Evaluating PPSE Scores of Prospective Teachers Graduated from Two Different Programs in Terms of Different Variables (Turkey Sample)

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Abstract: The aim of this study is to evaluate PPSE scores of prospective teachers graduated from elementary science education and elementary social studies education programs in faculty of education in terms of different variables. This research is a descriptive study and at the same time, it has the historical nature as it covers a period of six years. The population of the study is 1056 prospective teachers who graduated from Kastamonu University Faculty of Education between 2004 and 2009. In data analysis, t-test in binary comparisons, One-way ANOVA test in multiple comparisons was used. The relationship between scores was calculated with Pearson Correlation Coefficient. According to research findings, there is a meaningful difference in the distribution of PPSE scores of science and social sciences education program graduates according to years, gender and type of high school they graduated. There is a meaningful difference in the distribution of PPSE scores of social sciences education program graduates and science education program graduates. Prospective teachers graduated from science education program are more successful than prospective teachers graduated from social sciences education program statistically. Positive meaningful relationship was found between PPSE scores and Faculty graduation means.

Key words: Prospective teachers · PPSE scores · Science education · Social studies education

INTRODUCTION

Measurement and evaluation is of great importance at every stage of educational activities. Measurement and evaluation give clues about the degree of readiness of students, the achievement of the students, the development process of the students, the adequacy of education and training activities and the shortcomings of the curriculum.

Various methods are used to measure student achievement in Turkey. At the end of each stage of education, the state holds central exams to measure students’ achievement and to place them in an appropriate section according to their examination scores [1].

The appointment of teachers requires a selection process at present time. The method applied in the selection of prospective teachers is a series of multiple-choice exams. However, it would be right to point out that this system is towards screening rather than selection as these exams measure one or few aspects of the candidates and they do not use a grading system based on the quota or available positions [2,3]. The examination which ten thousands prospective teachers graduated from faculty of education and the owners of pedagogical formation enter, under the name of Public Personnel Selection Examination (PPSE)(KPSS in Turkish) is carried out on a regular basis every year. Due to the number of prospective teachers graduated is more than the need for teachers, such an examination is vitally needed. Such examinations were applied between years 1985 and 1991 for the first time and they are named "teacher qualification exams". Finally, in the examination held in 1991 given vacancies wasn’t filled; so this examination, losing its functionality, was terminated [4]. In 2001, Public Vocational Exam (PVE)/KMS in Turkish) and almost a year after with no. 3975 dated 03.18.2002 decision of the Council of Ministers according to regulations [5]. Provisions about first appointed people to public office, Public Personnel Selection Examination (PPSE) were started to be carried out by the Student Selection and Placement Center (SSPE)(ÖSYM in Turkish).
Public Personnel Selection Examination (PPSE) is conducted in accordance with “procedures and principles concerning the tests to be applied to those who will be appointed to government offices for the first time,” which was prepared by state personnel presidency and center for Student Selection and Placement in cooperation in 3.5.2002 [6].

The PPSE is an examination held centrally by the SSPC and used for determining the people who will be assigned as civil servants for the first time. Civil servant candidates can start their professional career depending on the scores they get from this exam. Prospective teachers who will be appointed for the first time as well can become a teacher after being successful at PPSE. For the prospective teachers, the PPSE is held in two sessions on Saturday morning and Saturday afternoon. The session on Saturday morning is composed of the ‘General Ability’ and ‘General Knowledge’ tests and the Saturday afternoon session is composed of the ‘Educational Sciences’ test. Those who obtain the minimum scores to be determined after the examination have the right to apply for the quota determined by the Ministry of National Education [7].

Generally the reason of the exams was to determine announced vacancies filled to what extent. Because if people applied fewer than need, the prospective teacher were assigned regardless of the obtained score. In 1996, the need for primary school teacher was filled by unemployed graduates, ones who don’t have pedagogic formation were assigned as teachers. Gradually with the growing number of graduates from faculties of education the need to assign with examination is emerged again and graduates are assigned according to Ministry of Finance’s quota and PPSE order of success.

In a study based on the views of students who enter PPSE, prospective teachers want that their entering score to their faculty and graduation degree must be taken into account, they define that for the exam’s liberal education, general ability and educational sciences sections aren’t sufficient to ensure measurement, it’s not a good technique [4]. Prospective teachers express their opinion that in this exam not only cognitive skills but also affective skills must be measured. Besides they define that the exam is only a contest and qualifying examination, it doesn’t contribute to teaching profession, it’s emphasized that because of test anxiety students can’t give the necessary importance to professional courses in faculty and also they state that in order to success in PPSE need to take additional and special courses is emerged.

The main purpose of the study is to evaluate PPSE scores of prospective teachers graduated from elementary science education and elementary social studies education programs in faculty of education in terms of different variables. In this study, answers to the following sub-problems were sought:

- How is the level of PPSE scores of prospective teachers who graduated from science education programs according to years, gender and type of high school?
- How is the level of PPSE scores of prospective teachers who graduated from social sciences education programs according to years, gender and type of high school?
- Is there a meaningful difference between PPSE scores of prospective teachers who graduated from science education programs and social sciences education programs?
- Is there a meaningful relationship between PPSE scores and faculty graduation means?

MATERIALS AND METHODS

This research is a descriptive study. Descriptive studies involve four basic steps [8]: (1) forming a framework for the descriptive analysis, (2) processing the data in the thematic framework, (3) describing the findings and (4) interpreting the findings. This study was defined as a descriptive due to the fact that the data were arranged and interpreted according to the pre-set themes. At the same time, it has the historical nature as it covers a period of six years.

The population of the study is 1056 prospective teachers who graduated from Kastamonu University Faculty of Education between 2004 and 2009. 529 prospective teachers are graduated from Elementary Science Education Program and 527 teacher prospective teachers are graduated from Elementary Social Studies Education Program.

The statistical package for the social sciences (SPSS) 16 program was used for statistical analysis of the data collected by the surveys filled in correctly and fully according to the explanations in the frame of the general aims of the study. In order to answer research questions in data analysis, the frequency, percentage, arithmetical mean and standard deviation of the answers were calculated. Independent t-test in binary comparisons, One-way ANOVA test in multiple comparisons was used. The relationship between scores was calculated with Pearson Correlation Coefficient.
RESULTS

Findings Related to First Sub-Problem: Arithmetical mean and standard deviation of the answers that teachers gave about the level of PPSE scores of prospective teachers who graduated from science education programs according to years, gender and type of high school

Distribution of PPSE scores of science education program graduates according to years was given in Table 1.

According to ANOVA test results, there is a meaningful difference in the distribution of PPSE scores of science education program graduates according to years \( (F_{(4, 523)} = 2.898 \) and \( p = 0.014 \). As variance is homogeneous as a result of homogeneity of variance test \( (\text{Levene, } F_{(4, 523)} = 0.990 \) and \( p = 0.423 \)), source of the difference between the groups were investigated with Tukey HSD test. As a result of Tukey HSD test, there is a meaningful difference between the PPSE scores of 2005 and PPSE scores of 2007 in the level of \( p = 0.019 \). According to this finding, it was found out that prospective teachers who graduated from science education program in 2007 are more successful when compared to 2005 statistically.

Distribution of PPSE scores of science education program graduates according to gender was given in Table 2.

Table 1: Distribution of PPSE scores of science education program graduates according to years

<table>
<thead>
<tr>
<th>Year (1)</th>
<th>n</th>
<th>X</th>
<th>S</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Tukey HSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>89</td>
<td>72.95</td>
<td>11.23</td>
<td>45.71</td>
<td>97.07</td>
<td>(2-4), 019</td>
</tr>
<tr>
<td>2005</td>
<td>86</td>
<td>71.07</td>
<td>11.04</td>
<td>42.31</td>
<td>89.34</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>90</td>
<td>75.50</td>
<td>10.63</td>
<td>48.46</td>
<td>91.28</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>84</td>
<td>76.47</td>
<td>10.51</td>
<td>47.53</td>
<td>95.52</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>85</td>
<td>75.71</td>
<td>12.34</td>
<td>42.41</td>
<td>91.58</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>93</td>
<td>73.89</td>
<td>10.48</td>
<td>44.21</td>
<td>90.68</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Distribution of PPSE scores of science education program graduates according to gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>X</th>
<th>S</th>
<th>F</th>
<th>t</th>
<th>df</th>
<th>Mean Diff.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>281</td>
<td>73.29</td>
<td>11.97</td>
<td>16.819</td>
<td>-2.148</td>
<td>524.005</td>
<td>-2.06</td>
<td>.032</td>
</tr>
<tr>
<td>Female</td>
<td>246</td>
<td>75.35</td>
<td>10.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Distribution of PPSE scores of science education program graduates according to type of high school

<table>
<thead>
<tr>
<th>Type of high school</th>
<th>n</th>
<th>X</th>
<th>S</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Tukey HSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public High School (1)</td>
<td>259</td>
<td>72.31</td>
<td>11.13</td>
<td>42.963</td>
<td>97.070</td>
<td>(1-4), 000</td>
</tr>
<tr>
<td>Anatolian High School (2)</td>
<td>90</td>
<td>75.75</td>
<td>11.50</td>
<td>49.822</td>
<td>95.528</td>
<td></td>
</tr>
<tr>
<td>Anatolian Teacher High School (3)</td>
<td>51</td>
<td>72.83</td>
<td>12.24</td>
<td>42.315</td>
<td>90.661</td>
<td></td>
</tr>
<tr>
<td>Foreign Language Weighted High School (4)</td>
<td>95</td>
<td>77.69</td>
<td>9.75</td>
<td>49.606</td>
<td>92.446</td>
<td></td>
</tr>
<tr>
<td>Other (5)</td>
<td>32</td>
<td>77.80</td>
<td>8.78</td>
<td>51.684</td>
<td>92.607</td>
<td></td>
</tr>
</tbody>
</table>
Findings Related to Second Sub-problem: Distribution of PPSE scores of social sciences education program graduates according to years was given in Table 4.

According to ANOVA test results, there is a meaningful difference in the distribution of PPSE scores of social sciences education program graduates according to years ($F_{(6,513)} = 9.10$ and $p<0.001$). As variance is homogeneous as a result of homogeneity of variance test ($Levene_{(6,513)} = 0.803$ and $p=0.548$), source of the difference between the groups were investigated with Tukey HSD test. As a result of Tukey HSD test, when we analyze distribution of PPSE scores of social sciences education program graduates according to years, there is a meaningful difference between the PPSE scores of 2004 and PPSE scores of 2008 and 2009; there is a meaningful difference between the PPSE scores of 2005 and PPSE scores of 2008 in the level of $p<0.001$ ($p<0.001$). It is found that there is a meaningful difference between the PPSE scores of 2005 and PPSE scores of 2009 in the level of $p<0.05$; and there is a meaningful difference between the PPSE scores of 2008 and PPSE scores of 2006 ($p<0.001$) and 2007 ($p=0.003$) in the level of $p<0.01$.

Distribution of PPSE scores of science education program graduates according to gender was given in Table 5.

As a result of $t$ test results, there is a meaningful difference in the distribution of PPSE scores of social sciences education program graduates according to gender in the level of $p<0.001$. Male prospective teachers graduated from social sciences education program are more successful than female prospective teachers graduated from social sciences education program ($p<0.001$).

Distribution of PPSE scores of social sciences education program graduates according to type of high school was given in Table 6.

According to ANOVA test results, there is a meaningful difference in the distribution of PPSE scores of science education program graduates according to type of high school they graduated ($F_{(6,514)} = 8.197$ and $p<0.001$). As variance is homogeneous as a result of homogeneity of variance test ($Levene_{(6,514)} = 0.622$ and $p=0.065$) source of the difference between the groups were investigated with Tukey HSD test. As a result of Tukey HSD test, there is a meaningful difference in the PPSE scores of social sciences education program graduates according to type of high school they graduated in the level of $p<0.001$. There is a meaningful difference statistically in the PPSE scores of prospective teachers graduated from public high school and both prospective...
Table 8: The relationship between PPSE scores and Faculty graduation means

<table>
<thead>
<tr>
<th>Faculty graduation means</th>
<th>PPSE scores</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r = 0.35</td>
<td>94</td>
</tr>
</tbody>
</table>

teachers graduated from Anatolian Teacher high schools and prospective teachers graduated from other high schools in the level of p<.001 (p<.000).

Findings Related to Third Sub-Problem: Distribution of PPSE scores according to programs was given in Table 7.

As a result of t test results, there is a meaningful difference in the distribution of PPSE scores of social sciences education program graduates and science education program graduates in the level of p<.001. Prospective teachers graduated from science education program are more successful than prospective teachers graduated from social sciences education program statistically (p<.000).

Findings Related to Fourth Sub-Problem: The relationship between PPSE scores and Faculty graduation means was given in Table 8.

The relationship between PPSE scores and Faculty graduation means was analyzed with Pearson Correlation Coefficient and positive meaningful relationship was found (r = 0.355 and p<.000) in the level of p<.001.

DISCUSSION

In a study by Göçmen and Balgamis [9], relationship between primary school and music education prospective teachers' attitudes towards teaching profession and PPSE anxiety was analyzed and it resulted that primary school education prospective teachers are more successful than music education prospective teachers, test score isn't differentiated according to department and gender, especially academic success isn't related to PPSE score and female students' academic success is higher than male students. In this study, it is found that there is no difference according to departments and genders, but in this study it's found that there is a difference in PPSE scores in terms of both for department and gender. Also it's found that while female prospective students graduated from science education program are more successful, male prospective students graduated from social sciences education are more successful. A positive correlation is found in relationship between academic success and PPSE scores.

Koc and Polat [10] state that academic success must be effective in teacher assignments, students who graduate from faculty in first ten degree must be exempted from PPSE. In a study analyzing the relationship between OSS success and PPSE success, it's found that success is affected positively but the relationship between them is pretty low [11]. It's determined that there is a positive, directly proportional but normal relationship between university academic success and PPSE success. In terms of genders, PPSE success is more on the female part and has a meaningful difference. These findings comply with the study's findings. Positive correlation is found between academic success and PPSE.

A larger study based on analyzing factors affecting PPSE success [12]. SSE (OSS in Turkish), PPSE, faculty academic success scores and high school academic success scores of 2275 prospective teachers who graduated in 2004, 2005 and 2006, are researched in terms of gender, department and graduation year variables. It's not found a relationship between graduates' PPSE and SSE (OSS in Turkish) scores but calculating Pearson Correlation Coefficient it's found a meaningful relationship between academic success and PPSE. In another study in the same year prospective teachers' answers to PPSE questions are analyzed according to different variables, their correct and wrong answers are studied in terms of their high school, gender, department and graduation year variables [13]. While there is a meaningful difference for correct answers' number in general ability test according to years, in wrong answers' numbers there isn't a meaningful difference. Only for 2006 it's found a meaningful difference in general culture test, in educational sciences test there is a meaningful difference in terms of correct and wrong answers in every three year.

CONCLUSION

In this study, PPSE scores of prospective teachers graduated from elementary science education and elementary social studies education programs in faculty of education was investigated in terms of different variables. This research was a descriptive study and at the same time, it has the historical nature as it covers a period of six years. The population of the study was 1056 prospective teachers who graduated from Kastamonu University Faculty of Education between 2004 and 2009.

According to research findings, it was found that there is a meaningful difference in the distribution of PPSE scores of science and social sciences education program
graduates according to years, gender and type of high school they graduated. There is a meaningful difference in the distribution of PPSE scores of social sciences education program graduates and science education program graduates. Prospective teachers graduated from science education program are more successful than prospective teachers graduated from social sciences education program statistically. Positive meaningful relationship was found between PPSE scores and Faculty graduation means.

REFERENCES