

Research Article

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Examination of the Metaphors of Classroom and Social Sciences Teacher Candidates Related to the Concept of Direction*

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Abstract

The aim of this research is to demonstrate the perception of the direction concept of the prospective teachers in the departments of classroom education and social sciences education through metaphors. For this purpose, the research was conducted in 2018-2019 academic year with a total of 174 teacher candidates studying in social sciences teaching and elementary education departments of the faculty of education of a state university in Turkey. One of the approaches to qualitative research, the phenomenology (phenomenology) design, was used in the study. The views and thoughts of the working group on the concept examined "the concept of direction... like/is similar to because ..." collected by interview form consisting of his statement. Content analysis technique was used in the analysis of data. According to the findings of the study, participants developed a total of 81 valid metaphors for the concept of direction. These metaphors have been collected under 11 different categories. As a result of the study, the most preferred metaphors for the direction concept of the participants were the words Sun, Pole Star, Road, Compass, book and clock.

Keywords

Direction, Perception of Direction, Teacher Candidates, Metaphor

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He continues his life on place and associates his space with other spaces and creates abstract places in his mind. In this context, human beings form the connection between real place and mental place. (Kuzey and Değirmenci, 2019). Thus, this situation plays an important role in people's perception of the place better and maintaining their activities in the space in a more secure way (Bonde, 2005). One of the concepts and skills that human beings need most in their spatial activities is the concept of direction and the ability to find direction (Tuna, Demirci and Gültekin 2012). Because people want to know where they are in the place where they live, where the requested location is and how to get there from the location they are in (Akgün, 2011).

Human constructs this act of knowing using words first and then expresses it as well. It conceptualizes the word direction by turning it into a word with multiple meanings such as (1) place, side, (2) side, *veçhe*, where something looks at a certain point, and (3) the way to go to a place, direction (Turkish language institution [TDK], 2011). It refers to the actions of knowing with words such as west, east, South, North, equator, parallel, meridian, latitude, longitude and coordinate, position, right, left, front, back, up, down, forward, back, etc.related to the concept of human direction in time.

It also names these words that indicate the direction of place-place based on human's position and experience on earth as metaphors of orientation (Lakoff and Johnson, 2015; Sarı, 2016). Metaphors (Bonde, 2005), a way of understanding oneself and place, shape mental perception as well as influence judgments and decisions. Thus it allows man to metaphorically express his thoughts and experiences (Nelson and Simmons, 2009). This is one of the easiest ways to explain something as a result of human conceptual thinking (Ahn and Kwon, 2007) and shows those who take precedence over experience with this method (Gibbs, Lima and Francozo, 2004). In general a mapping between two different conceptual metaphors is defined as the process of space: target area (a concept to be defined by the metaphor) and the source area (or the metaphorical structure used to create a concept that is drawn between the cognitive process (and Marguina Burmakova, 2014). Metaphors actually connect sentences where one thing is used to describe another, as opposed to elements that resemble something in common (Giesecke, 2014).

Metaphors are found in all aspects of human activities and in their thoughts expressing these areas. The conceptual use of metaphor is seen in science, education, art, literature, and religion (Steen, 2010). In education, its use became increasingly common, with the first being used by Sir Arthur Eddington, and it began to be used in all areas of education (Güneş and Tezcan, 2017). In the course of education, when the student does not know a concept well or knows little, he or she uses metaphors to make this concept more understandable. This situation facilitates the perception of the concept as it constructs the concept in the mind. This feature of metaphor is a way of thinking and seeing a concept and involves a process of understanding. It shows the student's knowledge of comprehension, experience, level of comprehension, and way of learning (Çakmak, 2018).

Basic concepts in the fields of science can be attainment through a qualified and rich learning experience and a well-regulated education process. Therefore, the goals and

achievements to be achieved must be supported with a rich content and a qualified learning experience (Bulut and Dursun, 2019). As a matter of fact, the teaching programs that contain metaphors are a planned guide for teachers in this sense. In this context, the 2018 Life Science course will be directly related to the concept of direction in the curriculum; LS.1.1. In our school life unit; LS.1.1.4. Finds his class's place in the school. LS.1.2. LS in our home life unit.1.2.3. It would describe the location of his home. LS.2.1. Life in our school LS.2.1.5. He introduces the immediate surroundings of his school. LS.2.2. Our home life unit LS.2.2.3. He knows the address of the house he lives in. LS.2.5. Life in our country LS.2.5.1. On the map and sphere it shows his country, his capital and his place of residence. LS.2.6. LS in the life unit in nature.2.6.8. It shows directions by observing the sun. LS.3.1. LS in the life Unit at our school.3.1.5. He sketches his class and his school. LS.3.2. LS in our home life unit.3.2.3. He sketches the location of his house. LS.3.6. LS in the Life unit in nature.3.6.3. It appears that attainments such as finding aspects by taking advantage of nature (MONE, 2018a) are included. Therefore, when the related program is examined, it is seen that the classroom teachers aim to give students various skills related to the concept of direction.

For the same purpose, the 2018 social sciences course curriculum will be able to relate to the concept of direction; people, places and environments in the field of learning; SS.4.3.1. It is found in inferences about the location of any location around it. SS.4.3.2. Draws a sketch of the places he uses in his daily life. SS.5.3.1. Maps describe the place where he lived and the landforms of his surroundings in general. SS.6.3.1. It is seen that attainments that can be directly and indirectly associated with the concept of direction, such as defining the geographical position of continents, oceans and our country by using concepts related to location (MONE, 2018b) are included. As a result, the concept of direction and the ability to find direction are included in the aims of the acquisition of individuals both at the basic level of education and in the later education process. Therefore, it is important to first understand how this concept is understood by the teacher candidates, what meanings are attached to this concept, and to present the participants' perception of direction in the mind worlds. Because according to Akbaş and Uzunöz (2011), it is important for the individual to have knowledge in any field or subject and to develop various ideas in order to acquire the basic concepts of that field correctly and in accordance with scientific facts. Therefore, it is important to understand and learn these concepts correctly in order for the prospective teachers to use these concepts correctly and in accordance with their purpose. Both in the learning of concepts and the fact that students have different learning methods allow metaphors to be used in educational settings.

The related field of use of metaphors in education is examined by many researchers at both national and international level (Öztürk, 2007; Ahn and Kwon 2007; Saban, 2008; Harewood, 2009; Aydın, 2010; Geçit and Gençer, 2011; İbret and Aydınöz, 2011; Çepni 2013; Gökçe, 2016; Beldağ and Geçit, 2017; Beyoğlu and Ergin, 2018; Duran and Aladağ 2018; Değirmenci, 2019).

These studies focus on the importance of using metaphor in educational settings. Metaphors can be seen as a method for students to express their thoughts (Hopkins, 2002) and for students to attainment concepts. In the literature, metaphor and the study

took place on many different concepts from various fields of science, although there is limited research in relation to the concept of direction (Demirkaya, Çetin and Tokcan, 2004; Karatekin, 2006; Aksoy and Yaylacı, 2017; Kuzey and Değirmenci 2019; Aydınözü, Demirbaş and Demir, 2019) and the direction of more direction of this research is executed for developing the skills of teaching and concept is noteworthy. Therefore, studies that metaphorically examine the concept of direction appear to be in limited numbers (Çepni, 2013; Sarı, 2016; Akın, 2017).

As a result, determining the meaning of the participants in the concept of direction, what their perception and thoughts are in the mind worlds, and what kind of metaphors they use when expressing this situation are among the reasons for this research. However, when it is considered that the concept of direction that we use constantly in daily life is important to attainment to individuals effectively and accurately and to improve social direction literacy, the meanings and perceptions of direction that teacher candidates impose on this concept are seen as important. The aim of this study is to determine the perceptions of the prospective teachers towards the concept of direction through metaphors. In line with this general purpose, the following questions were answered.

- What metaphors do teachers usually use to describe their perceptions of the concept of direction?
- What categories are the metaphors of the participants about the concept of direction collected according to their common characteristics?

Methodology

Research Design

In this study, the perception of teacher candidates towards the concept of direction was examined and the phenomenology design was used as one of the qualitative research methods. In the research, the phenomenon pattern, which is one of the qualitative research methods, was used to provide an in-depth and detailed knowledge of how the concept of space perception is perceived. The design of phenomena focuses on phenomena that we are aware of but do not have an in-depth and detailed understanding of. Phenomena can appear in various forms such as events, experiences, perceptions, orientations, concepts and situations in the world we live in (Yıldırım and Şimşek, 2011). The selection of this design was considered appropriate in order to reveal the experiences, perceptions, views and meanings of the concept of direction of the prospective teachers by taking into consideration the relevant literature in the research.

Working Group

The working group consists of a total of 174 teachers who study in the social sciences and classroom education departments of a state university during the fall semester of the 2018-2019 academic year. Data for the working group is included in Table 1.

Table 1
Working Group

<i>Gender</i>	<i>Social Sciences Teacher</i>	<i>Classroom Teacher</i>	<i>(f)</i>	<i>(%)</i>
Male	26	35	61	35,05
Female	43	70	113	64,95
Total	69	105	174	100

When table 1 examined, it was observed that the majority of the teacher candidates in the study consisted of n=174 (64.95%) female students, while the number of male participants in the group was n=61 (35.05%).

Data Collections

In Phenomenology research, the researcher focuses on a specific concept or phenomenon and collects data after interviews with participants (Fraenkel, Wallen and Hyun, 2012). While developing a data collection tool during the research process, the relevant literature (Shaw and Mahlios, 2008; Saban, 2008; Aydın, 2010; Beyoğlu and Ergin, 2017; Bauer, 2018, Değirmenci, 2019) was first examined. Then, the concept of direction towards participants in order to collect the metaphors they have used in related studies “Direction...e/like/is like. Because... “the forms written in the form of teacher candidates were given. Participants were asked to write their own metaphor for the concept of direction into this form together with their reasons. The word like/similar in this expression is generally used to better explain the link between the subject of the mental symbol and the source of the mental symbol. Because the word is used to explain the rationale of the metaphor produced (Saban, 2008). Teacher candidates are given a period of approximately 20 minutes for this process. The data obtained from these interview forms formed the data source of the research.

Data Analysis

The data obtained in the research were analyzed using content analysis. The main purpose of content analysis is to reach concepts and relationships that explain the collected data. The aim of this course is to bring together similar data within the framework of specific concepts and themes in content analysis and to organize and interpret them in a way that the reader can understand (Yıldırım and Şimşek, 2008).

The content analysis was analyzed by considering the four phases classified by Kılcan (2017). These phases are (1) the encoding and extracting phase of metaphors, (2) the compilation phase of metaphors, (3) the category development phase, (4) the validity and reliability phase, and (5) the transfer of data to computer media.

(1) Metaphor coding and extraction phase: in this phase he examined the participle forms given sequence number starting from one by looking at whether the spatial perception metaphor was clearly expressed. The forms in which the metaphor is written and there is no justification, where the metaphor is defined and the metaphor is not realized are marked and taken out of analysis.

(2) Stage of compiling sample metaphors: at this stage the connection between each metaphor resembling (1), being likened to (2), and being likened to (3) and being likened was analyzed. At this stage, the participants looked at whether a common point between the likened and the likened should be taken into account.

(3) Category development phase: in this phase, categories are formed by looking at words that fall within the same concept area of metaphors developed by the participants. Because their closer beings are interpreted as more similar (Fabrikant, Monteiro, Mark, 2006).

(4) The stage of ensuring validity and reliability: all metaphors and categories created in this stage are given to the relevant experts in a list. The reliability of the research was calculated by using the formula for reliability (Consensus/Consensus + difference of opinion) (Miles and Huberman 1994), taking into account the opinions of the experts. The reliability of this study was calculated as $109/109+3= 0.97$.

(5) Transfer of data to computer media stage: after the 109 metaphors created by the participants for the perception of space were divided into 10 categories, the metaphors were transferred to computer media. The number of participants (f) and percentage (%) representing the metaphors and the category in which they are found were calculated.

Findings

The metaphors of the students in the study group regarding the concept of direction are presented under two main headings. These titles are stated as "metaphors developed by the teacher candidates for the concept of direction" and "metaphor categories formed according to the common characteristics of the metaphors developed by the teacher candidates for the concept of direction".

Metaphors Developed By Prospective Teachers about the Concept of Direction

According to the general findings obtained in this study, the teacher candidates in the study group produced a total of 81 metaphors for the concept of direction. The metaphors developed by the teacher candidates are given in table 2.

Table 2

Metaphors Developed by Prospective Teachers about the Concept of Direction

	<i>Metaphor</i>	<i>Frequency (f)</i>	<i>Percent (%)</i>		<i>Metaphor</i>	<i>Frequency (f)</i>	<i>Percent (%)</i>
1	Sun	10	5,74	42	Father	1	0.57
2	Pole Star	9	5.17	43	Flag	1	0.57
3	Road	8	4.59	44	Humanies Activity	1	0.57
4	Compass	8	4.59	45	Brain	1	0.57
5	Book	6	3.44	46	Puzzle	1	0.57
6	Clock	6	3.44	47	Cricket	1	0.57
7	Human	5	2.87	48	Geography	1	0.57
8	Light	5	2.87	49	Dart	1	0.57
9	Mother	4	2.29	50	Light House	1	0.57

10	Teacher	4	2.29	51	Language	1	0.57
11	Target	4	2.99	52	Religion	1	0.57
12	Mirror	3	1.72	53	Friend	1	0.57
13	River	3	1.72	54	Idea	1	0.57
14	House	3	1.72	55	Education	1	0.57
15	Shadow	3	1.72	56	Torch	1	0.57
16	Eye	3	1.72	57	Future	1	0.57
17	Life	3	1.72	58	Sky	1	0.57
18	Arrow Mark	3	1.72	59	GPS	1	0.57
19	School	3	1.72	60	Pigeon	1	0.57
20	Windrose	3	1.72	61	Dough	1	0.57
21	Star	3	1.72	62	Imagine	1	0.57
22	Tree	2	1.49	63	İdeoloji	1	0.57
23	Family	2	1.49	64	Faith	1	0.57
24	Foot	2	1.49	65	Will	1	0.57
25	Emotion	2	1.49	66	Destiny	1	0.57
26	Glasses	2	1.49	67	Pen	1	0.57
27	Islam	2	1.49	68	Heart	1	0.57
28	Bird	2	1.49	69	Ant	1	0.57
29	Plate	2	1.49	70	Qibla	1	0.57
30	Color	2	1.49	71	Slavery	1	0.57
31	Wind	2	1.49	72	Game Consol Key	1	0.57
32	Love	2	1.49	73	Spider Web	1	0.57
33	Infinite	2	1.49	74	ReLSer	1	0.57
34	History	2	1.49	75	Route	1	0.57
35	Hope	2	1.49	76	Preference	1	0.57
36	Homeland	2	1.49	77	Türk	1	0.57
37	Ağrı	1	0.57	78	Philosophy of Life	1	0.57
38	Car Headlight	1	0.57	79	Sail	1	0.57
39	Purgatory	1	0.57	80	Mossy Stone	1	0.57
40	Love	1	0.57	81	Time	1	0.57
41	Moon	1	0.57		Total	174	100

When table 2 is examined, it is seen that 81 metaphors for the concept of direction were developed by the teacher candidates in the study group. When one examines these metaphors, it is seen that they are generally in a positive perception. 5.74% of respondents compared the concept of direction to “sun”, 5.17% compared the concept of direction to “Polar Star” and % 4.59 compared the concept of direction to the concept of “path”. Besides that, the concept of direction metaphors, respectively, as compared to most of the “compass” % 4,59, book % 3,44, hours % 3,44, human % 2,87, light % 2,87, Ma % 2,29, teacher % 2,29, target % 2,29, mirror % 1,72, home 1,72, shadow % 1,72, eye % 1.72 , life % 1.72 and school % 1,72 expressed in the form of was observed.

The Categories of Metaphors Created According to the Common Characteristics of the Metaphors Developed by the Teacher Candidates for the Concept of Direction

The metaphors of the students in the study group related to the concept of direction were discussed in 11 categories: “astronomy, tools, social, social relations, abstract, education, body-part terms, belief, animal species, obscurity and other fields”. The categories of metaphors developed by the prospective teachers are given in table 3.

Table 3

Metaphorical Categories Developed by the Prospective Teachers for the Concept of Direction

Categories	Metaphors	Metaphor Numbers	Metaphor Frequency	Metaphor Percent
Metaphor of direction as a field of astronomy	Sun (10), Polar Star (9), Light (5), Shadow (3), Star (3), Moon (1), Sky (1)	7	32	18,40
Metaphor of direction as instrument area	Compass (8), H (6), Mirror (3), Waveland (3) Arrow (3), Plate (2), Lighthouse (1), GPS (1), Glasses (2), headlights (1), flashlight (1), game console key (1)	12	32	18,40
Metaphor of direction as social area	Road (8), Homeland (2), Home (3), School(3), Stream (3), Wind (2), Tree (2), mossy stone (1)	8	24	13,8
Metaphor of direction as dimension of social relations	Human (5), Mother (4), Teacher (4), Family (2), Beloved (2), Father (1), Friend (1), Türk (1), ReLSer (1)	9	21	12,07
Metaphor of direction as abstract area	Target (4) Life (3), Emotion (2), Hope (2), Pain (1), Romance (1), Thinking (1), Fantasy (1) Ideology (1), Will (1), Route (1), preference (1), philosophy (1)	13	20	11,50
Metaphor of direction as training ground	Book, (6), History (2), Puzzle (1), Geography (1), Dart (1), Education (1), Dough (1), Pen (1)	8	14	8,05
The metaphor of direction as the area of body-part terms	Eye (3), Foot (2), Brain (1), Tongue (1), Heart (1)	5	8	4,59
Metaphor of direction as a field of faith	Islam (2), purgatory(1), Religion (1), Faith (1), Destiny (1), Qibla (1), servitude (1)	7	8	4,59
Metaphor of direction as an animal species	Bird (2), Cricket (1), Pigeon (1) Ant (1), Spiderweb (1)	5	6	3,45

Metaphor of direction as a field of obscurity	Color (2) Infinity(2), Future (1), Time (1)	4	6	3,45
Metaphor of direction as other fields	Flag (1), Humanities activity (1), sailing (1)	3	3	1,72
Total	11	81	174	100

When table 3 was examined, the metaphors developed by the students of the study group were collected in 11 different categories. These categories respectively (1) “the metaphor of direction in the field of astronomy”, (2) “the metaphor of tools in the area of direction”, (3), “social relations in the context of the metaphor of direction”, (4) “social space as metaphor in the direction”, (5) “metaphor in the field direction of abstract”, (6) “the metaphor of direction in the field of education”, (7) “body-part metaphor terms in the area of direction”, (8) “the metaphor of direction in the area of Faith”, (9) “Metaphor as a type of Animal Direction”, (10) “the metaphor of direction in the area of obscurity,” and (11) “the metaphor of direction in other areas” are the categories. Of these categories, it is observed that 32 teachers have developed 7 different metaphors in the category “direction metaphor as an area of Astronomy”. In the “metaphor of direction as an instrument area” category, 32 teacher candidates have developed 12 different metaphors. In the category “metaphor of direction as the dimension of social relations”, 21 teacher candidates have developed 9 different metaphors. “Metaphor of direction as space space”, 25 teacher candidates have developed 9 different metaphors. In the “metaphor of direction as abstract space” Category, 20 teacher candidates appear to have 13 metaphors. In the category “metaphor of direction as an educational field”, 14 teacher candidates have produced 8 different metaphors. In the category “metaphor of direction as the space of body-part terms”, 8 teacher candidates have developed 5 metaphors. In the “metaphor of direction as a field of faith” category, 8 teacher candidates have developed 7 metaphors. In the “metaphor of direction as an animal species” Category, 6 teacher candidates have developed 5 metaphors. In the category “direction metaphor as a field of obscurity”, 6 teacher candidates have developed 4 metaphors. In the “metaphor of direction as other fields” category, 3 teacher candidates are seen to have developed 3 metaphors.

Category 1: Metaphor of direction as a field of astronomy. When table 3 is examined, various metaphors for the concept of direction have been developed under this category, such as the sun (10), the polar star (9), light (5), shadow (3), star (3), moon (1) and sky(1) respectively. It is pointed out that this category is the category in which most metaphors are developed. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

The direction is similar to the sun, because if we find our direction right, our direction illuminates like the Sun (S29).

The direction is similar to the Polar Star, because it is bright, always there, and leads” (S113).

Direction is like light, because light illuminates man's path. He directs like direction (S9)

Direction is similar to shadow, because direction is determined depending on the sun (S51)

The direction is similar to the star, for the right direction brings it out of darkness into light (S96).

The direction is like the moon, for the moon seems to follow us. But it doesn't actually follow. So is the direction. It follows us everywhere and comes before us (S122).

The direction is similar to the sky, because whichever way you turn you are in the void (S101).

Category 2: Metaphor of direction as instrument field. When table 3 is examined, this category, under the direction of towards the concept, respectively a compass (8), h (6), mirror (3), waveland (3) arrow (3), plate (2), lighthouse (1), gps (1), glasses (2), headlights (1), flashlight (1) key and the game console (1) it is seen that improved, such as various metaphors. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

Direction is similar to compass, because it shows where to go (S153)

The direction is similar to the clock, because the direction also has a clock-like trajectory (S104).

The direction is similar to the mirror, because it reflects the characteristics of the side it is looking at. The southern slopes of a mountain reflect the characteristics of the South" (S28).

The direction is similar to the windfall, because we head in the direction that the wind comes from. Sometimes willingly, sometimes by necessity (S4).

The direction is similar to the arrow sign, because it shows how Man will move (S40).

The direction is similar to the slab, because it indicates where we are going (S91).

The direction is similar to the lighthouse, because we think it is the truest line we follow to find our way (S134).

The direction is similar to GPS, because it guides us (S166).

Direction is similar to glasses, because I can't see without it (S170).

The direction is similar to the car headlight, because it lights up in front of us in the dark and we go towards where it shows (S75).

The direction is similar to the flashlight, because it illuminates the way people want to go (S72).

The direction is similar to the game console, because the keys lead us (S80).

Category 3: Metaphor of direction as dimension of social relations. When table 3 is examined, it is observed that under this category they developed metaphors such as human (5), mother (4), teacher (4), family (2), beloved (2), father (1), friend (1), Türk (1) and relser (1) for the concept of direction. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

Direction is similar to man, because if you choose a good person, it leads to the right path, if you choose a bad person, it leads to the bad path (S56).

Direction is like mother, because it is the compass of our lives (S1).

Direction is like a teacher, because you don't know where to go without it (S22).

Direction is similar to family, because their children always lead the way since they were born (S102).

Direction is like beloved, for it always preoccupies our minds and shapes our lives (S138).

The direction is similar to the father, because if you lose him, one day you will surely lose your way (S34).

Direction is like a friend, for as a result of Elections my friends either add joy to me or sorrow to me (S16).

The direction is like the Turk, because those who turn to the Turk have never lost their way (S111).

The direction is like reLSer, because it shows which way to go where we are going (S110).

Category 4: Metaphor of direction as social field. When table 3 is examined, it is seen that they developed metaphors for the concept of direction under this category, such as road (8), homeland (2), stream (3), house (3), school (3), tree (2), wind (2) and mossy stone (1) respectively. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

Direction is like path, because it does not go without direction to a path with purpose (S161).

Direction is like homeland, because without our homeland we would not have a direction we could find (S39).

Direction is like stream, because there is a place gone. It has a point and continuity that it reaches (S140).

The direction is similar to home, because people's destination is usually their accommodation (S49).

Direction is similar to school, because they prepare for life (S183).

The direction is similar to the tree, because the Tree depicts one direction on all four sides according to the arrival of the sun's Rays (S31).

The direction is like the wind, because it is the direction to which the wind travels (S174).

Direction is like mossy stone, because it helps people in desolate places to find the place to go (S66).

Category 5: Metaphor of direction in abstract. When table 3 is examined, this category under the concept of direction towards respectively the target (4) life (3), emotion (2), hope (2), fantasy (1), pain (1), love (1) ideology (1), preference (1), philosophy (1), will (1), thinking (1) and route (1) it is observed that metaphors such as have developed. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

The direction is like the goal, because the paths to the goal are complicated. There are many factors that hinder us. We set ourselves direction in the direction of our goal (S73).

Direction is like life, because we have to determine a direction for ourselves (S57).

Direction is like emotion, for we act according to which emotion prevails (S69).

Direction is like hope, because if you lose direction like hope, you will not succeed in life" (Ö163).

Direction is like a dream, because I go in what direction my dream is (S44).

Direction is like pain, because my mind is always in my organ where I hear the pain (S68).

Direction is like love, for it finds which heart to enter in the direction of the arrow it throws (S129)

Direction is like ideology, because people have an ideology of societies or even States. It is the line that is followed according to the basic wishes and thoughts of its own. That is the climax that man reaches in a long dew (S58).

Direction is similar to preferences, because every person is on a journey. On this journey, one always comes to a crossroads. In such cases he makes a choice and determines his path (S157).

Direction is like Will, for man chooses with his little Will and suffers the consequences of what he chooses (S86).

The direction is like the route, because it determines where and how one will take the path (Ö173).

Category 6: Metaphor of direction as training ground. When table 3 is examined, it is observed that under this category they developed metaphors for the concept of direction, such as book (6), history (2), puzzle (1), geography (1), dart (1), education (1), dough (1) and pen (1) respectively. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

Direction is similar to the book, for as you read it, man's horizon widens (S88).

The direction is similar to history, for those who do not know history are lost in life (S85).

Direction is like a puzzle, because we are always on a quest with a curiosity (S164).

Direction is similar to geography, because it teaches to live in space (S71).

The direction is similar to narrow, because the direction requires a single shot, and so is the direction. There are many directions but one direction is right for everyone (S97).

Direction is similar to education, because education directs and shapes every single person (S6).

Direction is like dough, because it means something to the dough the way you shape it. Directions also shape how people move on the ground (S139)

Direction is like pen, because what you write is read, direction is if you exist (S143)

Category 7: The metaphor of direction as the space of body-part terms. When table 3 is examined, it is observed that under this category they developed metaphors for the concept of direction, such as eye (3), foot (2), brain (1), tongue (1) and heart (1) respectively. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

The direction is similar to the eye, because without it we cannot see the target (S25).

The direction is similar to the foot, because wherever you want the feet take you there (S60).

Direction is like the brain, because I get what I want done through the brain. He is acting according to me (S46).

Direction is similar to language, because it cannot accomplish goals if both deviate from its purpose (103).

Direction is like the heart, for wherever your heart leads you, your qiblen is there (S147).

Category 8: Metaphor of direction as a field of faith. When table 3 is examined, it is observed that under this category they developed metaphors such as Islam (2), purgatory (1), religion (1), faith (1), destiny (1), qibla (1) and servitude (1) for the concept of direction. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

Direction is similar to Islam, because eventually you find the right path (S100).

Direction is similar to religion, because we must properly fulfill our religion from birth to death (S158).

Direction is similar to purgatory, because it is your heart and logic that determine its direction. Heart and logic always leave us in Purgatory (S167).

Direction is like faith, for as long as you walk on that path, you can reach your goals and find peace (S11).

Direction is similar to fate, because no matter how much you try to steer it has a particular route (S155).

The direction is similar to Qiblah, because if we turn in the wrong direction in prayer, the prayer will not be accepted (S79).

Direction is like servitude, for when you turn your face to God and put your head in the prayer rug, you will find the right direction (S141).

Category 9. Metaphor of direction as an animal species. When table 3 is examined, it is observed that they developed metaphors for the concept of direction under this category, such as bird (2), cricket (1), pigeon (1), ant (1) and spider web (1) respectively. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

The direction is similar to the bird, for it roams freely in the world (S126).

The direction is like a dove, because it used to be used to send news. The Dove would go where he wanted his master (S33).

The direction is similar to the Ant, because the mouth of its nest faces South. Once this direction is found, other directions can be found (S42).

The direction is similar to the Spider's web, because it makes the Spider's webs to the wind-free and hot side. In the northern hemisphere this indicates the south (S43).

Category 10: Metaphor of direction as a field of obscurity. When table 3 is examined, it is observed that under this category they developed metaphors such as color (2), infinity (2), future (1) and time (1), respectively, for the concept of direction. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

Direction is like colors, because it can take on different colors according to the place (S131).

Direction is like infinity, for as long as you can turn around, every place you can go along the step you take is Infinity (S12).

The direction is like the future, because it already determines the path we will go according to it (S133).

Direction is like time, for you can flow wherever you want whenever you want (S154).

Category 11: Metaphor of direction as other fields. When table 3 is examined, it is seen that they developed metaphors for the concept of direction under this category, such as flag (1), human activity (1) and sail (1) respectively. Examples of metaphorical expressions created by teacher candidates related to this category are given below.

Direction is like flag, because direction is like flag is sine qua non (S142).

Direction is like human activity, because people can find the truth upon someone's description. The direction is an act of directing people (S65).

The direction is similar to the sail, because it leads from whichever side the wind blows (S76).

Conclusions, Discussion and Recommendations

In this section of the teachers who are studying education and social sciences class in the Department of education in relation to the concept of metaphors in order to reveal

the direction they have, of the findings of this research, recommendations based on the results and conclusions have been given.

Results of the Findings from the Metaphors Developed By the Teacher Candidates for the Concept of Direction

A total of 81 metaphors were produced by the teacher candidates. When these metaphors and statements about the concept of direction are examined, it is concluded that they are generally expressed in words with positive meaning and reflect a positive thought. This can also be seen as a result of how much teachers internalize the concept of direction in their daily lives. In this context, Çepni (2013)'s study "examination of student perceptions of geography concepts in social sciences teaching program" examined, it is seen that a majority of participants generally perceive the concept of direction as "guiding, providing happiness and information when the right path is determined" and that this concept has positive meanings.

It is seen that the teachers express the concept of direction with the words used in direction finding and describing activities such as "Sun, Pole Star, Light, Shadow, Moon, Compass, clock, GPS, stone". These concepts are included in the categories of astronomy, instruments and social space and account for 51.60% of the responses to the research. Kuzey and Değirmenci (2019) "understanding levels and misconceptions of teacher candidates of social sciences and literacy the concepts of maps called" the study of teacher candidates in the "direction" of the level of understanding the concept of % 40,1 and "orientation" understanding the concept of level % 58.7% of the time. The result that the teacher candidates understand the concept of "direction" better than the concept of "direction" coincides with the result that the teacher candidates metaphorically express the concept of direction with the concepts of direction. It is considered important that pre-service teachers express the "Sun" (5.74%), which is the basis of determining the geographical direction for the concept of direction. This is the metaphors of "life, reLSer, Sun, universe and human" in Geçit and Gençer (2010) "Determination of geography perceptions of 1st grade students through metaphor (Rize University example)"; In the study of "Social sciences, classroom and science teacher candidates' metaphors for the concept of" geography ", Öztürk (2007) metaphors about the concept of geography, " life, sun, world, mirror, universe and human "metaphors; In the study conducted by Çepni (2013), the most comparable with the metaphors of "Compass, Pole Star, teacher, traffic signs, map and Sun" regarding students' direction concept.

The Results of the Findings from the Categories Formed According to the Common Characteristics of the Metaphors Developed By the Teacher Candidates for the Concept of Direction

The metaphors produced by the prospective teachers about the concept of direction are grouped under 11 categories according to their common characteristics. When these categories are examined, it appears that the most commonly produced metaphor in general is in the category "direction as a field of astronomy". After this category, it was observed that the teacher candidates developed metaphors that were most commonly included in the category "direction as a tool area" and later in the categories "direction

as a social area". The area where the least metaphor is produced appears to be in the categories" direction as animal type and area of obscurity". The fact that the most widely produced category of metaphor in Geçit and Gençer (2011) is "geography as a guide, a guide to information" is important for showing the reason and necessity of the metaphor of direction that is the subject of this study in daily life.

In metaphorically associating concepts related to the field of astronomy with the concept of direction, it is concluded that there are positive expressions such as "light, light, truth, brightness, life, direction and freedom above." This situation is metaphorically regarded as a reflection of the idea that the positive will be above. In this context, Lakoff and Johnson (2015) support this conclusion of the view that states that are positive, such as happy, conscious, healthy, people metaphorically express above (positive).

It was concluded that the metaphors for the concept of instrument space direction include the concepts of direction finding-describing. In this context, the teacher candidates "to see the truth, to find the truth, to direct, to reflect the existing characteristics, to create a point of movement, to create trajectory, etc. they appear to have expressed justifications. In the Çepni (2013) research, it is observed that students related to the concept of direction coincide with the results of Compass and arrow.

It is seen that the metaphors they create for the field of social relations cover the grounds of "Compass, reLSerlik, and trust, protective, ideal". This is seen as an indication of the role of people with whom they have close relationships in ensuring an effective and balanced adaptation to the immediate environment in which they live. It is also recognized as a reflection of the values that social culture creates on individuals. In addition, individuals are related to Maslow's social needs level in the form of family, friendship and social groups. In this context, the concept of direction can also be said to contain a social requirement.

In metaphorically associating concepts of abstract space with the concept of direction, it is observed that they include meanings such as "truthfulness, guidance, necessity, climax, cleverness, choice, hope, dependence". This result can be regarded as a reflection of the knowledge and knowledge that man has generated from his own experiences. It was determined that the participants metaphorically associated the concept of direction as a field of education with the concepts indicating the level of education they were in. The reasons for the use of these metaphors include expressions such as "light, virtual reality, shaping the mind". This can be said to relate concepts more effectively in the metaphorical sense, depending on the academic level.

Concepts of the body-part space are metaphorically matched with words that form parts of a whole and are of vital importance. It has been determined that these words cover justifications such as "Router, carrier, sight". Gibbs, Lima and Francozo (2004) have stated that in their work the poet uses detailed metaphorical definitions in Neruda's poetry for the desired body parts. In this context, it can be thought that the teacher candidates are able to express their feelings and thoughts about the concept of direction by using body-part terms. This is due to the fact that people have characteristics that bind them to life and affect their quality of life. It is important to show how important

the concept of direction is for life. As a field of faith, it has been assumed that teacher candidates relate to concepts that express both their own experiences and the reflection of social culture. These metaphors are thought to be the result of the knowledge and knowledge generated by the teacher candidates' own experiences. These metaphorical concepts seem to encompass justifications such as "reasonableness, serenity, righteousness. It can be said that teacher candidates' association with the concept of direction with the field of belief has an effect on providing human inner peace.

The study found that teacher candidates use animal species metaphors for the concept of direction. These metaphors are thought to be inspired by features such as ants "nests making their entrance to the South; spiders weave their webs to the south; crickets sing nonstop at night; birds fly freely, forming certain routes between two points. Dos Santos and dig., (2000) humans bird in their work; symbol of freedom; Bonde (2005)'s work supports metaphorically expressing the concept of direction with animals as a result of what they see as a symbol of rest and comfort.

Participants appear to associate the concept of direction as a social space with the areas in which they interact in their daily lives. These space concepts include "finding the truth, the reason for existence, the last stop, the guide, Infinity, a certain path, etc. it concluded that it covered the statements. These spaces, which are necessary for human life to survive, are also the places with which they are connected ontologically. It is the confidence, the peace and the place where they are sure of their future that surrounds their outer shell. The fact that people associate the feeling with the places they belong to with a commitment can be regarded as an indication of the extent to which the metaphor of direction is adopted. In Bonde (2005), social areas such as castles and houses are seen as metaphors of Peace, Trust, care and protection, and the result is that the direction of the prospective teachers supports metaphorically the associations of social areas that protect themselves, provide confidence and peace.

When the metaphors and metaphorical expressions produced by the teacher candidates in the category of the field of obscurity are taken into account, it is seen that the metaphors they use cover all kinds of possibilities. Life is sometimes full of surprises. What you see is not what you want to see, but what you see can be said to reshape your existing perceptions.

The following suggestions can be made depending on the findings and results obtained in the research.

- Metaphors can be used in teaching difficult and abstract concepts, especially in some courses and subjects.
- Short-term metaphorical activities can be done in teaching concepts in the classroom environment.
- The use of metaphors can be given more space in lesson plans as the concept of direction will enrich the teaching methods and increase the quality of the education while teaching students at different grade levels with metaphors.

In educational settings, metaphors can be considered as an alternative option to attract students' attention to the lesson and to motivate them.

References

- Ahn, J. H. & Kwon, J. Y. (2007). A study of metaphor and metonymy of hand. *Journal of Language Science*, 14, 195-215.
- Akbaş, Y. & Uzunöz, A. (2011). Teach of geography based on conceptual chance approach; an example of implementation. *e-Journal of New World Sciences Academy*, 6 (2), 1659-1678.
- Akgün, Ü., E. (2011). A study of the effect of spatial configuration on perception and way finding in museums. (Yayınlanmamış yüksek lisans tezi). İstanbul: İstanbul Teknik Üniversitesi Fen Bilimleri Enstitüsü.
- Akın, C. (2017). The use of orientation metaphors in Kyrgyz proverbs. *Türk Dünyası Dil ve Edebiyat Dergisi*, (44), 9-17.
- Aydın, F. (2010). Secondary School Students' Metaphors about the Geography Concept. *Kuram ve Uygulamada Eğitim Bilimleri*, 10(3), 1293-1322.
- Aydınöz, D., Demirbaş, İ. & Demir, B. D. (2019). Classroom teachers' opinions on gaining gains related to direction and direction finding in primary school students. *International Journal of Geography and Geography Education (IGGE)*, 41, 59-72.
- Bauer, L. B. (2018). A necessary addiction: Student conceptualizations of technology and its impact on teaching and learning, *Journal of College Reading and Learning*, 48(1), 67-81.
- Beldağ, A. & Geçit, Y. (2017). Social Studies Teachers' Perceptions regarding the Concept "Geography": A Phenomenological Study. *Doğu Coğrafya Dergisi*, 22(37), 99-112.
- Beyoğlu, A. & Ergin, D. Y. (2018). Metaphorical perceptions of students in fine arts education departments on the concept of location. *Uluslararası Sosyal Bilimler Dergisi*, 6(11), 71-90.
- Bonde, L. O. (2005). "Finding a new place" metaphor and narrative in one cancer survivor's BMGIM therapy. *Nordic Journal of Music Therapy*, 14(2), 137-154.
- Bulut, A. & Dursun, F. (2019). The active learning model of class 7 students and their impacts on critical thinking tendencies teacher opinions. *Journal of History School (JOHS)*, 12 (XL), 12-31.
- Burmakova, E. A. & Marugina, N. I. (2014). Cognitive approach to metaphor translation in literary discourse. *Procedia-Social and Behavioral Sciences*, 154, 527-533.
- Çakmak, M. (2018). Content analyses of metaphor studies performed in terms of environment concept in Turkey. *Akdeniz Eğitim Araştırmaları Dergisi*, 12(25), 172-193.
- Çepni, O. (2013) *Examining students' perceptions on geography concepts in social science teaching program*. (Yayınlanmamış doktora tezi). Ankara: Gazi üniversitesi Eğitim Bilimleri Enstitüsü.
- Değirmenci, Y. (2019). Examination of prospective teachers' perceptions of homeland: A phenomenological study. *Review of International Geographical Education Online (RIGEO)*, 9(2), 346-360.
- Demirkaya, H., Çetin, T. & Tokcan, H. (2004). The methods that can be used in teaching the concept of direction in primary education. *Gazi Üniversitesi, Gazi Eğitim Fakültesi Dergisi*, 24(3), 39-70.

- Dos Santos, C. R., Gros, P., Abel, P., Loisel, D., Trichaud, N. & Paris, J. P. (2000, October). *Metaphor-aware 3d navigation. In IEEE Symposium on Information Visualization 2000. INFOVIS 2000. Proceedings (155-165). IEEE.*
- Duran, Y. & Aladağ, C. (2018). Determining the perceptions of the high school students about the concept of homeland through the metaphors. *Turkish Studies, 13(19)*, 589-614.
- Fraenkel, J. R., Wallen, N. & Hyun, H. (2012). How to design and evaluate research in education (8. b.). New York: McGraw-Hill.
- Geçit, Y. & Gençer, G. (2011). Determining the geographical perception of the 1st. grade students in the department of primary education through metaphor (Example of Rize University). *Marmara Coğrafya Dergisi, (23)*, 1-19.
- Gibbs R. W., Lima, P. L. C. & Francozo, E. (2004). Metaphor is grounded in embodied experience. *Journal of Pragmatics, 36(7)*, 1189-1210.
- Giesecke, J. (2014). Finding the right metaphor: Restructuring, realigning, and repackaging today's research libraries. (Ed. Sul H. Lee) *In Repackaging Libraries for Survival (60-71)*. Routledge.
- Gökçe, N. (2016). Metaphors of social studies teacher candidates regarding the concept of geography. *Uluslararası Eğitim Bilimleri Dergisi. 3(9)*, 121-134.
- Güneş, C. & Tezcan, R. (2017). *Metafor nedir, ne değildir?* Kılcan, B.(Ed). In *Metafor ve eğitimde metaforik çalışmalar için bir uygulama rehberi*, (p.1-14). Ankara: Pegem Akademi
- Harewood, S. (2009). Metaphor and the work of cultural studies. *Policy Futures in Education. 7(2)*, 161-171.
- Hopkins, J. (2002). Psychoanalysis, metaphor and the concept of mind. (Ed. Michael Levine). In *Analytic Freud (pp. 23-47)*. Routledge.
- İbret, B., Ü. & Aydınöz, D. (2011). The metaphors developed by elementary school-second stage students on the concept of 'world'. *Kastamonu Eğitim Dergisi, 19(1)*, 85-102.
- Karatekin, K. (2006). *The effect of teaching the subject of direction and finding methods according to multiple intelligence theory on student's success at the 4th class of primary school (Yayınlanmamış yüksek lisans tezi)*. Ankara: Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü.
- Kılcan, B. (2017). *Eğitim bilimlerinde metaforların veri toplama aracı olarak kullanılması, örnek bir uygulama*. (Ed. Bahadır Kılcan) ,In *Metafor ve eğitimde metaforik çalışmalar için bir uygulama rehberi*, Ankara: Pegem Akademi.
- Kuzey, M. & Değirmenci, Y. (2019). Social studies teacher candidates' understanding level and misconceptions with regard to the map and direction literacy. *Milli Eğitim Dergisi, 48(223)*, 207-230.
- Lakoff, G. & Johnson, M. (2015). *Metaforlar hayat, anlam ve dil (Çev. Gökhan Yavuz Demir)*. İstanbul: İthaki yayınları.
- MEB. (2018a). Hayat bilgisi öğretim programı (İlkokul 1, 2 ve 3. Sınıf). Retrieved from <http://mufredat.meb.gov.tr/Dosyalar/2018122171428547-HAYAT%20B%20C4%B0LG%20C4%B0S%20C3%96%20C4%9ERET%20C4%B0M%20PROGRAMI.pdf>

- MEB. (2018b). Sosyal bilgiler dersi öğretim programı (İlkokul ve Ortaokul 4,5,6 ve 7. sınıflar). Retrieved from <http://mufredat.meb.gov.tr/Dosyalar/201812103847686-SOSYAL%20B%C4%B0LG%C4%B0LER%20%C3%96%C4%9ERET%C4%B0M%20PROGRAMI%20.pdf>
- Miles, M. B. & Huberman, M. A. (1994). *An expanded sourcebook qualitative data analysis*. London: Sage.
- Nelson, L. D. & Simmons, J. P. (2009). On southbound ease and northbound fees: Literal consequences of the metaphoric link between vertical position and cardinal direction. *Journal of Marketing Research*, 46(6), 715-724.
- Öztürk, Ç. (2007). Metaphor status about the concept of 'geography' of prospective social science, science and classroom teachers. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, 8(2), 55-69.
- Saban, A. (2008). Metaphors about School. *Kuram ve uygulamada eğitim yönetimi*, 55, 459-496.
- Sarı, C. (2016). "Up/down" as an orientational metaphor in idioms. *Journal of International Social Research*, 9 (44).
- Shaw, D. M. & Mahlios, M. (2008). Pre-Service teachers' metaphors of teaching and literacy. *Reading Psychology*, 29(1), 31-60.
- Steen, G. J. (2010). Researching and applying metaphor. *Toegepaste Taalwetenschap in Artikelen*, 83(1), 91-102.
- TDK (2011). *Türkçe Sözlük*, Ankara: Türk Dil Kurumu Yayınları.
- Tuna, F., Demirci, A. & Gültekin, N. (2012). What is the usage level of basic geographic knowledge and skill in the society? Current situation analysis of direction, location and map skills. *Milli Eğitim Dergisi*, 41 (195), 211-227.
- Yaylacı, Z. & Aksoy, B. (2017). Upskilling students who have mental inadequacy with sence of direction. *Anadolu Kültürel Araştırmalar Dergisi*, 1(1), 35-50.
- Yıldırım, A. & Şimşek, H. (2011). *Sosyal bilimlerde nitel araştırma yöntemleri* (8. edition). Ankara: Seçkin yayıncılık.

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