



## EXPLORING THE RELATIONSHIP USING MOSSTON AND ASHWORTH'S TEACHING STYLES OF PHYSICAL EDUCATION TEACHERS IN TURKEY



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### ABSTRACT

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In this study, the relationship using Mosston and Ashworth's teaching styles of physical education teachers and their using intensities regarding stills were examined according to their gender, experience, and serving in public and private schools. In collecting, analyzing, and interpreting the study data, a qualitative study paradigm was utilized. In the scope of study, semi-structured interview was made with 23 physical education teachers selected by purposeful sampling. According to the result of data analysis, while physical education teachers were taught lessons, it was revealed that they teaching-centered teaching styles. In addition, when the teaching styles of physical education teachers are evaluated in the context of intercode relationships, it was revealed that they used the most frequently the styles related to "Command-A – Reciprocal-C" "Command-A – Practice-B". Intercode relationships decreases from teaching-centered teaching styles to learning-centered teaching styles. Especially, it was revealed that "Self-Teaching- K" and "Convergent and Divergent Discovery- G/H" styles, among learning-centered teaching styles, were not related to the other styles at all. Teaching styles teachers use is an indicator of that teaching-centered education are more prominently given. In addition, the intensities using Mosston and Ashworth's teaching styles of the teachers according to the gender, experience, serving in the public and private schools were identified.

**Contribution/ Originality:** This research reveals which teaching styles are used in relation to physical education teachers while teaching their lessons. When evaluated in terms of originality, it reveals the relationship between the teaching styles that physical education teachers mostly apply in qualitative terms.

### 1. INTRODUCTION

That the desired teaching is teaching-centered or student centered has been discussed in the various discipline areas and various educational environments for long years and many studies were carried out about teaching and learning-centered teaching styles. Although there are some studies suggesting to use learning-centered teaching styles (Davis & Sumara, 2002; Kemp, 2013), there are also some studies identifying that teaching-centered styles are predominantly used (Ince & Hünük, 2010; Yildiz & Karakullukçu, 2019).

At the present time, an orientation has emerged from the approach, in which physical education teacher plays role actively, gives all decisions in teaching processes, and the student is a passive information receiver, to an

approach, in which the student restructure information, reinterpreting it, plays role actively, and is in the center (Demirhan, 2002).

11 teaching styles presented to be used by Mosston and Ashworth (2002) are Command Style (A), Practice Style (B), Reciprocal Style (C), Self-Check Style (D), Inclusion Style (E), Guided Discovery Style (F), Convergent Discovery Style (G), Divergent Production Style (H), Learner's Individual Designed Program Style (I), Learner Initiated Style (J), and Self-Teaching Style (K). Five of these styles (A-E) are the styles, in which teaching –centered preference is made and information are reintroduced, while the remaining five (F-K) are teaching –centered ones, in which student is in the center and plays role actively in learning process (Mosston & Ashworth, 2002).

The difference between teachers using teaching and learning –centered styles arises from their approaches to teaching. In the first of them, the case of teaching-learning is primarily focused on the subject, in the second, on the student (Mosston & Ashworth, 2002). Whichever teaching style is used, the duty of teacher is to present an effective learning environment for high quality education (Byker, Xu, & Chen, 2016; Hopkins, 1997).

According to Townsend (1997) it can be said that agreement degree between teaching styles plays important role in forming foundations of educations. In other words, giving high quality education can be realized by using styles, where the teacher or students in the center is proportionally used together, with contribution of teacher or participation of student.

The various studies for using teaching styles, on which has been studied for long time in the area of physical education, were carried out and, in these studies, the different methods (observation, interviews, etc.) for using teaching styles were introduced. The focus point of the studies is regarding which methods are preferred among teaching –centered and learning –centered ones. There are not any studies regarding which one is used from among teaching –centered and learning–centered styles. In this study, the aim is firstly to discover the relationship using Mosston and Ashworth's teaching styles of physical education teachers. The second aim of the study is to associate the intensities of using Mosston and Ashworth's teaching styles of physical education teachers with the variables such as gender and experience.

## 2. LITERATURE REVIEW

Teaching –centered education is qualified as a teaching environment, which is characterized with the content directed by teacher and based on teacher's reporting himself/herself (Barrows, 2002). This learning environment provides ordered learning from styles, which require that the teachers spend less labor, time, and cost in teaching, and in which they make less contribution to development of the student, to styles, in which the student himself/herself actively participates in learning and practically performs an application (Beachey, 2007).

Teaching–centered education environment generally leads students to have information without including in learning process the students have information but cannot use it for solving the larger, more complex, and practical problems (Garnjost & Lawter, 2019).

Learning–centered education creates an active learning environment, in which student actively plays role. In other words, in this teaching style, the resource of all information is not the teacher, who organizes learning experience (Garnjost & Brown, 2018). The various studies were carried out for using learning style, on which has been studied for learning styles, and these were associated with the different variables (Aktan, 2012; Chatzipanteli, Digelidis, & Papaioannou, 2015; Dilekli & Tezci, 2016).

Many studies were carried out for the teaching styles introduced by Mosston and Ashworth (2002). The findings of these studies also revealed the various conclusions regarding the teaching and learning –centered education styles (Byra, Sanchez, & Wallhead, 2014; Ozgöl, Atan, & Kangalgil, 2019; Sanchez, Byra, & Wallhead, 2012; Syrmpas, Digelidis, & Watt, 2016). The teaching styles introduced by Mosston and Ashworth (2002) were discussed by some researchers in intercultural context (Cothran et al., 2005; Hein et al., 2012; Salvara & Bironé, 2002).

Beside this, teaching styles teachers use and their perceptions regarding these styles were examined by the various methods in the context of physical education teachers (Chatoupis, 2018). When the findings belonging to these studies are examined, Ince and Hünük (2010) revealed that the most used styles were teaching –centered. Curtner-Smith, Todorovich, McCaughtry, and Lacon (2001) compared teaching styles the teachers working urban and rural places use. They identified that the teachers working in cities more frequently used Practice style (B) compared to the teachers working in the rural places.

Also, the studies carried out in the area of physical education (Cothran et al., 2005; Hein et al., 2012; Jaakkola & Watt, 2011; Kulinna & Cothran, 2003; Salvara & Bironé, 2002; Syrmpas et al., 2016) identified the various findings about the styles physical education teachers intensively use and value.

In terms of reaching teaching objectives, teaching styles of physical education were compared by the certain methods to each other. Byra (2000) in his study, expresses that a style is not more dominant than the other but it can be mentioned about effectiveness of the different styles in reaching the different results. For example, while command style is more effective in common rhythm studies such as folk dances, in teaching an act, earlier not known by the teacher, it is expressed that invention style is more effective.

Moving from all these explanations, this study aims to reveal which the related style physical education teacher's use from among Mosston and Ashworth's teaching styles. Thus, it will be revealed that the teachers reproducing the skills and information exhibited or provided by the teachers used teaching–centered education styles for the information and skills the students were not earlier familiar.

### 3. METHOD

#### 3.1. Research Model

In collecting, analyzing, and interpreting the study data, qualitative study paradigm was utilized. In the study, in order to be able to learn the information of the teachers belonging to personal variables, structured questions were raised. For being able to identify the relationships using Mosston and Ashworth's teaching styles of physical education teachers, semi-structured questions were asked. In order to help teacher's applicants express their thoughts, leading questions were given, and probes were formed.

#### 3.2. Research Sample

In order to reveal the relationships using the teaching and learning–centered teaching styles of physical education teachers, 23 participants were interviewed. In the study, purposeful sampling method was preferred. In this sampling method, the study is continued by satisfaction point (Rädiker & Kuckartz, 2019). The study was ended, when it reaches the satisfaction point, namely, at the point, which new information does not any longer come from the participants. Ending the study at the satisfaction point is a criterion (Shenton, 2004).

The data were collected from 11 different provinces of Turkey. Participants serve in the provinces of Ankara (6 people), Konya (6 people), Hatay (3 people), Gaziantep (1 person), Şanlıurfa 1 person), Bitlis (1 person), İstanbul (1 person), İzmir (1 person), Van (1 Person), Kırıkkale (1 person), and Trabzon (1 person). 15 of participants are men, and 18 of them are women. When their educational status is examined, 17 of them have undergraduate and 6, postgraduate education. Their length of working experience varies between 2 years and 25 years. 17 of participants teach in public schools and 6 of them, in private schools.

#### 3.3. Data Analysis

In the analysis of the study, Maxqda software was used. Maxqda software, one of software used in analysis applications of qualitative studies, has many features meeting expectations of qualitative researchers, Particularly, it has an interface ,incorporating many features such as updating related codes and recalling related coding (Maxqda, 2020).

If the teacher expresses that he/she uses more than one style in his/her sentence, overlapping coding has been made. This is called together formation of code. Code relations browser visually presents together formation of the code in this section or document (Rädiker & Kuckartz, 2019). In updated the related code, the feature of code relations browser was used.

### 3.4. Intercoder Agreement

For standardizing text units, on which coders work, and following this, improving ability to distinguish coding schema (Campbell, Quincy, Osserman, & Pedersen, 2013) Intercoder agreement reliability was preferred. The aim here is to reduce coding errors to minimum (Rädiker & Kuckartz, 2019). Therefore, the data were coded by two experts. The compromise between encoders was calculated with the alternatives "code frequency in the document" and "Code overlapping rate of segment level" from the Maxqda program inter-coder agreement options for the encoded data.

#### 3.4.1. Code Frequency in the Document

If both coders assign the same code in the same number the document, it is deemed "matching" (Maxqda, 2020).

Table-1. Code frequency in the document.

Document name	Related	Not related	Percentage %
P-1	2	0	100
P-2	2	0	100
P-3	3	0	100
P-4	4	1	80
Total agreement	11	1	91.6

As seen in Table 1, at the end of the interview of four participants coded by Coder-1 and Coder-2, 11 codes are related, and 1 code is not related. According to this, from the formula of (Agreement) / (Agreement / Disagreements),  $(11) / (11+1) = 0.916$ . When it is multiplied by 100, opinion rate, on which two coders agree, is calculated as 91%.

#### 3.4.2. Code Overlapping Rate of Segment Level

Code overlapping rate of segment level: If both coders assign the same number of code to a certain data segment, it is deemed that there is a matching (Maxqda, 2020).

Table-2. Code overlapping rate of segment level.

Code	Agreement	Disagreement	Total	Percentage%
Command -A	4	-	4	100
Practice - B	4	-	4	100
Reciprocal - C	4	-	4	100
Inclusion - E	2	-	2	100
Convergent and Divergent Discovery -G/H	2	-	2	100
Learner -Designed - I	4	-	4	100
Learner Initiated - J	2	-	2	100
Self-Teaching - K	0	1	1	0
Total agreement	22	1	23	95.6

As seen in Table 2, when interview of four participants coded by Coder 1 and Coder 2 is evaluated in terms of code overlapping, it was agreed on 22 codes, and it could not be agreed on 1 code. According to this, from the formula of (Agreement) / (Agreement / Disagreements),  $(22)/(22+1) = 0.9565$ . When it is multiplied by 100, opinion rate, on which two coders agree, is calculated as 95%.

When the final results of “Code frequency in the document” and “Code overlapping rate of segment level”, it was identified that inter-coder agreement percentages were at the sufficient level (Rädiker & Kuckartz, 2019).

#### 4. FINDING

The aim of the study is to examine the relationships using Mosston and Ashworth’s learning styles of physical education teachers. In Turkey, the relationships using Mosston and Ashworth’s learning styles of physical education teachers were shown in Table 3.

Table-3. Using frequency of teaching and learning –centered learning styles.

Theme	Command -A	Practice - B	Reciprocal - C	Self-Check - D	Inclusion - E	Guided Discovery -F	Convergent and Divergent Discovery G/H	Learner-Designed Individual Program - I	Learner-Initiated - J	Self-Teaching - K	Total
Command - A	-	8	11	2	2	2	1	4	3	-	33
Practice - B	8	-	7	1	-	-	1	-	-	-	17
Reciprocal - C	11	7	-	2	2	-	-	1	-	-	23
Self-Check - D	2	1	2	-	1	-	-	1	-	-	7
Inclusion - E	2	-	2	1	-	-	-	1	-	-	6
Guided Discovery - F	2	-	-	-	-	-	-	1	1	-	4
Convergent and Divergent Discovery – G/H	1	1	-	-	-	-	-	1	1	2	6
Learner-Designed Individual Program - I	4	-	1	1	1	1	1	-	4	-	13
Learner-Initiated - J	3	-	-	-	-	1	1	4	-	-	9
Self-Teaching - K	-	-	-	-	-	-	2	-	-	-	2
Total	33	17	23	7	6	4	6	13	9	2	120

As seen in Table 3, as a result of interviews made with physical education teachers, when coding forming together is examined, the following results were reached. That the style, whose relationship intensities of using teaching –centered teaching styles are the most, is “Command- A”, while that of using learning –centered ones is the most is “Learner-Designed- Individual Program- I”, were revealed by means of coding made. Also, frequencies using teaching and learning–centered styles become different.

As seen in Figure 1, the code map shows the relationships between codes in a map-like display. The more frequently two codes have been assigned together, the closer they will be on the map. When code map is examined, it is identified that the styles, to which both codes are frequently assigned, are “command- paired- working” and “command-exercise”. When code map is examined, inter code relationships decrease from teaching–centered teaching styles to learning centered teaching styles. Especially, it was revealed that Self- Teaching- K” and “Convergent and Divergent Discovery- G/H” styles, among learning–centered teaching styles, were not related to the other styles at all.

As seen in Table 4, when using intensities of teaching and learning–centered teaching styles according to gender are examined, although there are more among participants, it was revealed that women mostly used the styles of “Problem Solving” and “Self-Teaching”

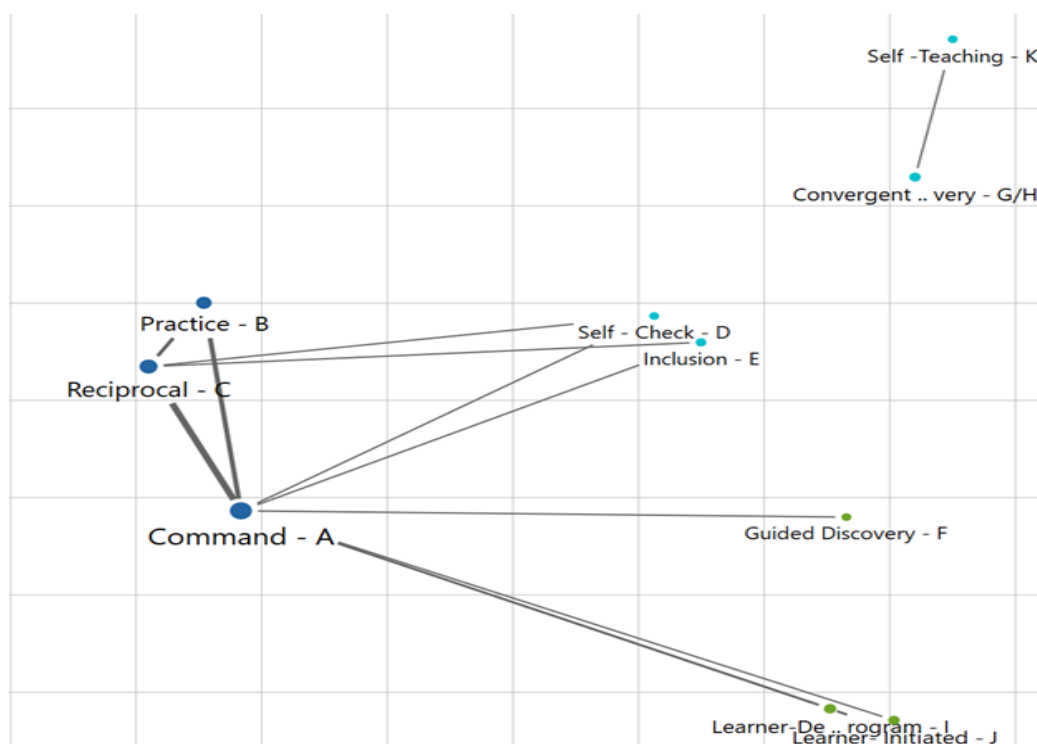


Figure-1. The relationship using teaching and learning –centered teaching styles.

Table-4. Using intensities of teaching and learning–centered teaching styles according to gender.

Themes	Male	Female	Total
Command - A	11	6	17
Practice - B	7	2	9
Reciprocal - C	8	4	12
Self-Check - D	1	1	2
Inclusion - E	3	-	3
Guided Discovery - F	1	1	2
Convergent and Divergent Discovery – G/H	1	3	4
Learner-Designed Individual Program - I	4	1	5
Learner-Initiated - J	3	1	4
Self-Teaching - K	-	2	2
Total	39	21	60
N = Documents	15 (%65,2)	8 (34,8)	23 (%100)

Table-5. Using intensities of teaching and learning–centered teaching styles according to serving in private and public schools.

Themes	Public school	Special school	Total
Command - A	11	6	17
Practice - B	7	2	9
Reciprocal - C	9	3	12
Self-Check - D	1	1	2
Inclusion - E	3	-	3
Guided Discovery - F	1	1	2
Convergent and Divergent Discovery – G/H	3	1	4
Learner-Designed Individual Program - I	2	3	5
Learner-Initiated - J	1	3	4
Self-Teaching - K	2	-	2
Total	40	20	60
N = Documents	17 (73,9%)	6 (26,1%)	23 (100%)

As seen in Table 5, when Using intensities of teaching and learning-centered teaching styles of the teachers according to serving in private and public schools are examined, private school teachers use more the styles of “student’s design” and “student’s starting” compared to the teachers serving in public sector.

**Table-6.** Intensities of teaching and learning –centered teaching styles according to the teacher’s being experienced and inexperienced.

Theme	Experienced teacher	Inexperienced teacher	Total
Command - A	5	12	17
Practice - B	4	5	9
Reciprocal - C	6	6	12
Self-Check - D	1	1	2
Inclusion - E	2	1	3
Guided Discovery - F	-	2	2
Convergent and Divergent Discovery – G/H	2	2	4
Learner-Designed Individual Program - I	2	3	5
Learner-Initiated - J	1	3	4
Self-Teaching - K	1	1	2
Total	24	36	100
N = Documents	10(43,5%)	13(56,5%)	23(100%)

As seen in Table 6, when intensities of teaching and learning –centered teaching styles according to the teacher’s being experienced and inexperienced are examined, inexperienced teachers expressed that they more intensively used “command” and “exercises” styles among teaching –centered styles and the styles of “oriented invention”, “student’s design”, and “student’s styles” among learning –centered styles than experienced teachers.

## 5. DISCUSSION AND CONCLUSION

The study was made to reveal the relationships of teaching styles physical education teachers serving in the different cities of Turkey. According to the study results, it was revealed that physical education teachers used the styles related to “command –paired working”, “command –exercise” among teaching –centered teaching styles; when the relationship intensity of teaching and learning–centered styles is examined, that they used the styles related to “command and student’s design” the most intensively

That physical education teachers teaching –centered styles, when used more than one styles, prefer teaching –centered styles can be accounted for in the form of that physical education teachers still teach lessons, in which teacher predominantly is in the center. In other word, this case can be interpreted that the teacher more intensively refer to teaching styles, which less contribute to development of the student, and in which they themselves in the center, while they teach the skills of physical education. Or it can be said that they are affected from the methods they saw in their teachers during their educational processes, and their tendency to teach a lesson just as they saw in their teachers become dominant.

In the studies carried out, although a study regarding that the teachers use the related styles in a lesson is not met, when the study findings examining teaching styles used in the courses are examined, there are the studies revealing that teaching-centered styles are predominantly used (Hein et al., 2012; Ince & Hünük, 2010; Stephanou & Tsapakidou, 2007; Yildiz & Karakullukçu, 2019). There are also some studies revealing that the teachers more intensively use command and exercise styles (Cengiz & Serbes, 2014; Curtner-Smith et al., 2001; Demirhan et al., 2008; Ertan & Çiçek, 2003; Jaakkola & Watt, 2011; Kulinna & Cothran, 2003). These studies show parallelism with the study results.

In addition, frequencies that physical education teachers use teaching styles were examined in terms of the variables of the gender, institute worked (public or private), and experience. When the preferences of teachers related to teaching styles according to gender, it was identified that male teachers more intensively use the

styles of Command–A, Practice–B, Reciprocal–C, Inclusion–E, Learner-Designed Individual Program–I, Learner-Initiated, while female teachers use the styles of Convergent and Divergent Discovery–G/H, Self-Teaching–K.

In contrast to the study findings, [Saraç and Muştu \(2013\)](#) revealed that the female and male students mostly preferred teaching-centered styles. When coding intensities of physical education teachers related to their preferences of teaching styles are evaluated according to their serving in private and public schools, it was revealed that teachers serving in public schools more intensively used teaching-centered teaching styles (Command–A, Practice–B and Reciprocal–C), while the teachers serving in private school used learning-centered teaching styles (Learner-Designed Individual Program–I and Learner-Initiated–J) more intensively than public school teachers.

It can be thought that physical education teachers in private schools more intensively used and considered more important learning-centered styles compared to the teachers in public schools. In other words, it can be said that the teachers serving in private schools are more flexible compared to the teachers in public schools. In addition, this can be accounted for in the form of that private school teachers consider important to raise the students that can ask question, think of, are creative, and have self-confidence, while bringing skills in the students; that they assigned more duties to the students in teaching skills compared to the teachers in public schools.

Depending on experiences of physical education teachers, when their preferences of teaching styles and coding intensities are evaluated, it was revealed that inexperienced teachers intensively used Command–A style and experienced teachers, Learner-Initiated–J style. When coding intensities are considered, it can be said that physical education teachers used learning-centered styles rather than teaching-centered styles, as they acquire experience. With moving from here, it can be considered that experienced teachers, valuing to participation of the students, their contribution to their physical, mental, emotional, and social developments are more compared to inexperienced teachers. In other words, it can be said that experienced teachers more value to discovery of student.

In a similar study, carried out by [Ince and Hünük \(2010\)](#) It emerged that the most used styles by experienced physical education teacher are Command, and Exercises and the least used styles by them are Student’s Starting and Self-Teaching.

This study presents evidences about which teaching style physical education teachers mostly prefer among the teaching styles they use and prefers which related styles. In addition, depending on the gender and experiences of teachers, and institutes they work in (private or public), this study shows that their intensities of using teaching styles become different.

In terms of reaching learning objectives, it was revealed that physical education teachers used more than one styles and preferred “command and paired working” from among these styles they use.

[Byra \(2000\)](#) in his study, expresses that a style is not more dominant than the other one but that it can mentioned about effectivity of different styles in reaching different aims. According to [Townsend \(1997\)](#) it can be said that agreement degree between teaching styles plays important role in forming the bases of high quality education. In other words, providing high quality education can be realized by proportionally using the styles, in which the teacher is in the center, and the student is in the center, are used together. Although educational approach taking the student to center is focus point of the changing educational system, in this study, this study also shows that the teacher is in the center, in other words, a teacher –centered physical education is continuing. It is possible to say that an educational system which is informative, listens to, repeats, and applies directives the teacher gives, is sustained. It is considered that using teaching –centered styles more frequently by physical education teachers results from that the teachers themselves are raised by teaching –centered teaching and that they have not have adequate information and experience about learning-centered teaching approach.

## 6. SUGGESTION FOR FUTURE RESEARCH

It is suggested that professional development programs are hold, which contain applications related to the use of learning-centered styles in physical education courses for teachers, and that it is provided an education having a



weight that can include in the use of learning –centered styles to content of the courses. In this study, the relationship using teaching styles of physical education teachers is emphasized. Fictionalizing qualitative studies, which enable to be able to compare with the relevant features of the teachers in the other countries and include a large group of teachers, will make contribution to developing such studies.

It must be considered that these findings represent the views of participants in 11 different countries. In addition, the relationships of using teaching styles can be examined in the context of teacher applicants and intercultural differentiation. For being able to introduce the issue in more detail, mixed studies can be given place.

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