



## THE RELATIONSHIP BETWEEN THE SELF-EFFICACY IN TEACHING PRINCIPLES AND METHODS COURSE AND THEIR COMPETENCE IN SELECTING TEACHING TECHNIQUES OF PRESERVICE TEACHERS

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### Abstract:

The aim of this study is to examine the relationship between the Self-Efficacy in Teaching Principles and Methods Course and Their Competence in Selecting Teaching Techniques of Preservice Teachers. In this regard, in line with the aim of the study, correlational research model was used in this study, to examine the relationship between the Self-Efficacy in Teaching Principles and Methods Course and Their Competence in Selecting Teaching Techniques of Preservice Teachers. The study group of the research consisted of 412 fourth year preservice teachers preservice teachers studying various majors in the spring semester of 2017-2018 academic year at Abant İzzet Baysal University Faculty of Education. In the research in order to collect the quantitative data two data collection tools, namely; "Perception Scale Regarding Competence of Preservice Teachers in Selecting Teaching Techniques" developed by Durdukoca et. al, (2017) and "Teaching Principles and Methods Course Self-Efficacy Scale" developed by Kuzu and Demir (2015). For the analysis, of the data collected, frequency and percentage values and arithmetic mean and standard deviation scores of the scales were calculated and correlation analysis techniques were used. It has been concluded that the preservice teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course is at "high" level in total. It has also been concluded that perceptions of Basic Concepts Knowledge, Program Development Process Knowledge, Learning-Teaching Approaches Knowledge, Clarification Knowledge, Application Knowledge and Planning Knowledge -among the sub-dimensions of Teaching Principles and Methods Course Self-Efficacy Scale- are at "high" level. It has been concluded that the preservice teachers' Perception of Competence in Selecting Teaching Techniques is at "high" level in total. It has been concluded that among the sub-dimensions of Perception Scale Regarding Competence in Selecting Teaching Techniques, the preservice teachers' perception of positive foresight relevant to

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selection of technique is at “very high” level, and their perception of negative foresight relevant to selection of technique is at “high” level. There is a positive and moderate level correlation between the preservice teachers' perceptions of Perception of Self-Efficacy in Teaching Principles and Methods Course, and Perception of Competence in Selecting Teaching Techniques.

**Keywords:** self-efficacy, selecting teaching techniques, teaching principles and methods course

## 1. Introduction

Education programs, which an education institution provides to children, youth and adults, and which cover all of the activities that are directed towards realization of the objectives of any institution (Varış, 1994), are one of the main determinants of human characteristics that are required by the society. In this context, by examining the education programs of an institution in general and of any institution specifically, one may make predictions on the characteristics that are/are not desired to be acquired by the individuals, who are desired to be raised in relative country, and knowledge, skills and attitudes that raised individuals shall have (Yüksel and Sağlam, 2011).

The most important component of the education program, which gives direction to the education activities of any country, which ensures that education is provided in schools, which are at the same education level, in the same direction within the framework of identical objectives, which increases efficiency in education, which provides guidance to the teachers, who began providing service as a teacher recently, which also ensures that teachers, whose professional seniority is high, adapts themselves to the education systems of the age by informing them on scientific and technological developments (Büyükkaragöz, 1997), is education institutions (Demirel, 2006). According to Demirel (2015), education programs must be planned since education is considered as a method of deliberate enculturation in a way, and provision of learning experiences to learners must be made via education programs. Therefore, learning experiences must be the most important dimension of an education program. In the education program, objectives dimension emphasizes the subject area of the society that shall be introduced is comprised of the behaviours that are required by the individual and nature, content dimension emphasizes the issues that shall be consistent with the objectives listed in the program, learning-teaching process dimension emphasizes the learning-teaching models, strategies, methods and techniques that shall be selected to achieve objectives, and measurement-assessment dimension emphasizes that objectives and behaviours are tested separately in the measurement-assessment dimension and that it is determined how much of the terminal behaviours are introduced, as well as quality of the education provided. Teachers, who are the first practitioners of learning situations, which are the most critical component of the education program, in class environments, take great responsibilities at this point. Thus, development of program in education is not adequate by itself in raising the quality of

education, and various other variables must also increase simultaneously, such as enrichment of learning environments and existence of reliable measurement and assessment systems etc (ERG, 2016-2017). Knowing and using teaching principles and methods may be listed at the top of the list of factors that play a role in increasing the qualifications of teachers and fulfilment of such responsibilities (Uşun, 2007).

Teaching Principles and Methods Course was referred with various titles until today (“General teaching method” in 1940s, “Teaching Method and Application” in 1950s, “General Teaching Knowledge” in 1960s, “Teaching in Primary Schools I-II” in 1970s, “Primary School Program and Teaching Principles” in 1980s, “General Teaching Methods and Primary School Programs and Development of the same” in 1990s) (Demir, 2012), and the title of the course was transformed into “Teaching Principles and Methods” in 2000s. The content of the Teaching Principles and Methods Course was determined as below according to the regulations made on 2006 – 2007 program: *“Basic concepts related with Teaching Principles and Methods, principles that shall be considered in learning and teaching, importance and benefits of planned study in teaching, planning teaching (annual plan divided into units, daily plan and activity examples), learning and teaching strategies, teaching methods and techniques, correlation of the same with practice, teaching tools and equipment, duties and responsibilities of the teacher in increasing the quality of teaching service, and teacher qualifications”*. Teaching principles and methods, whose content is very intense, are very critical in terms of fulfilment of the profession of teaching by teachers and teacher candidates, who are the teachers of the future, in the light of contemporary methods and principles (Kuzu ve Demir, 2015).

One of the basic variables that determine the quality of teaching service is the competency of teachers and teacher candidates to manage time efficiently in terms of teaching principles and methods course self-efficacies and in the teaching environments where they shall put into practice such knowledge. Teacher self-efficacy may be defined as the self-confidence of teachers in removing any barriers that prevent students from learning during learning-teaching processes (Tabancalı and Çelik, 2013). In this context, it is necessary and important for learning-teaching environments to have a character that allows usage of various teaching strategies, methods and techniques in a way to allow teacher candidates to acquire knowledge by various means (Firat et. al., 2017). Hence, if teacher candidates receive training on the techniques, which they shall use in learning and teaching environments in the future, both theoretically and practically in the training process, they may select and implement such techniques in their teaching experiences. Both teacher candidates and teachers must be aware of the fact that students may learn the knowledge and skills they must learn by providing an accurate learning period and opportunity to students via teaching techniques that they shall use in courses properly, and they must proceed in this direction (Güven-Yıldırım, Köklükaya and Aydoğdu, 2016). This is because learning is not satisfied with the spontaneous interest that occurs in students towards subjects. Learning in schools requires conscious orientation and management. In this case, the importance of methods and techniques of teaching strategy is revealed. Teaching technique refers to the attitude that the teacher shall adopt in the face of the concept of child and

accordingly, the attitude that the teacher shall adopt in the case of a specific child, i.e. an action that shall introduce true and beneficial knowledge or in general, a special case of the teaching method concept, and practical tools and ways used in application of method (Hesapçioğlu, 2011). There are certain factors that affect the selection of methods and techniques. These are as below in brief: rewards of current course, characteristics of the content that shall be used, characteristics of students, characteristics of the teacher, who shall select and apply the technique, time, physical structure of the classroom and available tools and resources. According to Hesapçioğlu (2011), flow of a course, its success and selection of strategy, method and technique is also based on the characteristics of teachers and their psychological structures. Every teacher is an individual by himself. Self-efficacy of any teacher in relation with teaching principles and methods used during course, knowledge on the field and pedagogic knowledge, technical knowledge, psychological state, skills, demands and strength also make an effect on teachers' method-technique preferences. There is no single technique that may be used in learning environments. This is because a specific technique may be effective on certain students or group of students, but it may not be effective on other students or group of students. In this case, teachers must be widely knowledgeable on strategies, methods and technical data, and must be capable of determining most suitable techniques according to various factors, such as achievements and characteristics of students etc. Considering the fact that training programs become functional with the assistance of teachers and that an education program may only be qualified as much as the teacher, who applies it, the most important component of education programs is the competency of teacher candidates, who are the administrators of learning situations, to use the teaching principles and methods self-efficacies, which shall allow the same to manage this process effectively and efficiently, as well as teaching methods that they shall prefer during teaching processes in specific cases.

It is very critical to determine and increase the competencies of teacher candidates to select teaching principles and methods course self-efficacies and teaching techniques. Also, after examining the literature, researcher did not encounter any research, which describes the correlation between competencies of teacher candidates to select teaching principles and methods course self-efficacies and teaching techniques both separately and in specific cases. In the direction of aforementioned statements, we may assert that examining the competencies of teacher candidates, who shall be included to the education system actively in a short period, to select teaching principles and methods course self-efficacies and teaching techniques is critical for both themselves individually and for the students, from whom they shall be responsible. In the direction of aforementioned statements, the objective of this research is to reveal the correlation between the competencies of teacher candidates, who received education in the Faculty of Education, Abant İzzet Baysal University, in the spring term of 2017 – 2018 academic year, to select teaching principles and methods course self-efficacies and teaching techniques. We looked for the answers of below questions in this direction:

1. Regarding the teacher candidates, who are receiving education in the faculty of education;
  - a. What is the level of their perception in terms of teaching principles and methods course self-efficacy?
  - b. What is the level of their perception in terms of competency to select teaching techniques?
2. Is there a significant correlation between competencies of teacher candidates to select Teaching principles and methods course self-efficacies and teaching techniques?

## 2. Material and Methods

### 2.1 Research Model

Correlational (relational) research model has been used in this research where the relation in between preservice teachers' perception of self-efficacy in teaching principles and methods course, and their competence in selecting teaching techniques has been examined. Correlational researches ensure the examination of the relation in between two or more variables without intervening these variables in any manner. Correlational researches are the ones that are effective in revealing the relations among variables and in determining, the levels of such relations, and that provide the required clues for the performance of higher level researches regarding these relations (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz and Demirel, 2013).

### 2.2 Study Group

The study group of the research consists of 412 final grade preservice Teachers studying at Abant İzzet Baysal University Faculty of Education in the spring semester of 2017-2018 academic year. The demographic characteristics of the preservice teachers in the study group are shown in Table 1.

**Table 1:** Demographic characteristics of preservice teachers

Departments	Gender					
	f	%	Female		Male	
			f	%	f	%
Primary School Teaching	40	9.7	34	85.0	6	15.0
Elementary Mathematics Teaching	35	8.5	25	71.4	10	28.6
Elementary Science Teaching	38	9.2	34	89.5	4	10.5
Preschool Teaching	38	9.2	36	94.7	2	5.3
Social Studies Teacher	37	9.0	27	72.8	10	27.2
Turkish Language Teaching	40	9.7	30	75.0	10	25.0
English Language Teaching	32	7.8	28	87.5	4	12.5
Special Education	30	7.3	26	86.7	4	13.3
State/Private Institutions Psychological Education	30	7.3	26	86.7	4	13.3
School Music Teaching	31	7.5	30	96.8	1	3.2
Arts and Crafts Education Teacher	30	7.3	27	90.0	3	10.0
Computer Education and Instructional Technologies	31	7.5	20	64.5	11	35.5
<b>Total</b>	<b>412</b>	<b>100</b>	<b>343</b>	<b>83.3</b>	<b>69</b>	<b>16.7</b>

The demographical characteristics of the preservice teachers participating in the research are given in Table 1. 83.3% of the students are “female”, and 16.7% of them are “male”. Regarding the preservice teachers studying at 12 different departments of the Faculty of Education, 9.7% of them are students of “Departments of Primary School Teaching”, 9.7% of them are students of “Departments of Turkish Language Teaching”, 9.2% of them are students of “Departments of Elementary Science Teaching”, 9.2% of them are students of “Departments of Preschool Teaching”, 9.0% of them are students of “Departments of Social Studies Teacher”, 8.5% of them are students of “Departments of Elementary Mathematics Teaching”, 7.8% of them are students of “Departments of English Language Teaching”, 7.5% of them are students of “Departments of School Music Teaching”, 7.5% of them are students of Departments of Computer Education and Instructional Technologies”, 7.3% of them are students of “Departments of Special Education”, 7.3% of them are students of “Departments of State/Private Institutions Psychological Education” and 7.3% of them are students of “Departments of Arts and Crafts Education Teacher”.

### 2.3 Data Collection

The data of the research has been collected through the “Perception Scale Regarding Competence of Preservice Teachers in Selecting Teaching Techniques” developed by Durdukoca et al, (2017) and “Teaching Principles and Methods Course Self-Efficacy Scale” developed by Kuzu and Demir (2015). For the research, first literature survey has been performed, and the most suitable measuring instruments have been determined. And then permits of the researchers have been obtained for the use of determined scales. The scale has been applied on final grade students studying at 12 different departments of the Department of Educational Sciences. General information on the scales has been provided to the students, and the purpose of the study has been explained. There are 1081 final grade students in total who are studying at 12 different departments of Department of Educational Sciences of Abant İzzet Baysal University in the spring term of 2017-2018 academic year. In the implementation phase, 600 scales had been delivered by hand by the researcher to actively studying students (except the students who are dropped out, sick or not attending the school), and they had again been collected by hand by the researcher. Among the collected scales, the ones that were blank and that were having missing markings and more than one marking had been separated, and the remaining 412 scales had been subjected to statistical analyses. It has been reached to 38.1% of the total number of students.

### 2.4 Data Collection Tool

#### A. “Perception Scale Regarding Competence of Preservice Teachers in Selecting Teaching Techniques”

Perception Scale Regarding Competence of Preservice Teachers in Selecting Teaching Techniques, which had been developed by Durdukoca et. al, (2017), is consisting of 2 sub-dimensions as being positive foresight relevant to selection of technique and negative foresight relevant to selection of technique, and of 22 items in total. In the

scale, the items in between 16 and 22 are consisting of reverse articles. It had been determined by the researchers that the first sub-dimension of the scale had a consistence coefficient of .92, that the second sub-dimension of the scale had a consistence coefficient of .82, and that the whole scale had a consistence coefficient of .90. The agreement degrees of the preservice teachers had been classified as 1 "Strongly disagree", 2 "Disagree", 3 "Indecisive", 4 "Agree" and 5 "Strongly agree" (Durdukoca et al., 2017). In this research, the total Cronbach's Alpha Coefficient of Teaching Principles and Methods Course Self-Efficacy Scale had been determined as 0.85. In the sub-dimensions of the scale, the Cronbach's Alpha coefficient had been calculated as .82 for positive foresight relevant to selection of technique, and as .91 for negative foresight relevant to selection of technique. These findings indicate that the measurement tool is reliable (Alpar, 2014).

#### *B. "Teaching Principles and Methods Course Self-Efficacy Scale"*

Teaching Principles and Methods Course Self-Efficacy Scale, which had been developed by Kuzu and Demir (2015), is consisting of 6 sub-dimensions as being Basic Concepts Knowledge, Program Development Process Knowledge, Learning-Teaching Approaches Knowledge, Clarification Knowledge, Application Knowledge and Planning Knowledge, and of 33 items in total. Cronbach's Alpha Reliability Coefficient ( $\alpha$ ) of the factors constituting the scale has been determined as  $\alpha=.919$  for the first factor, as  $\alpha=.863$  for the second factor, as  $\alpha=.876$  for the third factors, as  $\alpha=.906$  for the fourth factor, as  $\alpha=.877$  for the fifth factor, and as  $\alpha=.850$  for the sixth factor. The agreement degrees of preservice teachers for the articles of the scale had been classified as 1 "Can never do", 2 "Can do partially", 3 "Indecisive", 4 "Can do" and 5 "Can do completely" (Kuzu and Demir, 2015). In this research, the total Cronbach's Alpha Coefficient of Teaching Principles and Methods Course Self-Efficacy Scale had been determined as .94. In the sub-dimensions of the scale, Cronbach's Alpha Coefficient had been calculated as .91 for Basic Concepts Knowledge, as .93 for Program Development Process Knowledge, as .88 for Learning-Teaching Approaches Knowledge, as .92 for Clarification Knowledge, as .91 for Application Knowledge, and as .91 for Planning Knowledge. These findings indicate that the measurement tool is reliable (Alpar, 2014).

## **2.5 Data Analysis**

In order to determine the statistical methods to be used in the analysis of data obtained from Teaching Principles and Methods Course Self-Efficacy Scale, and Perception Scale Regarding Competence of Preservice Teachers in Selecting Teaching Techniques, first the normality distribution of the scales and of their sub-dimensions had been examined. The skewness coefficients and kurtosis coefficients of the scales and of the sub-dimensions as per the variables to be examined are varying in between -.753 and .115. The determination of skewness and kurtosis coefficients in between the values of  $\pm 1$  indicates that the scales and sub-dimensions don't excessively deviate from normal distribution (Büyüköztürk, Çokluk and Köklü, 2011). In the direction of the results obtained, statistical methods based on normal distribution assumption had been used for the analysis of data.

The frequency and percentage of demographical characteristics of preservice teachers taking part in the study group had been obtained, and then the arithmetic average and standard deviation scores of the scales had been calculated. Correlation analysis technique had been used in order to determine the relation in between preservice teachers' Self-Efficacy in Teaching Principles and Methods Course, and Perception of Competence in Selecting Teaching Techniques. All the variables had been subjected to correlation analysis, and the relations among the variables had been revealed. The correlation coefficients of "+" or "-", being used in determining the direction and power of relation in between two variables, had been used in determining the direction of the relation. During the assessment of correlation coefficients, they had been interpreted as "highly" related if the value was in between 0.70 and 1.00, as "medium" related if the value was in between 0.69 and 0.30 and as "low" related if the value was 0.20 and lower, and as having no relation as the value got close to 0.00. Statistical analysis of the data had been performed in SPSS program, and the significance level had been tested at the level of  $p < .05$ , and the findings have been presented as tables in the direction of the research's purposes (Büyüköztürk et.al, 2013). When the findings obtained for the analysis of sub-problems were interpreted in the study, the values of "1,00-1,80 No", "1,81-2,61 Low", "2,62-3,42 Moderate ", "3,43-4,23 High" and "4,24-5,00 Very High" were used in the scales.

### 3. Findings

In the research, the findings on preservice teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course, and Perception of Competence in Selecting Teaching Techniques have been provided under headings.

#### 3.1 Preservice Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course

The findings on preservice teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course have been provided in Table 2.

**Table 2:** Mean values and standard deviation values of Preservice Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course

	f	$\bar{X}$	sd
Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course (Total)	412	3.99	,52
Sub-dimensions			
1. Basic Concepts Knowledge	412	4.08	,57
2. Program Development Process Knowledge	412	3.76	,67
3. Learning-Teaching Approaches Knowledge	412	3.95	,61
4. Clarification Knowledge	412	3.89	,73
5. Application Knowledge	412	4.09	,59
6. Planning Knowledge	412	4.16	,66



In Table 2, arithmetic mean and standard deviations relevant to Preservice Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course have been provided. In general, the Preservice Teacher's Perception of Self-Efficacy in Teaching Principles and Methods Course is at "high" level in total ( $\bar{X}=3.99$ ,  $sd=.52$ ). Among the sub-dimensions of Teaching Principles and Methods Course Self-Efficacy Scale, Basic Concepts Knowledge ( $\bar{X}=4.08$ ,  $sd=.57$ ), Program Development Process Knowledge ( $\bar{X}=3.76$ ,  $sd=.67$ ), Learning-Teaching Approaches Knowledge ( $\bar{X}=3.95$ ,  $sd=.61$ ), Clarification Knowledge ( $\bar{X}=3.89$ ,  $sd=.73$ ), Application Knowledge ( $\bar{X}=4.09$ ,  $sd=.59$ ) and Planning Knowledge ( $\bar{X}=4.16$ ,  $sd=.66$ ) are at "high" level.

### 3.2 Preservice Teachers' Perception of Competence in Selecting Teaching Techniques

The findings on Preservice Teachers' Perception of Competence in Selecting Teaching Techniques have been provided in Table 3.

**Table 3:** Average and standard deviation values of Preservice Teachers' Perception of Competence in Selecting Teaching Techniques

	f	$\bar{X}$	sd
Competence in Selecting Teaching Techniques (Total)	412	4.15	,55
Sub-dimensions			
1. Positive foresight relevant to selection of technique	412	4.25	,51
2. Negative foresight relevant to selection of technique	412	4.06	,59

In Table 3, arithmetic means and standard deviations of Preservice Teachers' Perception of Competence in Selecting Teaching Techniques have been provided. In general, Preservice Teachers' Perception of Competence in Selecting Teaching Techniques is at "high" level in total ( $\bar{X}=4.15$ ,  $sd=.55$ ). Among the sub-dimensions of Perception Scale Regarding Competence in Selecting Teaching Techniques, positive foresight relevant to selection of technique ( $\bar{X}=4.25$ ,  $sd=.51$ ) is at "very high" level, and negative foresight relevant to selection of technique ( $\bar{X}=4.06$ ,  $sd=.59$ ) is at "high" level.

### 3.3 Relation in between Perception of Self-Efficacy in Teaching Principles and Methods Course, and Perception of Competence in Selecting Teaching Techniques

The results of the correlation analysis relevant to the relation in between Preservice Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course, and Perception of Competence in Selecting Teaching Techniques have been provided in Table 4.

In Table 4, the findings on the relation in between Preservice Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course, and Perception of Competence in Selecting Teaching Techniques are available.

**Table 4:** The results of the correlation analysis relevant to the relation in between Preservice Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course, and Perception of Competence in Selecting Teaching Techniques

	1	2	3	4	5	6	7	8	9	10
1. Basic Concepts Knowledge	1	,60	,69	,57	,53	,50	,79	,46	,31	,43
2. Program Development Process Knowledge		1	,67	,63	,54	,49	,81	,38	,34	,34
3. Learning-Teaching Approaches Knowledge			1	,73	,67	,48	,87	,43	,34	,44
4. Clarification Knowledge				1	,71	,52	,86	,34	,30	,35
5. Application Knowledge					1	,56	,82	,42	,31	,41
6. Planning Knowledge						1	,73	,40	,30	,40
7. Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course (Total)							1	,50	,35	,48
8. Positive foresight relevant to selection of technique								1	,43	,75
9. Negative foresight relevant to selection of technique									1	,81
10. Competence in Selecting Teaching Techniques (Total)										1

When Table 4 is examined, it is being observed that there is a medium level of relation in positive direction in total ( $r=-0.48$ ;  $p<0.01$ ) in between Preservice Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course, and Perception of Competence in Selecting Teaching Techniques. As the Preservice Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course increases, their Perception of Competence in Selecting Teaching Techniques is also increasing. Or in other words, the level of Perception of Self-Efficacy in Teaching Principles and Methods Course of students -with high level of Perception of Competence in Selecting Teaching Techniques- is also high.

In the analyses within the table, when the relation in between the preservice teachers' total Perception of Competence in Selecting Teaching Techniques, and their Perception of Self-Efficacy in Teaching Principles and Methods Course is examined, there is a medium level of relation in positive direction in the sub-dimensions of Basic Concepts Knowledge ( $r=-0.43$ ;  $p<0.01$ ), Program Development Process Knowledge ( $r=-0.34$ ;  $p<0.01$ ), Learning-Teaching Approaches Knowledge ( $r=-0.44$ ;  $p<0.01$ ), Clarification Knowledge ( $r=-0.35$ ;  $p<0.01$ ), Application Knowledge ( $r=-0.41$ ;  $p<0.01$ ) and Planning Knowledge ( $r=-0.40$ ;  $p<0.01$ ).

In the analyses within the table, when the relation in between the preservice teachers' total Perception of Competence in Selecting Teaching Techniques, and the sub-dimensions of Perception Scale Regarding Competence in Selecting Teaching Techniques is examined, there is a medium level of relation in positive direction in the sub-dimensions of positive foresight relevant to selection of technique ( $r=-0.50$ ;  $p<0.01$ ) and negative foresight relevant to selection of technique ( $r=-0.35$ ;  $p<0.01$ ).

#### 4. Results and Discussion

It has been concluded that the preservice teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course is at "high" level in total. It has also been concluded that perceptions of Basic Concepts Knowledge, Program Development Process Knowledge, Learning-Teaching Approaches Knowledge, Clarification Knowledge, Application Knowledge and Planning Knowledge -among the sub-dimensions of Teaching Principles and Methods Course Self-Efficacy Scale- are at "high" level. It is very important for the individuals to know themselves as being aware of their own competences. Self-efficacy of the individuals assists the individuals in knowing themselves in a general or special field, in controlling themselves and in adapting to their environment. The teachers and preservice teachers to be aware of their self-efficacy in a special field of education will assist them in correcting their deficiencies in such fields (Kuzu and Demir, 2015). High degree of self-efficacy, which is determining how the individuals feel, think and how they motivate themselves and how they behave, increases success and personal and professional satisfaction. The individuals with high self-efficacy are very decisive in attaining their objectives. They can recuperate their self-efficacy rapidly following a mistake or defeat. And the individual with low self-efficacy abstain from performing hard works which they deem as threat, they don't put in effort, and they tend to backdown immediately (Bandura, 1994). Based on the fact that there are consistent relations (Woolfolk and Hoy 1990) among characteristics of preservice teachers / teachers, behaviors of students and their learning, preservice teachers' it can be said that high level of Perception of Self-Efficacy in Teaching Principles and Methods Course -which is the most important element of the program, and which is among the determinants of the quality of their educational status- will both increase the quality of education and contribute to the cognitive and affective development of students. Because according to Woolfolk et al. (1990), high self-efficacy of teachers may cause the students to develop an attitude in positive direction towards the course, school and learning. In this context, the important thing is the general teaching competence of the preservice teacher / teacher, and the more important thing is student's field of interest at the schools and perception by most of the students that what they learn at school is important. The students of teachers with high level of competence in teaching principles and methods and thus in personal teaching make positive evaluations regarding their teachers. Based on these explanations, and by the findings obtained from this study, it can be said that preservice teachers' high level of Perception of Self-Efficacy in Teaching Principles and Methods Course during preservice education -in which their identities as teachers are being shaped- will cause them to use the teaching principles and methods effectively in their future teaching applications, and to have a positive attitude for their profession. Moreover, it can be said that the preservice teachers gain the required competences in teaching principles and methods during their preservice education, that the environments -in which they will be able to demonstrate such competences- are being formed by the relevant

educational institution, and that environments -which will increase the preservice teachers' self-confidence in teaching- are also being provided at the institution.

It has been concluded that the preservice teachers' Perception of Competence in Selecting Teaching Techniques is at "high" level in total. It has been concluded that among the sub-dimensions of Perception Scale Regarding Competence in Selecting Teaching Techniques, the preservice teachers' perception of positive foresight relevant to selection of technique is at "very high" level, and their perception of negative foresight relevant to selection of technique is at "high" level. This result is showing parallelism with the results of some researches (Yeşil, 2009; Gürçay 2012; Yavuz Konokman and Yanpar Yelken, 2013). By the use of the characteristics -that will be provided to individuals through education-, and of various strategies, methods and techniques in the learning and teaching processes through the determined contents, high level of Perception of Competence in Selecting Teaching Techniques of preservice teachers, being the practitioners of programs which has been prepared with constructivist approach rather than (Martell, Hashimoto and Martell, 2011) the teacher centered methods -which are found to be boring by the students, and which makes learning monotonous- and which are containing active learning techniques, is very pleasing. Because the traditional methods are now very outdated in the 21<sup>st</sup> century, and they are unable to appeal to new generation learning culture. The traditional methods are falling far behind the scientific and technological developments and complex requirements of this era, and they are unable to be sufficient in the solution of encountered problems (Zimmerman, 2010). In the curriculums which have been designed in the direction of learning characteristics of 21<sup>st</sup> century, it is being expected for the teachers not to follow a specific teaching technique, but to use techniques which will communicate each subject effectively and permanently (Akçay, Akçay and Kurt,2016). For such reasons, the use of student centered teaching methods in learning and teaching processes may be considered as potential strengths in meeting the requirements of students and in raising citizens having global conscious. Moreover, for the preservice teachers to attain the achievements required to be attained by implementing various techniques -suggested to be used in attaining the achievements included in the curriculums-, it is very important for them to feel highly sufficient regarding Perception of Competence in Selecting Teaching Techniques. Because in order to attain the objectives determined in the curriculums of various courses, it is very important for the teachers to effectively implement the various teaching methods and techniques suggested by the curriculum, and to have high level of Perception of Competence in Selecting Teaching Techniques for the increase of effectiveness of such implementation. But it has also been determined that the results reached by some researches araştırmalarda (Altıparmak and Nakipoğlu, 2004; Kan, 2006; Yaşar and Şeremet, 2010; Çelikkaya and Kuş, 2009) don't show parallelism with the results of this research.

It has been concluded that there is a medium level of relation in positive direction in between Preservice Teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course, and their Perception of Competence in Selecting

Teaching Techniques. Demirel (2006) mentions that teacher's self-efficacies are being motivational, being success-oriented and professional, and that her/his professional competences are planning the teaching events, using the teaching methods and techniques, establishing effective communication, managing the classroom effectively, using the time effectively, assessing the things learned and providing guidance. It can be said that teachers with strong self-efficacy are more open to innovations than the teachers with low self-efficacy, and that they may be more eager in using the new methods and techniques and in meeting the requirements of students (Stein and Wang, 1988). For instance, the preservice teachers with high level of self-efficacy in teaching science form positive teaching environments in their classrooms by using various methods and techniques (Ashton and Webb, 1986). Teachers with high level of self-efficacy can effectively use the teaching methods and techniques, and their quite believe in the success of their students (Schunk, 1989). The necessity of this course named Teaching Principles and Methods, previously named as Planning and Evaluation in Teaching, cannot be ignored for the preservice teachers to gain the skills of planning and evaluation in teaching and for them to use them effectively. Thus, teaching principles and methods course is important in the improvement of the preservice teachers' levels of perception of self-Efficacy in teaching strategies, methods and techniques to be used in the process of education (Kurt and Ekici, 2013). Moreover, Kurt and Ekici, (2013) has determined through the assessments in his study that the course of Planning and Evaluation in Teaching positively affects the level of perception of self-efficacy in teaching process, and that the course of Planning and Evaluation in Teaching –which the preservice teachers are required to take- is effective in positive improvement of preservice teachers' levels of perception of self-efficacy in teaching process. It is being observed that the teachers with high level of perception of self-efficacy take a close interest in their students, that they use various approached for effective teaching, that they spend more effort and time for the students to learn, and that they feel more responsibility. According to this, it can be said that there is a relation in between teachers' perception of self-efficacy, and planning of teaching processes and in-class practices (Pajares, 1992). It has been determined that the teacher's self-efficacy in general, and high level of Perception of Self-Efficacy in Teaching Principles and Methods Course in private, are relevant to many variables regarding education such as academic success of students, their motivation for learning, learning and adopting improvements in the field (new methods, programs etc.), success of implementation of curriculum, professional loyalty of the teacher, teachers' strategies of managing the classroom (Sunjin, 2010). If the expectation of a teacher –with low level of perception of self-efficacy- regarding being successful in teaching is negative, it will negatively affect her/his efforts in realizing the duty of teaching. Based on this point, it can be said that successful teachers are the ones being successful in the planning, implementation and evaluation of teaching process (Ekici et. al., 2010).

Based on the aforementioned statements, the following suggestions may be briefly developed: For the preservice teachers to comprehend the necessity and significance of courses of teaching profession and especially of the course of Teaching

Principles and Methods, teaching designs, which are based on personal characteristics, which cover many different strategies, methods and techniques, and which ensure the students to undertake responsibility, should be included by the academic members. Moreover, the importance of these courses should be engrained in preservice teachers through both explicit and implicit experiences. Deeper knowledge on the subject may be obtained by the use of combined methods in which both quantitative and qualitative data –for determining the variables affecting the preservice teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course, and their Perception of Competence in Selecting Teaching Techniques, or for determining the effect of other courses of professional knowledge- is used. The relations in between the preservice teachers' Perception of Self-Efficacy in Teaching Principles and Methods Course, and their Perception of Competence in Selecting Teaching Techniques, and their academic knowledge relevant to course may be searched.

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