

Examining secondary school students' metaphor perceptions of the concept of physical education lesson

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Abstract

The purpose of the present research is examining secondary school 7th grade students' perceptions of the concept of physical education lesson through metaphors. The present research also tested whether the metaphors produced by the students differ according to gender. The research was conducted on 393 students who study in 7th grade at three different public secondary schools in the province of Konya in 2014-2015 academic year, fall semester. According to the findings obtained in the research, the students produced 45 different metaphors related to the concept of physical education lesson. These metaphors produced by students under 4 conceptual categories. There wasn't a statistically significant difference between the conceptual categories according to gender. In accordance with the findings obtained in the present research, metaphor method can be used as an important data collection method in order to understand and explain the secondary school 7th grade students' perceptions of the concept of physical education.

Keywords: Concept, metaphor, metaphor perceptions, physical education lesson, secondary school.

INTRODUCTION

Human beings are in an education, development, and socialization process through their lives (33). According to Tolan (34), due to socialization, culture is transferred through generations, and individuals can accommodate the norms set in an organized social life.

Individuals need a set of real-life abilities to be able to socialize, and take place in social environments. They can acquire these skills through education. Educational activities provided at schools make great contributions to social accommodation processes of individuals. Socializing effect of games and sports prepares the pre-conditions that enable individuals to be in harmony with others, and society, and have a balanced structure (18). These pre-conditions are provided at schools with physical education lessons.

Sportive activities are the primary of what make students fit in with the needs of society, and therefore contribute to the social development. Through socialization in sports, people come together (12). Yetim (36) stated that, physical education lesson was important for children in

terms of both physical and social development, and sportive activities can help them learn their environment and establish communication.

Sport is important for human beings as it develops physical and mental structure, strengthens will, eases group work, enables cooperation, creates self-confidence, and socializes, and makes them members of the society (33).

Human beings can explain the reality inside them through metaphors. Metaphors are the only way to understand life, ourselves, and others (16). Metaphors present us what we call world by uncovering and covering it (19).

According to Abrams (1), human beings express themselves by associating their lives with other beings in the nature, and use metaphors doing this. Therefore, individuals always experience the process of associating elements in their lives with other elements (7, 37). Senemoğlu (29) defined metaphor method as associating new knowledge with existing knowledge, or schemas and giving meaning to new knowledge. Perry & Cooper (25) defined metaphor method as expressing something unknown using something known. Metaphors

enable educators to compare between two things, and associate two things through similarities and differences (21, 27).

Metaphors refer to expressing a concept or phenomenon using comparisons, the way it is perceived (26). Three main elements are important in comparing between concepts. These are; the subject of the metaphor, the source of the metaphor, and the features of the two things that are similar between the subject and the source of the metaphor (13, 31).

For instance, in the metaphor "Physical education lesson is like a party." there is a simile between physical education lesson and party. In this simile, physical education lesson is the subject, and party is the source of the metaphor. The answer to the question, why this simile was made associates between the source and the subject of the metaphor. The students answered this question as; "Because in physical education lessons, we sing songs, and play games with our friends."

This way, students try to explain the objects, events, environment, and life around them using various similes, through metaphors by giving a word a meaning different than its own meaning, as defined by Arslan & Bayrakçı (5), Aristo (4), Cerit (9). Therefore, due to metaphors, individuals create a strong mental mapping and modelling mechanism for their understanding and structuring their own worlds (5).

Metaphors, which are considered as powerful mental tools that can be used to understand and explain phenomenon (39), have been used to reveal to perceptions of concepts. Literature review presents many researches on different lessons (8, 30, 28, 9, 22, 32), though there have been no researches conducted to reveal students' perceptions of physical education lesson. In this context, determining and examining students' metaphorical perceptions of physical education lesson is considered to provide a guide for both school managers and physical education teachers, and also will contribute to student attendance on physical education lessons, and therefore it is of great importance. Additionally, the present research is expected to constitute a resource for the future researches in the subject field.

The purpose of the present research is determining how physical education lessons are perceived by students, through metaphors. In the research, the concept of physical education lesson is studied in detailed based on student remarks

through metaphor method. Consequently, the problem of the study was determined as "What are the metaphorical perceptions of 7th grade students for the concept of physical education lesson?" In order to solve this problem, answers to the following questions are sought in the present study.

1. What metaphors do 7th grade students produce related to the concept of physical education lesson?
2. What conceptual categories can be produced for the metaphors related to the concept of physical education lesson produced by 7th grade students?
3. Do the metaphors related to the concept of physical education lesson produced by 7th grade students differ in terms of gender?

MATERIAL & METHOD

Research Method

The purpose of the present study is revealing an existing case, and therefore it adopts descriptive method. Qualitative research methods were used in data collection analysis, and interpretation.

Participants

The present study was conducted on 7th grade students who study at three different schools in Konya in 2014-2015 academic year. A total of 403 students participated in the research. The answers of 10 students were excluded from the analysis as they left out some expressions unanswered, and didn't express an exact metaphor. Table 1 shows the frequency and percentage distributions of 393 students according to gender.

Table 1. Participants according to gender.

Gender	Frequency	Percentage (%)
Female	197	50.01
Male	196	49.9
Total Group	393	100

Data Collection

The present research analyses 7th grade students' perceptions of physical education lesson through metaphors. An interview form was created in order to reveal students' perceptions about physical education lessons. This form requested students to complete the expression "Physical education lesson is like; because". In this method generally used in metaphor studies,

using of the expression “like” aims at creating a simile, and “because” aims at basing the simile on a sensible ground. No interpretations were offered in order to avoid that misleading regarding the concept affected reliability negatively during implementation. Metaphor method enables complicated information collected through quantitative researches become clear (31; 37). Saban et al. (28) state that metaphors are the most powerful mental concepts that form, guide, and follow the opinions on the occurrence and continuance of events.

Data Analysis and Interpretation

“Content analysis” method was adopted to analyse the data collected in the present study. According to Ateş & Karatepe (6), the main purpose of content analysis is reaching at concepts and relations that can explain collected data. Yıldırım & Şimşek (38) stated that the main procedures conducted in content analysis were gathering similar data in the framework of certain concepts and themes, and organizing and interpreting these in a way that the reader could understand. Analysis of the data collected in the present study was conducted in 4 steps:

1. Naming the metaphors
2. Classifying the metaphors
3. Creating and analyzing the categories
4. Testing the validity and reliability of the measure

Naming the metaphors

In this step, the metaphors created by students were transferred into computer in an Excel table, and were listed in alphabetical order. In this process, the researchers checked whether students stated metaphors in a clear and a comprehensible way. The metaphors in the forms filled in by students were encoded. Forms that didn't include any metaphors, or metaphors that were not explained in a sensible way were not included in the research.

Classifying the metaphors

In this step, each metaphor was separated through “metaphor analysis” and “content analysis” techniques, and was analyzed compared to other metaphors in terms of similarity and common features (38; 14-Cited in, 6). Ten of the forms were eliminated in this step; 6 were eliminated because they were not filled in, and 4 were eliminated because they didn't include any complete

metaphors. From 393 valid forms filled in the research, 45 metaphors were obtained, these metaphors were listed again, and one example statement was determined for the metaphors with a frequency above one. Then an example metaphor list was created to be used in data categorization and analysis.

Creating and analyzing the categories

In this step, the metaphors created by the students were examined in terms of the common features. The ways of the concept of physical education lesson that expressed were examined in accordance with the list consisting 45 metaphors that was created in the previous step. Each metaphor created by participants was associated with a theme according to the perspectives on the concept of physical education lesson and 4 different conceptual categories were created.

These categories are:

- Entertainment environment
- Freedom
- Necessary
- Unimportant

While creating categories; it was taken into consideration that categories were;

- Comprehensive
- Independent in a way that didn't affect each other
- Unique so that each expressed a certain idea and
- Suitable to the purpose of the study

Testing the validity and reliability

With reference to the data collected in the present research, creation of the appropriate and correct categories, the placement of the data in the appropriate categories, and consequently, explaining how the researchers reached at these categories are the important measures of validity in a qualitative research (38-Cited in, 6). In the present research, we stated clearly the data collected, how we obtained these data and the consequences we reached at; and while testing reliability, the categorized metaphors were reviewed by field experts. In this stage, a coding key was prepared and this was photocopied for 20 experts for reliability purposes. Then, researchers and experts read the students' metaphors independently from each other, and created categories related to the

metaphors. As the coding keys were marked, the metaphors that were considered to be irrelevant by the experts were not included in the research. Then, the categories created by experts were checked, and these categories were marked as “consensus” or “dissensus”. If the experts created similar categories for the student metaphors, those categories were marked “consensus”, and if they created different metaphors those were marked as “dissensus”. The following formula by Miles & Huberman (21) was used to calculate the reliability of the present research.

$$P = Na \div (Na + Nd)$$

(P = Reliability; Na = Consensus; Nd = Dissensus)

RESULTS

A total of 45 physical education lesson related metaphors were created by 393 7th grade students. Twenty-four of these metaphors were created by one single student. The most frequently used metaphor was entertainment, which was used by 97 students (f: 97). In this part of the research, physical education lesson related metaphors created by 7th grade students who participated in the research are presented in 4 different conceptual categories in tables and then they were analyzed and interpreted.

Conceptual Categories

Physical education lesson as “entertainment environment”

This category consists of statements of 7th grade students who perceive physical education lessons as entertainment environment. In this category, students generally defined their physical education as a lesson when they enjoy themselves, have fun, don't get bored and lose track of time. As students created metaphors related to the concept of physical education lesson, where the present research is based on was, they used statements such as that “the teachers behave them well, they can do whatever they want, have fun and relax.”

Table 2. Reliability percentages of categories created.

Categories	Reliability (%)
Entertainment Environment	98
Freedom	96
Necessary	84
Unimportant	80

Table 3 shows these 13 metaphors that were evaluated in this category. These metaphors consist

of statements produced by 224 7th grade students (f: 224). This category represents the 57% of the participants. The most repeated metaphor in this category was “entertainment” which was used by 97 students (f: 97). Below are some statements included in this category.

I think the physical education lesson...

is like entertainment, because we always play games, and never get bored.

is like happiness, because I'm always happy in the lessons.

is like a game, because I have a lot of fun.

is like amusement, because I play games with my friends, and have fun.

is like water, because it ends so quickly.

Table 3. Physical education lesson as “entertainment

Rank	Metaphor	Frequency	Percentage
1	Entertainment	97	43.3
2	Game	70	31.2
3	Water	18	8
4	Amusement park	13	6
5	Party	8	3.6
6	Chocolate	5	2.2
7	Heaven	4	1.8
8	Music	3	1.3
9	Father	2	1
10	Amusement	1	0.5
11	Laughing	1	0.5
12	Joy	1	0.5
13	Happiness	1	0.5
Total		224	100

Physical education lesson as “freedom”

This category consists of statements of students who perceive their physical education lessons as freedom. It is considered that 7th grade students developed this perception because they can behave in a relaxed manner in the physical education lessons. According to them their physical education lessons are where they can behave freely play games as they want feel good and happy. Table 4 presents 12 metaphors in this category created by 88 students. This category represents 22.4% of the students who participated in the research. The most repeated metaphor in this category was “street” that

was used by 35 participants (f: 35). Below are some statements included in this category.

I think the physical education lesson...

is like street, because we can play freely.

is like liberation, because we are free and independent.

is like holiday, because it is the only lesson I feel free in.

is like freedom, because I rest.

is like weekend, because we are free and we can breathe.

Table 4. Physical education lesson as "freedom".

Rank	Metaphor	Frequency	Percentage
1	Street	35	39.8
2	Freedom	29	32.9
3	Holiday	8	9
4	Liberation	6	6.9
5	Independence	3	3.6
6	Weekend	1	1.1
7	Bird	1	1.1
8	Dream	1	1.1
9	Mountain	1	1.1
10	Ship	1	1.1
11	Gymnastics	1	1.1
12	Skateboard	1	1.1
Total		88	100

Physical education lesson as "necessary"

This category consists of statements of students who perceive physical education lessons as necessary. This category also includes the most metaphors of all the categories. It is considered that 7th grade students developed this perception because they think physical education lessons are important for health. According to them their physical education lessons are necessary lessons where they can rest and relieve from their stress for a healthy life. Table 5 presents 15 metaphors in this category created by 60 students. This category represents 15.2% of the students who participated in the research. The most repeated metaphor in this category was "life" that was used by 21 participants (f: 21). Below are some statements included in this category.

I think the physical education lesson...

is like peace, because peace is very important for human beings.

is like life, because this lesson is important for us as life.

is like resting, because I need in to relieve tiredness from other lessons.

Table 5. Physical education lesson as "Necessary".

Rank	Metaphor	Frequency	Percentage
1	Life	21	35
2	Flower	14	23.3
3	Tranquility	9	15
4	Air	4	6.6
5	Breath	2	3.3
6	Air	1	1.6
7	Obligation	1	1.6
8	Peace	1	1.6
9	Honey	1	1.6
10	Health	1	1.6
11	Fertility	1	1.6
12	A part of my life	1	1.6
13	Resting	1	1.6
14	Food	1	1.6
15	Medicine	1	1.6
Total		60	100

Table 6. Physical education lesson as "Unimportant".

Rank	Metaphor	Frequency	Percentage
1	Cruelty	16	76.1
2	Waste of Time	2	9.5
3	Carbon-dioxide	1	4.8
4	Nonsense	1	4.8
5	Trashcan	1	4.8
Total		21	100

Physical education lesson as "unimportant"

This category consists of statements of students who perceive physical education lessons as unimportant. It is considered that 7th grade students developed this perception because they think physical education lesson grades don't contribute to central exams. According to them their physical education lessons are nonsense waste of time like cruelty. Table 6 presents 5 metaphors in this category created by 21 students. This category represents 5.4% of the students who participated in the research. The most repeated metaphor in this category was "cruelty" that was used by 16

participants (f: 16). Below are some statements included in this category.

I think the physical education lesson...

is like cruelty, because I lollygag around in the lessons.

is like carbon-dioxide, because I think it is unnecessary.

is like nonsense, because there are no questions from this lesson in the central exams.

Table 7 shows that male students have more positive thoughts about the concept of physical education lesson than female students. However, chi-square test conducted on the conceptual categories didn't reveal any statistically significant differences between the metaphors produced by female and male students.

Table 7. Gender: Distribution of metaphors according to conceptual category.

Category	Females (n=197)	Males (n=196)
As entertainment environment	(45) Game (41) Entertainment (7) Amusement Park (6) Party (5) Water (3) Music (2) Father (1) Joy (1) Laughing (1) Chocolate Metaphor: 10 Frequency: 112 (%50)	(56) Entertainment (25) Game (13) Water (6) Amusement Park (4) Chocolate (4) Heaven (2) Party (1) Happiness (1) Amusement Metaphor: 9 Frequency: 112 (%50)
As Freedom	(10) Street (9) Freedom (5) Holiday (3) Independence (1) Weekend (1) Liberation (1) Bird (1) Dream (1) Mountain (1) Ship (1) Gymnastics Metaphor: 11 Frequency: 34 (%37.5)	(25) Street (20) Freedom (5) Liberation (3) Holiday (1) Skateboard Metaphor: 5 Frequency: 54 (%62.5)
As Necessary	(9) Life (9) Flower (6) Tranquillity (2) Air (1) Air (1) Honey (1) Health (1) Resting (1) Food Metaphor: 9 Frequency: 31 (%51.6)	(12) Life (5) Flower (3) Tranquillity (2) Breath (2) Air (1) Medicine (1) Obligation (1) Peace (1) Fertility (1) A part of my life Metaphor: 10 Frequency: 29 (%48.4)
As Unimportant	(10) Cruelty (1) Nonsense Metaphor: 2 Frequency: 11 (%52.4)	(6) Cruelty (2) Waste of time (1) Carbon-dioxide (1) Trashcan Metaphor: 4 Frequency: 10 (%47.6)

$\chi^2=0$; SD=1; $p=0.955$

DISCUSSION

The purpose of the present research is determining secondary school 7th grade students' perceptions of physical education lesson through metaphors.

Students used 45 different metaphors to express their perceptions of physical education lesson. Of these metaphors; the most frequently used perceptual expressions were; entertainment (f: 97), game (f: 70), street (f: 35), freedom (f: 29) and life (f: 21). Students used many different metaphors to express their perceptions of the concept of physical education lesson. This shows that they have different perspectives about the concept. Additionally, this shows the difficulty of explaining the concept of physical education lesson with one single metaphor.

Metaphors obtained in the present research produce some important issues about physical education lessons.

Evaluating the research on categories basis; we can list secondary school 7th grade students' perceptions of the concept of physical education lesson as follows:

The categories that included most metaphors were; physical education lesson as necessary (f: 15), physical education lesson as entertainment environment (f: 13) and physical education lesson as freedom (f: 12). This finding shows that students defined their physical education teachers using various but positive concepts. These three categories represent the 88.9% percentage of the students who participated in the research. Therefore, we can claim that secondary school 7th grade students have positive attitudes towards physical education lessons and they enjoy the lessons.

Neither Turkish nor foreign literature on the subject matter doesn't include any researches on students' metaphorical perceptions of the concept of physical education lesson. However, there are some researches on metaphorical perceptions of the concept of different lessons in general. Güven & Akhan (17) found that the concept of social sciences lessons was not defined with one single metaphor, but students defined the concept of lesson with various concepts.

Other metaphor studies on this subject also present similar findings. Guerrero & Villamil (15) and Saban et al. (28) also found in their researches that students used many various metaphors defining the concept of "lesson". Similarly, Aydın &

Pehlivan (7) reported in their research that teacher candidates used many different concepts to define the concept of "lesson". Afacan (3) found in his research on teacher candidates' metaphorical conceptions of the concepts of "science" and "science and technology lesson" that teacher candidates used many different and interesting metaphors. Şengül et al. (32) presented similar findings in their research on secondary school students' metaphorical perceptions of the concept of geography lesson that the concept of geography lesson was defined not with one single metaphor, but with many different concepts. Consequently, the findings of the present research on the secondary school 7th grade students' metaphorical perceptions of the concept of physical education lesson are in agreement with the findings of these researches mentioned above.

Of the metaphors related to the concept of physical education lesson created by secondary school 7th grade students in the present research; the most used metaphors were; entertainment (f = 97), game (f = 70), street (f = 35), freedom (f = 29) and life (f = 21). These findings show that the students who participated in the present research had positive attitudes toward the concept of physical education lesson. With reference to this finding we can claim that metaphor is an effective method in determining and explaining secondary school students' perceptions of the concept of physical education lesson. By this means the negative attitudes towards physical education teachers can be detected and these can be worked to be made positive.

Students are expected to feel safe and comfortable in physical education lessons. This expectation is one of the important attainments of physical education lessons. This situation was stated with students' metaphors; entertainment, game and freedom. Entertainment, game and freedom metaphors may have been resulted that students feel more comfortable in physical education lessons. Achinstein & Barrett (2) and Martinez et al. (20) also obtained similar findings in their researches. Students should feel safe and comfortable at their schools (27). Therefore, this can be provided for the students by their teachers who can implement the course curriculum in a more flexible way. The findings of the present study show that physical education lessons provide these for their students. Conceptual categories produced in the present research show that students produced metaphors that referred to the entertaining part (97%) of

physical education lessons. They stated that they enjoy the lessons feel more comfortable and free.

Education plays an important part in socialization and future tendencies of individuals (11). From this perspective physical education lessons which complement the general education and involve curricular and extracurricular activities have socializing and guiding aspects as stated by Kılbaş (18).

At the present time, physical education and sport activities aim at getting individuals adopt the lifelong habit of doing sports making them comprehend the importance of sports for health teaching them movement skills and introduce them to the society as individuals who are loyal to the sports and social ethics (24). Primary goals of physical education lessons are developing students' knowledge of physical education and sports, rules, techniques, health and diet. By developing this knowledge and physical features they can be individuals who have self-confidence self-conception take responsibilities work individually or cooperatively live healthily, consciously and productively (10). In short physical education is a set of activities that enable students improve themselves sophisticatedly (35).

In the present study, students produced metaphors that refer to the above-mentioned characteristics (f: 15) of physical education lessons. For instance metaphors such as life, peace, breath, obligation and health refer that students consider physical education lessons as necessary.

Some of the participants of the present study consider physical education lessons as unnecessary and unimportant. However, it is a very important lesson that requires discipline (23). The reason for students perceiving physical education lessons as unimportant may be the exam-oriented education system which excludes physical education grades from assessment. Because some students stated that they preferred doing tests during physical education lessons. As a result, some of the participants of the present research produced metaphors referring to the unimportance of physical education lessons (f: 5).

Analysis of the conceptual categories in terms of genders revealed that male students have more positive thoughts about the concept of physical education lesson than female students. Chi-square test conducted on the conceptual categories didn't reveal any statistically significant differences between the metaphors produced by female and

male students ($\chi^2=0$; $SD=1$; $p=0.955$). This finding is in agreement with the finding of the study conducted by Şengül et al. (32).

In conclusion, the present study analyzed how students perceive the concept of physical education lesson through metaphors. The researchers found that the students generally used positive metaphors to define physical education lesson. Presences of physical education teachers who make students feel close to them guide encourage and motivate their students and make physical education lessons entertaining so that students develop positive attitudes towards sports is considered important.

The present study was conducted in order to reveal secondary school 7th grade students' perceptions of the concept of "physical education lesson" through metaphors. Following suggestions can be offered in accordance with the findings of the present research: Metaphors can be a useful tool to determine student perceptions. Taking students with negative attitudes into consideration, school managers and physical education teachers can organize educational environment in a more fun way so to increase student participation in physical education lessons. Further researches can be conducted on different levels of education. More researches can be conducted on different lessons to detect student perceptions and prevent negative attitudes with arrangements conducted accordingly.

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