# A Review of Physical Education Teachers' Efficacy in Teaching-Learning Process

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**ABSTRACT**

The aim of this research is to determine the efficacy of physical education teachers in teaching-learning process and to compare them in accordance with several variables. In this study, "Teacher Efficacy Scale"was utilized in order to examine the physical education teachers' efficacy in the teaching-learning process. The research was carried out in the Spring Term 2011-2012 with 142 physical education teachers working in the public secondary and high schools in Turkish Republic of Northern Cyprus. The value of reliability was measured 0.96. As the result of research, teachers replied "I strongly feel confident" to the efficacy scale in teaching-learning process. Education level does not contribute to their efficacy in this process. The variables in gender or vocational seniority in their professions have neither separate nor shared impacts on their efficacy in teaching-learning process.

**Keywords:** *Physical Education Teachers, Teacher Efficacy*

This study is based on the Master's Dissertation written by Gökhan ÇETİNKOL

## INTRODUCTION

In order to have a regular and demanded education process in the educational institutions, it is compulsory to plan and programme each phase of education (Küçükahmet, 2005). The planned and programmed education is called "teaching"; so, curriculum is the major part of educational programme (Laska and Gürbüztürk, 1984). Curriculum: "special objectives and their subsidiary components and critical behaviours are constituted of "test conditions which show whether these components and critical behaviours are taught or not" (Özçelik, 1992). In the curriculums was interiorised constructivist approach to fulfil the objectives of the curriculums. The teachers were given new roles in this approach in which students adopt their own learning (T.C. MEB-Öğretim Programları).

Teachers are the important figures in educational system (Bilgen, 1998). They are responsible for raising man power which is necessary for new generations and their countries and play a role model for those who they raise at the same time (Karaküçük, 1999). Therefore, teachers are supposed to have sufficient knowledge, skills and attitudes. Their sufficient knowledge, skills and attitudes are also related to their vocational efficacy.

Consisting of knowledge, skills, attitudes and behaviours, teacher efficacy can be both observed and testified. The behaviour and skills observed and testified are concerned with the assessment and evaluation of behaviour, attitudes and skills. This indicates that teacher efficacy can be assessed and evaluated (www.egyankosh.ac). These evaluations of efficacy put forth teachers' tasks and success (T. C. MEB-TTKB-Öğretmen Yeterlilikleri, 2008). For that reason, teachers' sufficient knowledge, skills, attitudes and behaviours, namely their vocational efficacy, should be put into practice in order to determine their tasks and success. The evaluation of Physical Education Teachers' Efficacy in is of great importance in terms of the practice of their craft knowledge, responsibility and skills, and it must be investigated. This study is viewed to be of high importance because it helps reveal the physical education teachers' efficacy in Turkish Republic of Northern Cyprus (TRNC).

The aim of this study is to determine the efficacy of physical education teachers who work at secondary schools and high schools in TRNC and compare them with its variables (gender, education level, vocational seniority). In this light, answers were sought to the following questions.

1. At what level is the physical education teachers' efficacy in the teaching-learning process?

2. What are descriptive characteristics associated with sub-efficacies in lesson planning, material preparation, arranging learning environments, arranging extracurricular activities, diversifying teaching considering individual differences, time management and behaviour management?

3. Is it significant difference between physical education teachers' efficacy in teaching-learning process according to education levels?

4. Is it significant difference between physical education teachers' efficacy in teaching-learning process according to gender?

5. Is it significant difference between physical education teachers' efficacy in teaching-learning process according to vocational seniority?

6. Is there significant interaction between gender, and vocational seniority on the teacher efficacy.

## THE STUDY

The research horizon includes secondary and high schools in TRNC. A maximum sampling that would represent each county homogeneously was tried to be reached. Sampling involves 38 schools which were randomly selected (13 secondary schools and 25 high schools). The research included a total of 142 volunteer physical education teacher participants.

"Teacher Efficacy Scale" was used as data collection tool. Teacher Efficacy Scale was developed by Oskay et al. in 2010. The scale including 56 items comprises of 7 sub-efficacy fields as "Lesson Planning" (LP, 9 items), "Material Preparation" (MP, 10 items), "Arranging Learning Environments" (ALE, 9 items), "Arranging Extracurricular Activities" (AEA, 6 items), "Diversifying Teaching Considering Individual Differences" (DTCID 8 items), "Time Management" (TM, 3 items), "Behaviour Management" (BM, 11 items) and measured through Likert's Scale with 7 items ("1= Never Feel Confident, ..... 7= Strongly Feel Confident"). Oskay et al. (2010) found the reliability coefficient value as .94 in their research while it is .96 in this research.

While analysing the data, standard deviation (Sd) techniques as frequency (N), percentage (%) and mean ($\overline{X}$) were made of use. Parametric statistics techniques were used so as to figure out if there are any distinctions among the Physical Education Teachers in terms of gender, education level, and vocational seniority. Numerical data was checked for normalisation. The measures of skewness and kurtosis were analysed and Kolmogrov-Sminorov was measured since the number of samples was more than 50. The measures of skewness and kurtosis were 0.44 and 0.49, and level of significance was measured .31 in Kolmogrov-Sminorov test. Parametric Statistics Techniques were decided to be used in line with the measures of skewness and kurtosis, and Kolmogrov-Sminorov test questions. The techniques of T test and bilateral analysis of variance (ANOVA) from parametric statistics techniques were utilised. Score ranges of measuring tool are normal at a level of $p > 0.05$ significance. In the research, the items are interpreted as follow: items 1-3 represent "Never Feel Confident"; item 4: Neutral; 5-7 represent "Strongly Feel Confident". The data collected in the research was assessed via SPSS 17.0 package programme.

## FINDINGS

### Results of Descriptive Statistics Analysis

The mean value of physical education teacher efficacy in teaching-learning process is $\overline{X}$= 6.13 (Sd= .63, skewness= -0.44 and Kurtosis= -0.49). The rates of efficacy and sub-efficacy of the physical education teachers involved in the research were figured in Table 2.

**Table 1. Mean and Standard Deviation Values for Physical Education Teachers' Teacher Efficacy**

| Sub-Efficacy | N | $\overline{x}$ | Sd | Skewness | Kurtosis |
|---|---|---|---|---|---|
| LP | 142 | 6.12 | .75 | -0.90 | 0.52 |
| MP | | 6.02 | .79 | -1.05 | 1.59 |
| ALE | | 6.11 | .77 | -0.76 | -0.16 |
| AEA | | 6.01 | .82 | -0.97 | 1.16 |
| DTCID | | 6.01 | .86 | -0.80 | 0.24 |
| TM | | 6.50 | .67 | -1.49 | 1.94 |
| BM | | 6.28 | .63 | -0.83 | 0.03 |

It is seen that the values for teaching-learning sub-efficacy range from 6.01 to 6.50. While the maximum sub-efficacy is "time management" sub-dimension, the minimum sub-efficacy fields are "Arranging Extracurricular Activities" and "Diversifying Teaching Considering Individual Differences". According to these results, it is found that teacher efficacy of physical education teachers are so high in teaching-learning process. Mean values with regard to 7 sub-efficacy fields are shown below as *"Lesson Planning", "Material Preparation", "Arranging Learning Environments", "Arranging Extracurricular Activities", "Diversifying Teaching Considering Individual Differences", "Time Management"* and *"Behaviour Management"*.

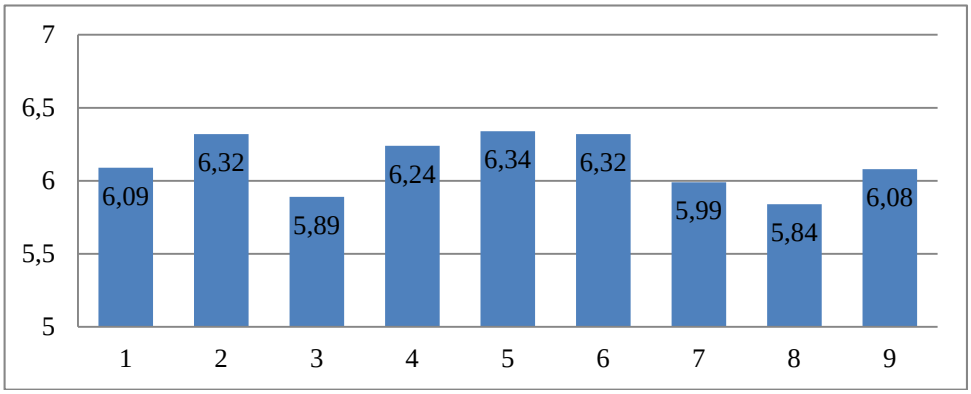


**Figure 1. Mean Rates for Lesson Planning as Sub-efficacy**

When physical education teachers' sub-efficacy in lesson planning are analysed, the mean rates are seen to range from 5.84 to 6.34. The maximum mean value is the item "the specification of appropriate methods and techniques in lesson plan" ($\overline{x}$ = 6.34, item 5). The minimum mean value is the item "Ranking how information and communication technologies must be used in lesson plan" ($\overline{x}$ = 5.84, item 8). The mean values for sub-efficacy in lesson planning are so close to each other.

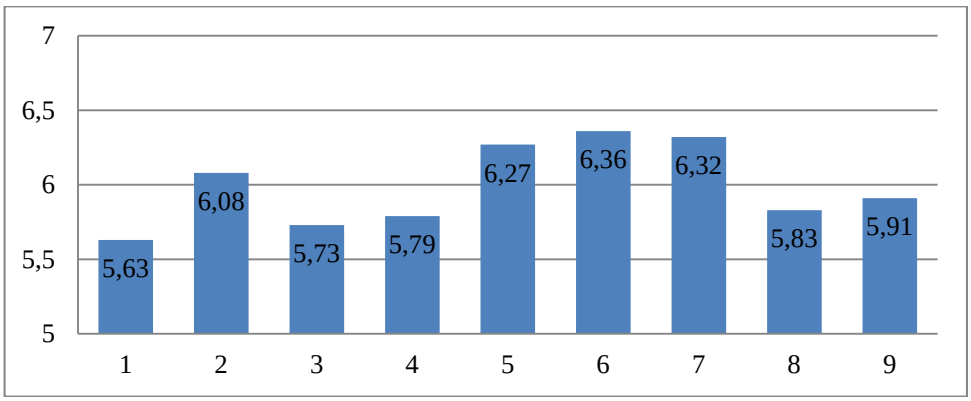


**Figure 2. Mean Values for Material Preparation as Sub-Efficacy**

When we analyse the material preparation as sub-efficacy of physical education teachers, we see that the mean values range from 5.63 to 6.32. The maximum mean values are the items of "Benefiting environmental facilities while preparing materials" and "considering the simpleness of the materials prepared for presentation" ($\overline{x}$ = 6.32, items 7 and 8). The minimum mean value belongs to the item 1, which is "Preparing worksheets" ($\overline{x}$ = 5.63, item 1). The values

for material preparing sub-efficacy are so close to each other.

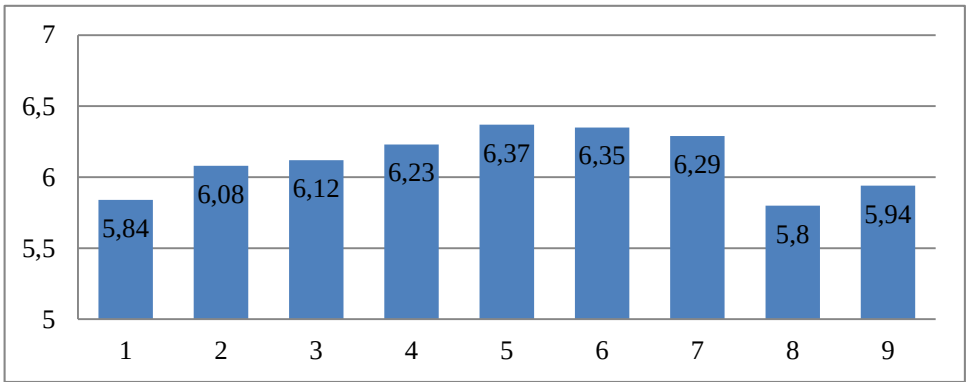


**Figure 3. Mean Values for Arranging Learning Environments as Sub-Efficacy**

The mean values range from 5.80 to 6.37 in the physical education teacher sub-efficacy of arranging learning environments. The maximum mean value is the item "Maintenance of instuments, operationalisation" ($\overline{X}$ = 6.37, item 5) while the minimum mean value is the item, which is " modeling and teaching effective use of technology sources " ( $\overline{X}$ = 5.80, item 8). The mean values for the sub-efficacy of managing learning environments are so close to each other.

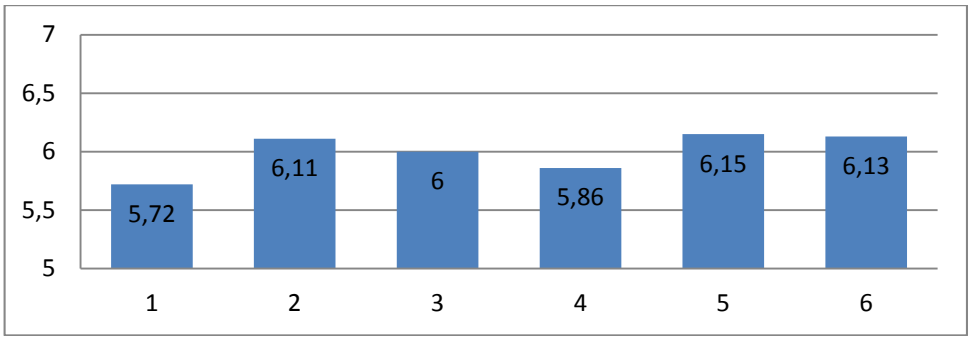


**Figure 4. Mean Values for Sub-Efficacy of Managing Extra Curricular Activities**

The mean values range from 5.72 to 6.15 in the sub-efficacy of arranging extracurricular activities of physical education teachers. The maximum mean value is the item "Supplying instruments for extracurricular activities" ($\overline{X}$ = 6.15, item 5) while the minimum mean value is the item, which is "planning for extracurricular activities" ($\overline{X}$ = 5.72, item 1). The mean values for the sub-efficacy of managing extracurricular activities are so close to each other.

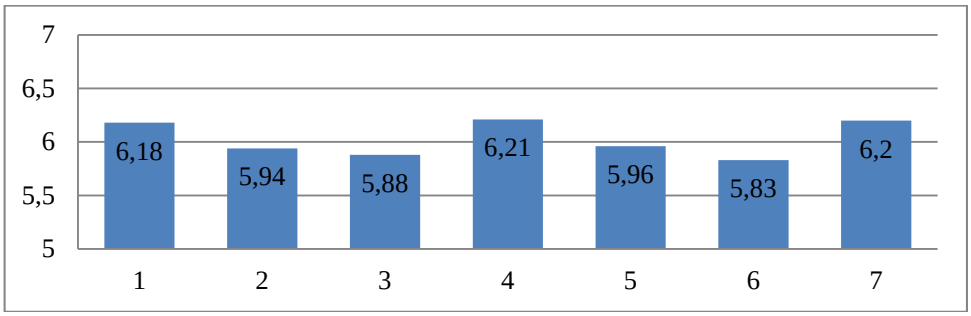


**Figure 5. Mean Values for the Sub-efficacy of Diversifying Teaching Considering Individual Differences**

When the sub-efficacy of diversifying teaching considering individual differences is analysed, the mean rates are seen to range from 5.83 to 6.21. The maximum mean is the item "considering individual differences while determining the methods" ($\overline{X}$ = 6.21, item 4). The minimum mean value is the item "planning individual learning" ($\overline{X}$ = 5.83, item 6). The mean values for the sub-efficacy of diversifying teaching considering individual differences are so close to each other.

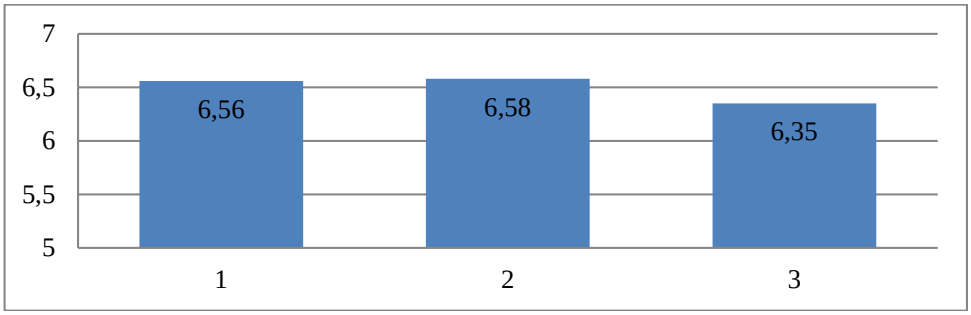


**Figure 6. Mean Values for the Sub-efficacy of Time Management**

When they are are analysed, the mean rates for the sub-efficacy of time management are seen to range from 6.35 to 6.58. The maximum mean is the item "managing time effectively in the teaching-learning process" ($\overline{X}$ = 6.58, item 2) whereas the minimum mean value is the item "guiding students to use lesson and free times effectively" ($\overline{X}$ = 6.35, item 3). The mean values for the sub-efficacy of time management are too close to each other.

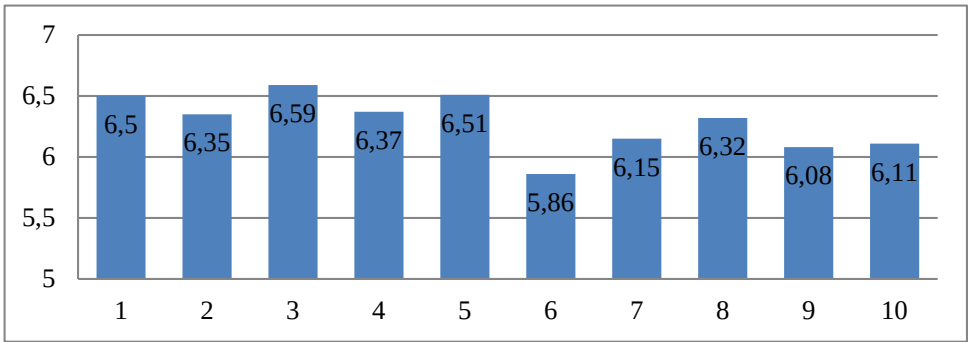


**Figure 7. Mean Values for the Sub-efficacy of Behaviour Management**

When they are are analysed, it is seen that the mean rates for the sub-efficacy of behaviour management range from 5.86 to 6.37. The maximum mean belongs to the item "Considering individual differences in managing behaviour" ($\overline{X}$ = 6.37, item 4) while the minimum mean value is the item "determining the class rules with students" ($\overline{X}$ = 5.86, item 6). The mean values for the sub-efficacy of behaviour management are so close to each other.

## Results of Parametric Statistics Analysis

### *Physical Education Teachers' Efficacy in Teaching-Learning Process According to Level of Education*

As the result of T test analysis, the distinction between teachers' levels of education and teacher efficacy is not of significance ($t_{140}$=346, p=.73). While the mean value for those who work as a high school physical education teacher is 6.11, the one for those at secondary schools is 6.15 (table 4.9).

**Table 2. The T Tests Analysis**

| | Education Level | N | $\overline{X}$ | Sd | t | Sd. | P |
|---|---|---|---|---|---|---|---|
| Teacher Efficacy | High School | 91 | 6.11 | 0.82 | .346 | 140 | .73 |
| | Secondary School | 51 | 6.15 | 0.62 | | | |

### *Physical Education Teachers' Efficacy in Teaching-Learning Process According to Gender, and Vocational Seniority*

The results of bilateral analysis of variance (ANOVA) are shown in the table 3 in order to diagnose the both shared and separate impacts of gender and vocational seniority upon the physical education teachers' teacher efficacy in teaching-learning process.

**Table 3. The two-Way-Anova Analysis**

| Variables | Group Type | N | $\overline{X}$ | Sd |
|---|---|---|---|---|
| Gender | Female | 74 | 6.18 | 0.58 |
| | Male | 68 | 6.06 | 0.67 |
| Vocational Seniority | 10 years and less | 46 | 6.02 | 0.59 |
| | 10-20 years | 69 | 6.15 | 0.63 |
| | 21 years and more | 27 | 6.24 | 0.67 |
| Gender*Vocational Seniority | Female*10 years and less | 30 | 6.07 | 0.60 |
| | Female*10-20 years | 33 | 6.21 | 0.58 |
| | Female*21 years and more | 11 | 6.41 | 0.53 |
| | Male*10 years and less | 16 | 5.93 | 0.57 |
| | Male *10-20 years | 36 | 6.09 | 0.68 |
| | Male *21 years and more | 16 | 6.13 | 0.74 |
| | Analysis of Variance (ANOVA) | | | |
| Gender | SoS*=0.94; MSV*=0.94; $F_{5-136}$=2.40; η2*=.02; p*=0.12 | | | |
| Vocational Seniority | SoS=1.23; MSV=0.62; $F_{5-136}$=0.62; η2=0.02; p=0.21 | | | |
| Gender*Voc. Seniority | SoS=0.14; MSV=0.07; $F_{5-136}$=0.18; η2=0.00; p=0.84 | | | |

SoS: sum of squares; MSV: mean square values, η2: eta squared; p: level of significance

When the table above is analysed, the mean value for teacher efficacy of females in teaching-learning process is seen to be 6.18 while that of males in this process is 6.06. As the result of the analysis of variance (ANOVA), gender has no effects on teacher efficacy for physical education teachers ($F_{5-136}$=2.40; p=0.12>0.05).

The table demonstrates that the mean value for teacher efficacy of physical education teachers who work for 21 years and more is 6.15; the mean value of those whose length of service in their professions is between 10 and 20 years is 6.15, and that of teachers whose length of service is 10 years and less is 6.02. Vocational seniority is of no significance for physical education teachers in teaching-learning process ($F_{5-136}$=0.62; p=0.21>0.05).

According to the table, when both gender and vocational seniority are examined, the mean value for teacher efficacy of females who are of vocational seniority in teaching-learning process for 21 years and more has the highest one ($\overline{X}$ = 6.24) while the mean value of male teachers' efficacy who work for 10 years and less is of the lowest, which is $\overline{X}$ = 6.02. Gender and vocational seniority (mutual interaction) are of no significance for the efficacy of physical education teachers observed in the research in teaching-learning process ($F_{5-136}$=0.18; p=0.84>0.05).

## RESULTS

The results obtained in the research and discussions about these results are as follow:

Physical Education Teachers expressed "Strongly Feel Confident" for their own efficacies in teaching-learning process ($\overline{X}$ = 6.13). In another study in which the same scale was used, it was ascertained that pre-service teachers' teacher efficacy in teaching-learning process is high ($\overline{X}$ = 4.81) (Oskay et al., 2010). It was pointed out that teachers' and pre-service teachers' efficacies are so close to each other and above average in the studies in which the vocational efficacy of physical education teachers, pre-service teachers and lecturers at Vocational Schools of Physical Education and Sports (Aktağ, 2011; Mirzeoğlu, et. al., 2007; Aktağ & Walter, 2005). According to these results, it could be said that the vocational efficacy of teachers is at a good level. It is important how efficacious teachers they are in order to help students achieve success (Aktağ, 2005). In that, it is seen that those who have high teaching efficacy tend to make use of various teaching methods, student-oriented teaching strategies and instruments (Hoy ve Burke-Spero, 2005). In other words, well-qualified teacher is the person to provide class environment and atmosphere that help students learn (www.egyankosh.ac).

Education level of their school does not effect on their level of efficacy. In a study in which senses of vocational efficacy were investigated, there is no significant difference between the high school and primary school physical education teachers' teacher efficacy (Mirzeoğlu et al., 2007). According to these results, it could be inferred that the vocational efficacies of physical education teachers who teach at schools with different education levels compare to each other.

Another result displays that gender also has no impact on the physical education teachers' efficacy in teaching-learning process. In this respect, it is also possible to declare that the male physical education teachers' efficacy in teaching-learning process compare to those of female teachers. While this result is similar to some research results (Aktuğ, 2011; Mirzeoğlu, et. al., 2007), it has no similarities to some others (Aktağ & Walter, 2005; Şeker et al., 2005). We see that vocational seniority has no important impact on the teacher efficacy.

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