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INVESTIGATION OF PHYSICAL EDUCATION AND SPORTS TEACHERS' UNDERSTANDING OF TEACHING AND LEARNING*

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ABSTARCT

The current study is a descriptive study aiming to examine the teaching and learning conceptions of physical education and sport teachers. A total of 274 physical education and sport teachers (mean age 38.83 ± 10.07 years), 82 female and 192 male, constituted the sample of the study. The "Teaching and Learning Conceptions Scale" developed by Chan et al. (2004) and adapted into Turkish by Aypay (2011) was used as the data collection tools used in the study. Skewness and Kurtosis normality tests were applied for the measurements. Since the test results were in accordance with the normal distribution, t-test for pairwise comparisons and One-Way Anova tests for multiple comparisons were performed. According to the results of the research, it can be concluded that the mean score of constructivist understanding of the participants from the sub-dimensions of the teaching and learning understanding scale is 19.87 and the mean score of traditional understanding is 53.58, and it can be concluded that the traditional understanding levels of physical education and sports teachers are quite high compared to the constructivist understanding levels. According to the personal characteristics, it was found that there was a statistically significant difference in the teaching and learning conception levels of the participants according to some variables, but there was no statistically significant difference according to some variables.

Keywords: Learning and Teaching Concepts, Physical Education and Sports Teacher

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1. INTRODUCTION

In parallel with the developments in the world, change is always an inevitable fact of life. The period we are in is one of the periods in which change occurs quite a lot and quite rapidly (Erdoğan, 2021:1). The changes that occur lead the society to develop and contribute to their always being dynamic. The education system is also among the areas of change in society (Özden, 200:16). It is a normal situation that the changes in the education system bring about changes in teaching-learning approaches. As a result, it is of great importance to examine the teaching-learning conceptions of teachers who undertake the task of raising successful students and to organize them according to the requirements of the age (Baş, 2014:19).

As a concept, teaching-learning conceptions refer to teachers' beliefs about teaching and learning. The scope of these beliefs consists of the meanings of teaching-learning concepts and the tasks of teachers and students (Chan and Elliot, 2004). Developments in the education system in different periods have led to differences in teaching-learning conceptions. In this sense, there are two opposite teaching-learning approaches in the education system. These are the traditional understanding and the constructivist understanding (Can & Çelik, 2017:328).

In the traditional understanding where the teacher is at the center, the teacher is the one who transmits the objectively accepted information in the books to the student and the student is the one who receives this information. The traditional understanding is based on positivism. Positivism argues that knowledge is independent of the individual and objective. For this reason, the student is passive in the creation of knowledge. The main task of the teacher is to convey this knowledge to the passive student (Özden, 2005:54). In the traditional approach, the teacher is at the center. In this approach, since it is assumed that all students have the same level of background on the subject and learn at the same speed, students are kept in the second plan. Direct and unilateral teaching is generally practiced in classrooms. Students are expected to learn certain information. Students are expected to accept this information without questioning, researching and discussing (Khalid & Azeem, 2012:172).

In other words, in the traditional understanding, teachers want to hear only one correct answer to the questions they pose to students in the classroom. In this approach, rote learning is dominant. Creative thinking is not allowed. The teacher is the only authority in the classroom and the main source of knowledge. In addition, in the traditional understanding, teachers do not pay attention to students' intelligence levels and learning styles, and they try to impose an understanding in which the teacher is at the center (Baş, 2014:20).

Another teaching-learning approach is the constructivist approach. Constructivist understanding refers to the acquisition of new knowledge by bringing together students' existing knowledge and newly learned knowledge. The basis of constructivist understanding is to ensure that the information learned is permanent and to help students acquire creativity, problem solving and critical thinking skills. The student is at the center of the constructivist approach. The teacher's task is to ensure that students are active in the lessons and to prepare the appropriate environment in which they can learn by making personal applications (Richardson, 2003:1624 Şaşan, 2002:49). In accordance with democracy, students produce solutions to the problems encountered in daily life and create knowledge that they can benefit from throughout their lives. What is important here is that students adopt knowledge by examining and questioning. The emphasis is on why and how students can learn rather than what they can learn (Erdem & Demirel, 20002:83-84).

In 2005, the Ministry of National Education made innovations in all levels of education and curricula and decided to implement the constructivist approach by leaving the traditional understanding behind in curricula. Today, the traditional teaching-learning approach, in which the teacher is in the center and the active student remains passive in the second plan, has been replaced by the constructivist teaching-learning approach in which the student structures the information by assimilating and interpreting it and actively participates in the lessons (Işıkgöz, 2020: 73).

Although the constructivist approach has been adopted in the curricula, teachers' existing traditional understandings and the constructivist approach may be in conflict in some cases and the goals that should be gained by the students may not be gained by the students as they should be. For this reason, it is thought that examining teachers' teaching-learning conceptions is of great importance (Bağcı, 2019; Yener & Yılmaz, 2017; Chan 2003; Can & Çelik, 2018; Aydın, Tunca & Şahin, 2015; Dedebalı & Süral, 2021; Işıkgöz, 2020) as well as studies examining the teaching-learning conceptions of teachers on duty (Baş, 2014; Ocak, Ocak, & Kalender, 2017; Akyıldız, 2018). However, there is no study that deals with the teaching-learning conceptions of physical education and sport teachers may be in line with the changes in the education system or vice versa. It is thought that making the changes in the education system or planned to be made by considering the teaching-learning conceptions of teachers will positively affect and increase the functionality of the changes made.

Successful transfer of physical education and sports course outcomes to students is possible through effective teaching. A physical education and sports teacher is not only an individual with high level psychomotor skills or a person who has a good command of his/her subject, but also a person who can convey all these to students in the best way so that they can learn. Physical education and sports lessons have a very important place in terms of meeting the student's need for movement, which is one of the most basic needs of the student, developing in a healthy way and supporting social development to a great extent, as well as bringing the student into society as a self-confident, successful and peaceful individual who can keep up with society (Yıldız & Kangalgil, 2014: 64). It is thought that the teaching approaches used by the physical education and sports teacher in the lesson have a great effect on the best way of gaining all these to the student. Based on this, considering the importance of physical education and sports course, this study was conducted to examine the teaching-learning conceptions of physical education and sports teachers.

The aim of this study is a descriptive study in which the levels of physical education and sports teachers' understanding of teaching and learning in terms of some variables are determined in terms of some variables with the understanding of learning and teaching scale.

Hypotheses

H1: Is there a significant difference between the mean scores of the sub-dimensions of the teaching and learning conception scale of Physical Education and Sports teachers according to some variables?

H2: Is there a difference in terms of constructivist understanding and traditional understanding among the sub-dimensions of teaching and learning scale of Physical Education and Sports teachers?

2. METHOD

In this section where the methodology of the research is discussed; the methodology used in the research, the characteristics of the sample and the population, the data and the data collection tool, the application of the scale and the statistical analysis used in the findings obtained are emphasized.

2.1.Research Model

The research was determined by simple random sampling method. Simple Random Sampling method provides equal selection opportunity for each sampling unit (Büyüköztürk et al., 2013). The research includes a descriptive study.

2.2. Research Group

The population of the study consists of physical education and sports teachers working in schools affiliated to the Ministry of National Education in various regions of Turkey. The sample of the study consisted of a total of 274 physical education and sports teachers (mean age 38.83 ± 10.07), 82 female and 192 male.

2.3.Data Collection

A literature review was conducted and domestic and foreign sources were accessed and the theoretical framework for the thesis was created. The data were collected face-to-face on a voluntary basis.

"Teaching and Learning Conceptions Scale", which was developed by Chan et al. (2004) and adapted into Turkish by Aypay (2011), was used as data collection tools in the study.

2.4. Data Tools

2.4.1. Personal Information Form

A personal information form consisting of 7 items was prepared by the researcher in order to collect information about the personal characteristics of Physical Education and Sports teachers and to create the independent variables of the study. In the form; there are variables to determine the teachers' "Gender, Age, Marital Status, Sports Practice Status, Income Status and Do You Think Working with a Psychologist is Useful?".

2.4.2. Teaching and Learning Understanding Scale

Teaching and Learning Scale was developed by Chan et al. (2004) and adapted into Turkish by Aypay (2011). As a result of the exploratory factor analysis, it was determined that the total variance explained was 68%.

The fit indices of the model obtained as a result of subjecting the data to Confirmatory Factor Analysis were examined and it was seen that the Chi-square value (x2 =1020.3 N=341, sd=404, p=0.00) was significant. The root mean square error of agreement (RMSEA) was found to be 0.067. RMSEA value between 0 and 0.05 indicates the presence of a good fit, and a value between 0.05 and 0.08 indicates the presence of an acceptable fit. In the study, the RMSEA value was 0.067 and this value was accepted as indicating an acceptable fit. Normed Fit Index (NFI) was 0.72 and Comparative Fit Index (CFI) was 0.80. Although these fit index values are lower than expected, since it is stated that the fit index that gives the most information about the fit of the model is RMSEA (Thompson, 2000; as cited in Alpay, 2011), these fit index values reveal that the model is partially compatible. According to the results of the factor analysis, the 30 items in the scale loaded on two factors. These factors were named as "Constructivist Approach" and "Traditional Approach". The reliability of the scale was measured using Cronbach Alpha coefficient and two-half methods. The reliability calculated for the overall scale was 0.71, .88 and .83 for the sub-dimensions. The correlation between the two halves was 0.77.

2.5.Data Collection Process

Before starting the implementation phase of the research, the necessary processes were followed by applying for the approval of institutions and individuals. Afterwards, the inventories consisting of three parts were administered face-to-face to the participants specified in the sample group on a voluntary basis. The purpose and content of the research were explained and the necessary information was given about reading and filling the questions carefully.

2.6.Data Analysis

In the data analysis phase, the following procedures were carried out in accordance with the objectives of the study.

- Descriptive statistics, frequency and percentage distributions were made to determine the characteristics of the data.
- One sample Skewness and Kurtosis normality test was applied to determine whether the measurements were suitable for normal distribution.

- Since the data were not normally distributed, t test was used for pairwise comparisons and One Way Anova tests were used for multiple comparisons. Tukey test was used to determine the difference between the groups.
- Finally, Pearson Correlation Analysis test was used to reveal the relationship between the groups. The analysis of the research data was evaluated using SPSS for Windows 21.00 statistical package program.

3. RESULTS

This section presents the findings obtained from the analysis of the data collected in relation to the variables and hypotheses examined in the study.

3.1. Findings on Personal Characteristics of the Research Group

In this section of the study, information about the personal characteristics of the participants who constitute the sample group of the research is given.

Table 1. Distribution of Participants According to Independent Variables

N	Variables	0	⁄o
Gender	Female	82	29,9
	Male	192	70,1
Marital Status	Single	87	31,8
	Married	187	68,2
Sports Situation	Yes	208	75,9
	No	66	24,1
	21 - 30 Age	76	27,7
Age	31 - 40 Age	81	29,6
	41 - 50 Age	71	25,9
	51 and +	46	16,8
	13.000 TL - 16.000 TL	210	76,6
Income Status	17.000 TL - 20.000 TL	29	10,6
	21.000 TL +	35	12,8
Do You Think Working with a Sports	Yes	200	73,0
Psychologist Is Helpful?	No	74	27,0
	Public School	134	48,9
Institution He/She Works At	Private School	32	11,7
	Training Center	30	10,9
	Others	78	28,5

Table 2. Descriptive Statistics for the Sub-dimensions of the Conceptions of Teaching and Learning Scale

	N	Mean	Ss	Skewness	Kurtosis	Min.	Max.
Constructivist	274	19,87	5,520	,516	,126	12,00	42,00
Understanding							
Traditional	274	53,58	10,70	,905	1,137	18,00	72,00
Understanding							

When Table 2 is examined, according to the Skewness and Kurtosis test results of the teaching and learning conceptions scale, it is understood that the emotional intelligence dimension is between + 1.5 and -1.5, so it is suitable for normal distribution. The total and sub-dimensional scores of teaching and learning conceptions scores are shown. As a result of this examination, it is understood that the participants included in the research are below the middle level with a mean =19,87 in the constructivist understanding sub-dimension and above the middle level with a mean =53,58 in the traditional understanding sub-dimension in terms of the sub-dimensions of the teaching and learning conceptions scale.

Table 3. t-Test Results to Determine Whether the Participants' Teaching and Learning Conceptions Scale Subscale Scores Differed According to Marital Status Variable

	Groups	N	Mean	Ss	Shg	T Test		
						T	Sd	P
Constructivist	Single	87	19,3333	5,96826	,63986	-1,110	272	,001*
Understanding	Married	187	20,1283	5,29705	,38736			
Traditional	Single	87	50,4713	10,73447	1,15086	-3,336	272	,001*
Understanding	Married	187	55,0214	10,40521	,76090			

When Table 3 is examined, as a result of the independent group t test conducted to determine whether the constructivist conceptions of teaching and learning scale sub-dimensions of the sample participants showed a significant difference according to the marital status variable of the participants, the difference between the arithmetic means of the groups was found statistically significant (t=-1,110; p<.05).

As a result of the independent group t test conducted to determine whether the participants' traditional understanding scores from the sub-dimensions of the teaching and learning conceptions scale showed a significant difference according to the marital status variable of the

participants, the difference between the arithmetic means of the groups was found to be statistically significant (t=-3,336; p<.05).

Table 4. One-Way Analysis of Variance (One-Way ANOVA) Results to Determine Whether the Participants' Teaching and Learning Conceptions Scale Subscale Scores Differed According to Age Variable

f, x ve ss Values							One-Way ANOVA Result					
	Groups	N	Mean	Ss	Var. Com.	KT	Sd	КО	F	р	Dif.	
	21 - 30	76	20,33	5,77	Intergroup	185,67	3	61,89	2,05	,107	-	
Constructivist	Age											
Understanding	31 - 40	81	18,62	4,74	Intragroup	8134,11	270	30,13				
	Age											
	41 - 50	71	20,58	5,73	Total	8319,78	273					
	Age											
	51 and +	46	20,26	5,85								
	21 - 30	76	49,71	11,55	Intergroup	1807,81	3	602,60	5,52	,001*	1-2	
Traditional	Age										1-3	
Understanding	31 - 40	81	54,11	9,92	Intragroup	29469,08	270	109,14			1-4	
	Age											
	41 - 50	71	54,93	11,24	Total	31276,89	273					
	Age											
	51 and +	46	56,93	7,83								

When Table 4 is examined, as a result of the one-way analysis of variance (One-Way ANOVA) conducted to determine whether the arithmetic averages of the total dimension of the emotional intelligence scale show a significant difference according to the occupational variable, the difference between the total emotional intelligence dimension of the occupational groups was found statistically significant (F=17.71; p<.05).

Table 5. t-Test Results to Determine Whether the Participants' Teaching and Learning Understandings Scale Subscale Scores Differentiate According to the Variable of Do You Think Working with a Sport Psychologist is Beneficial?

	Groups	N	Mean	Ss	Shg		T Test	
						T	Sd	P
Constructivist	Yes	200	19,30	5,28	,373	-2,877	272	,004*
Understanding	No	74	21,43	5,86	,682			
Traditional	Yes	200	54,13	10,59	,748	1,409	272	,160
Understanding	No	74	52,08	10,93	1,270			

When Table 5 is examined, as a result of the independent group t-test conducted to determine whether the scores of the constructivist understanding, one of the sub-dimensions of the teaching and learning conceptions scale, of the participants in the sample showed a significant difference according to the variable Do you think that working with a sports psychologist is

beneficial, the difference between the arithmetic means of the groups was found to be statistically significant (t=-2,877; p<.05).

Table 6. One-Way Analysis of Variance (One-Way ANOVA) Results to Determine Whether Participants' Teaching and Learning Conceptions Scale Subscale Scores Differed According to Income Status Variable

	One-Way ANOVA Result										
	Groups	N	Mean	Ss	KT	Sd	KO	F	р	Dif.	
Constructivist Understanding	13.000 - 16.000 TL	210	19,73	5,45	Intergroup	28,882	2	14,44	,47	,624	-
	17.000 - 20.000 TL	29	19,90	5,91	Intragroup	8290,899	271	30,59			
	21.000 ve + TL	35	20,71	5,67	Total	8319,781	273				
Traditional Understanding	13.000 - 16.000 TL	210	53,53	10,60	Intergroup	760,921	2	380,46	3,37	,036*	2-3
	17.000 - 20.000 TL	29	57,52	8,28	Intragroup	30515,970	271	112,60			
	21.000 ve + TL	35	50,60	12,23	Total	31276,891	273				

When Table 6 is examined, as a result of the one-way analysis of variance (One-Way ANOVA) conducted to determine whether the arithmetic averages of the total dimension of the emotional intelligence scale show a significant difference according to the occupational variable, the difference between the total emotional intelligence dimension of the occupational groups was found statistically significant (F=17.71; p<.05).

4. CONCLUSION, DISCUSSION AND RECOMMENDATIONS

The aim of this study is a descriptive study in which the levels of physical education and sports teachers' understanding of teaching and learning in terms of some variables are determined and examined in terms of some variables with the understanding of learning and teaching scale.

The results obtained regarding the problems of the research were grouped and presented as items. In line with the results;

The findings of this study reveal that the constructivist conception of teaching and learning among the participants was below the middle level, while the traditional conception was above the middle level. These results align with some studies in the literature, yet they also raise concerns regarding the adoption of contemporary educational approaches. Firstly, the low level of constructivist understanding suggests that traditional teaching approaches remain prevalent among teachers. This finding is consistent with research that emphasizes the historical reliance

on more conventional models within the Turkish education system (Yıldırım & Şimşek, 2016). Traditional teaching models are often characterized by teacher-centered practices where knowledge is transmitted directly. The participants' tendency towards this approach may indicate that such methods are still perceived as more reliable and practical. Indeed, Doğanay and Sarı (2017) argue that the insufficient adoption of constructivist approaches may be linked to teachers' limited knowledge and competencies in this area. However, the low level of constructivist understanding raises concerns regarding current educational policies and programs. Constructivist approaches support learner-centered education, aiming to foster active student participation and critical thinking skills (Brooks & Brooks, 1999). In this context, the findings suggest that constructivist strategies have not been effectively embraced or implemented in practice. Particularly in the field of physical education and sports, constructivist teaching methods should play a more prominent role in enhancing teachers' pedagogical knowledge and practices (Arslan & Erkuş, 2018). The lack of constructivist methods could hinder students' development of independent thinking, problem-solving, and collaboration skills, potentially limiting the creation of modern and dynamic learning environments in sports education.

The significant gender differences observed between the constructivist and traditional understanding of teaching and learning among the participants reflect broader trends in educational approaches. Specifically, the results indicate that married individuals displayed higher scores in both constructivist and traditional dimensions, suggesting that marital status may play a role in shaping educators' pedagogical beliefs. These findings align with previous research that emphasizes life experience, including marriage, as a factor that influences teaching perspectives and adaptability (Redding, 2013). In terms of gender differences, research has shown that male and female educators often approach teaching and learning with distinct perspectives. For instance, women may be more inclined towards constructivist practices due to their emphasis on collaboration and student engagement (Foster, 2011). Meanwhile, the higher scores among married participants in both dimensions suggest that personal life experiences, including managing relationships and responsibilities, may contribute to a more balanced approach to pedagogy, combining both traditional and modern methods (Gur, 2018).

The significant difference observed in the traditional understanding dimension between different age groups, particularly the lower level of traditional understanding among participants aged 21-30, suggests a generational shift in teaching and learning conceptions.

Younger educators, who are more likely to have been exposed to contemporary educational theories during their training, may be more inclined towards learner-centered, constructivist approaches rather than traditional, teacher-centered methods. This trend is supported by studies highlighting that younger educators are often more open to innovative pedagogical strategies (Sunal et al., 2014). In contrast, older participants, who may have been trained in or are more accustomed to traditional educational models, tend to hold onto these practices more firmly. This is consistent with research showing that pedagogical beliefs are often shaped by the educational practices experienced during initial teacher training and are more resistant to change over time (Vermunt & Endedijk, 2011). Therefore, the lower adherence to traditional methods among the 21-30 age group could reflect their familiarity with more progressive teaching frameworks.

The significant difference between participants' constructivist understanding and their perception of the usefulness of working with a sport psychologist is an intriguing finding. Specifically, those who did not view working with a sport psychologist as useful exhibited a higher level of constructivist understanding. This result seems counterintuitive, as constructivist teaching philosophies generally align with holistic approaches to education, including psychological well-being and mental skills development, which sport psychologists often promote (Wrisberg, 2009). One possible explanation could be that individuals who exhibit a stronger constructivist orientation may believe in the power of intrinsic learning and self-regulation, favoring self-directed approaches over external guidance from professionals such as sport psychologists. This aligns with research suggesting that some educators with a constructivist mindset may prioritize learners' autonomy and internal resources for problem-solving over external interventions (Richardson, 2003). However, this finding contrasts with studies that highlight the complementary role of sport psychologists in enhancing both mental and emotional resilience, which can be viewed as a natural extension of the constructivist emphasis on the learner's holistic development (Weinberg & Gould, 2019).

The significant difference observed between income levels and the traditional understanding dimension suggests that participants with an income between 17,000 and 20,000 exhibit a more traditional understanding compared to those earning 21,000 and above. This finding could be related to socio-economic factors influencing access to educational resources and exposure to progressive teaching methods. Individuals with higher income levels may have greater access to advanced educational opportunities, which could promote more modern, learner-centered

approaches (Bourdieu, 1986). Conversely, those in lower income brackets may be more accustomed to traditional methods that emphasize structure and teacher authority. This study's findings contribute significantly to the literature, particularly due to the scarcity of research combining learning and teaching conceptions with the context of sports. Existing studies in the field of education often overlook how economic factors influence teaching approaches in sports education. Therefore, this research offers valuable insights into how socio-economic status intersects with pedagogical beliefs in sports education settings, enriching the academic discourse on teaching and learning conceptions within the sports domain.

In this section, suggestions developed according to the results of the study and the experiences of the researcher are given.

- Measurements of learning and teaching conceptions can be made on a larger sample group other than the participants in our study and the results can be interpreted more broadly by looking at the correlation of all variables.
- It can be applied to those who are professionally involved in sports in proportion to the participants of our study.

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