers stated that no significant differences.

Parental education status of the study group were found to have statistically significant difference between problem-solving skills based on variable. Secondary school graduates has been determined that this difference between fathers against high school and university graduates. In his study, Topal (2011) education level of father status in the faculty of education has determined whether or not the work of students in problem-solving skills. Researches done by Hamarta (2007) and Altay (2011) also support the research. Çağlayan et al. (2008) in his study with high school students based on parental education level of problem-solving skills that significant differences were seen with their father's educational level is higher than the average of the problem solving skills of the students was high. Tümkaya and İflazoğlu (2000) also has a lower level of education as compared to non-identified problem-solving skills of students with high family.

Job of mother status of the participants are found that there is a meaningful difference between problem-solving skills based on variance. Mothers' groups in which the officer has determined that this difference stems from the difference between housewives profit.

Job of Father status of the study group are found there is a meaningful difference between problem-solving skills based on variable. It is determined that this difference is derived from jobs like officers, farmers and tradesman groups in favor of the workers, retired people and other jobsgroups.

Family income level of the participants are found that there is meaningful difference between problem-solving skills based on variable. This difference was determined that income level against the lower ones. Uzun (2010), as a result of one-way analysis of variance applied with elementary school students, a

significant difference between students who have reached the conclusion that no. According to the results of socioeconomic level increases levels of achievement for all groups of students the differences are increasing. According to Terzi (2003)'s research the results of his research at the family's socio-economic situation it differentiates students' problem-solving skills. Terzi (2003) According to the research it differentiates the skills of students with socio-economic level there are people who are with socio economic level interpersonal problem-solving skills, perceptions, are higher than the lower and middle socio-economic level having students interpersonal problem-solving skills perception. However, Altay (2011) in his study of secondary school students he does not have reached a meaningful difference in family income averages.

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