

EXAMINATION OF METAPHORICAL ATTITUDES TOWARDS PHYSICAL EDUCATION TEACHER AND LESSON

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Abstract

The attitudes of secondary school students towards physical education and sports lessons and their teachers were tried to be determined through metaphors in this study. In the study, in which the mixed research method was used, the convergent parallel design was adopted. In the research, "physical education teacher evaluation scale based on student opinions", "physical education attitude scale for secondary education students" and the metaphor sentence created by the researchers were used as data collection tools. The study group consisted of 185 secondary school students. The obtained quantitative data were analyzed in the Jamovi 2.0.0 statistical software program. Independent sample t-test and Pearson correlation test were used in pairwise comparisons. When the data obtained were examined, significant differences were determined according to the physical education teacher (PEL) attitude, gender, sports background, PEL, and teacher love. In the mean scores of physical education teacher evaluation, there were differences according to gender, PEL, and teacher love. The findings of the qualitative data were analyzed with the content analysis method, and categories and themes were created. The metaphors for physical education and sports lessons were grouped under two categories, while the metaphors for the physical education and sports teacher were grouped under three categories.

Keywords: Attitudes, Metaphor, Physical Education Lesson, Physical Education Teacher, Students.

I. Introduction

Metaphors are mental constructs that underlie a person's awareness and serve as a cognitive tool for analogical framing and description of experience to derive meaning [1], [2] and cognitive models that enable individuals to interpret one phenomenon through another phenomenon [3]. The importance of metaphors in the process of knowledge construction is widely recognized and used to bridge the gap between thinking and abstraction [4]. Metaphors and metaphorical thinking are very important not only as the mechanisms by which individuals attribute meaning to their world and their daily lives but also in terms of their role in revealing ideas in an instructional sense [5]. Fidan [6] argued that metaphors in our minds have an effect that shapes our attitudes and behaviors, while Lakoff [7] suggested that metaphors, as a way of thinking, have deep meanings beyond defining a concept with another concept. Research by Eagly and Chaiken [8] also define attitudes as psychological thought expressed in a positive or negative evaluation of a particular entity. Cognitive and affective domains are essential components of how attitudes are formed. This attitudinal link between cognitive and affective domains has the potential to affect students' learning. There are many factors that can affect student learning. The key issue in educational research is to identify and understand how these factors affect student achievement [9].

Each stage of the education period is very important for individuals to develop by revealing their skills and potentials. Education also attaches importance to cognitive, physical, psychomotor, emotional, and social dimensions for the development of the individual as a whole and the development of his mental characteristics [10]. Physical education lesson (PEL), which is seen as indispensable element of education, has an

important place in raising individuals with these characteristics. This course, which has an important share in the development of individuals, is only possible with a qualified education [11]. The primary purpose of the physical education course is to encourage students to adopt active lifestyles by teaching them to participate in physical activities for life [12]. At this point, the quality of the teacher is also important. Regardless of the course, teachers who determine the educational environment undertake roles such as making students love the lessons and ensuring their learning [13]. The ability of the teacher to teach the lesson efficiently and to meet the expectations of the students regarding the potential attitudes and behaviors towards the lesson is among the important criteria, and it is known that this criterion affects the students' perspectives on the lesson [14].

In many studies, separate studies have been conducted on the attitudes of secondary school students toward PEL [15]–[22] their attitudes and perceptions towards physical education teacher [23]–[26] and their metaphorical perceptions on these issues [27]–[30]. There has not been a study in the literature that has been done both quantitatively and qualitatively by bringing all of them together. For this reason, it is thought that this study, which aims to examine secondary school students' attitudes towards physical education and sports lessons and their teachers in the context of metaphors, will contribute to the literature.

II. Research Method

Research Model

A mixed research method and a convergent parallel design was used [31]. In the research, metaphor was preferred. It is to get opinions from individuals, to understand their feelings, thoughts and emotions [32] and to reveal and interpret individual perceptions about a phenomenon in general [33].

Research Group

There were 185 secondary school students voluntarily participated in the study. It is seen that the students (n=116) have a sports background and (n=177) are not included in the student's school team. Demographic information about the students is given in Table 1.

Table 1. Data on students' demographic information

Variable		N	F	%
Gender	Female	185	89	41.8
	Male		96	51.9
Gender of teacher	Female	185	118	63.8
	Male		67	36.2
Sports background	Yes	185	116	62.7
	No		69	37.3
School team	Yes	185	8	4.3
	No		177	95.7
I like PEL	Yes	185	165	89.2
	No		20	10.8
I like PEL teacher	Yes	185	152	82.2
	No		33	17.8

Data Collection Tools

In this study, "physical education teacher evaluation scale based on student opinions" developed by Kayışoğlu [34] to determine secondary school students' attitudes towards physical education teachers and PEL; "physical education attitude scale for secondary education students" developed by Güllü and Güçlü [35] and the metaphor sentence created by the researchers were used. The physical education teacher evaluation scale based on student opinions, developed by Kayışoğlu [34], consists of 48 items and includes a 5-level Likert-type scale. The scale is scored from 1 point (strongly agree) to 5 points (strongly disagree). Scale items consist of three sub-dimensions. These are the general performance dimension (GPD), the course performance dimension (CPD), and the negative behavior dimension (NBD). The GPD consists of 30 items, the CPD consists of 14

items, and the NBD consists of four items. Items in the NBD were reverse-coded. The Cronbach's alpha (α) coefficient of the scale was calculated as 0.95 and in its sub-dimensions GPD $\alpha=0.91$, CPD $\alpha=0.71$, NPD $\alpha=0.95$. In this study, Cronbach's alpha (α) coefficient was calculated as 0.95, and in its sub-dimensions, GPD $\alpha=0.95$, CPD $\alpha=0.87$, NPD $\alpha=0.64$. A reliability coefficient of 70 or higher is generally considered sufficient for the reliability of test scores [36].

The physical education attitude scale for secondary education students, developed by Güllü and Güçlü [35] consists of 35 items and includes a 5-level Likert-type scale. The scale is scored from 1 point (strongly agree) to 5 points (strongly disagree) and consists of one dimension. The variance explained by the single factor is 36.19% and the first eigenvalue is 12.67. The reliability coefficient of the scale was 0.80 and the consistency coefficient was 0.94. In this study, α coefficient was calculated as 0.81. In order to collect qualitative data in the research, the open-ended metaphor used by Hanin and Stambulova [37] to determine the perceptions of the participants about the physical education, sports lesson, and the physical education teacher (PEL/My physical education teacher is like ... because ...) form has been prepared. The expression "because" was used in order for the students participating in the research to provide a justification for the metaphors they produced.

Data Analysis

The quantitative data obtained were analyzed in the Jamovi 2.0.0 statistical software program with a 95% confidence interval and 5% margin of error. Mean (\bar{x}), standard deviation (sd), frequency (f), and percentage values (%) were used to determine the descriptive statistics of the participants. In testing the normality of the data, the skewness value was first checked. As a result of the skewness test, it was seen that the skewness coefficient was between (-1) and (+1). Based on this, independent sample t-test from parametric tests and Pearson correlation test were used in pairwise comparisons. Cohen's d (d) effect size coefficients were calculated to determine the effect of the variables in the analyzes in which a significant difference was detected, and in the interpretation of the coefficients, the effect size close to .20 was "small" for Cohen's d value, and the effect size close to .50 was "medium", and the effect size close to .80 was interpreted as "large" effect size [38].

Since the metaphors obtained in the research were used as a descriptive tool, content analysis, one of the qualitative research approaches, was used in the analysis of the data. Content analysis is the process of defining, coding, and categorizing data [39]. To start the analysis of the data, first of all, the forms of the students were numbered from S1 to S175. Evaluation and interpretation of the metaphors stated by the participants through content analysis: i) Coding and sorting scheme; ii) Sample metaphor image compilation stage; iii) Category development stage; iv) Validity and reliability stage; and v) Data for quantitative data analysis. 2.0.0 is the transfer phase to the statistics software program. To ensure the reliability of the research, the data were analyzed by three field experts to determine whether the conceptual categories reached as a result of the data analysis represent the obtained themes, and the codes obtained and the categories represented by the codes were compared. After the research data were coded separately by three researchers, the resulting code and category list was given its final form. The reliability of the data analysis performed in this way was calculated using the formula $[\text{agreement}/(\text{agreement}+\text{disagreement})\times 100]$ [40].

Research Ethics

Ethics committees are very important in preventing violations of people's rights. It was received from the scientific research and publication ethics Committee of Bursa Uludağ University Rectorate on 25/03/2022 for the study. During the research, consideration was taken within the framework of the "higher education institutions scientific research and publication ethics directive".

III. Results

Results of Quantitative Data

When Table 2 is examined, the PEL attitude scale mean scores of the students are (3.00±0.48). The physical education teacher evaluation scale mean scores of the students, respectively, GPD (2.95±0.84), CPD (3.35±0.79), NBD (3.34±0.96), and total score averages of the scale (3.10±0.73). It is seen that the average scores of the scale of the students to whom these results are taken into account are at an intermediate level.

Table 2 . Physical education teacher evaluation and PEL attitude scale results

	N	\bar{x}	Sd	Mean	Min	Max
PEL attitude scale	185	3.00	0.48	3.06	1	4.31
GPD	185	2.95	0.84	3.00	1	5
CPD	185	3.35	0.79	3.29	1	5
NBD	185	3.34	0.96	3.25	1	5
PE teacher evaluation total	185	3.10	0.73	3.06	1.31	4.88

When Table 3 is examined, the mean scores of male students in the PEL attitude scale are statistically significantly higher than the mean scores of female students (t=2.77, p=0.00). According to the calculated effect size (Cohen's d) coefficient, it can be said that the gender variable of the PEL attitude scale has a medium effect size (d=0.40). There is no statistically significant difference in the PEL attitude scale according to the teacher's gender and school team variables. The PEL attitude scale mean scores of the students according to their sports backgrounds are also statistically significant (t=2.21, p=0.02). According to the calculated effect size (Cohen's d) coefficient, it can be said that the PEL attitude scale sports background variable has a medium effect size (d=0.33). PEL attitude scale scores are statistically significant compared to those who like PEL (t=7.17, p=0.00) and physical education teachers (t=6.51, p=0.00). According to the calculated effect size (Cohen's d) coefficient, it can be said that the variable of love for PEL and physical education teacher has a high effect size (d=1.69).

Table 3. PEL attitude scores of students according to variables t-test results

Physical education attitude scale	Group	N	\bar{x}	SD	df	T	P	Cohen-d
Gender	Female	89	2.90	0.48	183	2.77	0.00**	0.40
	Male	96	3.09	0.47				
Gender of teacher	Female	118	3.01	0.55	183	0.31	0.75	0.04
	Male	67	2.98	0.33				
Sports background	Yes	116	3.06	0.49	183	2.21	0.02*	0.33
	No	69	2.90	0.47				
School team	Yes	8	3	0.72	183	0.00	0.99	0.00
	No	177	3	0.47				
I like PEL	Yes	165	3.08	0.40	183	7.17	0.00**	1.69
	No	20	2.34	0.62				
I like PEL teacher	Yes	152	3.10	0.36	183	6.51	0.00**	1.25
	No	33	2.54	0.60				

*=p<0.05 and **=p<0.01

According to Table 4, the mean scores of male students in the physical education teacher evaluation scale are statistically significantly higher than the mean scores of female students (t=2, p=0.04). According to the calculated effect size (Cohen's d) coefficient, it can be said that the gender variable of the PEL attitude scale has a medium effect size (d=0.29). There was no statistically significant difference in the physical education teacher evaluation scale according to the teacher's gender, sports background and school team variables. Physical education teacher evaluation scale mean scores were statistically significant according to students' love for PEL (t=3.10, p=0.00) and physical education teachers (t=7.28, p=0.00). According to the calculated effect size (Cohen's d) coefficient, it can be said that the variable of love for PEL and physical education teacher has a high effect size

(d=1.40).

Table 4. Physical education teacher evaluation scores of students according to variables t-Test results

PE teacher evaluation scale	Group	N	\bar{x}	SD	df	T	P	Cohen-d
Gender	Female	89	2.99	0.75	183	2.00	0.04*	0.29
	Male	96	3.20	0.71				
Gender of teacher	Female	118	3.07	0.80	183	0.63	0.52	0.09
	Male	67	2.98	0.60				
Sports background	Yes	116	3.17	0.75	183	1.80	0.07	0.27
	No	69	2.97	0.70				
Sports team	Yes	8	3.11	0.70	183	0.06	0.94	0.02
	No	177	3.10	0.74				
I like PE lesson	Yes	165	3.15	3.13	183	3.10	0.00**	0.73
	No	20	2.62	2.61				
I like PE teacher	Yes	152	3.26	0.64	183	7.28	0.00**	1.40
	No	33	2.35	0.69				

*=p<0.05 and **=p<0.01

When Table 5 is examined, as the PEL attitudes of the students increase, there is a statistically significant positive moderate relationship between the general performance (r=0.460), course performance (r=0.417) and physical education teacher evaluation (r=0.445) scores. There is a statistically significant positive moderate correlation between the physical education teacher evaluation total scores of the students and their PEL attitudes (r=0.445).

Table 5. Pearson correlation test results between students' attitudes to pe lesson and pe teacher evaluation

		PEL attitudes	GPD	CPD	NBD
General performance dimension	r	0.460***	—		
	p	< 0.001	—		
CPD	r	0.417***	0.765***	—	
	p	< 0.001	< .001	—	
NBD	r	-0.133	0.176*	0.115	—
	p	0.071	0.016	0.120	—
PE teacher dimension	r	0.445***	0.974***	0.873***	0.271***
	p	< 0.001	< 0.001	< 0.001	< 0.001

* p <0.05, ** p <0.01, *** p <0.001

Results of Qualitative Data

There were 175 students who could produce metaphors in the analysis of qualitative data were included in the study. When Table 6 is examined, it is seen that secondary school students produced a total of 80 different metaphors for physical education and sports lessons. The highest frequency metaphors were game "14", entertainment "13", freedom "10", football "10", and paradise "8".

Table 6. Metaphors developed by students regarding physical education and sports lesson

Metaphor number	Metaphor name	F	Metaphor number	Metaphor name	F	Metaphor number	Metaphor name	F
1	Game	14	31	Food	1	56	Monkey	1
2	Entertainment	13	32	Wind	1	57	Dog	1
3	Freedom	10	33	Iron	1	58	Funfair	1
4	Football	10	34	King	1	59	Sports course	1
5	Paradise	8	35	Turkish liras	1	60	Laziness	1
6	Bird	6	36	Socialization	1	61	Boring	1
7	Volleyball	5	37	Race	1	62	Dark Cloud	1
8	Prison	5	38	Pause	1	63	North Korea	1

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9	Life	4	39	Distraction	1	64	Poles	1
10	Training	3	35	Turkish liras	1	65	Police station	1
11	Maths	3	36	Socialization	1	66	Space	1
12	Medicine	3	37	Race	1	67	Reading book	1
13	Ball	3	38	Pause	1	68	Avocado	1
14	Garden	3	39	Distraction	1	69	Teeth	1
15	Psychologist	2	40	Physical action	1	70	Automobile factory	1
16	Basketball	2	41	Cure	1	71	Free lesson	1
17	Tree	2	42	Music	1	72	Meaningless	1
18	Punching bag	2	43	Clock	1	73	Fatigue	1
19	Diamond	2	44	Fur	1	74	Turtle	1
20	Take a rest	2	45	Nature	1	75	Wall	1
21	Cage	2	46	Candy	1	76	Knife	1
22	Military	2	47	Tofaş	1	77	Paper	1
23	Happiness	2	48	Panda	1	78	Bed	1
24	Cheetah	2	49	Jaguar	1	79	Bug	1
25	Activity	2	50	Whistle	1	80	Dry banch	1
26	Car	2	51	Rope	1			
27	Sleep	2	52	Sweet	1			
28	Garbage	2	53	Key	1			
29	Pleasure	2	54	Savior	1			
30	Sky	1	55	Love	1	Total opinion		175

A total of 61 metaphors were produced in the category of the “course content” related to the physical education and sports course of the students as seen in Table 7. According to the explanation sentences given as examples, they think that they spend their lesson hours productively together with the activities they like by comparing physical education and sports lessons to metaphors such as freedom, entertainment, paradise, football, volleyball, and games. In the same category, some participants stated that they had a negative impact on their lesson practices by likening physical education and sports lessons to metaphors such as laziness, emptiness, empty lesson, and tree.

Table 7. Metaphors and explanation phrases specified in the “course content” category

Theme	Category	F	Metaphors
Physical education and sports lesson	Course content	61	Positive (56)
			Negative (5)

Excerpts from secondary school students' explanation examples about the course content	
Positive	Negative
Freedom; we move freely (S106), we do the activity we want (S107)	Space; the teacher does not control weus (S139)
Entertainment; we do the sports love (S24), we play games and sports (S85)	Free lesson; whoever wants does what he wants (S144)
Paradise; we do what we want (S114)	Paper; it goes straight through
Football; football should be played (S108), the best	

sport (S115) Volleyball; we play volleyball all the time(S174) (S117)

A total of 99 metaphors were produced in the category of “how the students felt” about the physical education and sports lesson as revealed in Table 8. According to the explanatory sentences given, physical education and sports lessons are likened to negative metaphors such as prison, cage, garbage, North Korea, bug, as well as positive metaphors such as game, entertainment, bird, football, paradise, freedom, and entertainment.

Table 8. Metaphors and explanation phrases specified in the “student feel” category

Theme	Category	F	Metaphors
Physical education sports lesson	What the course and makes the student feel	99 (77)	<p>Positive (77)</p> <p>Game (n=12), fun (n=6), bird (n=5), football (n=5), paradise (n=3), freedom (n=3), punching bag (n=2), volleyball (n=3), life (n=2), medicine (n=2), pleasure (n=2), diamond (n=2), psychologist (n=2), sleep (n=2), Turkish liras, socialization, tree, nature, pause, garden, wind, flower garden, head distribution, honey, happiness, motivation, music, clock, basketball, running</p> <p>Negative (22)</p> <p>Prison (n=2), cage (n=2), garbage (n=2), math (n=2), jail, boring, dark cloud, North Korea, police station, poles, meaningless, fatigue, egg, wall, knife old bug, dry branch</p>
Other (uncategorized)		(15)	Race, happiness, panda, cheetah, fun, relax, reading, avocado, teeth, winter, play, military, turtle, relax

Excerpts from the explanation examples of secondary school students about how the lesson made the students feel

Positive	Negative
Game; we are having fun (S18; S20)	Prison; something we want does not happen
Bird; I feel free (S22), free and peaceful(S129)	Prison; it is scary (S148)
(S70) Paradise; I feel we live (S16)	Garbage; unnecessary (S168)
Turkish lira; the lesson ends immediately	Egg; nausea (S156)
(S32) Sweet; it is good after studying so many lessons (S94)	Knife; we don't like it if we get it wrong (S169)

When Table 9 is examined, it is seen that secondary school students produced a total of 96 different metaphors for physical education and sports teachers and expressed 175 opinions for this. The metaphors with the highest frequency are the sun “10”, the cat “8”, the scales “8”, the athlete “6” and the tree “5”. Except that the clock “4”, a nice person “4”, king “4” and commander “4” has a higher frequency than others.

Table 9. Metaphors developed by students regarding physical education and sports teacher

Metaphor number	Metaphor name	F	Metaphor number	Metaphor name	F	Metaphor number	Metaphor name	F
1	Sun	10	36	Candy	1	66	Sinan engin	1
2	Cat	8	37	Cotton	1	67	Snowball	1
3	Scales	8	38	Computer	1	68	An ugly person	1

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4	Athlete	6	39	Basketball player	1	69	File	1
5	Tree	5	35	Ronaldo	1	70	Bin	1
6	Clock	4	36	Cheetah	1	71	Exhumed	1
7	A nice person	4	37	Gymnast	1	72	Paper	1
8	King	4	38	Gülşah saraçoğlu	1	73	Dead	1
9	Şener şen	4	39	Course book	1	74	Bug	1
10	Commander	4	40	Lifeguard	1	75	Shepherd	1
11	Soldier	3	41	Stove	1	76	Gemini	1
12	Queen	3	42	Friend	1	77	A comforting person	1
13	Flower	3	43	Watch a match	1	78	Witch	1
14	Ice	3	44	Aunt	1	79	Snake	1
15	Egg	3	45	Pencil	1	80	Fly	1
16	Football	3	46	Queen bee	1	81	Angel	1
17	Ball	3	47	Flamingo	1	82	Tyre	1
18	Panda	3	48	Tiger	1	83	Spinner	1
19	Eagle	2	49	Fire	1	84	Energy ball	1
20	Star	2	50	Bear	1	85	Stick	1
21	Giraffe	2	51	Weather condition	1	86	Time bomb	1
22	Space	2	52	Bull	1	87	Lion	1
23	Manager	2	53	Player	1	88	Boss	1
24	Judge	2	54	Polar bear	1	89	Stress ball	1
25	Monster	2	55	Pogaca	1	90	Different person	1
26	Papa smurf	2	56	Angry bird	1	91	Spicy food	1
27	Fatih terim	2	57	Wavy sea	1	92	Cage	1
28	Book	2	58	Balloon	1	93	Gossipy	1
29	Brother	1	59	Gun	1	94	Pressured water	1
30	Information	1	60	Plant	1	95	Question mark	1
31	Scholar	1	61	Princess	1	96	Telephone	1
32	Water	1	62	Gossipy	1			
33	Ear	1	63	Recep ivedik	1			
34	Volleyball player	1	64	Mafia	1			
35	Happiness	1	65	Iron man	1	Total opinion		175

A total of 89 metaphors were produced in the category of the “teacher’s personality traits” related to the physical education and sports teacher of the students as seen in Table 10. According to the explanation sentences given as examples, physical education and sports teachers are likened to metaphors such as scales, cat, clock, panda, flower, star, sun, while emphasizing the teacher’s positive personality traits as being fair, disciplined, motivating, and love. The students emphasized the negative personality traits of being commanding, unjust, and variable by likening the physical education and sports teacher to metaphors such as commander, soldier, ice, one-sided, scales/broken scales, monster, time bomb, and weather.

Table 10. Metaphors and explanation phrases specified in the “teacher’s personality traits” category

Theme	Category	F	Metaphors
Physical education and sports teacher personality traits	Teacher’s personality traits	89 (45)	Scale (n=4), cat (n=4), clock (n=3), panda (n=3), flower (n=3), star (n=2), sun (n=2), queen (n=2), eagle (n=2), king (n=2), tree (n=2), football (n=2), water, spicy food,

Negative (44)	lion, stress ball, happiness, good person , candy, cotton, energy ball, stove, friend, aunt, brother, angel Commander (n=3), soldier (n=3), ice (n=3), cat (n=3), scales (n=2), manager (n=2), monster (n=2), Fatih Terim (n=2), weather, bull, player, polar bear, angry bird, rough sea, balloon, pressured water, rock, fire, boss, time bomb, plant, gossipy, mafia, iron man, snowball, ugly one, morning sun, exhumed, dead, bug, Gemini, fly
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Excerpts from examples of secondary school students' explanations about teacher's personality traits

Positive	Negative
Scales; is just (S5); treats equally (S15) Sweet person (S82; S95) Hour; is timed (S2); comes to class on time (S21)	Cat; aScales; very unstable (S101); unequal (S103) Weather; one angry one at peace (S1049)
A spicy dish; it first burns your mouth and then leaves a pleasant aftertaste (S27). Sun; very warm blooded (S14)	Wavy sea; experiencing a lot of emotional change (S114) Commander; multi- disciplined and gives commands (S151) Soldier; multidisciplinary (S146) Gemini; mood is not clear (S170)

A total of 35 metaphors were produced in the category of physical education and sports teacher in the category of "physical characteristics of the teacher" as seen in Table 11. According to the explanation sentences given as examples, Şener şen likened the physical education and sports teacher to metaphors such as an athlete, sun, giraffe, pencil, bird, and flamingo. The negative physical characteristics of teachers were emphasized with metaphors such as ball, egg, papa smurf, snake, witch, and pastry.

Table 11. Metaphors and explanation phrases specified in the "teacher's physical characteristics" category

Theme	Category	F	Metaphors
Physical education and sports teacher	Teacher's physical characteristics	35	Positive (20) Şener şen (n=4), athlete (n=2), sun (n=2), giraffe (n=2), basketball player, Ronaldo, cheetah, gymnast, Gülşah Saraçoğlu, pencil, car, tire, bird, flamingo,
			Negative (15) Ball (n=3), egg (n=3), Papa Smurf (n=2), paper, witch, snake, bear, pastry, Recep İvedik, Sinan Engin

Excerpts from examples of secondary school students' explanations about the teacher's physical characteristics

Positive	Negative
Athlete; weak and active (S56) blond hair and tall (S76) Car; he puts lenses in his eyes and modifies them (S83) Şener şen; their movements are similar (S96)	Giraffe; Ball; fat (S130; S136) Egg; because he is bald (S141) Papa Smurf; an old person (S142) Witch; does not dress well (S175) Snake; speaks hissing (S176)

A total of 51 metaphors were produced in the category of "teacher's professional knowledge" about physical education and sports teacher as seen in Table 12. In addition to the students stating that they see their teachers as a source of information and a teacher, they liken physical education and sports teachers to metaphors such as the sun, athlete,

good person, referee, king, queen bee, book, and computer. Some students express negative opinions by describing their teacher with metaphors such as space, tree, cage, file, bin, and shepherd.

Table 12. Metaphors and explanation phrases specified in the “teacher’s professional knowledge” category

Theme	Category	F	Metaphors	
Physical education and sports teacher	Teacher’s professional knowledge characteristics	51	Positive (36)	Sun (n=5), athlete (n=4), good person (n=3), book (n=2), referee (n=2), king, scholar, knowledge, textbook, question mark, moon , ear, cat, stick, volleyball player, computer, tree, queen bee, energy, lifeguard, watching a match, fidget spinner, tiger, queen, princess
			Negative (15)	Space (n=2), scales (n=2), tree (n=2), weapon, cage, king, someone different, commander, file, bin,, shepherd, comforter

Excerpts from the explanation examples of secondary school students about the teacher’s professional knowledge characteristics

Positive	Negative
Sun; informs us (S3)	Space; does not make activities (S106) Scales; very interested in girls (S110)
Ear; listens very carefully (S26)	Cat; plays very interested in girls (S110)
Games; allows us to play (S28)	Cage; does not play football for us (S123)
Computer; gives us information (S46)	Bin; unnecessary (S161)
Judge; warns us when we make a mistake (S63)	Tree; he just stays where he is and doesn’t care (S166)
Watching the match; allows us to have pleasant time (S72)	Shepherd; we are like released sheep (S169)

IV. Discussion

In this study, it is aimed to determine the attitudes of secondary school students toward PEL and teachers with the help of metaphors. In the research findings, it was revealed that the mean score of male students in the PEL attitude scale was significantly higher than that of female students. When the literature is examined, it is seen that there are similar findings to these results [41]–[44]. In the study by Onan [45], it was seen that male students’ attitudes toward PEL showed a more significant relationship than female students. Among the reasons why male students’ attitudes are more positive, especially in physical education and sports lesson attitudes, it can be said that sports have a male-dominated understanding in our society, that male students have easier access to sports opportunities and that they are more active in sports activities.

It was determined that those who have a sports background on the same scale have higher attitudes than those who do not. Hazar et al. [42] and Duman [46] reported that the physical education course attitudes of students who have an athlete license are high. In another study, it was seen that secondary school students interested in sports had more positive attitudes towards PEL [47]. It can be seen as a natural consequence of this situation that students with a sportive background have a high attitude towards PEL. The fact that students willingly participate in sports activities and have high self-confidence in participating in physical activity or sports activities enables them to develop a positive attitude.

Finally, in the PEL attitude scale, the mean scores of those who like PEL and physical education teacher were significantly higher. In the literature, it is stated in different sources that PEL is loved by students [48], [49]. Loving is one of the greatest effective skills that can be developed to do a job or an action. The “desired behavior change” included in

the definition of education can be shaped by love. This leads to positive developments in education and learning. For this reason, it is a natural result that students who love PEL and physical education teachers develop positive attitudes toward the lesson.

The metaphors developed by the students for physical education and sports lessons were gathered in two categories (the content of the lesson and the way the lesson made the students feel). Students compared physical education and sports lessons to positive metaphors such as freedom, entertainment, paradise, football, training, ball, activity in the content category. In the same category, there are also cases where students liken the lesson to negative metaphors such as "laziness, emptiness, empty lesson, tree". In the metaphorical study conducted by Sofi [50] about PEL for secondary school students, students produced similar metaphors such as "freedom, entertainment, game, source of joy, dream". In another study examining the metaphors of the students for the PEL, views such as "sports, games, entertainment, training, movement, and football" were explained [51]. When the literature is examined, it is seen that students produce similar metaphors about physical education and sports lessons [52]–[54]. When the PEL is examined in terms of content, it is quite expected that students will liken the lesson to a game because it is a game-oriented lesson. At the same time, it is thought that especially male students have the opportunity to play football in the lesson, which causes them to associate the lesson with the metaphor of football. In the category that the course makes the students feel, the students mostly likened it to metaphors such as game, entertainment, bird, football, paradise, freedom, joy, punching bag.

Research by Yilmaz et al. [14], it was seen that students defined PEL as a good lesson, a tool of freedom, a source of life, a field of competition, and a natural phenomenon as including positive qualities. Since PEL is a game and movement-oriented lesson, it is quite normal for students to liken the lesson to a game. Especially because of the age level of the research group, the game also means fun. In addition, for the students who usually do their lessons in the classroom environment, the PEL, which is held in the garden, in the hall, or a different environment, may arouse the feeling of freedom in the students. People generally use the definition of "heavenly" for the environments they like and feel happy and peaceful. For this reason, it is inevitable for students to feel like they are in heaven in physical education classes, where they find themselves enjoying themselves and are happy, and describe the lesson with the metaphor of heaven. Another point that draws attention here is that students who produce the same metaphor attribute different meanings to the metaphor. For example, stating the game metaphor (S24) while emphasizing the content of the lesson by writing "we do the sports we love" in the "because" part; again stating the game metaphor (S18; S20) by writing "we are having fun" in the "because" part, emphasizing that the lesson makes him feel.

In the physical education teacher evaluation scale, it was determined that the mean score of male students was higher than that of female students. In the study of Genç and Temel [55], it was found that the views of teachers on the sub-dimensions of general performance and course performance did not differ significantly according to the gender of the students. In the negative behavior sub-dimension, it was determined that female students had more positive views than male students. On the contrary, in the study conducted by Şekerci [56], it was seen that male students had more positive opinions in the negative behavior sub-dimension. Karataş [26] determined that students' perceptions of ideal physical education teachers were higher in male students. In this study, it is thought that the high average score of male students is due to the student's interest in PEL and teacher, and the learning opportunities they have in the lesson.

In the physical education teacher evaluation scale, the mean scores of those who like PEL and physical education teachers were significantly higher. As mentioned above, loving a subject, a lesson or a person is a factor that always affects attitudes positively. A student who sees a friendly, loving, and democratic approach from his teacher is expected to love his teacher first and then the lesson indirectly. As a matter of fact, in some studies, it has

been determined that students define a friendly, cooperative, loving, democratic [23] teacher who values them [26] as the ideal teacher.

The metaphors that students developed for physical education and sports teachers were categorized under the titles of teacher's personality traits, teacher's physical characteristics, and teacher's professional knowledge. In the positive personality traits of teachers, the students generally stated the concepts of fair, disciplined, and good person as metaphors. In addition, some students described their teachers as unfair, angry, and commanding. In the studies conducted with secondary school students, there are statements of students who perceive the concept of physical education teacher as authoritarian [26] and normative [50]. In the study of Egüz and Öntaş [57], some define the physical education teacher as a source of fear and alienate the students. In the study of İlhan and Karaşahinoğlu [28], it was seen that students portrayed their physical education teachers as nervous people. Research by Özcan et al. [24], students expressed their opinions about physical education teacher being athletic/sportsman, understanding/friend-like, and fun/cheerful. Research by Gorucu et al. [27] similarly identified the students' metaphors about physical education teacher as friend, father, comedian, and trainer.

Research by Yilmaz et al. [14], students produced a metaphor for the physical education teacher as a caring and entertaining person. As can be seen, in the question of what kind of physical education teacher is, an understanding and entertaining physical education teacher profile emerges from the comments of the students, who act close to them and establishes positive social relations. In lessons where teacher-student relations are positive, students love both the lesson and the teacher. The attitude of the seven students will always be higher. Indeed, Ladwig et al. [58] also stated that the qualifications of physical education teachers and their social relations with their students have an effect on physical education memories, and this affects their attitudes towards physical education and being active in the lesson. Considering the findings, it is seen that some students are directed to negative thoughts while producing metaphors about their teachers. The reason for this is that in addition to students who receive positive communication messages from their teachers, different students in the same course receive negative communication messages. Students who are not satisfied with negative communication can attribute negative meanings to the metaphors they develop for their teachers.

It was found that the most intense meaning that the students attributed to the metaphors they developed about "the physical characteristics of the physical education teacher" were weak and athletic looking. İlhan and Karaşahinoğlu [28] stated that secondary school students perceive their physical education and sports teachers as sportive person, disciplined, hardworking, and good person. It is seen that students produce similar metaphors in studies conducted on physical education teachers [23], [29], [57], [59]. This is because individuals with athletic physical characteristics come to mind when physical education teachers are mentioned, not only for students but also for society in general. It is normal for students to develop their metaphors in this direction. González-Calvo et al. [60] stated that for physical education teachers, being athletic is also a way to convey important messages to students in terms of being healthy individuals. Considering the teachers who are expected to be role models for their students, this situation is an important issue for physical education classes where students are directed to protect their health.

Finally, it has been seen that the meaning that the students heavily attribute to the metaphors developed by "the physical education teacher about the professional knowledge" features is the source of information and instructive qualities. In the study of Gorucu et al. [27], students expressed the guiding role of their teachers by likening physical education teachers to metaphors such as trainer, life coach, sun, candle, and captain. In studies aiming to reveal secondary school students' views on ideal teacher qualifications, there are explanations about teachers' professional competencies [26], [61]. Another study that reached similar results with this study was conducted by Egüz and Öntaş [57]. The students described the concept of physical education teacher with the metaphors of information

source and guide. It is thought that these descriptions originate from the way the teacher is formed in the minds of the students as a person who teaches and is a source of information. The current physical education teacher training program provides training to teacher candidates in many different sports branches. However, a teacher candidate cannot be trained at the level of expertise in all branches. The existing secondary school and high school physical education and sports training programs do not create a training need that requires expertise in any branch. However, when the result is examined and the expectations of the students from the physical education teacher are examined, it is seen that the teachers and teacher candidates need to train themselves in different sports branches.

V. Conclusion

As a result, in this study, it was concluded that secondary school students generally have a positive perspective on PEL and teachers and they create metaphors that have positive connotations for physical education teacher and lesson. In general, if we emphasize the concept of “desired” in education, the desired behavior change can be achieved with positive attitudes. Physical education teachers have to create a positive attitude in their classes. Physical education teachers, who can establish constructive communication with their students, value their students, teach their lessons efficiently, and gain the respect of their students by proving that they are knowledgeable about this subject, can develop positive attitudes in their students. The different opinions of the same teacher and different students in the same course, which emerged in the study, can be stated as a different subject that is recommended to be examined in the literature. In this context, qualitative interviews can be conducted to address the causes of negative metaphors toward PEL and teachers.

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