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The Relationship between Philosophical Tendencies and Teaching Style Preferences of Physical Education Teacher Candidates

Beden Eğitimi Öğretmen Adaylarının Felsefi Eğilimleri ve Öğretim Stilleri Tercihleri Arasındaki İlişki

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ABSTRACT

The teaching methods employed by teachers are interconnected with their educational philosophy tendencies. Determining teacher candidates' teaching style preferences and philosophical orientations toward education, as well as studying their relationship, might provide insights about the classroom environment they will establish when they begin their teaching career in the future. To examine this connection, this study aimed to compare the educational philosophy tendencies of PE teacher candidates, their preferred teaching styles, and their value perceptions of styles based on gender and grade levels and to determine if there is a relationship between philosophical tendencies and teaching style preferences. The research included 242 PE teacher candidates. The study utilized the "Physical Education Teachers' Use of Teaching Styles and Perceptions of Styles Questionnaire" and "Educational Philosophy Tendencies Scale" for data collection. The data was analyzed using independent samples t-test, ANOVA, and Pearson correlation analysis. The research results revealed that among the educational philosophy tendencies of PE teacher candidates, there was only a difference in the essentialist philosophy of education according to gender, and there was no difference according to grade level. However, it was observed that the teaching style preferences of PE teacher candidates did not differ according to gender and grade level. The study revealed a correlation between the preferred teaching styles, the value perceptions of these styles, and the educational philosophy approaches of teacher candidates.

Keywords: *Physical education, Teacher candidate, Teaching style, Value perceptions, Philosophical tendency*

ÖZ

Öğretmenlerin farklı öğretim yöntemlerini derslerinde kullanmalarının onların sahip olduğu eğitim felsefesine bağlı olduğu vurgulanmaktadır. Öğretmen adaylarının öğretim yöntemleri tercihlerinin ve eğitime ilişkin felsefi eğilimlerinin belirlenmesi ve aralarındaki ilişkinin incelenmesi de onların gelecekte öğretmenlik mesleğine başladıklarında oluşturacakları sınıf atmosferi hakkında ipucu verebilir. Bu araştırma ile beden eğitimi öğretmen adaylarının felsefi eğilimlerini, tercih ettikleri öğretim stillerini ve stillere yönelik algılarını cinsiyet ve sınıf düzeylerine göre incelemek ve öğretmen adaylarının felsefi eğilimleri ile öğretim stili tercihleri arasında bir ilişki olup olmadığını ortaya koymak amaçlanmıştır. Araştırmaya 242 beden eğitimi öğretmen adayı dâhil edilmiştir. Araştırmada veri toplamak için "Beden Eğitimi Öğretmenleri Öğretim Stilleri ve Değer Algıları Anketi" ve "Eğitim Felsefesi Eğilimleri Ölçeği" kullanılmıştır. Verilerin analizinde bağımsız örneklemler t testi, tek yönlü varyans analizi ve pearson korelasyon analizi kullanılmıştır. Araştırma sonuçları beden eğitimi öğretmen adaylarının eğitim felsefesi eğilimlerinin cinsiyete göre sadece esasici eğitim felsefesinde fark olduğunu, sınıf düzeyine göre ise bir farklılık olmadığını ortaya koymuştur. Bununla birlikte beden eğitimi öğretmen adaylarının öğretim stili tercihlerinin cinsiyet ve sınıf değişkenlerine göre farklılaşmadığı, öğretmen adaylarının çeşitli eğitim felsefesi eğilimleri ile tercih ettikleri çeşitli öğretim stilleri arasında pozitif yönde düşük düzeyde ilişki olduğu tespit edilmiştir.

Anahtar Kelimeler: *Beden eğitimi, Öğretmen adayı, Öğretim stili, Değer algısı, Felsefi eğilim*

INTRODUCTION

Although there are numerous teaching methods, they all involve practices and processes that aim to reach a specific goal or purpose. The goal or purpose will be revealed with the guidance of philosophy. The term philosophy is derived from the Greek word "philosophia," where “philo” means love and “sophia” implies knowledge or wisdom (Çüçen, 2001). In this perspective, philosophy might be defined as the love of wisdom (Aytaç, 2020). Philosophy significantly enhances individuals' ability to question, improving their intellectual skills and the environment they live in, thus positively impacting education (Aytaç, 2020). The philosophy of education is a philosophical branch that explores the nature, purpose, and methods of education, addressing questions like the feasibility of education, the necessity of teachers, the primary goals of knowledge transfer or information acquisition, and the distinction between knowledge-focused and action-focused education (Cevizci, 2000). The main philosophical movements that direct education are considered perennialism, essentialism, progressivism, reconstructionism, naturalism, and existentialism (Doğanay and Sarı, 2003; Gutek, 2014). Among these, four main currents, namely perennialism, essentialism, progressivism, and reconstructionism, among the generally accepted educational philosophies, are discussed within the scope of this study (Aytaç, 2020; Demirel, 2011). The origins of perennialism and essentialism, traditional educational philosophies, are influenced by idealism and realism, while progressivism and reconstructionism, contemporary education philosophies, are influenced by pragmatism philosophy (Demirel, 2011; Gutek, 2014). The perennialist philosophy of education, based on idealism, asserts that values are absolute and unchangeable, and should be taught in schools to preserve cultural heritage (Demirel, 2011; Gutek, 2014). Essentialist education philosophy, based on realism, emphasizes including fundamental subjects and knowledge filtered by the human mind throughout life. The realist approach emphasizes that teachers should organize learning processes based on students' interests and wishes, rather than focusing on transferring knowledge of reality (Aytaç, 2020; Demirel, 2011; Gutek, 2014). Influencing progressive and reconstructive educational philosophies, pragmatism is a philosophical movement that prioritises the student as the starting point, allowing flexibility in goals, methods, and continual experimentation and correction (Aytaç, 2020; Demirel, 2011; Gutek, 2014). Traditional educational philosophies, perennialism, and essentialism, believe knowledge is universal and should be passed down through generations. In contrast, contemporary philosophies, progressivism, and reconstructionism emphasize student-structured knowledge rather than transfer, promoting a more personalized learning experience (Gutek, 2014). The constructivist education approach is where students learn independently in a teacher-created environment, guided by the teacher, and interpret information based on their past experiences, fostering self-directed learning (Doğanay and Sarı, 2012). The growing recognition of constructivist and diverse student learning has prompted physical education (PE) teachers to employ various teaching methods (Kulinna and Cothran, 2003). It is emphasized that the teacher's philosophy of education affects the teaching methods they will choose in their lessons; otherwise, the preferred method will affect their tendency toward the philosophy of education. Teachers use various teaching methods in their classes depending on their approach to educational philosophy (Campbell, 1990). Teaching styles shift towards student-centered approaches, encouraging more critical thinking, questioning, and higher-level thinking skills like analysis, synthesis, and evaluation (Doğanay and Sarı, 2012; Mosston and Asworth, 2008; Saçlı and Demirhan, 2008). Given this context, it is reasonable to conclude that the implementation of students' higher-order thinking skills relies on the teacher's appropriate planning and organization of learning environments and processes (Doğanay and Sarı, 2012; İnce and Hünük, 2010). PE has transitioned from traditional philosophical approaches to a contemporary philosophical perspective, aligning to promote holistic learning (Demirhan, 2006; Ministry of National Education [MoNE], 2007). The change in general education has significantly impacted PE studies, focusing on developing health, motor movement skills, and mental, emotional, and

social skills in an active learning environment based on human movements (Demirhan, 2006; Yıldızer et al., 2018). PE has shifted from a teacher-centered approach where students passively receive information to interpret and reconstruct information actively, taking a central role in learning (Demirhan, 2003). The critical aspect of this transformation is teaching methods that focus on raising individuals who find and generate according to the era's demands rather than those who consume (Demirhan, 2006; Yıldızer et al., 2018). Mosston and Asworth's (2008) spectrum of teaching styles is cited as the most crucial study addressing the teaching approaches to be employed to attain these goals in the field of PE (İnce and Hünük, 2010; Saraç and Muştu, 2013). Mosston and Ashworth's (2008) teaching styles are examined regarding two primary teaching strategies: reproduction and production. These styles range from memorization to creation, from teacher-centered circumstances to student-centered situations, and comprise 11 teaching styles. Classifying styles as teacher-centered or student-centered is linked to the decisions made in PE classes. Decisions such as stance, location, and start and stop times are examples of such actions. Teaching styles in which the number of decisions delegated to students is high are considered student-centered, and teaching styles in which the number of decisions is low are considered teacher-centered (Mosston and Ashworth, 2008). Since each style serves different purposes, it is stated that it will be helpful for teachers to choose the style that suits the behaviors they want to impart to students. It may be possible for teachers to use more than one style in a lesson when necessary (İnce and Hünük, 2010). However, studies indicate that PE teachers predominantly use Command and Practice styles, which are reactive teaching styles, in their lessons (Ağgez, 2015; İnce and Hünük, 2010; Jaakkola and Watt, 2011; Parsak and Saraç, 2019; Saraç and Muştu, 2013; Yıldızer et al., 2018), and they use an insufficient number of teaching styles (2-4), and do not prefer productive teaching styles (Cothran et al., 2005; Demirhan et al., 2008; Ertan and Çiçek, 2003; Jaakkola and Watt, 2011; Parsak and Saraç, 2019; Şirinkan and Erçiş, 2009). In implementing the student-centered curriculum, reconstructed with a constructivist approach, PE teachers' use of styles plays a vital role in the program's effectiveness. Therefore, what is expected from teachers is to use student-centered styles in the teaching process (İnce and Hünük, 2010).

Teachers' style preferences are linked to the educational philosophy approaches that shape their understanding of teaching and learning (Baş, 2015). Işıkgöz (2020) discovered that female PE teachers prefer progressive education philosophy, whereas male teachers prefer perennialist and essentialist education philosophies; as teaching experience increases, teachers' beliefs in progressive and reconstructive educational philosophies weaken, while their beliefs in essentialist and perennialist educational philosophies strengthen. In his study examining PE teachers' philosophical views on PE, Özüdoğru (2010) discovered that PE teachers adopted pragmatism, which forms the basis of progressive and reconstructionist philosophical approaches, at a high level, and realism, which includes the basis of essentialist and perennialist philosophical movements, at a low level. The philosophical tendencies of PE teacher candidates can influence their classroom atmosphere and teaching styles. Teachers can choose their teaching method based on their educational philosophy, or the preferred method can impact their educational philosophy. Therefore, understanding these tendencies can help shape future teaching practices (Campbell, 1990). Teachers' philosophical preferences significantly influence their educational practices in the classroom (Tezci and Uysal, 2004). Research on teachers' philosophical tendencies and preferred teaching styles reveals gender differences. The study suggests that the courses taken by teacher candidates at each grade level may influence their educational philosophies and teaching style preferences, making it crucial to investigate whether these differences exist based on gender and grade level. Furthermore, given that the first and second-grade students did not take courses directly related to PE teaching styles, and the first-grade students did not take courses directly related to educational philosophies, it is interesting to see if the philosophical tendencies and preferred teaching styles of the teacher candidates differ by grade level. It is thought that this research will reveal important findings

regarding the educational philosophies of PE teacher candidates in the teacher training program and their philosophical tendencies and teaching style preferences at each grade level. The information about PE teacher candidates will aid education policymakers in predicting their educational approach and arranging for necessary teacher training programs before their service, providing crucial insights for predicting their teaching style and ensuring effective teacher training. Given this knowledge, it is worth wondering whether the teaching styles preferred by teacher candidates are related to their philosophical tendencies. This research provides valuable insights for programmers to develop more qualified teacher training programs. This research aims to compare the philosophical preferences of PE teacher candidates, their preferred teaching styles, and their value perceptions of styles based on gender (female, male) and grade level (1st grade, 2nd grade, 3rd grade, 4th grade) variables and investigate if there is a relationship between these tendencies and their teaching style preferences.

METHOD

Research Design: A survey-based descriptive and correlational research design was used for the study. While descriptive research describes and documents the characteristics or behavior of a specific population, group, or phenomenon, correlational research investigates the relationship between two or more variables (Fraenkel et al., 2012).

Participants: This study included 242 teacher candidates, 47.1% female and 52.9% male, who continue their education in the Department of Physical Education and Sports of two state universities in the South of Anatolia, as determined by a convenience sampling approach. It attempted to reach all students in the two universities' departments within the research's scope. Of the 242 participants, 24.4% were first-grade students, 24.8% were second-grade students, 29.3% were third-grade students, and 21.5% were fourth-grade students. The average age of the participants was 21.48±2.32 for the teacher candidates, 21.14±2.19 for the female participants, and 21.79±2.83 for the male participants.

Data Collection Instruments: Data for the study were gathered using the Personal Information Form, the Educational Philosophy Tendencies Scale, and the Physical Education Teachers' Perceptions of Teaching Styles Instrument.

Personal information form: Researchers created a Personal Information Form for the study that included questions regarding age, gender, and grade level for candidate PE teachers.

Educational philosophy tendencies scale: The Educational Philosophy Tendencies Scale developed by Aytaç and Uyangör (2020) was used to assess the educational philosophy tendencies of PE teacher candidates. The scale is a 5-point Likert type (Strongly Disagree=1, Disagree= 2, Partially Agree= 3, Agree= 4, Strongly Agree= 5) with 36 items divided into four dimensions: Progressivist Educational Philosophy Tendencies (13 items, Example item: The educational environment should be designed to showcase the creativity of students.), Reconstructivist Educational Philosophy Tendencies (9 items, Example item: Learning environments should be designed to enable students to find solutions to their social environment's issues.), Essentialist Educational Philosophy Tendencies (7 items, Example item: The teacher should independently establish classroom rules without involving the students in the decision-making process.), and Perennialist Educational Philosophy Tendencies (7 items, Example item: Methods in which the teacher is active (presentation, narration, question-answer, etc.) should be used in the classroom environment.). The scale is graded based on sub-dimensions rather than the overall score. The minimum and maximum scores obtained from the scale sub-dimensions are 1-5. The educational philosophy inclination is stronger for the sub-dimension for which the average scores received from the scale are higher. During the development of the scale, Cronbach's alpha coefficient for internal

consistencies was calculated and obtained as .83 for the overall scale, .89 for the progressivist, .84 for the reconstructivist, .82 for the essentialist, and .84 for the perennialist educational philosophy tendencies sub-dimension. Within the scope of this research, Cronbach's alpha coefficients were calculated and obtained as .79 for the overall scale, .89 for the progressivist, .87 for the reconstructivist, .84 for the essentialist, and .81 for the perennialist educational philosophy tendencies sub-dimension

Physical education teachers' perceptions of teaching styles ınstrument: The teaching styles and value perceptions of the PE teacher candidates who participated in the research were revealed using the "Physical Education Teachers' Perceptions of Teaching Styles Instrument. "The instrument was developed by Kulinna and Cothran (2003) and translated into Turkish by İnce and Hünük (2010). The scale includes a total of 11 scenarios prepared for each of the 11 teaching styles in the Mosston's Spectrum of Teaching Styles (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]) and four statements about them (Mosston and Ashworth, 2008). The scale was prepared in a 5-point Likert type (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always). Example of scenario: The teacher breaks down the skills into parts and demonstrates the right way to perform the skill. Students try to move when and exactly how the teacher tells them. The teacher provides feedback and the students try to look like the teacher's model. The first of the statements is "I have used this way to teach PE," which was created to evaluate the level of teachers' use of the relevant teaching style. The second, third, and fourth statements are the expressions that help to determine the "value perceptions" of the teachers about the style, respectively, about the style making the lesson fun for the students (fun), helping the students to learn skills and concepts (learning), and motivating the students to learn (motivation). The scores to be obtained for this expression range from 1 to 5. In calculating the score for the levels of value perception, the average of the value obtained from the sum of the three related items (minimum 3, maximum 15) and the value (minimum 1, maximum 5) received from each item (entertainment, learning, and motivation) are used. The reliability scores ranged from 0.82-0.93 during the scale development. İnce and Hünük reported that Cronbach's alpha internal consistency coefficient ranged between .86 and .95 during the translation of the instrument into Turkish. The reliability coefficients calculated and obtained in this research are in the range of .88-.95.

Data Collection Procedures: Before initiating the research, the Social and Human Sciences Ethics Committee's approval was obtained, as was official permission from the institution where the data will be collected. Following consent and authorization, the courses taken by students in the departments where the data will be collected were identified, and the instructors of the recognized courses were told about the research and whether the data could be collected within the time frame specified. Students were informed about the study before or after the lectures of instructors who agreed to allow data collection in their classrooms, and data were collected from students who volunteered to participate in the study. The scales were completed in about 10 minutes on average. Before beginning this study, Ethics Committee Approval was obtained from the Social Sciences and Humanities Research Ethics Committee with the decision numbered 18 on 09/02/2022. This research was conducted under the Declaration of Helsinki and by obtaining signed consent forms from the participants.

Data Analysis: The Skewness and Kurtosis were used to determine the normality of each variable, with acceptable Z values ranging from +3 to -3. An independent *t*-test and one-way analysis of variance (ANOVA) were used to compare PE teacher candidates' teaching style preferences, value perceptions towards teaching styles, and educational philosophy tendencies according to gender and grade levels; Pearson's Correlation Coefficient was used to determine whether there

is a relationship between teaching style preferences, value perceptions towards styles, and educational philosophy tendencies. The eta squared (η^2) values, defined as 0.01 (small), 0.06 (medium), and 0.14 (large), were obtained from the *t*-test and ANOVA to determine the effect size of the analysis (Büyüköztürk, 2021).

RESULTS

An independent sample *t*-test was conducted to compare the PE teacher candidates' teaching style preferences and value perceptions of teaching styles based on gender. The analysis showed statistically no significant difference between female and male PE teacher candidates' preferences of teaching styles and their value perceptions of these teaching styles (p> .05). These results showed that teaching style preferences and value perceptions were comparable for male and female PE teacher candidates. Table 1 provides detailed data on PE teachers candidates' preferred teaching styles and their value perceptions of these styles.

Table 1

Results of a t-Test Comparing the Preferences for Teaching Styles and Value Perceptions between Females and Males

		Preference of Teaching Styles*					Value Perception of Teaching Styles**				
		$\bar{X}$	*SD*	*df*	*t*	η^2	$\bar{X}$	*SD*	*df*	*T*	η^2
Style A	Female	3.98	0.89	240	.603	.001	12.15	2.34	240	1.768	.012
	Male	3.91	0.87				11.58	2.65			
Style B	Female	3.95	0.95	240	1.123	.005	12.38	2.47	240	1.038	.004
	Male	3.80	1.02				12.05	2.36			
Style C	Female	3.76	0.84	240	.640	.001	12.03	2.37	240	.582	.001
	Male	3.69	0.98				11.84	2.49			
Style D	Female	3.27	1.10	240	.044	.001	10.39	3.04	240	.745	.002
	Male	3.27	1.12				10.10	3.07			
Style E	Female	3.63	1.12	240	-.123	.001	11.62	2.89	240	.017	.001
	Male	3.65	1.01				11.62	2.36			
Style F	Female	3.63	1.03	240	.573	.001	11.47	2.60	240	1.594	.010
	Male	3.55	1.05				10.91	2.90			
Style G	Female	3.75	0.97	240	.490	.001	11.75	2.53	240	1.344	.007
	Male	3.70	0.90				11.30	2.66			
Style H	Female	3.78	0.98	240	.695	.002	11.69	2.50	240	.490	.001
	Male	3.70	0.94				11.54	2.38			
Style I	Female	3.53	1.14	240	.400	.001	11.34	2.91	240	.983	.004
	Male	3.47	1.10				10.98	2.87			
Style J	Female	3.15	1.28	240	1.504	.009	10.39	3.54	240	1.428	.008
	Male	2.91	1.23				9.76	3.30			
Style K	Female	2.45	1.28	240	-.888	.003	8.12	3.92	240	-1.068	.005
	Male	2.59	1.28				8.66	3.95			

*Minimum value 1, maximum value 5

**Minimum value 3, maximum value 15

An independent samples *t*-test was also conducted to compare the PE teachers' tendencies for four educational philosophies (perennialism, essentialism, progressivism, and reconstructionism) based on their gender. There was a statistically significant difference in female and male PE teachers' tendency toward essentialist educational philosophy ($t(240)= -2.376$, $p= .018$). The essentialist educational philosophy tendency scores for females appeared to be lower ($\bar{X}= 2.38$, $SD= 0.81$) than those for males ($\bar{X}= 2.65$, $SD= 0.95$), according to an independent samples *t*-test. A small effect size ($\eta^2 < .06$) was found for the eta-squared values of the gender variable in relation to essentialist educational philosophy. However, the preferences for perennialism ($\bar{X}_{female}= 3.65$, $SD_{female}= 0.79$; $\bar{X}_{male}= 3.62$, $SD_{male}= 0.78$), progressivism ($\bar{X}_{female}= 4.60$, $SD_{female}= 0.41$; $\bar{X}_{male}= 4.50$, $SD_{male}= 0.50$), and reconstructionism ($\bar{X}_{female}= 4.39$, $SD_{female}= 0.49$; $\bar{X}_{male}= 4.35$, $SDmale= 0.52$) in educational philosophy were not significantly different between female and male PE teachers ($p> .05$) (Table 2).

Table 2

Results of a t-Test Comparing the Tendencies for Educational Philosophies between Females and Males

		$\bar{X}$	*SD*	*df*	*t*	η^2
Perennialism	Female	3.65	0.79	240	.279	.001
	Male	3.62	0.78			
Essentialism	Female	2.38	0.81	240	-2.376*	.023
	Male	2.65	0.95			
Progressivism	Female	4.60	0.41	240	1.719	.012
	Male	4.50	0.50			
Reconstructionism	Female	4.39	0.49	240	.558	.001
	Male	4.35	0.52			

*$p<.05$

Table 3

Results of an ANOVA Comparing the Preferences for Teaching Styles and Value Perceptions between 1st, 2nd, 3rd, and 4th Graders

		Preference of Teaching Styles*					Value Perception of Teaching Styles**				
		$\bar{X}$	*SD*	df^1	*F*	η^2	$\bar{X}$	*SD*	df^1	*F*	$\eta 2$
Style A	1st grade	3.83	0.93	3/241	.941	.012	11.59	2.57	3/241	.903	.011
	2nd grade	3.88	0.80				12.12	2.19			
	3rd grade	4.07	0.88				12.01	2.53			
	4th grade	3.98	0.90				11.59	2.81			
Style B	1st grade	3.92	0.99	3/241	1.309	.016	12.14	2.51	3/241	.771	.009
	2nd grade	3.97	0.97				12.23	2.49			
	3rd grade	3.93	1.02				12.51	2.30			
	4th grade	3.63	0.95				11.85	2.38			
Style C	1st grade	3.64	1.00	3/241	.927	.012	11.63	2.36	3/241	2.486	.030
	2nd grade	3.65	0.97				11.77	2.37			
	3rd grade	3.87	0.83				12.58	2.34			
	4th grade	3.69	0.88				11.58	2.58			

		Preference of Teaching Styles*					Value Perception of Teaching Styles**				
		$\bar{X}$	*SD*	*df*[1]	*F*	η^2	$\bar{X}$	*SD*	*df*[1]	*F*	$\eta 2$
Style D	1st grade	3.15	1.27	3/241	.878	.011	9.97	3.43	3/241	.535	.007
	2nd grade	3.18	0.97				10.07	2.90			
	3rd grade	3.44	1.05				10.59	2.96			
	4th grade	3.27	1.14				10.27	2.92			
Style E	1st grade	3.75	0.98	3/241	.825	.010	11.78	2.65	3/241	.214	.003
	2nd grade	3.53	1.14				11.52	2.45			
	3rd grade	3.55	1.07				11.48	2.66			
	4th grade	3.77	1.06				11.75	2.75			
Style F	1st grade	3.53	1.16	3/241	.499	.006	10.68	3.22	3/241	.952	.012
	2nd grade	3.68	1.02				11.50	2.55			
	3rd grade	3.65	1.00				11.30	2.67			
	4th grade	3.48	0.98				11.19	2.59			
Style G	1st grade	3.59	0.93	3/241	.598	.007	11.07	2.42	3/241	1.353	.017
	2nd grade	3.80	0.86				11.30	2.60			
	3rd grade	3.72	0.91				11.85	2.69			
	4th grade	3.79	1.05				11.83	2.66			
Style H	1st grade	3.92	0.88	3/241	1.001	.012	11.80	2.20	3/241	.783	.009
	2nd grade	3.65	1.01				11.20	2.37			
	3rd grade	3.66	0.92				11.76	2.44			
	4th grade	3.73	1.01				11.67	2.75			
Style I	1st grade	3.47	1.30	3/241	.286	.004	10.68	3.31	3/241	.957	.012
	2nd grade	3.57	1.05				11.25	2.45			
	3rd grade	3.54	0.97				11.52	2.67			
	4th grade	3.38	1.17				11.06	3.13			
Style J	1st grade	3.02	1.35	3/241	.073	.001	9.68	3.58	3/241	.355	.004
	2nd grade	2.97	1.21				10.15	3.30			
	3rd grade	3.07	1.28				10.28	3.45			
	4th grade	3.02	1.21				10.06	3.40			
Style K	1st grade	2.46	1.33	3/241	.476	.006	8.03	4.06	3/241	.902	.011
	2nd grade	2.47	1.19				8.53	3.83			
	3rd grade	2.49	1.37				8.10	3.92			
	4th grade	2.71	1.21				9.12	3.95			

*Minimum value 1, maximum value 5

**Minimum value 3, maximum value 15

[1]*df*: between groups/total

First-, second-, third-, and fourth-grade PE teacher candidates were examined using an ANOVA to see if there was a statistically significant mean difference in teaching style preferences and value perceptions. No statistically significant difference was found between the teaching style preferences and value perception scores of the 1st, 2nd, 3rd, and 4th grade PE teacher candidates (p>.05) according to the ANOVA results. The results showed that the teaching style preferences and value perception scores of the first second, third, and fourth-grade PE teacher candidates were comparable. Table 3 details the results for the preferences for teaching styles and value perceptions.

Table 4

Results of an ANOVA Comparing the Tendencies for Educational Philosophies among 1st, 2nd, 3rd, and 4th Grade PE Teacher Candidates

		$\bar{X}$	*SD*	*df*[1]	*F*	*η2*
Perennialist	1st grade	3.60	0.73	3/241	.227	.003
	2nd grade	3.59	0.72			
	3rd grade	3.69	0.80			
	4th grade	3.63	0.89			
Essentialist	1st grade	2.36	0.81	3/241	2.212	.027
	2nd grade	2.39	0.80			
	3rd grade	2.63	0.96			
	4th grade	2.71	0.97			
Progressivist	1st grade	4.59	0.38	3/241	.949	.012
	2nd grade	4.52	0.49			
	3rd grade	4.49	0.51			
	4th grade	4.61	0.45			
Reconstructionist	1st grade	4.36	0.51	3/241	.992	.004
	2nd grade	4.31	0.56			
	3rd grade	4.45	0.45			
	4th grade	4.35	0.51			

[1]*df*: between groups/total

An ANOVA was performed to determine whether educational philosophies tendency scores for candidate PE teachers of first, second, third, and fourth grade differed. There were no statistically significant differences in scores for perennialism, essentialism, progressivism, and reconstructionism among 1st, 2nd, 3rd, and 4th grade PE teacher candidates (p> .05). These findings revealed that pre-service teachers at various grade levels had comparable attitudes toward educational philosophies. Table 4 provides comprehensive details on the results discovered.

A Pearson's correlation analysis was also conducted to determine the strength of association between the PE teacher candidates' teaching style preferences and their tendencies for educational philosophies. According to the analysis, there is a statistically significant relationship between Style A (Command) and perennialist (p<.01) and reconstructionist (p<.01) philosophies, Style B (Practice) and perennialist (p<.05), progressivist (p<.001), and reconstructionist (p<.001) philosophies, Style C (Reciprocal) and progressivist (p<.01) and reconstructionist (p<.001) philosophies, Style E (Inclusion) and progressivist (p<.01) and reconstructionist (p<.01) philosophies, and Style F (Guided Discovery) and progressivist (p<.05) and reconstructionist (p<.001) philosophies, Style G (Convergent

Discovery) and perennialist (p<.01), progressivist (p<.01) and reconstructionist (p<.001) philosophies, Style H (Divergent Discovery) and progressivist (p<.001) and reconstructionist (p<.001) philosphies, Style I (Learner Designed) and progressivist (p<.05) and reconstructionist (p<.001) philophies, Style J (Learner Initiated) and reconstructionist (p<.05) philosophy, and Style K (Self-Teaching) and perennialist (p<.05), essentialist (p<.01), and reconstructionist (p<.05) philophies. All of the variables having a significant association showed a positive relationship. Table 5 displays the *r* values obtained from Pearson's correlation analysis.

In addition, Pearson's correlation analysis was conducted to examine associations between PE teacher candidates' value perceptions of teaching styles and educational philosophy tendencies. It was found that there was a positive correlation between Style A (Command) and perennialist, progressivist, and reconstructionist philosophies; Style B (Practice) and perennialist, progressivist, and reconstructionist philosophies; Style C (Reciprocal) and progressivist, and reconstructionist philosophies; Style F (Guided Discovery) and reconstructionist philosophy; Style G (Convergent Discovery) and progressivist, and reconstructionist philosophies; Style H (Divergent Discovery) and progressivist, and reconstructionist philosophies; and Style I (Learner Designed) and reconstructionist philosophy. Table 6 provides comprehensive details on the results discovered.

Table 5

Correlations between Teaching Style Preferences and Educational Philosophy Tendencies

	Perennialist	Essentialist	Progressivist	Reconstructionist
Style A	.168**	.069	.105	.175**
Style B	.150*	-.042	.311**	.300**
Style C	.027	.025	.180**	.294**
Style D	.064	.060	-.036	.107
Style E	.068	-.104	.186**	.195**
Style F	.111	-.056	.146*	.210**
Style G	.171**	.091	.189**	.228**
Style H	.096	-.060	.223**	.257**
Style I	.103	-.016	.158*	.225**
Style J	.025	.021	.010	.133*
Style K	.153*	.170**	-.015	.128*

*p<.05
**p<.01

Table 6

Correlations between Value Perceptions of Teaching Styles and Educational Philosophy Tendencies

	Perennialist	Essentialist	Progressivist	Reconstructionist
Style A	.308**	.097	.142*	.173**
Style B	.254**	.025	.298**	.245**
Style C	.044	-.028	.162*	.174**
Style D	.100	.095	-.031	.108
Style E	.023	-.075	.114	.085
Style F	.106	.006	.108	.148*
Style G	.106	.024	.203**	.227**
Style H	.067	-.059	.209**	.224**
Style I	.097	-.033	.112	.151*
Style J	.012	-.028	-.055	.074
Style K	.097	.114	-.055	.087

*p<.05

**p<.01

DISCUSSION

The research findings revealed the preferred styles of PE teacher candidates, their value perceptions of these styles, their educational philosophy tendencies, and the relationship between their teaching style preferences and educational philosophy tendencies.

Comparison of PE Teacher Candidates' Teaching Style Preferences and Value Perceptions of Teaching Styles by Gender: The first research question of this study was about the teaching styles preferred by PE teacher candidates and whether their value perceptions of these styles differed based on their gender. Research findings have shown no difference in male and female PE teacher candidates' preferred teaching styles and value perceptions of these styles. In the research, prospective teachers preferred Command, Practice, and Reciprocal styles the most and Learner-initiated and Self-teaching styles the least. It has been determined that the value perceptions of teaching styles do not differ according to gender. Both male and female teacher candidates value Command, Practice, and Reciprocal styles more, and they value Learner-initiated and Self-teaching styles less. The findings align with previous research on PE teachers (Ağgez, 2015; Banville et al., 2003; Cothran et al., 2005; İnce and Hünük, 2010; Jaakkola and Watt, 2011; Kulinna and Cothran, 2003; Parsak and Saraç, 2019; Sue See and Edwards, 2011; Yıldız and Kangalgil, 2014) and teacher candidates (Cengiz and Serbes, 2014; Parker and Curtner-Smith, 2012; Sanchez et al., 2012; Saraç & Muştu, 2013). In their research, Gülüm and Bilir (2011) emphasize that teachers cannot assimilate the renewed education curriculum and that the education they receive is insufficient to consider the interests and needs of the student and is teacher- and subject-centered.

Similarly, the reason why teacher candidates prefer teacher-centered styles may be due to their inability to assimilate the renewed education curriculum. In addition, teacher-centered teaching styles may be preferred since they require less preparation (Yıldızer et al., 2018). Demirhan et al. (2008) found that PE teachers often choose teaching methods based on familiarity or easy applicability rather than considering the needs of their students. This information provides insight into the preferred teaching styles of future physical educators. There is no difference between the teaching styles preferred by male and female PE teacher candidates, which may be because the teacher candidates have gone

through the standard education process and the content of the teacher training program does not differ according to gender (Cengiz and Serbes, 2014).

Comparison of PE Teacher Candidates' Educational Philosophy Tendencies by Gender: Another finding of the research is that there is a difference between the educational philosophy tendencies of male and female teacher candidates only in the essentialist philosophy of education and that the essentialist educational philosophy tendency scores of female candidates are lower than those of male candidates. Similar to this finding, Dağ and Çalık (2020) reported that male teachers adopted the essentialist education philosophy in their study. Biçer et al. (2013) research on teacher candidates revealed that male candidates predominantly adopted essentialist education philosophy, while both male and female candidates had high progressivist and reconstructivist educational philosophy tendencies, a finding consistent with other literature studies. The higher tendency towards essentialist philosophy of education in male teacher candidates may be attributed to traditional gender roles. The condition is believed to stem from the gendered association of women with weak, emotional, and needy traits, while men are associated with strong, tough, and emotionless adjectives (Aslan, 2015; Baykal, 1991). Male teachers are more controlling, teacher-centered, and pro-disciplinary than female teachers, which contributes to the current situation (Dağ and Çalık, 2020). Ekiz (2007), in his research examining the opinions of prospective teachers about philosophical movements, revealed that progressive and reconstructionist educational philosophies were the most preferred philosophical approaches. Similarly, Doğanay (2011), in his study examining the philosophical practices of teacher candidates, found that teacher candidates mostly preferred progressive education philosophy. In a study examining PE teachers' philosophical approaches to education, Işıkgöz (2020) found that PE teachers mostly adopted progressive and reconstructionist education philosophies. PE teacher candidates exhibit high levels of progressive and reconstructionist education philosophy, indicating a greater adoption of modern education philosophies. The 2005 curriculum change, emphasized by constructivist and student-centered education approaches, is believed to have influenced the outcome. Nevertheless, there are also findings that pre-service and in-service teachers' philosophical approaches toward education do not differ according to gender (Doğanay and Sarı, 2003; Ilgaz et al., 2013). The eta-squares of the gender variable on essentialist philosophy of education were found to have a small effect. This indicated that the effect of the gender of the pre-service teachers on their tendency to adopt an essentialist philosophy of education was small.

Comparison of PE Teacher Candidates' Teaching Style Preferences and Value Perceptions of Teaching Styles by Grade Level: Research findings show that there is no difference in the teaching style preferences and their value perceptions of these styles by prospective teachers studying in the 1st, 2nd, 3rd, and 4th grades, and teacher candidates at each grade level preferred Command, Practice, and Reciprocal teaching styles the most and Learner-initiated and Self-teaching styles the least. Similarly, it was determined that pre-service teachers at all grade levels valued Command, Practice, and Reciprocal styles more and valued Learner-initiated and Self-teaching styles less. Baruönü (1991) argued that while the Turkish education system is rooted in a pragmatist approach, its practices are largely influenced by a realist approach. Demirhan's 2003 research on philosophical views of PE teachers suggests that the disparity between theory and practice may be due to societal enduring socio-cultural habits, resulting in similar preferences of teacher candidates across different grade levels for teacher-centered styles.

Comparison of PE Teacher Candidates' Educational Philosophy Tendencies by Grade Level: The study found no significant difference in educational philosophy tendencies scores among 1st, 2nd, 3rd, and 4th-grade students, but progressivism and reconstructionism tendencies were high at all grade levels. In Ekiz's (2005) study comparing the

philosophical approaches of 1st and 4th-grade teacher candidates, it was observed that the first graders preferred the perennialist and essentialist educational philosophy, while the fourth graders preferred the progressive and reconstructionist educational philosophy. This outcome differs from the research findings, which could be because the research was conducted with teacher candidates from different departments and at different periods. According to the Council of Higher Education [CoHE] (2023) Physical Education Teacher Training Program, although the philosophy of education course is included in the spring semester of the first year, it is quite surprising that there is no difference in philosophy of education tendencies at all grade levels since the data was collected in the fall semester. The lack of philosophy education course hours and the lack of importance given to philosophy education may be contributing factors (Doğanay, 2011). PE teacher candidates' highest progressive and reconstructionist educational philosophy tendencies may be attributed to the emphasis on constructivism and student-centered education in the 2005 renewed curriculum. The teacher training program's faculty members, who prioritize constructivist and student-centered education, and reference books recommended or taught in classes that support these philosophical movements may contribute to their progressivist and constructivist educational tendencies (Doğanay and Sarı, 2003). Furthermore, contrary to the educational philosophies that the prospective teachers adopted, the fact that they preferred teaching styles that focused more on the subject and were teacher-centered raises questions about the educational philosophies that the future teachers adopted.

The Relationship Between PE Teacher Candidates' Teaching Style Preferences and Educational Philosophy Tendencies: When looking at the relationship between teacher candidates' preferred teaching styles and educational philosophies tendencies, an association has been identified between command style and perennialist and reconstructionist education philosophies; between practice style and perennialist, progressivist, and reconstructionist education philosophies; between reciprocal style and progressivist and reconstructionist education philosophies; between inclusion style and progressivist and reconstructionist education philosophies; between guided discovery style and progressivist and reconstructivist educational philosophies; between convergent discovery style and progressivist and reconstructivist educational philosophies; between divergent discovery style and perennialist, progressivist and reconstructivist educational philosophies; between learner designed style and progressivist and reconstructivist educational philosophies; between learner-initiated style and reconstructionist education philosophy, and between self-teaching style and essentialist and reconstructionist education philosophies.

The study also revealed a correlation between Command Style value perceptions and perennialist, progressivist, and reconstructionist education philosophies; between Reciprocal Style and progressivist and reconstructionist education philosophies; between Guided Discovery Style and reconstructionist education philosophy; between Convergent Discovery Style and progressivist and reconstructionist education philosophies; between Divergent Discovery Style and progressivist and reconstructionist education philosophies; and between Learner-Designed Style and Reconstructionist education philosophy. Although there is an association between PE teacher candidates' teaching style preferences, their value perceptions of these styles, and their philosophical tendencies, this association is weak. On the other hand, when we look at the answers given by the teacher candidates, it is thought-provoking that they associate teacher-centered and student-centered teaching styles with traditionalist (perennialist and essentialist) and innovative (progressivist and reconstructivist) educational philosophies. Based on the fact that teachers act from a particular understanding when choosing teaching methods and techniques and that their educational philosophy directs these choices, it is stated that a teacher who lacks a philosophical sense cannot experience a consistent decision-making process in his choices and, therefore the methods he chooses will emphasize the teaching aspect rather than the educational aspect (Doğanay, 2011). The lack of professional experience among teacher candidates could impact the results. Furthermore, Meral (2014)

discovered that traditional education philosophies have a low level of relationship with the constructivist approach and contemporary education philosophies with traditional education philosophies in his research examining the philosophical tendencies of teachers. Similarly, Aytaç (2020) underlines that, while traditional and contemporary education philosophies have opposing qualities, there is an interaction between teaching and learning approaches. In this respect, the results of this research support the findings of the current research. The low correlation between teacher candidates' philosophical tendencies and their preferred teaching styles may be due to the interaction between teaching styles and educational philosophies. The structure of teaching styles was based on the idea of not being opposed between styles, and logical thinking focusing on relationships between styles rather than differences was prioritized, resulting in the desired outcome.

CONCLUSION AND SUGGESTIONS

According to the study, PE teacher candidates prefer and appreciate more teacher-centered teaching styles. Furthermore, progressive and reconstructionist educational theories have become increasingly popular among teachers. It has been found that there is a relationship between several teaching styles preferred by teacher candidates, their teaching style value perceptions, and educational philosophies. It is an unexpected result that prospective teachers adopt progressive and reconstructionist educational philosophies, which have contradictory characteristics, and prefer teacher-centered styles and value these styles more. Teachers select methods and techniques based on specific educational philosophy approaches, requiring teacher candidates to understand them in their teacher training program. The limited philosophy of education course hours in undergraduate education, which only lasts two hours, indicates a lack of sufficient emphasis on this field. Teacher candidates who will implement MoNE's future training programs are expected to receive overlap between the content of the teacher training program and the program they will apply in schools. Increasing the teaching philosophy course hours that teacher candidates receive during their undergraduate education may be a solution to the problems experienced. Faculty-school collaboration can enhance prospective teachers' constructivist understanding of their philosophical tendencies and preferred teaching styles. In this regard teacher candidates can effectively learn through observing practice teachers and reflecting on lessons enriched with student-centered activities in their schools, allowing them to experience the effectiveness of the constructivist approach in the learning process. In practice schools, mentor teachers and faculty members can serve as role models for prospective teachers through collaborative learning-teaching processes. Mentor teachers and instructors can collaborate on lesson planning, with instructors conducting courses to serve as role models for prospective teachers.

The study suggests that further investigation into the factors influencing teacher candidates' teaching style preferences can be achieved through in-depth interviews with these candidates. In addition, The qualitative research method can provide a comprehensive understanding of complex issues like educational philosophy and teaching style preference, contributing valuable findings to the literature. Future studies can explore the reasons why teacher candidates prefer teacher-centered styles over student-centered styles using qualitative or mixed methods.

Author Contribution

1. **Burhan Parsak**: Idea/Concept, Design, Checking, Data Collection And Processing, Writing, Critical Review.

2. **F. Pervin Bilir**: Checking, Data Processing, Writing, Critical Review.

3. **Zeynep Filiz Dinç**: Checking, Data Processing, Writing, Critical Review.

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Information about Ethical Board Permission

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