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Analysis of Primary Education Students' Metaphorical Perceptions of the Concept of Learning

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Abstract

The aim of this study is to determine the metaphors that are used by 3rd, 4th and 5th grade students in primary education relating to the concept of learning. The study is qualitative and it has been conducted using an interpretative approach. Two hundred and eighteen students participated in the study, but because the survey questionnaires of 83 students were considered invalid for different reasons, the analysis of the data was carried out for 135 students. The data were collected through a survey containing open ended sentences, such as "Learning is like ..... because .....". The content analysis technique was used to analyze the data. The data analysis was conducted in the following four stages: 1) coding and elimination; 2) category development; 3) validity and reliability; and 4) data interpretation. The data analysis showed that primary education students produced a total of 86 metaphors that were related to the concept of learning, and these metaphors were collected for 12 categories: the metaphors of 3rd grade students were collected for 6 categories, while the metaphors of 4th grade students were collected for 10 categories, and the metaphors of 5th grade students were collected for 11 categories. All of the categories, except for one, are composed of positive perceptions. Accordingly, it can be said that overall, 3rd, 4th and 5th grade students have positive perceptions about learning.

Key words: *interpretative qualitative research approach; learning; metaphor.*

Introduction

The new millennium has transformed education to a point where it exceeds the planned activities that are performed in the school environment, and has become

a process that continues throughout one's entire life. This phenomenon has also caused the roles of students within the learning-teaching process to change. According to the changing learning paradigm, the individuals, whose role is to learn, are now obliged to have more responsibility in the learning – teaching process. An individual who is a responsible learner will both make the learning process easier and learn more effectively and permanently by having to make decisions about the different dimensions of the learning process, self-regulate and employ his/her cognitive processes to a greater extent during the learning process. Regarding the internalization of education, cognitive and affective characteristics, which directly influence an individual's learning, are just as important as the regulation of the learning environment and the external factors that are employed during teaching.

The affective conditions that influence learning include attitude, motivation, manipulation and perception. Perception has an important place among these characteristics because learning is realized at the end of the processes of perception and the formation of meaning. Perception is the most important lesson of human life in every sense because it has a direct influence on the manner in which people approach any situation. While one individual may approach a situation in a positive manner, another individual may approach the same situation in a negative manner. Despite the fact that there is only one situation occurring, what lies at the base of this difference is the fact that the power of perception, people's level of openness to perception and individuals' life experiences are different from those of others.

Metaphors reflect this difference most effectively. Thus, metaphors have an important function in the definition and interpretation of learning, both as a product and as a process.

The word metaphor is formed by combining two Greek words (i.e. "meta" and "pherein", which mean "beyond, further, after" and "carriage, transfer, conveying", respectively). Metaphor refers to the use of a word or a concept in a way that it means something different from its known or accepted meaning. Accordingly, metaphors can be seen as both a form of verbal expression and as cognitive structures that ensure a reconciliation between the different meanings and the cognitive system (Angus & Rennie, 1989). Metaphors mostly cover the transfer of information from a similar area to a new and unknown area, and are generally expressed in verbal terms. However, while metaphors can also be formed in more than one way (e.g., verbally, by gesticulations and mimics, through the use of emphasis and by using tone of voice), they can also be created modally (Arnett, 1999; Cameron & Law, 1999; Müller & Cienki, 2009; Tsoukas, 1991). Therefore, metaphors are defined as the transformation of a word, concept or idiom that is more widely used to a different but similar object or act (Merriam-Webster, 2011; as cited in Karaırmak & Güloğlu, 2012, p. 122).

What lies at the root of the use of metaphors is the understanding that something is consistent with something else and with gained experience (Lakoff & Johson, 2010, p. 27). While individuals can use metaphors to re-identify facts and re-conceptualize

problematic situations (Goldstein, 2005, p. 7; Young, 2001, p. 609), they can also use metaphors to interpret and understand the world in which they live (Mahlios & Maxson, 1998, p. 228). Therefore, it can be said that metaphors function as an intellectual modeling and mapping mechanism, which ensures that individuals can understand and structure their own world (Arslan & Bayrakçı, 2006, p. 103; Palmguist, 2001, p. 25). However, in a metaphorical relationship, there needs to be a minimum of three underlying factors: the subject of the metaphor, its source and the characteristic that is assigned from the source of the metaphor to its subject (Forceville, 2002, pp. 1-2). Saban (2008, p. 460) describes these factors as follows: (1) the subject of the metaphor (for example, the word "school" in the sentence, "a school is like a treatment plant"), (2) the source of the metaphor (for example, the concept of "treatment plant" in the sentence, "a school is like a treatment plant"), and (3) the characteristics that are assigned from the source of the metaphor to its subject (for example, "a school is like a treatment plant. This is because students from all cultures and all sections of society are taught at school and return to society as citizens who function in different ways that are required by society...").

By nature, metaphors are frequently used in the area of educational science, as well as in every area that is specific to humans. People frequently benefit from metaphors in education, particularly because metaphors explain and reveal the assumptions that are related to certain concepts (Gültekin, 2013). Metaphors are used in different areas of education and, in fact, establish the basis for theories and models of various subjects (Bota, 2009). When studies that are conducted on the use of metaphors – in the field of educational sciences, in particular – are examined, they reveal that metaphors are generally used to explain the meanings that are assigned to any subject or concept. Studies that consider the concept of the teacher (Ben-Peretz, Mendelson, & Kron 2003; Cerit, 2008a; Clarken, 1997; Celikten, 2006; Kasoutas & Malamitsa, 2009; Lasley, 1994; Marshall, 1990; Oğuz, 2009; Oxford et al., 1998; Pektaş & Kıldan, 2009; Saban, 2004; Saban, Koçbeker, & Saban, 2006; Taşdemir & Taşdemir, 2011); the student (Bozlk, 2002; Saban, 2009); learning, teaching and education (Bullough, 1994; Carter & Pitcher, 2010; Elmholdt, 2003; Guerrero & Villamil, 2002; Levine, 2005; Martinez, Sauleda, & Huber, 2001; Massengill, Mahlios, & Barry, 2005); the school (Akkaya, 2012; Aydoğdu, 2008; Cerit, 2006; Engin-Demir, 2007; Hardcastle, Yamamoto, Parkay, & Chan, 1985; Inbar, 1996; Koçak 2013; Mahlios & Maxson, 1998; Nalçacı & Bektaş, 2012; Saban, 2008); and school directors and education inspectors (Akan, Yalçın, & Yıldırım, 2013; Balcı, 1999; Cerit, 2008b; Dönmez, 2008; Döş, 2010; Johnson 2006; Linn, Sherman, & Gill, 2007; Monroe, 2003; Töremen & Döş, 2009; Trnavčevič & Vaupot, 2009) are examples of these studies.

In examining studies focusing on the use of metaphors in the area of educational sciences, it can be seen that they have mostly concentrated on the concepts of the teacher, student, school and director, which are seen as the inputs of the education system. Some of these studies have focused on the concepts of teaching and education,

which are described as the dimensional process of the system of education. Both learning and the use of metaphors are equivalent to human history. Indeed, in the work entitled Theaitetos by Plato, his likening of learning to "the birth of the child" is possibly the oldest metaphor on learning (Hager & Halliday, 2009). In addition, it is supported by the results of research that metaphors in different cultures may express different meanings with the same words or express same meanings with different words (Berendt, 2008). From this point of view, it is important to examine these similarities and differences resulting from language structure with studies to be made from different cultures.

Despite the fact that learning and the use of metaphors that are connected to learning date back quite far in human history, the fact that the studies in this area are limited is thought provoking. The fact that no other studies in Turkey have been related to either learning or student metaphors related to learning and that this study considers learning-related metaphors that are used by primary education students demonstrates the significance of this study.

The general aim of this study is to reveal learning-related metaphors that are used by 3rd, 4th and 5th grade students in primary education. Responses have been sought to the following questions, which are consistent with this fundamental aim:

1. What metaphors do 3rd, 4th and 5th grade primary school students use to describe the concept of learning?
2. Under what categories can metaphors that are used by 3rd, 4th and 5th grade primary school students be classified?

Method

This study, which focuses on determining the metaphorical perceptions of students regarding the concept of learning, was conducted with an interpretative approach as its basis (Strauss & Corbin, 1990; Yıldırım & Şimşek, 2013). An interpretative approach is used when the aim of the study is to determine the perceptions of individuals—each of whom are social actors in the world—regarding the world (Glesne, 2012). Because the aim of this study is also to reveal the metaphoric perceptions of primary education students regarding the concept of learning, an interpretative approach was adopted here.

Sample

The participants in interpretative studies are chosen with a specific purpose in mind. The present study aims to acquire in-depth information about the subject of the study, and therefore, an easily reachable sampling method has been selected from among the methods of "intentional sampling" (Glesne, 2012, p. 61). The study was conducted with a group of 3rd, 4th and 5th grade students who are currently receiving education in Turkey. Two hundred and eighteen students participated in the study, but the survey questionnaires of 83 students were deemed invalid. As a result, the analysis of the study

data was performed on the data obtained from 135 students. The characteristics of the students who participated in the study are shown in Table 1.

Table 1

Characteristics of the participants

Characteristics	f
Gender	
Female	74
Male	61
Age	
9	18
10	36
11	59
12	22
Grade level	
3rd	47
4th	42
5th	46
Residential area where they live	
Village	31
Town	27
District Centre	38
City Centre	39
Total	135

As shown in Table 1, 74 of the students were female, and 61 were male. Accordingly, it is clear that the students who participated in the study are equally distributed in terms of gender. In terms of age, the largest number of participants is in the 11-year-old age group (f=59), while the lowest number of participants is in the 9-year-old age group (f=18). The distributions in terms of grade level are very close to one another. Forty-seven students who participated in the study were in 3rd grade, 42 students were in 4th grade, and 46 students were in 5th grade. Thirty-one students who took part in the study reside in villages, 27 reside in towns, 38 reside in district centers, and 39 reside in city centers. Accordingly, it is clear that the rural and urban distributions of students who participated in the study are balanced.

Data Collection

An open ended survey questionnaire was prepared so that students' perceptions related to the concept of learning, could be determined. The questionnaire was composed of two sections. The first section contained questions that are related to age, gender, grade level and areas where the students reside, while the second section contained the sentence, "Learning is like ..... because ....." Similar data collection tools have been used in other studies (Döş, 2010; Gültekin, 2013; Inbar, 1996; Linn, Siberman, & Gill, 2007; Saban, 2009; Yalçın & Erginer, 2012).

In the present study, the relationship between the subject and the source of the metaphor was determined and shown by the students based on the use of the word "like". Related to this concept, through "because" participants were expected to present a reason or logical basis for their metaphors.

Data Analysis

The content analysis approach was adopted because the fundamental objective of the study was to discern the relationships that could explain the collected data. Firstly, in the content analysis, similar data are combined within the framework of certain concepts and themes. This is followed by the data being organized in a manner in which it can be understood by readers, and their interpretation can be determined. Based on the stages that are followed while executing content analysis, the following sequence was applied in this study: 1) coding and elimination; 2) category development; 3) validity and reliability; and 4) interpretation of data.

Coding and elimination: The coding process in qualitative studies requires the obtained data to be separated into groups, and the data's conceptualization and the relationship between the data to be determined (Strauss & Corbin, 1990). Within the scope of the study, the responses of the participants were first transferred to a table that was created on the computer, and the metaphors that appeared were listed. Additionally, when data of each participant was recorded on the computer, the participant was coded and numbered between S1 and S135. A relational category framework was created from the data set that was found as a result of this study. In other words, the data set is made ready for finding, comparing and explaining patterns with the obtained codes.

In the second stage, the metaphors that were created by students were grouped according to their grade levels. The metaphors in each group were then subjected to a second grouping in terms of the "subject of the metaphor", the "source of the metaphor" and the "relationship between the source and the subject of the metaphor". Based on the analysis that was implemented at this stage, a total of 83 students were either unable to produce a metaphor, only explained the concept by defining it, or failed to establish a relationship between the concept and a metaphor and were eliminated. This situation can be explained by the fact that students in this age group in Turkey are not accustomed to such surveys. As a result of these procedures, 135 survey questionnaires were evaluated.

Category development: At this stage, the learning-related statements that were created by the participants were listed in alphabetical order. From the metaphors that were generated by the participants, those that were determined to possess the same characteristics were combined in the same group. Themes or categories were determined as a result of an inductive analysis. "Internal consistency" and "external consistency" measures were taken into account when defining the themes. For internal consistency, care was taken to ensure that the metaphors that were placed under the same theme formed a meaningful whole, while for external consistency, whether or not all of the metaphors, which had been obtained and were found to be consistent with the aims of the study, was considered. Thus, it was determined that 86 valid metaphors were generated by the 135 participants, and each metaphor was associated

with a specific theme that took the metaphor's reasons into account. Twelve different conceptual categories were created as a result of this process.

Validity and reliability: Validity in qualitative studies means that the observation and acquisition of the phenomenon are examined by the study at face value and as objectively as possible (Kirk & Miller, 1986, as cited in Yıldırım & Şimşek, 2013). Therefore, no directional examples were given to the participants during their process of generating metaphors, no suggestions were made, and care was taken to ensure that participants only shared their own opinions. Furthermore, persuasiveness and transmissibility are also very important in ensuring the validity of the study (Yıldırım & Şimşek, 2013). Another important route to ensuring the validity of a qualitative study involves directly presenting the views of the participants and announcing the results that are based on these views (Ratcliff, 1995, p. 20; Wolcott, 1990). Therefore, the data analysis process in this study is described in detail to ensure the validity of the study and that the metaphors generated by the participants were directly presented during the data analysis and interpretation, that the metaphors generated were presented in the findings section, and that detailed explanations of the metaphors were given. Additionally, the data collection and analysis process is portrayed in full detail.

A consistency examination was implemented to ensure the reliability of the study (Yıldırım & Şimşek, 2013). The metaphors, which were separated into conceptual categories by the researcher, were presented to two qualified experts in the area of qualitative research so that their views could be sought. The experts were asked to match the metaphors to these conceptual categories. Their consensus and differences in opinion were then determined, and the reliability of the study was calculated using the reliability formula of Miles and Huberman (1994). It was determined that the consensus between the experts and researchers was 92%.

The interpretation of the data: The categories and metaphors that were created after the realization of the stages that are presented in the study were visualized using diagrams and tables. The findings were presented, explained and interpreted based on these visualizations.

Results

In this section, the learning-related metaphors that were generated by the students who participated in the study were first presented in general, and then, the categories and themes that were created from the metaphors were presented as forms and shown by sections from the statements of the students being cited.

As shown in Table 2, during the course of the study the students generated a total of 86 metaphors related to the concept of learning. The metaphors that were most used by the students were "reading" (f=16), "star" (f=13), "the sun" (f=12), "book" (f=11), "the moon" (f=10) and "the sea" (f=7). In other words, the students mostly associate the concept of learning with metaphors of "reading, star, the sun, book, the moon and

the sea". The students may have used the metaphors of reading and book to describe the basis of education and the metaphors of star, the sun, the moon and the sea to describe the extensiveness, magnitude and infiniteness of learning. Indeed, despite the changes and developments in science and technology, no activity can take the place of reading, which is defined as the resolution and understanding of the codes of written products. However, the attempt to explain the extensiveness, infiniteness and changeability that relate to the nature of learning, through incidents of nature and their formation, can be seen as a reflection of this natural process.

Table 2

The meanings attributed to the concept of learning by primary education students

Categories	Metaphor name	f	Categories	Metaphor name	f
Infiniteness and magnitude	The sea	7	Informing and guiding	Book	11
	Star	4		Dictionary	4
	The world	4		Information machine	3
	Rain	3		Computer	2
	Leaf	2		Encyclopaedia	2
	Desert	1		Guide	2
	Forest	1		Mother	2
	Snowball	1		Compass	1
	Soil	1		Friend	1
	The ocean	1		Journey	1
	The sky	1		Library	1
	Tree roots	1		Polar star	1
	Water	1		Traffic light	1
	Total	**28**		**Total**	**32**
A complex affair requiring time	Reading	16	Changeability and variety	Story	2
	Writing	5		Aquarium	1
	Science	4		Bee	1
	Researching	3		Bird	1
	Riddle	3		Cloud	1
	Mathematics	2		Field	1
	Miner	2		Film	1
	The brain	2		Forest	1
	A complex text	1		Grasshopper	1
	Journey	1		Jigsaw puzzle	1
	Labyrinth	1		Mobile telephone	1
	Rose	1		Series	1
	Total	**41**		**Total**	**13**
A living concept	Baby	3	An enlightening concept	The sun	12
	Flower	3		The moon	10
	Growing up	3		Star	9
	Eating	1		Light	1
	Fledgling	1		Sparkle	1
	Fruit	1		Torch	1
	Student	1			
	Total	**13**		**Total**	**34**

Categories	Metaphor name	f	Categories	Metaphor name	f
Negativity	Going to school	2	An entertaining affair	Drawing a picture	5
	Factory	1		Game	4
	Horror film	1		Playing a game	4
	Nightmare	1		Entertainment	3
	Robot	1		Earning points	1
	Torture tool	1			
	Total	**7**		**Total**	**17**
A process which progresses in stages	Climbing stairs	2	Uncertainty and curiosity	Curious man	1
	The crawling of a baby	2		Gift box	1
	Baby talking	1		Reading the first page of a book	1
	Road	1		Surprise	1
	Swimming	1		Thought	1
	Total	**7**		**Total**	**5**
A need	Water	3	Generating solutions and improvements	Medicine	1
	Air	1		Treatment	1
	Bread	1			
	Food	1			
	Total	**6**		**Total**	**2**

The 86 learning-related metaphors that were generated by the students were combined into 12 categories in terms of their shared characteristics and reasons for use. The themes for learning-related metaphors generated by primary education students were combined into the following categories: *"a complex activity"; "infiniteness and magnitude"; "enlightening"; "informing and guiding"; "an entertaining affair"; "a living concept"; "a need"; "a process that progresses in stages"; "changeability and variety"; "negativity"; "uncertainty and curiosity"; "generating solutions and improvements"*. When these categories, which were obtained as a result of the analysis of learning-related metaphors that were generated by primary education students, are closely examined, it is clear that all of the categories, except for one (negativity), are positive. This finding shows that students perceive the concept of learning as being positive. This positive view of learning is important in terms of its positive reflection on the learning experience and its ability to ensure effective and permanent learning.

The metaphor categories were obtained in accordance with the class levels, and the metaphors within these categories and their frequencies are presented in Table 3.

Table 3
The distribution of metaphor categories, according to grade levels

Categories	The distribution and frequency of metaphors according to grade levels					
	3rd grade	f	4th grade	f	5th grade	f
Learning is a complex and time consuming activity	Science Riddle Mathematics Reading	4 3 2 2	Reading Writing Miner	6 4 2	Reading Researching	8 3
Infiniteness and magnitude	The world Star The sea The ocean	4 4 3 1	The sea Snowball	4 1	Leaf Rain	2 2
An enlightening concept	Star The sun The moon	4 4 3	The sun The moon Star	4 3 3	The moon The sun Star	4 4 2
Informing and guiding	Book Encyclopaedia	5 2	Book Dictionary	4 4	Information machine Book	3 2
An entertaining affair	Drawing a picture Game Playing a game	2 1 1	Drawing a picture Playing a game Earning points	3 3 1	Game Entertainment	3 3
A living concept	Flower Growing up Baby	3 3 3	–		–	
A need	–		Food Air Water	1 1 1	Water Bread	2 1
A process which progresses in stages	–		Climbing stairs Swimming	2 1	The crawling of a baby Baby talking	2 1
Changeability and variety	–		Film Aquarium Forest	1 1 1	Story Grasshopper Mobile telephone	2 1 1
Negativity	–		Torture tool Horror film Nightmare	1 1 1	Going to school Robot Factory	2 1 1
Uncertainty and curiosity	–		Gift box Reading the first page of a book	1 1	Curious man Surprise Thought	1 1 1
Generating solutions and improvements	–		–		Medicine Treatment	1 1

As shown in Table 3, 73 of the learning-related metaphors that were generated were used in 3rd grade, 68 were used in 4th grade, and 67 were used in 5th grade. Accordingly, no significant difference is present between grade levels in terms of the quantity of metaphors. The learning-related metaphors that were generated by 3rd, 4th

and 5th grade students were combined into 12 categories, with the metaphors of 3rd grade students being combined into 6 categories, the metaphors of 4th graders being combined into 10 categories, and the metaphors of 5th graders being combined into 11 categories. Regarding the distribution of these categories, according to grade levels, 3rd grade students categorically generated fewer metaphors, and while they generated a large number of metaphors per category, these metaphors were widely dispersed (in connection with their age and development levels); 4th and 5th grade students generated more categories but fewer metaphors for each category.

When examining categories, it is obvious that the categories that are shared by all of the grade levels are as follows: "learning as an activity that needs time and is complex", "learning as infiniteness and magnitude", "learning as an enlightening concept", and "learning as an entertaining affair". The categories that are only shared by 4th and 5th grade students are as follows: "learning as a need", "learning as a process that progresses in stages", "learning in terms of changeability and variety", "learning as a negative concept", and "learning as uncertainty and curiosity". In addition, the category of "learning as a living concept" is only present in the metaphors that were generated by 3rd grade students, while the category of "learning for generating solutions and improvements" is only revealed in the metaphors of 5th grade students.

When the metaphors in the category "learning is a complex and time consuming activity", which is present in all three grade levels, is examined in more detail, it is clear that apart from the "reading" metaphor (which is used in all of the three grades), the metaphors that were used in all of the three grades were different. The reason for why "reading" is present in all of the three grades may be because reading is something that requires time and effort, yet produces a positive outcome. Indeed, while S81 (a 4th grade student) expresses learning in the sentence, "Learning is like reading. If we need to make an effort to read, we also need to make an effort to learn", S189 (a 5th grade student) says, "I liken learning to reading. It is as difficult as reading." These statements show that students perceive learning as something that is difficult and takes time and effort. However, this difficulty, which arises from the nature of learning, is not actually assessed by students as something negative, and is found to be important in terms of its reflection of the depth of the process and the fact that the resulting outcome is positive.

The students who participated in the study perceive learning as an infinite and extensive concept. This perception is, in fact, associated with the nature of knowledge: knowledge is also an infinite phenomenon that does not have any boundaries. The following statements serve as examples of this perception: "Learning is like the ocean. It is big, just like the ocean. There is a lot of information that needs to be learnt" (S39, 3rd grade); "Learning is like the sea; you never run out of things to learn despite learning more and more" (S116, 4th grade); "I liken learning to a leaf. Just as there are a lot of leaves on the branch of a tree, there are also a lot of things to learn" (S157, 5th grade).

Students who regard learning as an "enlightening concept" relate it to a light source. In reality, this is the reflection of a traditional imagination and the manifestation of a shared perception in communal teachings. Indeed, the figure of a torch that is shown between the pages of an open book in the logo of the Ministry for Education is the most vivid example of this perception. The perception of enlightenment in the community and the teaching of religion can also be seen as another source that feeds this imagination. This imagination is also reflected in the following statements by students: "If light enlightens us, then learning also enlightens us" (S67, 3rd grade); "Learning radiates light around it, just like the moon" (S120, 4th grade); "I liken learning to the sun because, like the sun, learning enlightens us" (S148, 5th grade).

It is clear that students interchangeably used the "book" metaphor in the category of "learning as informative and guiding". The fact that students in all of the three grade levels likened learning to books is a reference to books being a source of information. This observation is also proof that despite changing and developing technology and the opportunities that these changes and developments provide, books are still regarded as a source of information and the symbol of learning. The statements of some of the students who liken learning to books are as follows: "Learning is composed of information, just like books" (S89, 4th grade); "Learning gives us information, just like books" (S28, 3rd grade). In addition, the metaphors ("compass, guide, friend, traffic lights and polar star") that were used by students who consider learning to be a guiding factor for individuals are also evident. When the manner in which students use these metaphors is examined, it is clear that the belief that learning will not lead an individual astray or turn the individual away from the wrong path is dominant.

When we examine the metaphors within the "learning as an entertaining affair" category, we find that almost all of the students jointly used the same concepts. The shared metaphor used by students who find learning to be entertaining is "game" because the students who participated in the study are still at ages where they enjoy playing games. In fact, games are a serious business and are preferred by people of all ages for the purposes of entertainment and learning, according to their ages and individual characteristics. Those who used this concept can be considered students who find pleasure in learning. Indeed, this phenomenon is reflected in the statements of the students, as follows: "Learning is enjoyable, just like games" (S34, 3rd grade); "Learning is like a game, which I enjoy playing" (S162, 5th grade).

The metaphors in the category of "learning as a living concept" were only used by 3rd grade students. These students expressed that learning is similar to the feeding and growing characteristics of living beings, and they defined it in this manner: "If we do not water a flower, it will wither. If we do not add new information to learning, learning will wither, too" (S3) and "Learning is alive, like a baby, and develops over time" (S37). The students who used the metaphors in this category likened the formation and development of learning to the concept of being alive and, in fact, emphasized that

learning is a process that continues throughout life, and that continuous learning is essential for the continuation of life.

Some of the students perceive learning as a "need". The fundamental needs of people are emphasized to support this idea. Indeed, the metaphors that were used in this category were explained using concepts that are required for the continuation of life. This approach was reflected in the statements of the following students: "I liken learning to the air because just like we need the air, we also need learning" (S104, 4th grade); "I liken learning to water. It is important for life, similar to water" (S168, 5th grade). Students who used these metaphors see learning as a vital and unavoidable requirement.

The 4th and 5th grade students who see learning as a "process that progresses in stages" attempt to explain that learning does not occur in an instant and that it is a process that progresses stage by stage. Indeed, this concept is related to "climbing stairs and the stages of being a baby" in the metaphor examples that were used. Examples of this perception are as follows: "I liken learning to climbing stairs because learning leads you to a higher grade, just like climbing stairs does" (S87, 4th grade) and "I liken learning to a baby crawling. Learning takes time, just like the crawling of a baby" (S161, 5th grade).

Students who perceive the difference, variety and changeability aspects of learning emphasized the content of learning. This observation is shown in the following statements: "I liken learning to an aquarium. Just like there are a variety of fishes in an aquarium, there is a variety of information in learning" (S135, 4th grade); "Learning is like a garden and a forest because just as there are different living beings in a forest, there is different information in learning" (S75, 4th grade); "I liken learning to a story. Just as there are different events and information in a story, there is also different information in learning" (S152, 5th grade). When the example statements are examined, we see that this variety in the metaphors is a result of the students' different life experiences and perceptions and their individual differences.

Regarding the metaphors in the "learning as a negative concept" category, which is the only category that contains negativity out of all of the categories, it is clear that the students' negative perception is the result of the content and process of learning, rather than learning itself. Examples of this observation are as follows: "I liken learning to a tool of torture because I sometimes experience difficulties when learning" (S134, 4th grade); "Learning is like a factory. It always results in the same product" (S200, 5th grade); and "I liken learning to a robot because it makes us act like robots" (S78, 5th grade). When these statements are examined, it is clear that serious criticisms are actually directed at the education system. Students perceive learning as something that both causes individuals to become similar and that eliminates individual differences. However, the concept of modern education requires sensitivity to the individual differences of students and their manners of learning.

The metaphors under the category of "learning as uncertainty and curiosity" are related to the fact that learning causes something that is unknown to become known. This phenomenon is reflected in the following statements: "I liken entertainment to a gift box because, like a gift box, what you will earn is not certain" (S129, 4th grade) and "I liken learning to a surprise because the things that I learn amaze me" (S168, 5th grade). Learning is something that causes curiosity. This outcome can be both exciting and frightening because not knowing what one is going to learn can sometimes lead the student's feelings to change when what he or she learns must be reconciled with what he or she has learnt.

In the category of "generating solutions and improvements", for which only 5th grade students generated two metaphors, students stated the following: "I liken learning to medicine. If medicine cures the ill, then learning cures the ignorant" (S156) and "I liken learning to being treated for (cured of) ignorance" (S164). These students define learning as a solution that ensures better living conditions. This phenomenon can be seen as a reference to the very nature of learning because the advancement of humanity and the resolution of problems are dependent on science, and the advancement of science is dependent on learning and research.

Discussion and Conclusion

This study, which was based on the reality that metaphors (i.e., vehicles of perception and an intellectual phenomenon) are the most powerful intellectual vehicles that can be employed in the understanding and explanations of highly intangible, complex or theoretical concepts (Yob, 2003), has attempted to determine the meanings and perceptions to which primary education students have assigned the concept of "learning". The most fundamental conclusion of the study is that the meanings that they have assigned to the concept of "learning" are highly varied. The underlying reason for this variety among the metaphors, which are expressed as a form of the students' verbal accounts and cognitive structures, and ensure reconciliation between different meanings and the cognitive system (Angus & Rennie, 1989), can be said to be dependent on one's way of thinking and seeing, which shows how we perceive the world (Morgan, 1998). Additionally, it is possible that at the basis of this conclusion is the ontological belief that lies underneath the constructivist approach, which has been adopted in teaching programs in Turkey, and the influential role of the interpretative paradigm on which the approach depends. According to the interpretative paradigm, knowing something is closely associated with how people interpret and understand certain objects, incidents, concepts, behaviors and perceptions (Glesne, 2013). This phenomenon is also related to the nature of constructivist learning because in constructivism, the control and responsibility for learning completely rest with the individual, and the lives of individuals, their learning styles, their points of view and their readiness levels direct their learning (Brooks & Brooks, 1993). Naturally, all of these differences among individuals are also mirrored in their learning and the manner

in which they express what they have learned. Based on this point of view, students seem to reflect the variety that they possess in their cognitive structures, regarding their concept of learning, as seen through their different statements and methods.

The 86 learning-related metaphors that were generated by the students were combined under 12 categories that are based on the metaphors' shared characteristics and the reasons for using these metaphors. The categories from which the most metaphors were generated included "a complex affair that requires time" (41) and "an enlightening concept" (36), while those categories with the least number of metaphors were "uncertainty and curiosity" (6) and "generating solutions and improvements" (2).

The reason that the students who participated in the study see learning as a "complex affair that requires time" can be explained by the nature of learning: learning is an active process, which forms the self-knowledge, understanding and behavior of an individual in regard to a specific phenomenon, incident or situation, as a result of his/her interaction with his/her surroundings (Charlesword, 2000). In other words, learning is achieved by listening and reading, as well as by the effective participation of students in the learning process, discussing and arguing for one's points of view, establishing hypotheses, and questioning and sharing ideas (Perkins, 1999). Thus, the fact that individuals have more responsibility for learning in the learning–teaching process and the fact that they have to exert more effort and take a more active role may lead them to view learning as a difficult and complex activity.

Beliefs, which are defined as information that an individual accepts as correct (Kobala & Crawley, 1985) and the intellectual structures that are created by experiences (Sigel, 1985), direct people's behaviors and actions. The metaphors that were generated by students who participated in the study and fell under the "enlightening concept" category seem to reflect common perceptions, beliefs and teachings. Indeed, similar to the belief of the "God of the Sky", which was among the first religious beliefs of the Turks, very important sacred values have been assigned to the concepts of the moon, the stars and the sun in their Muslim beliefs, after accepting the Islamic religion. The most striking examples of this phenomenon include the facts that the moon and the star are the two principal symbols that are contained in the Turkish flag; there are sixteen stars, which symbolize every Turkish state in history, in the Presidential pennant; and there is the figure of a sun, which symbolizes the Republic of Turkey and is located in the center of the stars. In addition to the symbols of the moon, stars and sun, which are present in this study, scopes, such as light, torch and sparkle, are used in the same category. These concepts are seen as the equivalent to saving the individual and the community from darkness. However, the concepts of ignorance and lack of knowledge are seen as being the equivalent of darkness. These concepts also represent the same meanings in many songs, idioms and proverbs, which reflects the value attributed to them.

One of the two categories that contains the least amount of metaphors generated within the study was "uncertainty and curiosity". The fact that a relatively low number

of metaphors was generated in this category reveals that students see learning as a concept that is uncertain and causes curiosity. In fact, because curiosity is an important factor in learning, the fact that the number of students who associate learning with curiosity is very low is thought provoking. Curiosity is an important factor in the students' need to learn and their acting in accordance with this need (Güleç, Çelik, & Demirhan, 2012; Loewenstein, 1994). Another category that contains a low amount of metaphors was learning as a means for "generating solutions and improvements". Here, the consideration referred to whether learning solves real life problems. The fact that very few metaphors were used in this category can be interpreted as a lack of connection between daily life and learning content in the Turkish Education System.

When the categories, which appear as a result of the study, are examined, the learning-related metaphors that were generated in the informing, guiding and enlightening categories appear to be similar. In the study by Saban (2008), students, teachers and teacher candidates were asked to provide a metaphor for the concept of school. The metaphors that were generated included a house in the form of a school, a center of knowledge, a factory, a fruit garden, and a polar star, and these metaphors fell under the categories of love and solidarity, knowledge and enlightenment, culture and shaping, growing and maturing, pleasant and nice, and guiding and directing. In the study by Nalçacı and Bektaş (2012), teacher candidates generated metaphors, such as family, friend and factory that were related to the concept of school. In the present study, primary education students also regarded the concept of learning as being associated with school, and subsequently generated metaphors, such as polar star, friend and fruit. In other words, primary education students view learning as something that occurs in school, and they use similar expressions when describing metaphors for school and for learning. This phenomenon can be interpreted as a failure to achieve the whole of the envisaged structural changes in the Turkish education system, which were put into effect in 2004, because the underlying assumption of an education reform, where constructivism is embraced, is that learning continues throughout one's entire life and is not restricted to school. However, the students' perceptions are that learning is an activity that is performed at school.

A large number of metaphors are needed for the concept of learning to be fully explained because metaphors only represent part of the phenomenon that they are attempting to explain, rather than its entirety (Weade & Ernst, 1990, p. 133). It is understood that the most used metaphors in this study are "reading" (f=16), "star" (f=13), "the sun" (f=12), "book" (f=11) and "the moon" (f=10). Accordingly, students primarily seem to associate learning with the metaphors of "reading" and "book", which can be said to be the largest sources of learning, and with "star", "the sun", and "the moon", which are symbols of enlightenment. While the concepts of reading and books are directly associated with learning, the fact that students still possess the traditional point of view that books are a primary source of learning is also revealed by this study. However, the elementary-level teaching program, which has been based

on constructivism and is currently being implemented, emphasizes life experiences. This also parallels the conclusion that learning is perceived as an activity that occurs at school. Students who explain learning by using the concepts of the stars, the sun and the moon seem to depend on symbols that are perceived as valuable by the community when defining these concepts. As stated above, these concepts are important for the Turkish community, both in terms of the religious values and the nationalist values that they connote.

Another conclusion that has been reached in the study is that the metaphors of 3rd grade students were combined under six categories, while the metaphors of 4th grade students were combined under ten categories, and those of 5th grade students were combined under eleven categories. When the distribution of these categories, according to grade levels is examined, 3rd grade students seem to generate fewer categories of metaphors, and although they generate a large number of metaphors per category, these metaphors are widely dispersed (in connection with their age and development levels). However, 4th and 5th grade students generate more categories but fewer metaphors for each category. This outcome can be explained by the ages and learning levels of the students, as well as the enrichment of their cognitive structures.

Metaphors, which researchers accept as having been present in human language for hundreds of years, are extensive modes of expression that include thoughts as well as actions (Lakoff & Johnson, 2010; Richards, 1936). Therefore, similar to describing many other concepts, it is also possible for metaphors to be used when describing learning. The fact that learning is obtained via metaphors in learning and teaching processes where the constructivist learning approach is implemented, in particular, is quite meaningful. During the process of constructing information, when new concepts are associated with previous information that is possessed by students, the new concepts become meaningful (Metsala & Glynn, 1996). The formation and expression of this association are often made easier through the use of metaphors. Therefore, metaphors should be used when explaining, measuring and evaluating learning; their use should be encouraged; and research that uses more extensive and varied patterns should be implemented. It is suggested that cross-cultural studies be carried out to explain the learning metaphor in depth and universally.

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Analiza metaforičkih percepcija pojma učenja kod učenika u osnovnoj školi

Sažetak

Cilj ovoga istraživanja bio je ustanoviti kojim se metaforama koriste učenici trećega, četvrtoga i petoga razreda osnovne škole koje su vezane uz pojam učenje. Ovo je istraživanje kvalitativnoga karaktera, a provedeno je koristeći se interpretacijskim pristupom. U istraživanju je sudjelovalo 218 učenika, a s obzirom na to da su 83 upitnika nevažeća iz raznih razloga, analizi je podvrgnuto 135 učeničkih upitnika. Podatci su prikupljeni koristeći se anketom s tvrdnjama otvorenoga tipa poput: „Učenje je poput…… jer …….". Tehnikom analize sadržaja mogli smo analizirati podatke. Podatci su analizirani u sljedeća četiri koraka: 1) kodiranje i eliminacija; 2) kategoriziranje; 3) valjanost i pouzdanost; 4) interpretacija rezultata. Analiza podataka pokazala je da su učenici u osnovnoj školi iskazali ukupno 86 metafora koje su bile povezane s pojmom učenje, a te su metafore svrstane u dvanaest kategorija: metafore učenika trećega razreda u 6 kategorija, metafore učenika četvrtoga razreda u 10 kategorija, metafore učenika petoga razreda u 11 kategorija. Sve kategorije izuzev jedne sadržavale su pozitivnu percepciju o učenju. Shodno tome, možemo reći da učenici trećega, četvrtoga i petoga razreda uglavnom imaju pozitivnu percepciju o učenju.

Ključne riječi: *interpretacijski pristup kvalitativnom istraživanju; metafora; učenje.*

Uvod

Novi milenij transformirao je obrazovanje do točke kada ono nadmašuje planirane aktivnosti koje se odvijaju u školskom okruženju pa je obrazovanje preraslo u proces koji se nastavlja tijekom života. Taj fenomen uzrokovao je i promjenu uloge učenika unutar procesa učenja i poučavanja. Prema promijenjenoj paradigmi učenja, pojedinci čija je uloga učiti, sada imaju više odgovornosti u procesu učenja i poučavanja. Pojedinac koji je odgovoran za učenje, učinit će taj proces lakšim, učinkovitijim i trajnijim ako o tome donosi odluke iz različitih dimenzija procesa učenja, ako samoregulira ili se koristi svojim kognitivnim procesima za vrijeme učenja. Vezano uz internalizaciju obrazovanja, kognitivne i afektivne karakteristike, koje izravno utječu na učenje pojedinca, jednako su važne kao i regulacija okruženja za učenje i vanjskih faktora koji se upotrebljavaju za vrijeme poučavanja.

Afektivna stanja koja utječu na učenje podrazumijevaju stav, motivaciju, manipulaciju i percepciju. Percepcija ima važnu ulogu među navedenim karakteristikama jer se učenje ostvaruje na kraju procesa percepcije i oblikovanja značenja. Percepcija je najvažnija pouka ljudskoga života u svakome pogledu jer izravno utječe na način na koji ljudi pristupaju bilo kojoj situaciji. Dok jedan pojedinac može pristupiti situaciji s pozitivnim stavom, drugi istoj situaciji pristupa negativno. Unatoč činjenici da se radi o samo jednoj situaciji, ono što je u srži te razlike jest činjenica da su snaga percepcije, ljudska razina otvorenosti percepciji i životno iskustvo jednog pojedinca različiti od drugoga.

Metafore najučinkovitije odražavaju tu razliku. Stoga metafore imaju važnu ulogu u definiranju i interpretaciji učenja kao produkta i kao procesa.

Riječ metafora nastala je od dviju grčkih riječi („meta" i „pherein", što znači „izvan, dalje, nakon" i „prijenos, transfer, izražavanje"). Metafora se odnosi na korištenje riječi ili pojma na način da ono znači nešto drugo od poznatog ili prihvaćenog značenja. Metafore se mogu sagledati kao oblik iskaza i kao kognitivna struktura koja osigurava usklađivanje između različitih značenja i kognitivnog sustava (Angus i Rennie, 1989). Metafore uglavnom pokrivaju prijenos informacije od poznatog područja u novo i nepoznato područje i uglavnom su iskazane verbalno. Međutim, metafore mogu nastati na više načina (npr. verbalno, gestikulacijom i mimikom, naglašavanjem ili bojom glasa), pa tako i modalno (Arnett, 1999; Cameron i Law, 1999; Müller i Cienki, 2009; Tsoukas, 1991). Stoga se metafore definiraju kao transformacije riječi, pojma ili idioma koje ima širu uporabu za različite, ali slične stvari ili radnje (Merriam-Webster, 2011; prema Karaırmak i Güloğlu, 2012, str. 122).

Ono što je u osnovi korištenja metafora jest razumijevanje i doživljavanje jednoga kao nečega drugoga (Lakoff i Johson, 2010, str. 27). Dok se pojedinci mogu koristiti metaforama da bi ponovno identificirali činjenice i rekonceptualizirali problematične situacije (Goldstein, 2005, str. 7; Young, 2001, str. 609), oni se također mogu koristiti metaforama da bi tumačili i razumjeli svijet u kojemu žive (Mahlios i Maxson, 1998, str. 228). Stoga se može reći da metafore djeluju kao mehanizmi intelektualnog modeliranja i mapiranja, što omogućuje pojedincima razumijevanje i strukturiranje vlastitoga svijeta (Arslan i Bayrakçı, 2006, str. 103; Palmguist, 2001, str. 25). Međutim, u metaforičkom odnosu, moraju postojati najmanje tri osnovna faktora: subjekt metafore, njezin izvor i karakteristika koja joj je pridana od izvora metafore do subjekta (Forceville, 2002, str. 1-2). Saban (2008, str. 460) te faktore opisuje na sljedeći način: (1) subjekt metafore (na primjer riječ „škola" u rečenici „škola je poput postrojenja za pročišćivanje"), (2) izvor metafore (na primjer, pojam „postrojenje za pročišćivanje" u rečenici „škola je poput postrojenja za pročišćivanje"), i (3) karakteristike koje su pridane od izvora metafore do subjekta (na primjer, „škola je poput postrojenja za pročišćivanje. To je zato što se učenici iz svih kultura i iz svih dijelova društva poučavaju u školi i potom vraćaju u društvo kao građani koji funkcioniraju na različite načine koje društvo zahtjeva…").

Po prirodi stvari, metafore se često koriste u obrazovnim znanostima kao i u svim područjima koja su svojstvena ljudima. Ljudi često imaju koristi od metafora u obrazovanju, posebice jer metafore objašnjavaju i otkrivaju pretpostavke koje su povezane s nekim pojmovima (Gültekin, 2013). Metafore se koriste u različitim područjima obrazovanja, i zapravo tvore osnovu za teorije i modele različitih predmeta (Bota, 2009). U proučavanju literature i istraživanja o korištenju metafora, posebice u polju obrazovanih znanosti, možemo otkriti da metafore općenito objašnjavaju značenja koja su pridodana bilo kojemu predmetu ili pojmu. Istraživanja koja razmatraju pojam učitelja (Ben-Peretz, Mendelson i Kron 2003; Cerit, 2008a; Clarken, 1997; Celikten, 2006; Kasoutas i Malamitsa, 2009; Lasley, 1994; Marshall, 1990; Oğuz, 2009; Oxford et al., 1998; Pektaş i Kıldan, 2009; Saban, 2004; Saban, Koçbeker i Saban, 2006; Taşdemir i Taşdemir, 2011); učenika (Bozlk, 2002; Saban, 2009); učenja, poučavanja i obrazovanja (Bullough, 1994; Carter i Pitcher, 2010; Elmholdt, 2003; Guerrero i Villamil, 2002; Levine, 2005; Martinez, Sauleda i Huber, 2001; Massengill, Mahlios i Barry, 2005); škole (Akkaya, 2012; Aydoğdu, 2008; Cerit, 2006; Engin-Demir, 2007; Hardcastle, Yamamoto, Parkay i Chan, 1985; Inbar, 1996; Koçak 2013; Mahlios i Maxson, 1998; Nalçacı i Bektaş, 2012; Saban, 2008); ravnatelja škola i obrazovnih inspektora (Akan, Yalçın i Yıldırım, 2013; Balcı, 1999; Cerit, 2008b; Dönmez, 2008; Döş, 2010; Johnson 2006; Linn, Sherman i Gill, 2007; Monroe, 2003; Töremen i Döş, 2009; Trnavčevič i Vaupot, 2009) primjeri su tih istraživanja.

Kod proučavanja studija usmjerenih na primjenu metafora u obrazovnim znanostima, možemo vidjeti da se uglavnom usredotočuju na pojmove učitelj, učenik, škola i ravnatelj, koji se promatraju kao ulazne stavke obrazovnoga sustava. Neka od navedenih istraživanja usmjerena su na pojmove poučavanja i obrazovanja, a opisuju se kao dimenzionalni procesi obrazovnoga sustava. Učenje i primjena metafora jednake su ljudskoj povijesti. U Platonovu radu naslovljenom Theaitetos, njegova usporedba učenja s „rođenjem djeteta" vjerojatno je jedna od najstarijih metafora o učenju (Hager i Halliday, 2009). Nadalje, to uvjerenje podržavaju i rezultati istraživanja o metaforama koje u drugim kulturama mogu izražavati drukčija značenja s istim riječima ili mogu izraziti ista značenja s drugim riječima (Berendt, 2008). S toga stajališta važno je proučiti sličnosti i razlike koje proizlaze iz jezičnih struktura putem istraživanja provedenih u različitim kulturama.

Unatoč činjenici da učenje i upotreba metafora povezanih s učenjem sežu daleko u ljudsku povijest, istraživanja su u tome području ograničena i potiču na razmišljanje. Činjenica da nijedno drugo istraživanje u Turskoj nije bilo povezano s učenjem ili učeničkim metaforama vezanima uz pojam učenje te da ovo istraživanje uzima u obzir metafore vezane uz učenje kojima se koriste učenici u primarnom obrazovanju, ukazuje na važnost samoga istraživanja.

Primarni cilj ovoga istraživanja jest otkriti metafore povezane s pojmom učenja kojima se koriste učenici trećih, četvrtih i petih razreda osnovne škole. Odgovori na sljedeća pitanja usklađeni su s tim ciljem:

Kojim se metaforama koriste učenici trećih, četvrtih i petih razreda osnovne škole da bi opisali pojam učenje?

Kojim kategorijama pripadaju metafore kojima se koriste učenici trećih, četvrtih i petih razreda osnovne škole?

Metoda

Ovo istraživanje, čiji je cilj odrediti metaforičke percepcije učenika vezane uz pojam učenje, provedeno je koristeći se interpretacijskim pristupom (Strauss i Corbin, 1990; Yıldırım i Şimşek, 2013). Interpretacijski pristup koristi se kada je cilj istraživanja odrediti percepcije pojedinaca – koji su društveni akteri u svijetu – vezane uz svijet (Glesne, 2012). S obzirom na to da je cilj otkriti metaforičke percepcije učenika u osnovnom obrazovanju vezane uz pojam učenje, primijenjen je interpretacijski pristup.

Uzorak

Ispitanici u interpretacijskim istraživanjima birani su sa specifičnim ciljem. Ovo istraživanje pokušat će dobiti iscrpnu informaciju o predmetu istraživanja, stoga je primijenjena jednostavna metoda uzorkovanja „namjerno uzorkovanje" (Glesne, 2012, str. 61). Istraživanje je provedeno sa skupinom učenika trećih, četvrtih i petih razreda koje se obrazuju u Turskoj. U istraživanju je sudjelovalo 218 učenika, no 83 učenička upitnika bila su nevaljala. S obzirom na to, analiza podataka napravljena je na dobivenih 135 učeničkih upitnika. Karakteristike učenika koji su sudjelovali u istraživanju prikazane su u tablici 1.

Tablica 1

Kao što je prikazano u tablici 1, uzorak se sastojao od 74 učenice i 61 učenika. S obzirom na to, jasno je da su učenici koji su sudjelovali u istraživanju slično raspoređeni s obzirom na spol. S obzirom na dob, najveća skupina učenika bila je u dobi od 11 godina (f=59), a skupina s najmanje ispitanika bila je dobna skupina od 9 godina (f=18). Distribucija s obzirom na razred (godinu) bila je slična. Od učenika koji su sudjelovali u istraživanju, 47 je bilo u trećem razredu, 42 u četvrtome razredu i 46 učenika u petome razredu. Trideset i jedan učenik koji je sudjelovao u istraživanju živi na selu, 27 ih živi u gradovima, a 38 u županijskim centrima. Stoga je distribucija učenika iz ruralnih i urbanih sredina uravnotežena.

Prikupljanje podataka

Upitnik otvorenoga tipa pripremljen je da bi se prikupile percepcije učenika vezane uz pojam učenje. Upitnik se sastojao od dva dijela. Prvi dio sadržavao je pitanja vezana uz dob, spol, razred i mjesto življenja, a drugi je dio sadržavao sljedeću rečenicu: „Učenje je poput…….. jer ……". Slični instrumenti koristili su se i u drugim istraživanjima (Döş, 2010; Gültekin, 2013; Inbar, 1996; Linn, Siberman i Gill, 2007; Saban, 2009; Yalçın i Erginer, 2012).

U ovome istraživanju odnos između predmeta i izvora metafore određen je i prikazan na osnovi učeničkih odgovora na riječ „poput". Vezano uz taj pojam, putem riječi „jer" ispitanici su prikazali razloge ili logičku osnovu za vlastite metafore.

Analiza podataka

Analiza sadržaja kao pristup usvojen je zbog glavnog cilja istraživanja, a to je raspoznati odnose koji bi mogli objasniti prikupljene podatke. Kod analize sadržaja, slični se podatci kombiniraju unutar okvira pojmova i tema. Na to se nastavlja organizacija podataka na način da ih čitatelji mogu razumjeti i da se može odrediti njihova interpretacija. S obzirom na faze koje smo prošli za vrijeme analize sadržaja, u istraživanju smo se držali sljedećeg redoslijeda: 1) kodiranje i eliminacija, 2) kategorizacija, 3) valjanost i pouzdanost, 4) interpretacija podataka.

Kodiranje i eliminacija: Proces kodiranja u kvalitativnim istraživanjima zahtijeva odvajanje podataka u skupine, određivanje konceptualizacije podataka i određivanje odnosa između podataka (Strauss i Corbin, 1990). Unutar okvira istraživanja, učenički odgovori prvotno su preneseni u tablicu, a metafore su stavljene u popis. Nadalje, kada su podatci svakoga ispitanika uneseni u računalo, svaki je ispitanik kodiran i označen od S1 do S135. Relacijski okvir kategorija nastao je iz dobivenih podataka. Drugim riječima, datoteka je pripremljena za pronalaženje, uspoređivanje i objašnjavanje uzoraka unutar dobivenih kodova.

U drugoj fazi, učeničke metafore grupirane su s obzirom na razred. Metafore su u svakoj grupi podvrgnute drugom grupiranju s obzirom na „predmet metafore", „izvor metafore" i „odnosa između izvora i predmeta metafore". Iz analize je razvidno da 83 učenika nisu mogla napisati metaforu, nego su samo objasnili pojam definirajući ga ili nisu mogli prikazati odnos između pojma i metafore, zbog čega su njihovi radovi bili eliminirani. Taj slučaj može se objasniti činjenicom da učenici u toj dobi u Turskoj nisu naviknuti na takve ankete. S obzirom na eliminacijsku proceduru, analizi je podvrgnuto ukupno 135 učeničkih upitnika.

Kategorizacija: U ovoj fazi tvrdnje vezane uz pojam učenje koje su ponudili učenici u uzorku napisane su abecednim redom. Od metafora dobivenih od ispitanika jednu su grupu činile one koje su imale slične karakteristike. Teme kategorija dobivene su indukcijom. Mjere „unutarnje konzistentnosti" i „vanjske konzistentnosti" uzeli smo u obzir pri određivanju tema. Za unutarnju konzistentnost metafore koje su bile svrstane pod istu temu činile su smislenu cjelinu, a kod vanjske se konzistentnosti uzelo u obzir jesu li ili nisu sve dobivene metafore dosljedne cilju istraživanja. Iz toga slijedi da je 135 ispitanika napisalo 86 valjanih metafora, a svaka je metafora bila povezana sa specifičnom temom koja je dopuštala metaforičke razloge. Kao rezultat toga procesa nastalo je dvanaest konceptualnih kategorija.

Valjanost i pouzdanost: Valjanost u kvalitativnim istraživanjima podrazumijeva da su promatranje i usvajanje fenomena istraženi u nominalnoj vrijednosti, i što je moguće objektivnije (Kirk i Miller, 1986; prema Yıldırım i Şimşek, 2013). Stoga ispitanicima

nisu dani primjeri ni prijedlozi koji bi ih usmjeravali u osmišljavanju metafora, nego su ispitanici dijelili isključivo vlastita mišljenja. Nadalje, uvjeravanje i prenosivost također su vrlo važni u osiguravanju valjanosti istraživanja (Yıldırım i Şimşek, 2013). Drugi važan pravac osiguranja valjanosti kvalitativnog istraživanja uključuje izravno prezentiranje stajališta ispitanika i objavljivanje rezultata na osnovi njihovih mišljenja (Ratcliff, 1995, str. 20; Wolcott, 1990). Prema tome, analiza podataka u procesu ovoga istraživanja detaljno je opisana kako bi se osigurala valjanost istraživanja te su metafore ispitanika izravno prezentirane tijekom analize i u interpretaciji. Prezentirane su u dijelu koji govori o rezultatima pri čemu su dana detaljna objašnjenja metafora. Nadalje, podrobno su opisani prikupljeni podatci i njihova analiza.

Test postojanosti primijenjen je da bi se osigurala pouzdanost istraživanja (Yıldırım i Şimşek, 2013). Metafore koje su podijeljene u konceptualne kategorije dane su ekspertima u području kvalitativnih istraživanja kako bi se dobila i njihova mišljenja. Od stručnjaka se tražilo da metafore rasporede u konceptualne kategorije. Određeno je njihovo slaganje i razilaženje u mišljenju pa je pouzdanost istraživanja izmjerena koristeći se formulom pouzdanosti koju su razvili Miles i Huberman (1994). Utvrđeno je da je suglasnost među ekspertima i istraživačima 92%.

Interpretacija podataka: Kategorije i metafore koje su osmišljene nakon faza prikazanih u istraživanju vizualno su prikazane u dijagramima i tablicama. Rezultati su prikazani, objašnjeni i interpretirani na osnovi tih prikaza.

Rezultati

U ovome dijelu prikazane su sve metafore učenika vezane uz pojam učenje, a zatim su kategorije i teme izrađene na osnovi dobivenih metafora obrađene i prikazane u dijelovima tvrdnji koje su osmislili učenici. Dobivene metafore prikazane su u tablici 2.

Kao što je prikazano u tablici 2, učenici su stvorili ukupno 86 metafora vezanih uz pojam učenje. Metafore koje su se najčešće koristile jesu „čitanje" (f=16), „zvijezda" (f=13), „sunce" (f=12), „knjiga" (f=11), „mjesec" (f=10) i „more" (f=7). Čini se da učenici najčešće povezuju pojam učenja s metaforama „čitanje, zvijezda, sunce, knjiga, mjesec i more". Učenici su se možda koristili metaforama čitanje i knjiga da bi opisali srž obrazovanja, a metaforama zvijezda, sunce, more i mjesec da bi opisali razmjer, intenzitet i beskonačnost učenja. Unatoč promjenama i razvoju znanosti i tehnologije, nijedna aktivnosti ne može zamijeniti čitanje koje se definira kao odlučnost i razumijevanje kodova na pisanome uratku. Međutim, u pokušaju objašnjenja razmjera, beskonačnosti i promjenjivosti koji su povezani s prirodom učenja, putem događanja u prirodi i njezinu stvaranju, uočava se odraz prirodnih procesa.

Tablica 2

Značenja pojma učenje prema učenicima u primarnom obrazovanju

Kategorije	Naziv metafore	f	Kategorije	Naziv metafore	f
Beskonačnost i intenzitet	more	7	Informiranje i usmjeravanja	knjiga	11
	zvijezda	4		rječnik	4
	svijet	4		stroj za informiranje	3
	kiša	3		računalo	2
	list	2		enciklopedija	2
	pustinja	1		vodič	2
	šuma	1		majka	2
	gruda	1		kompas	1
	tlo	1		prijatelj	1
	ocean	1		putovanje	1
	nebo	1		knjižnica	1
	korijenje drveća	1		polarna zvijezda	1
	voda	1		semafor	1
	Ukupno	**28**		**Ukupno**	**32**
Složeni događaj koji zahtijeva vrijeme	čitanje	16	Promjenjivost i raznolikost	priča	2
	pisanje	5		akvarij	1
	science	4		pčela	1
	istraživanje	3		ptica	1
	zagonetka	3		oblak	1
	matematika	2		polje	1
	rudar	2		film	1
	mozak	2		šuma	1
	složeni tekst	1		skakavac	1
	putovanje	1		slagalica	1
	labirint	1		mobilni telefon	1
	ruža	1		serija	1
	Ukupno	**41**		**Ukupno**	**13**
Živući pojam	malo dijete	3	Pojam prosvjetljenja	Sunce	12
	cvijet	3		Mjesec	10
	odrastanje	3		zvijezda	9
	jelo	1		svjetlo	1
	žutokljunac	1		iskra	1
	voće	1		baklja	1
	student	1			
	Ukupno	**13**		**Ukupno**	**34**
Negativnost	odlazak u školu	2	Zabavna aktivnost	crtanje	5
	tvornica	1		igra	4
	film strave	1		igranje igara	4
	noćna mora	1		zabava	3
	robot	1		dobivanje bodova	1
	alat za mučenje	1			
	Ukupno	**7**		**Ukupno**	**17**
Proces koji se razvija u fazama	penjanje uz stepenice	2	Nesigurnost i radoznalost	radoznao čovjek	1
	puzanje	2		poklon kutija	1
	govor maloga djeteta	1		čitanje prve stranice knjige	1
	cesta	1		iznenađenje	1
	plivanje	1		misao	1
	Ukupno	**7**		**Ukupno**	**5**
Potreba	voda	3	Iznalaženje rješenja i unapređenje	lijek	1
	zrak	1		terapija	1
	kruh	1			
	hrana	1			
	Ukupno	**6**		**Ukupno**	**2**

Dobivenih 86 metafora svrstano je u 12 kategorija s obzirom na zajedničke karakteristike i razloge za korištenje. Teme metafora vezanih uz pojam učenje uvrštene su u sljedeće kategorije: „*složena aktivnost*", „*beskonačnost i intenzitet*", „*poučnost*", „*informiranje i usmjeravanje*", „*zabavan posao*", „živući pojam", „*potreba*", „*proces koji se razvija u fazama*", „*promjenjivost i raznolikost*", „*negativnost*", „*neizvjesnost i radoznalost*", „*iznalaženje rješenja i unapređenja*". Nakon pomnog proučavanja kategorija, jasno je da su sve kategorije osim jedne (negativnost) pozitivne. Taj rezultat pokazuje da učenici doživljavaju pojam učenja kao pozitivan. Taj pozitivan pogled na učenje važan je s obzirom na pozitivan odraz na iskustvo učenja i njegovu sposobnost da osigura učinkovito i trajno učenje.

Kategorije metafora dobivene se u skladu s razredom, a metafore unutar kategorija i njihove frekvencije prikazane su u tablici 3.

Kao što je prikazano u tablici 3, 73 metafore vezane uz pojam učenje osmišljene su u 3. razredu, 68 u 4. razredu, a 67 u 5. razredu. Nije utvrđena značajna razlika među razredima s obzirom na broj metafora. Metafore iz trećih, četvrtih i petih razreda uvrštene su u 12 kategorija s tim da su metafore učenika trećih razreda uvrštene u 6 kategorija, četvrtih razreda u 10 kategorija, a metafore učenika petih razreda u 11 kategorija. Vezano uz distribuciju metafora, iako su učenici stvarali velik broj metafora po kategoriji, metafore su bile prilično raspršene (vezano uz uzrast učenika i razvojne faze); učenici četvrtih i petih razreda imali su više kategorija, ali manji broj metafora za svaku kategoriju.

Prilikom analize kategorija, za sve su razrede karakteristične sljedeće kategorije: „učenje je složena aktivnost koja zahtijeva puno vremena", „učenje kao beskonačnost i intenzitet", „učenje kao prosvjetljenje", „učenje kao zabavna aktivnost". Kategorije koje dijele učenici četvrtoga i petoga razreda su sljedeće: „učenje kao potreba", „učenje kao proces koji se razvija u fazama", „učenje s obzirom na promjenjivost i raznolikost", „učenje kao negativan pojam" i „učenje kao neizvjesnost i radoznalost". Nadalje, kategorija „učenje kao živući pojam" prisutna je samo kod metafora učenika trećega razreda, a kategorija „učenje kao pronalaženje rješenja i unapređenje" pronađena je samo kod metafora učenika petoga razreda.

Kada proučimo metafore u kategoriji „učenje kao zahtjevna i složena aktivnost" koja je prisutna u sva tri razreda, jasno je da su osim metafore „čitanje" (koja se koristi u sva tri razreda), sve metafore bile različite. Razlog zbog kojega je „čitanje" prisutno u sva tri razreda jest taj što čitanje zahtijeva vrijeme i trud, ali rezultira pozitivnim ishodom. Dok je S81 (učenik četvrtoga razreda) izrazio učenje u rečenici „učenje je poput čitanja. Ako za čitanje trebamo uložiti trud, za učenje također trebamo uložiti trud", S189 (učenik petoga razreda) kaže, „Učenje uspoređujem s čitanjem. Jednako je teško kao i čitanje". Te tvrdnje pokazuju da učenici doživljavaju učenje kao nešto teško, za što je potrebno vrijeme i trud. Međutim, poteškoća koja dolazi iz prirode učenja nije zapravo procijenjena od učenika kao negativna. Zapravo je prilično važna u odnosu na svoju složenost i činjenicu da je ishod čitanja pozitivan.

Tablica 3

Distribucija kategorija metafora s obzirom na razred

Kategorije	Distribucija i učestalost metafora s obzirom na razred					
	3. razred	f	4. razred	f	5. razred	f
Učenje je složena aktivnosti koja zahtijeva vrijeme	znanost zagonetka matematika čitanje	4 3 2 2	čitanje pisanje rudar	6 4 2	čitanje istraživanje	8 3
Beskonačnost i intenzitet	svijet zvijezda more ocean	4 4 3 1	more gruda	4 1	list kiša	2 2
Prosvjetljenje	zvijezda Sunce Mjesec	4 4 3	Sunce Mjesec zvijezda	4 3 3	Mjesec Sunce zvijezda	4 4 2
Informiranje i usmjeravanje	knjiga enciklopedija	5 2	knjiga rječnik	4 4	stroj za informiranje knjiga	3 2
Zabavan posao	crtanje igra igranje igre	2 1 1	crtanje igranje igre dobivanje bodova	3 3 1	igra zabava	3 3
Živući pojam	cvijet odrastanje malo dijete	3 3 3	-		-	
Potreba	-		hrana zrak voda	1 1 1	voda kruh	2 1
Proces koji se razvija u fazama	-		penjanje uz stepenice plivanje	2 1	puzanje maloga djeteta govor maloga djeteta	2 1
Promjenjivost i raznolikost	-		film akvarij šuma	1 1 1	priča skakavac mobilni telefon	2 1 1
Negativnost	-		alat za mučenje film strave noćna mora	1 1 1	odlazak u školu robot tvornica	2 1 1
Neizvjesnost i radoznalost	-		poklon kutija čitanje prve stranice knjige	1 1	radoznao čovjek iznenađenje misao	1 1 1
Iznalaženje rješenja i unapređenja	-		-		lijek terapija	1 1

Učenici koji su sudjelovali u istraživanju, učenje doživljavaju kao beskonačan i opsežan pojam. Ta percepcija povezana je s prirodom znanja: znanje kao beskonačan

fenomen nema granice. Sljedeće tvrdnje služe kao primjeri te percepcije: „Učenje je poput oceana. Ono je veliko kao ocean. Puno je informacija koje se moraju naučiti" (S39, treći razred); „Učenje je poput mora; stvari za učenje nikada ne ponestane unatoč tome što učimo sve više i više" (S116, četvrti razred); „Učenje uspoređujem s listom. Baš kao što postoji puno lišća na drveću, postoji puno toga za učenje" (S157, peti razred).

Učenici koji učenje doživljavaju kao „prosvjetljenje" povezuju učenje s izvorom svjetla. U stvarnosti, to je odraz tradicionalnoga zamišljanja i manifestacije zajedničke percepcije društvenoga poučavanja. Simbol baklje koja je prikazana na stranicama otvorene knjige na logotipu Ministarstva obrazovanja najslikovitiji je primjer te percepcije. Percepcija prosvjetljenja u zajednici i religijsko poučavanje drugi su izvori koji su moguća inspiracija za takvo promišljanje pojma učenja. To se ogleda i u sljedećim učeničkim primjerima: „Ako nas to prosvjetljuje, onda nas i učenje prosvjetljuje" (S67, treći razred); „Učenje nas osvjetljuje, poput Mjeseca" (S120, četvrti razred); „Poistovjećujem učenje sa Suncem jer nas Sunce prosvjetljuje" (S148, peti razred).

Razvidno je da se učenici naizmjenično koriste metaforom „knjige" u kategoriji „učenje kao informiranje i usmjeravanje". Činjenica da učenici u sva tri razreda poistovjećuju učenje s knjigama, aluzija je na knjige kao izvor informacija. Ta opservacija dokaz je da se, unatoč promjenama, razvoju tehnologije i mogućnostima koje te promjene nude, knjige još uvijek doživljavaju kao izvori informacija i simboli učenja. Tvrdnje nekih učenika koji poistovjećuju učenje s knjigama su: „Učenje se sastoji od informacija, kao i knjige" (S89, četvrti razred); „Učenje nam daje informacije, kao i knjige" (S28, treći razred). Nadalje, metafore („kompas, vodič, prijatelj, semafor, polarna zvijezda") također su prisutne kod učenika koji smatraju da je učenje vodič za pojedince. Kada se prouči način na koji se učenici koriste tim metaforama, jasno je da je prisutno vjerovanje da učenje neće pojedinca navući na zlo ili na pogrešan put.

Kod analize metafora unutar kategorije „učenje kao zabavna aktivnost", uočili smo da su se gotovo svi učenici koristili istim pojmovima. Metafora kojom se koriste učenici koji učenje doživljavaju kao zabavu jest „igra". Učenici koji su sudjelovali u ovome istraživanju još su uvijek u dobi kada se vole igrati. Štoviše, igre su ozbiljan posao, a preferiraju ih i osobe različite dobi i sa svrhom zabave, ali i učenja, naravno s obzirom na njihovu dob i individualne karakteristike. Učenici koji su upotrebljavali taj pojam mogu se promatrati kao učenici koji uživaju u učenju. Taj se fenomen ogleda u učeničkim tvrdnjama poput: „Učenje je zabavno, baš kao i igra" (S34, treći razred); „Učenje je poput igre koju volim igrati" (S162, peti razred).

Metafore iz kategorije „učenje kao živući pojam" pronašli smo samo kod učenika trećega razreda. Ti učenici poistovjetili su učenje s hranjenjem ili nekim razvojnim karakteristikama živih bića: „Ako cvijet ne dobije vodu, uvenut će. Ako ne dobijemo novu informaciju za učenje, učenje će također uvenuti" (S3) i „Učenje je živo, poput maloga djeteta, i raste kako odmiče vrijeme" (S37). Učenici koji su upotrebljavali

metafore u toj kategoriji povezali su stvaranje i razvoj učenja s pojmom življenja, točnije, naglasili su da je učenje proces koji se nastavlja tijekom života, a neprekidno je učenje potrebno za nastavak života.

Neki učenici doživjeli su učenje kao „potrebu". Fundamentalne potrebe ljudi naglašene su da bi podržale tu ideju. Metafore iz te kategorije objašnjene su pojmovima koji su potrebni za nastavak života. Taj pristup ogleda se u sljedećim tvrdnjama: „Povezujem učenje sa zrakom jer kao što nam je potreban zrak, tako nam je potrebno i učenje" (S104, četvrti razred); "Učenje uspoređujem s vodom. Važno je za život baš kao i voda" (S168, peti razred). Učenici koji su upotrebljavali takve metafore učenje vide kao ključnu i neizbježnu potrebu.

Učenici četvrtoga i petoga razreda koji učenje doživljavaju kao „razvojni proces u fazama" pokušavaju objasniti da učenje nije trenutni događaj i da je to proces koji se razvija u fazama. Taj pojam povezan je s „penjanjem uz stepenice u fazama razvoja djeteta". Primjeri te percepcije su sljedeći: „Povezujem učenje s penjanjem uz stepenice jer učenje dovodi do višeg razreda baš kao što dovodi i penjanje stepenicama" (S87, četvrti razred) i „Učenje povezujem s puzanjem maloga djeteta. Učenje zahtijeva vrijeme, baš kao i puzanje maloga djeteta" (S161, peti razred).

Učenici koji mogu uočiti razliku, raznolikost i promjenjivost učenja naglasili su sadržaj učenja. Ta opservacija ogleda se u sljedećim tvrdnjama: „Učenje povezujem s akvarijem. Kao što u akvariju nalazimo raznolike ribe, tako kod učenja nalazimo raznolike informacije" (S135, četvrti razred); „Učenje je poput vrta i šume jer u šumi nailazimo na različita živa bića, tako i kod učenja nailazimo na različite informacije" (S75, četvrti razred); „Učenje povezujem s pričom. Kao što u priči imamo različite događaje i informacije, tako u učenju imamo različite informacije" (S152, peti razred). Kod analize tvrdnji iz primjera, uočili smo da je različitost metafora rezultat učeničkih različitih životnih iskustava i percepcija te njihovih individualnih razlika.

Vezano uz metafore u kategoriji „učenje kao negativan pojam" koja je bila jedina negativno orijentirana kategorija, jasno je da negativna percepcija učenika dolazi iz sadržaja i procesa učenja, a ne iz samoga učenja. Primjeri takve percepcije su sljedeći: „Učenje povezujem s alatom za mučenje jer ponekad imam poteškoća u učenju" (S134, četvrti razred); „Učenje je poput tvornice. Proizvod je uvijek isti" (S200, peti razred); i „Učenje povezujem s robotom jer nas čini robotima (S78, peti razred). Kada analiziramo te tvrdnje, jasno je da je ozbiljna kritika upućena obrazovnom sustavu. Učenici doživljavaju učenje kao nešto što pojedince čini istima i eliminira pojedinačne razlike. Međutim, koncept modernog obrazovanja nalaže senzibilnost za individualne razlike učenika i njihove načine učenja.

Metafore u kategoriji „učenje kao neizvjesnost i radoznalost" povezane su s činjenicom da učenje omogućuje da nepoznato postane poznato. Taj fenomen ogleda se u sljedećim tvrdnjama: „Učenje povezujem s poklon-kutijom, jer nikada ne znaš što ćeš naučiti" (S129, četvrti razred) i „Učenje povezujem s iznenađenjem jer me stvari koje učim zadivljuju" (S168, peti razred). Učenje je nešto što uzrokuje radoznalost. Taj

ishod može biti istodobno uzbudljiv i zastrašujući jer ponekad činjenica da ne znaju što će naučiti, učenike može navesti na promjenu osjećaja kada se ono što uče mora uskladiti s onim što su naučili.

U kategoriji „pronalaženje rješenja i unapređenja", gdje su jedino učenici petoga razreda imali dvije metafore, navodimo sljedeće: „Učenje povezujem s lijekom. Ako lijek iscjeljuje bolesne, onda učenje iscjeljuje neuke" (S156) i „Učenje povezujem s terapijom – terapija neukosti" (S164). Ti učenici definiraju učenje kao rješenje koje daje bolje uvjete za život. Taj fenomen može se doživjeti kao pogled na samu prirodu učenja jer napredak čovječanstva i rješavanje problema ovise o znanosti, a napredak znanosti ovisi o učenju i proučavanju.

Rasprava i zaključak

Ovo istraživanje zasnovano je na činjenici da su metafore (odnosno pokretači percepcije i intelektualni fenomen) najmoćnija intelektualna sredstva koja se mogu koristiti u razumijevanju i objašnjavanju vrlo neodređenih, složenih ili teorijskih pojmova. Yob (2003) je pokušao odrediti značenja i percepcije koje su učenici pridali pojmu „učenje". Bitan zaključak istraživanja jest da su značenja koja su pridali pojmu „učenje" vrlo raznolika. Temeljni uzrok toj raznolikosti metafora, koje su učenici verbalno izrazili i koje odražavaju kognitivne strukture te osiguravaju usuglašavanje između različitih značenja i kognitivnih sustava (Angus i Rennie, 1989), mogao bi biti ovisnost načina na koji pojedinac misli i vidi, i tako ukazuje na načine na koji doživljava svijet (Morgan, 1998). Nadalje, moguće je da u osnovi tih zaključaka stoji ontologijsko vjerovanje u pozadini konstruktivističkog pristupa koji je usvojen u obrazovnim programima u Turskoj, te utjecajna uloga interpretacijske paradigme o kojoj taj pristup ovisi. Prema interpretacijskoj paradigmi, znanje nečega tijesno je povezano s time kako ljudi interpretiraju i razumiju određene stvari, slučajeve, pojmove, ponašanja i percepcije (Glesne, 2013). Taj fenomen također je povezan s prirodom konstruktivističkog učenja jer u konstruktivizmu, kontrola i odgovornost za učenje u potpunosti leži na pojedincu, a životi pojedinaca, njihovi stilovi učenja, njihovi pogledi i razine spremnosti diktiraju njihovo učenje (Brooks i Brooks, 1993). Naravno, sve te razlike među pojedincima također se ogledaju u njihovome učenju i načinu na koji izražavaju naučeno. S takvoga stajališta, učenici u svojim tvrdnjama i metodama odražavaju raznolikost koju imaju u vlastitim kognitivnim strukturama u vezi s pojmom učenja.

Ukupno 86 metafora vezanih uz učenje koje su osmislili učenici svrstano je u 12 kategorija koje sadrže zajedničke karakteristike metafora i razloge zbog kojih su upotrijebljene. Kategorije iz kojih su izvukli najviše metafora su „složena aktivnost koja nalaže vrijeme" (41) i „prosvjetljenje" (36), a kategorije s najmanjim brojem metafora bile su „neizvjesnost i radoznalost" (6) i „iznalaženje rješenja i unapređenje" (2).

Razlozi zbog kojih učenici koji su sudjelovali u istraživanju vide učenje kao „složenu aktivnost koja zahtijeva vrijeme" mogu se objasniti prirodom učenja: učenje je aktivan

proces koji oblikuje samospoznaju, razumijevanje i ponašanje pojedinca u vezi s određenim fenomenom, incidentom ili situacijom, kao rezultatom njegove interakcije s okolinom (Charlesword, 2000). Drugim riječima, učenje se ostvaruje slušanjem i čitanjem kao i aktivnim sudjelovanjem učenika u procesu učenja, raspravom i objašnjavanjem stajališta, stvaranjem hipoteza, propitivanjem i dijeljenjem ideja (Perkins, 1999). Stoga činjenica da pojedinci imaju više odgovornosti za učenje u procesu učenja i poučavanja i činjenica da moraju uložiti više truda i preuzeti aktivniju ulogu, može dovesti do poimanja učenja kao teške i složene aktivnosti.

Vjerovanja koja definiramo kao informacije koje pojedinac prihvaća kao točne (Kobala i Crawley, 1985) i intelektualne strukture koje su nastale iskustvom (Sigel, 1985) usmjeravaju ponašanja i postupke ljudi. Metafore koje su generirali učenici koji su sudjelovali u ovome istraživanju, a pripadaju kategoriji „pojam prosvjetljenja" odražavaju opću percepciju, vjerovanja i učenja. Slično vjerovanju u „Boga neba", koje je jedno od prvih religijskih vjerovanja turskoga naroda, vrlo važne, svete vrijednosti dodijeljene su pojmovima Mjesec, zvijezda i Sunce u muslimanskim vjerovanjima nakon prihvaćanja islama. Očiti primjeri toga fenomena su činjenice da su Mjesec i zvijezda dva osnovna simbola koja nalazimo na turskoj zastavi; šesnaest zvijezda simbolizira svaku od turskih saveznih država tijekom povijesti, na predsjedničkoj zastavi; a slika Sunca koja simbolizira Republiku Tursku nalazi se između zvijezda. Uz simbole Mjeseca, zvijezda i Sunca koje imamo u ovome istraživanju, pojmovi poput svjetla, baklje i iskre nalazimo u istoj kategoriji. Ti pojmovi jednaki su spašavanju pojedinca i zajednice od tame. Međutim, pojmovi neupućenosti, nedostatka znanja poistovjećuju se upravo s tamom. Ti pojmovi zastupljeni su u istome značenju u nekim pjesmama, idiomima i poslovicama, a odražavaju vrijednosti koje su im pripisane.

Jedna od dviju kategorija koja sadrži najmanji broj metafora jest kategorija „neizvjesnost i radoznalost". Ta činjenica otkriva da učenici doživljavaju učenje kao pojam koji je neizvjestan i izaziva radoznalost. Zapravo, upravo zato što je radoznalost važan faktor kod učenja, a činjenica da samo malen broj učenika povezuje učenje s radoznalošću, potiče na razmišljanje. Radoznalost je važan čimbenik kod potrebe za učenjem i djelovanjem u skladu s tom potrebom (Güleç, Çelik, i Demirhan, 2012; Loewenstein, 1994). Druga kategorija koja sadrži malien broj metafora jest kategorija „stvaranje rješenja i unapređenje". Ovdje se učenje dovodi u vezu s rješavanjem stvarnih, životnih problema. Činjenica da je vrlo malo metafora ponuđeno u toj kategoriji objašnjava se nedostatkom povezanosti sadržaja učenja u turskom obrazovnom sustavu sa stvarnim, svakodnevnim životom.

U analizi kategorija dobivenih istraživanjem, metafore vezane uz pojam učenje koje su uvrštene u kategorije informiranje, vođenje i prosvjetljenje vrlo su slične. U drugome istraživanju (Saban, 2008) učenici, nastavnici i budući nastavnici morali su napisati metafore vezane uz pojam škola. Dobivene metafore uključivale su kuću u obliku škole, središte znanja, tvornicu, voćnjak, polarnu zvijezdu i te su metafore uvrštene u kategorije ljubav i solidarnost, znanje i prosvjetljenje, kultura i oblikovanje,

rast i razvoj, ugoda i ljepota, vođenje i upravljanje. U istraživanju koje su proveli Nalçacı i Bektaş (2012) budući učitelji pojam škola opisali su metaforama obitelj, prijatelj i tvornica. U istraživanju opisanome u ovome radu, učenici osnovne škole također su pojam učenja povezali sa školom te ponudili metafore poput polarna zvijezda, prijatelj i voće. Drugim riječima, učenici osnovne škole učenje doživljavaju kao nešto što se događa u školi, i upotrebljavaju slične izraze u opisivanju metafora za školu i učenje. Taj fenomen može se objasniti kao neuspjeh u ostvarenju svih predviđenih strukturalnih promjena u turskom obrazovnom sustavu koji je stupio na snagu u 2004. jer je temeljna pretpostavka obrazovne reforme, u kojoj se prihvaća konstruktivizam, da se učenje nastavlja tijekom cijelog života i da nije isključivo ograničeno na školu. Međutim, percepcija učenika je da je učenje aktivnost koja se zbiva u školi.

Velik broj metafora potreban je za potpuno pojašnjenje pojma učenje jer metafore prikazuju samo dio fenomena koji se pokušava objasniti (Weade i Ernst, 1990, str. 133). Većina metafora u ovome istraživanju povezana je s riječima „čitanje" (f=16), „zvijezda" (f=13), „Sunce" (f=12), „knjiga" (f=11) i „Mjesec" (f=10). Zaključujemo da učenici uglavnom povezuju pojam učenje s metaforama „čitanje" i „knjiga" što je, može se reći, i najveći izvor učenja te se koriste metaforom „zvijezda", „Sunce" i „Mjesec" koji su ujedno simboli prosvjetljenja. Dok se pojmovi čitanje i knjiga izravno povezuju s učenjem, ovo istraživanje pokazalo je i činjenicu da učenici još uvijek učenje doživljavaju na tradicionalan način, odnosno da je osnovni izvor učenja knjiga. Međutim, program poučavanja u primarnome obrazovanju koji je zasnovan na načelima konstruktivizma i koji se trenutno primjenjuje, naglasak stavlja na životno iskustvo. Taj zaključak uspoređuje se sa zaključkom da se učenje doživljava kao aktivnosti koja se zbiva u školi. Učenici koji objašnjavaju učenje koristeći se pojmovima zvijezde, Sunce i Mjesec oslanjaju se na simbole koji se u zajednici percipiraju kao dragocjeni. Kao što je rečeno, ti pojmovi izrazito su važni za tursko društvo s obzirom na religijske vrijednosti, ali i nacionalne vrijednosti koje podrazumijevaju.

Drugi zaključak ovoga istraživanja jest da su metafore koje su osmislili učenici trećega razreda uvrštene u šest kategorija, metafore učenika četvrtoga razreda u deset kategorija, a učenika petoga razreda u jedanaest kategorija. U analizi distribucija kategorija, s obzirom na razred, uočeno je da učenici trećih razreda imaju manje kategorija metafora, a veći broj metafora unutar kategorija, no te su metafore široko raspršene (s obzirom na dob i razvojnu fazu). Međutim, učenici četvrtoga i petoga razreda imaju više kategorija metafora, ali manje metafora po kategoriji. Taj rezultat objašnjava se razvojnom fazom i dobi učenika, kao i obogaćenim kognitivnim strukturama.

Metafore koje istraživači prihvaćaju kao svojstvene jeziku već stotinama godina sveobuhvatni su načini izražavanja koji uključuju razmišljanja kao i radnje (Lakoff i Johnson, 2010; Richards, 1936). Stoga, slično kao u opisivanju mnogih drugih pojmova, također je moguće koristiti se metaforama za opisivanje učenja. Činjenica da se učenje

može ostvariti i putem metafora u procesu učenja i poučavanja, gdje se primjenjuje konstruktivistički pristup učenju, prilično je smislena. Tijekom stvaranja informacije, kada se novi pojmovi povezuju s prethodno dobivenom informacijom koju učenici posjeduju, novi pojmovi postaju smisleni (Metsala i Glynn, 1996). Informacije i izjave iz tih povezivanja često su olakšane upotrebom metafora. Prema tome, metafore bi se trebale koristiti kada objašnjavamo, mjerimo i procjenjujemo učenje. Njihova primjena treba biti poticana, a također je potrebno provoditi istraživanja koja se koriste opsežnim i raznolikim uzorcima. Predlaže se izvođenje međupredmetnih istraživanja kako bi se detaljnije i univerzalnije objasnila metafora učenja.