

## Views of Pre-Service Teachers on Profession: Technician or Professional?\*

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### ARTICLE INFO

#### Article History:

Received 06.05.2016

Received in revised form  
23.11.2016

Accepted 18.12.2016

Available online

22.12.2016

### ABSTRACT

The purpose of this study is to analyze the views of pre-service teachers on teaching profession regarding the technician-professional conflict. The study is descriptive survey study in nature, and the participants are 439 pre-service teachers -third year or senior students- who were randomly chosen from nine different departments in Faculty of Education at Çukurova University, Adana, Turkey. Data were collected using The Views on Teaching Profession Scale (VTS) with four dimensions that consist of items including technician and professional teacher qualities. Results show that the pre-service teachers mainly adopted the "professional teacher" approach and thought that the undergraduate education contributed to this approach more than the others. As to the technician teacher approach, the participants' adoption level regarding the contribution was at a similar rate. Results also show that all dimensions of the scale indicated significant differences in favor of female pre-service teachers in terms of the gender variable, showing that their adoption level through teaching approaches and the level of contribution by undergraduate education to these approaches were higher compared to males. In conclusion, it could be asserted that pre-service teachers mostly adopted the professional teacher approach and they believed their pre-service education contributed to the development of this teaching understanding.

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#### Keywords:

Teacher education, technician teacher, professional teacher

### Introduction

The teacher forms the core of the education system. Educating teachers with appropriate qualifications will increase both their success and the success of education system. There is no doubt that this could be provided through a healthy and effective teacher education curriculum. As it is one of the fundamental factors that shape the society, the kind of a teacher wanted to be educated in a country is among the significant indicators of the kind of a society desired. In this sense, the education and professional skills of the pre-service teachers gain importance. Every single element of teacher education field should be questioned and assessed progressively and enhanced in both quantity and quality with regard to the needs of today and future (Azar, 2011). Although the studies from past to present have provided significant improvements, the quality problem still remains. Problems which have been frequently mentioned included not being able to educate teachers according to Turkey's conditions, applying the new model abruptly, and experiencing a quality loss in teacher identity with the changes experienced (Okçabol, 2004). That the "researching" quality of teachers has been neglected by the teacher education institutions, and the teacher has been directed to acting more than thinking are among the emphasized issues (Mustan, 2002; Ünal, 2005). Besides, there are also some problems regarding the failure of the reforms due to the education institutions' being under the effect of normativeness and regulations (Mustan, 2002).

There are some qualities that a good teacher should possess. Şahin (2010) explains the characteristics of profession in eleven dimensions. These dimensions are: 1. Essential service to society 2. Special knowledge

\* An earlier version of this study was presented at 3rd National Congress on Curriculum and Instruction, Gaziantep.

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DOI: <http://dx.doi.org/10.15345/iojes.2017.01.002>

and skills, 3. Use of special knowledge and skills, 4. Advanced university training, 5. Induction 6. In-service training 7. Specialization 8. Autonomy and authority 9. Compensation 10. Professional organizations, 11. Code of ethics. Some of the general teacher competencies identified by Ministry of National Education in Turkey (MONE, 2008) are valuing, understanding, respecting and guiding students, and planning the lesson. Çetin (2001) states the qualities of an ideal teacher as having good relationships with students, working in collaboration, analyzing the individual differences of students, being competent with content knowledge, and using various methods during lessons. Teachers should provide students with democratic learning-teaching environments where students have the chance to make trials freely (Senemoğlu, 1996).

During the last two decades, teachers in many countries have found themselves facing new demands and changes (Ballet, Kelchtermans and Loughran, 2006). In the educational field, qualities of a “good” teacher are explained in various ways by different paradigms. Numerous teacher definitions could be made within the focus of various educational approaches. According to Mustan (2002), some examples include leader teacher (class combines the leadership in it with social leadership), researcher teacher (reaches scientific knowledge and uses it), professional teacher (multifaceted and benefit from every opportunity as a learning source). Buyruk (2014), who investigated the discussions in literature regarding the transformations in teaching profession, concludes with two main approaches. While in the first approach teachers are “professionalized” over time, in the second approach, it is claimed that teachers are not professionals anymore, on the contrary, with the transformation process they are increasingly getting deskilled and hence are “proletarianized”. On the other hand, the teacher image of the behavioral paradigm sees the teacher having the determined teaching standards as ideal. Within this approach, the teacher is mainly the implementer (Zeichner, 1983; cited in Yıldırım, 2011). Since this study has analyzed the views of pre-service teachers about technician/professional teacher approaches, more detailed information related to these two approaches is given below.

### **Technician Teacher**

According to ‘technician teacher’ approach affected by behavioral approach, the teacher is the one who gains the competencies within the scope of effective teaching, needs to be guided, controllable, and accountable, sticks to standards, and focuses on implementing more than thinking (Yıldırım, 2011; Ünal, 2005). Evans (2010) states that when teaching is seen as a technical line of work; teachers are accepted as skilled workers and public employees; the teaching occupation is itself standardized and rule-bound, there are full of procedures and guides to be followed in class. In recent years factors such as the economical advances and employment policies regarding education and the decisions about profession made by the central authorities have caused the perception for teaching profession as “implementer-technician” (Güven, 2010). Moreover, perceptions about teachers as technicians are closely related with global economy policies. According to neoliberal perspective where the competition is at the front, the teacher, as mentioned by Yıldız (2014, 14), is nothing more than a technician of exam-oriented and corporate education.

According to Connell (2009), the neoliberal agenda and the audit culture in education construe teachers as technicians, enacting pre-defined “best practice” with a pre-defined curriculum measured against external tests - a situation for which skill is required but not intelligence. In this direction, Sleeter (2008) emphasized teacher education, which also finds itself under assault in the context of neoliberal policies, and examined three related neoliberal/neoconservative pressures on teacher education: (1) away from explicit multicultural, equity-oriented teacher preparation, and toward preparing teachers as technicians to implement measures school districts are taking to raise student test scores; (2) away from defining teacher quality in terms of professional knowledge, and toward defining it terms testable content knowledge; and (3) toward shortening university-based teacher education or by-passing it altogether (p.1952). Yıldız (2014, 13) states that the teacher typology that becomes prominent is “technician teacher preparing for exams”. This typology could be described as technician teacher gets out of social responsibilities a mechanic content transmitter whose duty is restricted to prepare students for exams. As Au (2011) also mentions, high-stakes testing effecting the activities in class increases the standardization and disempowers and deskills teachers. With regard to this belief, the teacher who is seen like any intermediate technical labor force within the market is defined as a person who does not gain sufficient pedagogical knowledge (and who does not have adequate specialized knowledge), who is not able to grasp the educational reality as a whole, and who tries to teach the students the information he is supposed to gain meaning content knowledge using specific teaching methods and who

sees his duty limited to this (not possessing the power of discretion over his job). Hence, teacher education system is developed accordingly (Özsoy and Ünal, 2005). The ideology which sees the teacher as a worker minimizes the need for knowledge at professional level through instruction (Evans, 2010). That the courses which may provide seeing the system and all effecting conditions in a holistic view and analyzing competency such as philosophy, sociology, psychology, pedagogy, education system and history have been either completely removed from or minimized in the teacher education curricula in Turkey. It could also be considered a part of teaching profession's being degraded to technical knowledge and skills. As Özsoy and Ünal (2005) also state, the teachers who are educated with this approach cannot be expected to comprehend the education with its social and economic dimensions, to question the educational policies, to understand and evaluate the student in his wholeness, to discuss on which educational philosophy the teaching principles and techniques they try to apply are based, and to know what this philosophical approach's viewpoint is on human and education.

### **Professional Teacher**

"Professional teacher" is another teacher definition in conflict with the approach accepting the teacher as a technician. According to this approach, teacher is the person who is a researcher, who thinks critically, who provides alternative solutions to the problems he faces and who is able to create his own ideology and philosophy within the scope of education and training (Yıldırım, 2011). Through the applications in educational processes, teacher autonomy and authority are dominant in this approach. Demirkasımoğlu (2010), who emphasized that the autonomy is one of the main focuses featured in professionalism characteristics, cited from Forsyth and Danisiewicz (1985) that the tasks of professionals are important, exclusive and complex. Thus, professionals should have the autonomous decision making powers that are free from external pressures. According to Demirkasımoğlu autonomy is a professional teacher component, and it provides both an individual decision making area to achieve one's aims and has an effect on controlling the situations related to one's work.

Zeichner and Ndimande (2008), who used the term "reflective professionals", stated that the curriculum in such approach may be provided at a national level and some support is given to teachers with regard to teaching strategies. However, there is a commitment to actively involving teachers in interpreting the reforms and adapting them to meet the diverse needs of their learners and to gaining teachers' commitment to both the underlying ideas behind the reforms and practices associated with them. There is also a commitment to providing teachers with professional development opportunities that support their implementation of the reforms and their adaptation to varied circumstances (Zeichner and Ndimande, 2008). To Hargreaves (2000), professionalism consists of improving the quality and standards regarding practice. Therefore, it requires teacher's having autonomy to some extent within teaching-learning processes. Hence, in professional teacher approach, teachers have the right and competency to make some changes in the curriculum according to the local culture and conditions, student qualities, school facilities, etc. However, as Stone-Johnson (2014) mentions, as the control over schools increases, there is more threat on professional feelings of teachers. It is inevitable that the teacher sees herself/himself as an implementer, like a robot, or like an unqualified worker within the practices in which everything is determined by someone else. The teacher is told what to say, when and how to say it in the classroom step by step by means of teacher guide books. Yet, the professional teacher is the teacher who improves her/himself and who always makes research and analysis. S/he is the person who plans, applies, assesses the daily activities without letting coincidences and reflectively thinks of all these experiences to arrange further activities in a more effective way. Following the innovations in the field, the professional teacher makes an effort to enhance her/himself, her/his class and gradually the whole school. Since the professional teacher is equipped with democratic knowledge, skills and values, he values his students as he values all people and the nature. He is sensitive about every social problem and leads her/his environment in this regard.

While technician teacher is a teacher who sticks to standards and is curriculum dependent, professional teacher is more independent and is beyond the standards forming his/her own educational philosophy; s/he can come up with different activities and teaching actions other than the ones within the curriculum. Technician teacher is much more focused on high stakes exams. Aiming the top, he prepares students for these exams. However, such approach is not the main aim of teaching up to professional teacher. It is mostly easier to observe the level of success through teaching process by technician teachers as the outcomes are much more

evident compared to professional teacher’s as the later will show up after some time. All these characteristics of two different teacher stereotypes indicate that both teaching approaches have positive and negative features which need to be investigated in detail.

Teachers’ being qualitatively educated professionals will increase the quality of education as well (Şahin-Taşkın and Hacıömerlioglu. 2010). Ideally raising the new generations through education and integrating them into the society depends on educating qualified teachers (Maden et al.. 2010). In this regard, analyzing the views of pre-service teachers related to profession and teacher education institutions is very crucial and many studies have been conducted accordingly. Many of these kinds of studies show that pre-service teachers do not find their education faculties adequate; these faculties are not effective in terms of adopting the profession and increasing the self-confidence of pre-service teachers; and the practices are not sufficient for effective teaching (Okçabol, 2004; Büyükgöze-Kavas and Bugay, 2009). According to a recent study (Şahin, 2014) pre-service teachers think that more traditional teachers (teacher-centered) are trained in education faculties. At this point, the awareness of pre-service teachers regarding their education at the faculties and their suggestions towards improving this education are very important. This study will be a significant guide for both observing this awareness and revealing which identity pre-service teacher is educated to possess. In this direction the main purpose of this study is to analyze the views of pre-service teachers about the teaching profession regarding technician-professional teacher conflict. In line with this purpose, the study aimed to find answers to the following questions:

- What are the views of pre-service teachers regarding level of adopting “technician” and “professional” teacher approaches and the contribution of undergraduate education to these approaches?
- Are there significant differences between the views of pre-service teachers regarding level of adopting “technician” and “professional” teacher approaches and the contribution of undergraduate education to these approaches in terms of gender?
- Are there significant differences between the views of pre-service teachers regarding level of adopting “technician” and “professional” teacher approaches and the contribution of undergraduate education to these approaches in terms of department?

### Method

#### Participants

The target population of the study is all pre-service teachers in Faculty of Education, Çukurova University, Adana, Turkey. The participants were randomly chosen pre-service teachers (third year and senior) in one class from nine different departments; and the sampling was unbiased. In total, 439 pre-service teachers from nine departments participated in the study: 267 of pre-service teachers (60.8%) were third year students while 172 of them (39.2%) were seniors and 280 (63.8%) of them were female and 159 (36.2%) were male. The participants’ average age was found 22.41, with a range from 20 to 35; standard deviation was found 2.14. The distribution of participants by gender and department is shown in Table 1.

**Table 1.** Distribution of the participants by gender and department

Department	Gender		Female		Male		Total	
	f	%	f	%	f	%	f	%
EC-Early Childhood Education	52	83.9	10	16.1	62	14.1		
PT-Primary School Teaching	52	72.2	20	27.8	72	16.4		
SS-Social Studies Teaching	21	32.3	44	67.7	65	14.8		
SC-Science Teaching	24	77.4	7	22.6	31	7.1		
TR-Turkish Teaching	31	72.1	12	27.9	43	9.8		
EN-English Teaching	24	68.6	11	31.4	35	8		
AR-Art Teaching	30	66.7	15	33.3	45	10.3		
PH-Philosophy Teaching	23	60.5	15	39.5	38	8.7		
CT-Computer And Instructional Technologies	23	47.9	25	52.1	48	10.9		
Total	280	63.8	159	36.2	439	100		

#### Data Collection Instruments

Data were collected through the Views on Teaching Profession Scale (VTS) developed by Sarı and Yolcu (2014). Explanatory factor analysis and reliability analysis were conducted for validity and reliability

purposes. The scale consisted of four dimensions: two of them were related to technician teacher (exam-orientedness and curriculum dependence) and the other two were related to professional teacher (effectiveness in learning-teaching process and self-development). The first component of VTS is "PT-Effectiveness in learning-teaching process" dimension in which the items point the qualities the professional teacher should have. Some examples are "Focusing the attention on activities will improve students sophisticatedly through teaching processes" and "Using the most convenient teaching methods for teaching conditions". The factor loads belonging to 14 items gathered in this factor were between .61-.80; and Cronbach Alpha internal consistency coefficient was .95. The second factor in VTS was the dimension identified as "TT-Exam-orientedness" and reflected the teaching approach focusing on exams, test scores, and academic achievement. Some examples include "Giving priority to improve students' test solving skills" and "Focusing on educating students will be successful at high-stakes tests". The factor loads of seven items in this dimension were .53-.79, and Cronbach Alpha internal consistency coefficient was .84. The third factor consists of five items (item-pool number 6, 5, 3, 9, 1). The examples "Having a researcher personality" and "Being open to new information and ideas" were named as "PT-Self-Development". Cronbach Alpha internal consistency coefficient of these items was .82; and their factor loads were between .57 and .75. "TT-Curriculum Dependence" is the fourth factor of VTS and it consists of six items as "Keeping to only standards determined within the curriculum during teaching activities" and "Being aware of his being only the implementer of predictions within the curriculum more than decisions he made". While the factor loads of these items are between .56 and .72, Cronbach Alpha internal consistency coefficient is .80. These four sub-scales explain 58.01% of the total variance.

VTS applied was arranged in a way that the same items were answered in two separate columns. In the first column, the pre-service teachers were asked to answer to what extent they regard the items concerning "technician" and "professional" teaching approach as important on a five-point Likert scale (1. Not important at all - 5. Very important). On the other hand, in the second column they answered the question "how much did you gain this property in the faculty of education?" evaluating the undergraduate education they get with regard to the items in the scale again on a five-point Likert scale (1. None - 5. Much).

### Data Analysis

Analysis of the data included range of median, mean and standard deviation. As the data did not meet the premises of parametric tests (normal distribution and/or homogeneity of variance), nonparametric tests Wilcoxon Signed Ranks, Mann Whitney U and Kruskal Wallis H tests were utilized instead.

### Findings

#### Pre-Service Teachers' Views on Their Level of Adopting Professional and Technician Teaching Approaches and the Contribution of Undergraduate Education to These Approaches

The views of pre-service teachers about "professional" and "technician" teaching approaches, the level their adopting these approaches and the contribution of undergraduate education to these approaches were analyzed. The descriptive statistics related to this analysis are shown on Table 2.

**Table 2.** Descriptive statistics related to the pre-service teachers' views on their level of adopting PT and TT approaches and the contribution of undergraduate education to these approaches

Adoption Level	N	Mean	SD	Median
TT-Exam-orientedness	439	3.09	.84	3.14
TT- Curriculum dependence	439	3.02	.77	3.00
<b>Technician Teacher (Total)</b>	<b>439</b>	<b>3.06</b>	<b>.67</b>	<b>3.08</b>
PT- Effectiveness in teaching process	439	4.56	.41	4.64
PT- Self-development	439	4.56	.39	4.60
<b>Professional Teacher (Total)</b>	<b>439</b>	<b>4.56</b>	<b>.37</b>	<b>4.63</b>
Level of Undergraduate Education Contribution	N	Mean	SD	Median
TT-Exam-orientedness	439	2.98	.89	3.00
TT- Curriculum dependence	439	3.25	.82	3.33
<b>Technician Teacher (Total)</b>	<b>439</b>	<b>3.10</b>	<b>.72</b>	<b>3.15</b>
PT- Effectiveness in teaching process	439	3.68	.93	3.84
PT- Self-development	439	3.60	.84	3.60
<b>Professional Teacher (Total)</b>	<b>439</b>	<b>3.66</b>	<b>.83</b>	<b>3.79</b>

In accordance with the data presented in Table 2, the level that the participants adopt each teaching approach and the contribution of undergraduate education to these approaches were examined by using Wilcoxon Signed Ranks Test. The results of this test are shown in Table 3.

**Table 3.** Results of Wilcoxon signed ranks test related to the pre-service teachers' views on their level of adopting PT and TT approaches and the contribution of undergraduate education to these approaches

Teaching Approaches	Adoption Level- Undergraduate Education Contribution	N	Mean Rank	Sum of Ranks	z	p
TT-Exam-orientedness	Negative Ranks	174	188.01	32713.00	2.587 <sup>a</sup>	.010
	Positive Ranks	218	203.28	44315.00		
	Ties	47				
TT- Curriculum dependence	Negative Ranks	244	212.58	51870.50	5.093 <sup>b</sup>	.000
	Positive Ranks	156	181.60	28329.50		
	Ties	39				
Technician Teacher-(Total)	Negative Ranks	218	209.23	45611.50	1.092 <sup>b</sup>	.275
	Positive Ranks	196	205.58	40293.50		
	Ties	25				
PT- Effectiveness in teaching process	Negative Ranks	50	67.07	3353.50	15.693 <sup>a</sup>	.000
	Positive Ranks	343	215.94	74067.50		
	Ties	46				
PT- Self-Development	Negative Ranks	32	86.23	2759.50	16.258 <sup>a</sup>	.000
	Positive Ranks	372	212.50	79050.50		
	Ties	35				
Professional Teacher (Total)	Negative Ranks	45	66.67	3000.00	16.631 <sup>a</sup>	.000
	Positive Ranks	378	229.30	86676.00		
	Ties	16				

a. Based on negative ranks; b. Based on positive ranks

As it is seen in Table 3, there are significant differences between pre-service teachers' adoption level of exam-orientedness and curriculum dependence approaches which dimensions are concerning technician teaching approach and the contribution level of undergraduate education to these approaches. This difference was found to be in favor of positive ranks, that is adoption level in exam-orientedness dimension. It was in favor of undergraduate education's contribution level within curriculum dependence dimension ( $p < .05$ ). An analysis of total scores obtained from both dimensions of technician teacher showed that the difference between the levels was not significant ( $p > .05$ ). Findings related to professional teaching approach showed that there was a significant difference in favor of positive ranks, meaning adoption level for each dimension (effectiveness in learning-teaching process, self-development). As for sum of both dimensions, the difference was again significant in favor of adoption level ( $p < .05$ ).

Table 4 presents Wilcoxon Signed Ranks Test results regarding the views of pre-service teachers on professional and technician teaching approaches in general, the difference between adoption levels of both approaches, and the contribution of undergraduate education.

**Table 4.** Comparison of the pre-service teachers' views on their level of adopting and the contribution of undergraduate education in terms of PT and TT approaches

Variable	Professional Teacher – Technician Teacher	N	Mean Rank	Sum of Ranks	z	p
Adoption Levels	Negative Ranks	6	18.75	112.50	18.113	.000
	Positive Ranks	433	222.79	96467.50		
	Ties	0				
Undergraduate Education Contribution Level	Negative Ranks	98	156.72	15358.50	12.260	.000
	Positive Ranks	338	236.41	79907.50		
	Ties	3				

\*Based on negative ranks.

Table 4 presents findings related to comparison of views on professional and technician teaching approaches regarding both adoption of these approaches and the contribution of undergraduate education. According to these findings, there was a significant difference in favor of professional teacher approach in both dimensions (adoption level, contribution level) ( $p < .05$ ).

#### **Pre-Service Teachers' Views on Their Level of Adopting Professional and Technician Teaching Approaches and the Contribution of Undergraduate Education to These Approaches in terms of Gender**

Table 5 demonstrates descriptive statistics concerning pre-service teachers' adoption levels of "professional" and "technician" teaching approaches and the views on contribution of undergraduate education to them according to the gender variable.

**Table 5.** Descriptive statistics concerning adoption levels of PT and TT approaches and views on contribution of undergraduate education to them in terms of gender.

Teaching Approach	Gender	N	Mean	SD
TT- Adoption Level	Female	280	3.11	.65
	Male	159	2.97	.70
TT- Undergraduate Education Contribution Level	Female	280	3.16	.72
	Male	159	3.00	.71
PT- Adoption Level	Female	280	4.60	.36
	Male	159	4.48	.38
PT - Undergraduate Education Contribution Level	Female	280	3.82	.78
	Male	159	3.36	.85

Mann-Whitney U Test was conducted in order to investigate whether there were any significant differences between the pre-service teachers' adoption levels of "professional" and "technician" teaching approaches and the contribution level of undergraduate education to these approaches in terms of the gender variable. The results are shown in Table 6.

**Table 6.** Mann-Whitney U test results related to the comparison of the pre-service teachers' views on "technician" and "professional" teaching approaches in terms of the gender variable

Teaching Approach	Gender	N	Mean Rank	Sum of Ranks	U	p
TT- Adoption Level	Female	280	229.12	64154.00	19706.000	.046
	Male	159	203.94	32426.00		
TT - Undergraduate Education Contribution Level	Female	280	230.31	64488.00	19372.000	.024
	Male	159	201.84	32092.00		
PT- Adoption Level	Female	280	237.24	66428.50	17431.500	.000
	Male	159	189.63	30151.50		
PT -Undergraduate Education Contribution Level	Female	280	245.74	68806.50	15053.500	.000
	Male	159	174.68	27773.50		

As it is seen in Table 6, it was found that the scores from technician teacher and professional teacher dimensions in both scales (adoption level-undergraduate contribution level) significantly differs in favor of females ( $p < .05$ ).

#### **Pre-Service Teachers' Views on Their Level of Adopting Professional and Technician Teaching Approaches and the Contribution of Undergraduate Education to These Approaches in terms of Their Department**

Table 7 shows the means and standard deviations about pre-service teachers' adoption levels of "professional" and "technician" teaching approaches and their views on the contribution of undergraduate education in terms of department.

**Table 7.** Descriptive statistics concerning adoption levels of PT and TT approaches and views on contribution of undergraduate education to them in terms of department

	Department	Technician Teacher		Professional Teacher	
		Mean	SD	Mean	SD
Adoption Level	EC-Early Childhood Education (n:62)	2.88	.66	4.53	.41
	PT-Primary School Teaching(n:72)	3.19	.74	4.64	.31
	SS-Social Studies Teaching (n:65)	3.11	.67	4.45	.46
	SC-Science Teaching (n:31)	3.44	.58	4.67	.34
	TR-Turkish Teaching (n:43)	3.24	.64	4.61	.28
	EN-English Teaching (n: 35)	2.80	.62	4.59	.26
	AR-Art Teaching (n:45)	3.07	.62	4.48	.37
	PH-Philosophy Teaching (n:38)	2.78	.63	4.61	.31
	CT-Computer And Inst. Tech. (n:48)	3.00	.54	4.49	.38
	EC-Early Childhood Education (n:62)	2.94	.77	3.97	.68
Undergraduate Education Contribution Level	PT-Primary School Teaching(n:72)	3.26	.67	3.82	.78
	SS-Social Studies Teaching (n:65)	2.93	.77	3.26	.93
	SC-Science Teaching (n:31)	3.69	.50	4.29	.56
	TR-Turkish Teaching (n:43)	3.34	.63	3.60	.86
	EN-English Teaching (n: 35)	3.13	.65	3.57	.75
	AR-Art Teaching (n:45)	3.03	.76	3.50	.85
	PH-Philosophy Teaching (n:38)	2.88	.66	3.70	.83
	CT-Computer And Inst. Tech. (n:48)	2.88	.58	3.32	.68

An analysis of Table 7 shows that philosophy pre-service teachers have the lowest means regarding technician teacher approach in terms of adaptation level; and the highest means belonged to science teaching. As to undergraduate education contribution to technician teacher approach, philosophy and computer and instructional technologies had the lowest means while science had the highest. While the lowest mean belonged to social sciences related to adoption level of professional teacher approach, the highest mean was obtained in science teaching.

Table 8 presents the findings of Kruskal Wallis test conducted to analyze whether there was any significant difference between the pre-service teachers' adoption levels of "professional" and "technician" teaching approaches and the contribution level of undergraduate education to these approaches in terms of departments.

As seen in Table 8, there were significant differences regarding both the adoption levels of two approaches by pre-service teachers and their beliefs related to the contribution level of undergraduate education to these approaches in terms of departments [ $\chi^2(8) = 34.277, 45.529, 16.720, 57.812, p < .05$ ]. Given the mean ranks of groups, concerning adoption of technician teacher approach, the lowest mean belonged to philosophy teaching whereas science teaching had the highest mean. An analysis of between which groups these differences were observed showed that the significant differences were between SC and EC, SS, EN, AR, PH, CT in favor of SC; between PT and EC, EN, PH, in favor of PT; between TR and EC, EN, FL, CT in favor of TR; between SS and EN, PH in favor of SS department. As for the contribution level of undergraduate education to this approach, the lowest and highest means were also found for philosophy and science respectively. An analysis of the source of significant differences between the groups showed that there were differences between SC and EC, PT, SS, TR, EN, AR, PH, CT in favor of SC department; between TR and EC, SS, AR, PH, CT in favor of TR department; between PT and EC, SS, PH, CT in favor of PT department. When the analysis results were examined in terms of departments regarding adoption level of professional teacher approach, it was found that the lowest mean rank was in social sciences and the highest one was in science teaching. Significant differences were found in mean ranks by departments between PT and SS, AR, CT in

favor of PT department; between SC and SS, AR, CT in favor of SC department and between TR and SS in favor of TR department. An analysis of Table 8 regarding undergraduate education contribution level to professional teaching, the highest mean rank belonged to science teaching whereas the lowest one was in computer and instructional technologies teaching department; and the differences were significant. These differences were found significant between SC and all other departments in favor of SC department; between PT and SS, EN, AR, CT in favor of PT department; between EC and SS, TR, EN, AR, CT in favor of EC department; between TR and CT, SS in favor of TR department and between PH and CT in favor of CT department.

**Table 8.** Kruskal Wallis test results related to the comparison of the pre-service teachers' views on "technician" and "professional" teaching approaches in terms of department

Variable	Department	Mea Rank	sd	$\chi^2$	p	U
Adoption Level of Technician Teacher Approach	EC-Early Childhood Education (n:62)	187.10	8	34.277	.000	SC>EC, SS, EN, AR, PH, CT PT>EC, EN, PH TR>EC, EN, FL, CT, SS>EN, PH
	PT-Primary School Teaching(n:72)	245.58				
	SS-Social Studies Teaching (n:65)	227.56				
	SC-Science Teaching (n:31)	297.53				
	TR-Turkish Teaching (n:43)	256.50				
	EN-English Teaching (n: 35)	172.13				
	AR-Art Teaching (n:45)	219.76				
	PH-Philosophy Teaching (n:38)	168.26				
Undergraduate Education Contribution Level to the Technician Teacher Approach	CT-Computer And Inst. Tech. (n:48)	207.21	8	45.529	.000	SC>EC, PT, SS, TR, EN, AR, PH, CT TR>EC, SS, AR, PH, CT PT>EC, SS, PH, CT
	EC-Early Childhood Education (n:62)	191.80				
	PT-Primary School Teaching(n:72)	249.13				
	SS-Social Studies Teaching (n:65)	198.91				
	SC-Science Teaching (n:31)	328.65				
	TR-Turkish Teaching (n:43)	261.23				
	EN-English Teaching (n: 35)	221.63				
	AR-Art Teaching (n:45)	205.51				
Adoption Level of Professional Teacher Approach	PH-Philosophy Teaching (n:38)	177.08	8	16.720	.033	PT>SS, AR, CT SC>SS, AR, CT TR>SS
	CT-Computer And Inst. Tech. (n:48)	180.57				
	EC-Early Childhood Education (n:62)	216.16				
	PT-Primary School Teaching(n:72)	248.26				
	SS-Social Studies Teaching (n:65)	187.77				
	SC-Science Teaching (n:31)	268.19				
	TR-Turkish Teaching (n:43)	231.53				
	EN-English Teaching (n: 35)	221.63				
Undergraduate Education Contribution Level to the Professional Teacher Approach	AR-Art Teaching (n:45)	191.53	8	57.812	.000	SC>EC, PT, SS, TR, EN, AR, PH, CT PT>SS, EN, AR, CT EC>SS, TR, EN, AR, CT TR>CT, SS PH>CT
	PH-Philosophy Teaching (n:38)	233.96				
	CT-Computer And Inst. Tech. (n:48)	199.20				
	EC-Early Childhood Education (n:62)	269.97				
	PT-Primary School Teaching(n:72)	247.28				
	SS-Social Studies Teaching (n:65)	165.17				
	SC-Science Teaching (n:31)	319.97				
	TR-Turkish Teaching (n:43)	214.02				
EN-English Teaching (n: 35)	201.43					
AR-Art Teaching (n:45)	195.86					
PH-Philosophy Teaching (n:38)	227.66					
CT-Computer And Inst. Tech. (n:48)	159.69					

Results indicate that pre-service teachers adopted professional teacher approach at a higher level than technician teacher approach and also thought the contribution level of undergraduate education to professional teacher approach was also higher. It was found that through the comparison of pre-service teachers' views on technician teacher and professional teacher dimensions in both scales (adoption level-undergraduate contribution level) in terms of gender, there were significant differences in favor of females.

For both technician and professional teacher approaches, the highest means were obtained in science teaching department while the lowest mean for technician teaching belonged to philosophy and professional teaching in social sciences.

### **Discussion**

According to the findings of this study through which pre-service teachers' adoption level of "technician" and "professional" teaching approach and their views regarding the level of contribution of undergraduate education to these approaches, pre-service teachers adopted "professional teacher" qualities to a higher extent and think that qualities concerning this approach were gained much more through undergraduate education. These findings could be considered as a sign of pre-service teachers' and instructors' agreeing on the qualities a good teacher in general. Besides, the significant differences in favor of adoption level for both sub-dimensions and total scores between adoption level and undergraduate contribution level regarding professional teacher qualities indicate that pre-service teachers believe that they did not gain these qualities at a satisfying level. Although this study was conducted in Çukurova University, these findings might not be specific to this sample. It is a universal problem in teacher education not only in Turkey but also in all countries under the effect of neoliberalism. As Yıldız (2015, 14) also mentioned, the policies making a competitive mentality effective in education become dominant at global level. This dominant approach requires an education system shaped through market's requests and teachers are working like robots in this system, they become deskilled day by day, and their effort is losing its value. Thus, instead of thinking reflectively, critically and creatively, questioning, problem solving, making own decisions, and having a progressivists and democratic professional teaching approach; obeying the rules of others without any objection, conducting exams, tests and competition-oriented activities, applying the curriculum word by word, being a worker and implementer, and having a technician teaching approach shows its domination in teacher education institutions and schools. When the teachers are seen primarily as technicians, they are not expected to make important decisions about the curriculum applied to their students. Boundaries, standards, content and the objectives of curriculum are presented away from school and classes by specialist committees who are not knowledgeable about classes, schools, students and teachers for whom the curriculum is prepared and who do not have direct connection to them (Iano, 1990). However, as Yıldırım (2011) also mentioned, given the constructivist nature of the curricula applied in Turkish National Education, the need for a professional teacher who can make changes in the curriculum according to the available conditions and student features, take new decisions, are in a continuous effort to improve himself becomes more important than the technician teacher who applies activities in the curriculum in exactly the same way and assesses student achievement by preset criteria.

One of the findings of the study is related to the pre-service teachers' views on technician teacher. With regard to the analyses on the participants' adoption levels of suitable qualities for "technician" teacher and their views on the contribution level of undergraduate education to this approach, while there weren't any differences in terms of comparison values in technician teacher total scores; there were significant differences between the adoption level of TT-Exam-orientedness and TT-Curriculum dependence dimensions and the contribution level of undergraduate education to these approaches. The significant difference found in TT-Exam-orientedness dimension was in favor of the level of pre-service teachers' adopting approach. In this case, it could be pointed out that TT-Exam-orientedness approach consisting of factors such as achievement at high stakes tests and improvement of test solving skills might be adopted by pre-service teachers at a higher level than they were gained. This result might have arisen from the pre-service teachers' focusing much more on such matters related to exam and academic achievement as they will take KPSS (Public Personnel Selection Exam) soon and go to courses for preparation. The pre-service teachers face with KPSS without even overcoming the multifaced destruction of YGS (Higher education entrance exam). Their expectations from undergraduate education and assessment regarding this education are shaped accordingly. Hence, in the studies conducted with pre-service teachers preparing for KPSS, it is observed that the participants mostly feel high test anxiety (Baştürk, 2007) and they think that they don't get the skills that will provide them with high enough test scores through their education (Sezgin and Duran, 2011). For instance, only 17.3 % of the pre-service teachers participating in the study Gündoğdu, Çimen and Turan (2008) found the instructors adequate in terms of preparing themselves for the exam. Similarly, more than half of the pre-service teachers participating in the study conducted by Sezgin and Duran (2011) also mentioned that KPSS content and

undergraduate course contents overlap with each other, but they complain about the way instructors teach the courses as they think they do not prepare them for the exam.

On the other hand, TT-Curriculum dependence dimension showed significant differences in favor of undergraduate education contribution. This case is a sign that the features regarding TT-Curriculum dependence in undergraduate education are gained at a higher level than pre-service teacher's desire. Given the findings, it could be said that the pre-service teachers prefer success in the exams; and the instructors prefer educating teachers to be completely dependent on curriculum and fully apply it. It is evident that technician teacher qualities stand out in both situations. In terms of faculties, it is possible to note the effects of KPSS. As known, the success rating of universities are made every year after the exam; being at the top in this list is regarded prestigious, so faculties discuss precautions to take. According to Yıldırım (2011), there are also faculties of education shaping their course contents and teaching method with regard to the context of this exam. This situation, even not formally, indirectly bring teaching's measurable and observable state to the front in education faculties. A similar understanding is also dominating the in-service teachers. As the successful teacher understanding is degraded to the teacher who gets and makes the students get high scores in exams and applies the curriculum exactly to the point, it is quite normal that teachers, pre-service teachers and instructors focus on gaining the technical knowledge and skills. As Ünal (2005) also pointed out, advancing the image of teachers who have succeeded in developing successful students in the high-stakes exams transforms the meaning of the teachers' understanding of education over time; teachers are increasingly aiming to educate themselves as better teachers who can solve the test better and direct students in this way. Another finding of the study indicates the significant differences regarding the pre-service teachers' technician/professional teacher understandings and to what extent they gained the related qualities through undergraduate education in terms of the gender variable. It was found that the scores from both technician and professional teacher dimensions in terms of both adoption level and contribution level of undergraduate education were significant in favor of females. Female students adopted both technician and professional teaching understandings more than male students did. These results could be considered as a sign of female students' having adopted teaching profession much more in comparison to male students in all dimensions. The teaching profession was feminized historically and culturally and frequently labeled as a feminine profession (Apple, 1985, 1988, 2001). It was associated with some features attributed to women such as motherhood, emotionality, and patience; and women have been considered more appropriate for it. Teaching is considered as the follow-up of the domestic works performed by women who are seen primarily as a housewife whatever career they may have. It has been adopted in the same way by them over time. As Çitçi (1990, p.105) mentioned, women have had the chance to get higher levels of education other than primary education since the proclamation of the republic, and have generally chosen occupations such as teaching which is regarded as a woman profession. Indeed, the study conducted by Çermik, Doğan and Şahin (2011) reported that the perception of teaching as a "woman profession" was quite common among both female and male pre-service teachers. Through the various studies on the attitudes towards teaching profession in Turkey, significant differences were found generally in favor of female participants (Camadan and Duysak, 2010; Çetinkaya, 2009; Pektaş and Kamer, 2011; Sari et al., 2014). When the findings within the literature and the results of this study were evaluated altogether, it could be asserted that female pre-service teachers develop a positive attitude at a high level towards the profession in accordance with traditional gender roles assigned to them and parallel to these attitudes they care much more about gaining any knowledge, skills and value regarding teaching.

There are also comparisons regarding the departments in the present study. It was found that both for adoption level and undergraduate education contribution to technician teacher approach, the highest means were found in science teaching department. Besides, the highest means for professional teacher were also obtained for science teaching department. These parallel findings for adoption and undergraduate education contribution to the teaching approach pointed that both pre-service teachers and instructors in science teaching department adopted technician teacher approach at a high level. Interestingly enough, the department professional teacher approach that obtained the highest mean was also science teaching. That both approaches were adopted in the same department could be considered as an indicator of any kind of knowledge, skill and value, either traditional or contemporary, was paid attention by both pre-service teachers and instructors. The lowest means regarding the adoption and undergraduate education contribution level for technician teacher approach belonged to philosophy teaching department. It could be parallelly asserted that

this approach was adopted by both pre-service teachers and instructors less than the other departments. On the other hand, the department that participants adopted the professional teacher approach at lowest level was social sciences teaching department. In a similar vein, the contribution of undergraduate education to professional teaching was low accordingly. The present study indicates that participants' adoption level of teaching approaches were parallel to the contribution level of undergraduate education to these approaches. These findings could be considered as a proof for the effective impacts of overt and hidden curriculum in forming the teaching understandings of pre-service teachers. However, it should be stated that there should be many other studies and findings to reach precise judgments.

### **Conclusion and Recommendations**

This study has revealed that pre-service teachers adopt "professional teacher" qualities at a higher level and think undergraduate education contribute more to gain qualities regarding this approach. Although this is a pleasing result in terms of modern and democratic educational approach, it indicates that professional teacher qualities were not gained at a level meeting the expectations of pre-service teachers. However, actualizing the national curricula is only possible with "professional" teachers who adopt the constructivist approach. Therefore, it is crucial that Ministry of National Education and universities come to an agreement in terms of an educational philosophy based on democracy and science as well as teacher qualities; sincere collaborations should be formed for the benefit of all society in this direction.

Even though the professional teacher qualities are adopted at a higher level through the study, the analyses regarding technician teacher qualities showed that pre-service teachers adopted TT-Exam-orientedness dimension at a higher level than they adopted the related qualities. This dimension containing competition, measurement and observable low level behaviors instead of high level behaviors with an essentialist approach contradicts to modern education approach. Yet in Turkey, a paradise of high-stakes exams, pre-service teachers' caring about the success in exams as the key to any door should be considered normal; it could also be what many people from all strata think. This is not a problem that can be solved by only one institution alone. More appropriate methods of choice in which the cutthroat competition is not such apparent in transition among levels should be found. To achieve this, it is necessary that all responsible people for these exams come together as groups and work for a better measurement-evaluation system.

According to pre-service teachers' views, the qualities concerning TT-Curriculum dependence are provided to them much more than they desire. It is quite expected that the pre-service teachers who will take KPSS soon care more about success in exams than being the implementer of curriculum in schools. In fact, it is necessary that a teacher have the qualities of both technician and professional teacher. The teacher is the one who reshapes and implements the curriculum and develops it considering local conditions, student features, school facilities, etc. In addition to this, he is the person who prepares appropriate measurement-evaluation methods and gives students timely and continuous feedback. Teacher is the critical, creative and reflective thinker based on these feedbacks. Hence, it is seen beneficial to take some precautions to analyze the curricula, environment and instructions within teacher education and enhance them in order to help the pre-service teachers graduate from the department equipped with all these qualities and even more.

Review of the related literature indicates no similar studies on this issue. In addition to originally developed scale, the study is important but not sufficient in terms of emphasizing technician/professional teaching approaches and being pioneer to the studies in this field. It is evident that much more studies are needed on this topic. These studies should be based on the question "how can we get rid of de-skilling and de-professionalization processes in teaching?" (Ballet et al., 2006) might also be conducted with similar sample and methods; they can also be carried out involving different universities, different methods, and different data resources. In accordance with the findings of these studies in-service/pre-service education curricula, courses, seminars etc. appropriate for both in-service and pre-service teachers could immediately be arranged with the cooperation of Ministry of National Education and Faculty of Education.

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