

## Perspective of Prospective Primary Teachers in Terms of Curriculum and Curricular Components

**Nurhan Atalay**

Asst. Profesör, Niğde Ömer Halisdemir University, Turkey, [nurratalay@gmail.com](mailto:nurratalay@gmail.com)

**Zeynep Kılıç**

Asst. Profesör, Eskisehir Osmangazi University, Turkey, [zeyno-dev@hotmail.com](mailto:zeyno-dev@hotmail.com)

The aim of this study is to determine the perceptions of the prospective primary teachers in terms of curriculum and curricular components with metaphors. The study was conducted with qualitative research method. 100 primary school teacher candidates studying at a state university in central participated in the research. A questionnaire consisting of open-ended questions was used to collect data. The opinions of prospective primary teachers about the components of curriculum were analyzed through content analysis. According to the research findings, prospective primary teachers who participated in this study aimed to present their perceptions of the curriculum and the components of the curriculum which are gains, content, teaching-learning process and measurement and assessment through metaphors, produced 194 metaphors in total. When analyzing the metaphors, it can be said that prospective teachers emphasize the characteristics and functionality of the curriculum and its components which are goal/gain, content, teaching-learning process and measurement-assessment.

Keywords: curriculum, curriculum components, metaphor, prospective primary teacher, primary education

### INTRODUCTION

Education and training are the only means of keeping up with the ever-changing world conditions and raising qualified individuals as required by the era. Education is a long-term investment; at the same time, education is faced with constant pressure from social and economic change. This forces instructors and decision makers to plan for the future (Gültekin, 2014). Training programs are needed to ensure that the process is effective and complete at all levels of training. Küçükahmet (1997) described the training program as "all of the activities beyond the curriculum such as guidance services, trip and observations, social club studies and specific days and weeks" (Ekiz, 2008). On the other hand, Demirel (2010) defined the training program as "the learning experience mechanism provided through planned activities in and out of school."

Societies that want to raise qualified individuals have turned to rapid changes in the educational process. The "Curriculum approach" used in Turkey's education system until the 1950s as a list of courses and topics was replaced by the "New Curriculum" (Demirel, 2010). The new curriculum includes all activities related to the teaching-learning process and shows the subjects, objectives, weekly course hours and teaching methods and techniques of the courses (Büyükkaragöz, 1997). To achieve a curriculum's purpose and become functional, all its components must be meaningfully interconnected and any change that may occur in any item will affect the other components (Aykaç, 2005). Curriculum development activities are influenced by socio-cultural factors such as "society's perspective on information", "important facts and events", "transformations" and "paradigms" (Yaşar,

**Citation:** Atalay, N., & Kılıç, Z. (2022). Perspective of prospective primary teachers in terms of curriculum and curricular components. *Anatolian Journal of Education*, 7(1), 103-122. <https://doi.org/10.29333/aje.2022.719a>

2014). Educational systems have also changed in parallel with these changes, especially when the transition from agricultural society to industrial society, from industrial society to information society. Education in agricultural society has been limited to those who manage it, and mass education has been given importance in industrial society. In the information society, it was not limited to school, but also to continue education throughout life with the importance of knowledge and the spread of knowledge (Akkoyunlu, 1998).

It is necessary to determine the objectives intended for the student first from the basic elements such as goal (gains), content (scope), learning-teaching process (educational situations) and measurement-assessment (testing status), when preparing the curriculum (Çelik, 2006). The content that is the answer to the question "What should we teach" is determined in line with the set goals (gains) (Demirel, 2010). The content covers the curriculum scope and includes the units and topics specified in the curriculum (Ertürk, 1978). The content should consist of the units and topics that will host the targeted behaviors. Content should be consistent with target behaviors, suitable for the student's level, and equipped with science-art-philosophy knowledge. However, in most education systems, content was more prominent than the goals of education (Sönmez, 2008). As one of the most important elements of education is the curriculum, great duties and responsibilities fall on teachers who effectively implement this program. During the training and teaching process, teachers can acquire their teaching skills, make sense of their own responsibilities and develop schemes of what the teaching profession is. While creating these schemes and models, each individual can create metaphors for concepts in their own way. Metaphors can also be used to combine the gap between theory and practice in teacher training (Leavy, McSorley & Bote, 2007). According to Morgan (1998), the use of metaphors generally means a way of thinking and seeing that reflects our understanding of the world. Basically, a concept, phenomenon or event that is meant to be explained with the metaphor concept is described by analogy to another concept, phenomenon or event (Oxford et al., 1998).

Metaphors are applied in educational administration, curriculum development and planning, and to encourage learning in the field of teaching and to develop creative thinking. Metaphors in teacher training are also a tool in guiding teaching practices and in determining the role of teachers in modern educational understanding (Vadeboncoeur & Torres, 2003). Metaphors commit to create an understanding through analogy (Steen, 2007). In other words, metaphors make new meanings by using tangible reference points that are familiar to develop the understanding of new, challenging or hidden structures. Metaphor creation is the innovative thinking that comes out in both linguistic and conceptual forms. They are generally regarded as sentences that serve literary and aesthetic purposes (Lynch & Fisher-Ari, 2017). Metaphors constantly shape our thoughts and actions (Haggis, 2004). Metaphors are not only used linguistically, but also regulate and clarify theoretical structures (Bowdle & Gentner, 2005; Lakoff & Johnson, 2010). According to this new theory, also called the contemporary theory of metaphor, metaphor is treated as a tool that shapes human thinking processes and shapes cognitive activities as well as directs personal and social development (Uslu - Yardımcı & Bal, 2015). Metaphors can be defined as means of interpretation and embodiment through the analogies we use frequently, consciously or unconsciously, in our daily lives to regulate mental processes in understanding concepts (Aykaç & Çelik, 2014).

Researchers have recently questioned the possibility of using metaphors to improve the thinking ability and development of prospective and in-service teachers around the world (Lynch & Fisher-Ari, 2017). Metaphors can be used as a powerful "pedagogical tool" to uncover, understand and (perhaps) change the mental images of prospective teachers in relation to certain facts during teacher training (Saban, 2008). Almost all researchers accept the idea of metaphor, which plays a structural role in regulating our conceptual system (Sanchez, Barreiro & Maojo, 2000). Metaphors are commonly known only in the field of language, but play a significant role in education and pedagogical aspects (Botha, 2009). Despite its prevailing view in western philosophy and linguistics that metaphor is environmentally

interesting, Lakoff & Johnson (1980) argued that metaphor is not just a linguistic tool, but that “our conceptual processes are largely metaphorical” (Kemp, 1999).

The pre-service education for teachers in shaping their perceptions of the curriculum has a great importance (Gültekin, 2013). One of the important mental tools that can be used to reveal the perceptions of prospective teachers regarding the curricular components can be the metaphor (analogy) they will create about the program. The perceptions of the prospective teachers regarding the curriculum will have a significant impact on both the effectiveness and development of the curriculum they apply.

In the literature, regarding the concept of curriculum; there are studies that examine the metaphors that school administrators (Semerci & Özçelik 2018), teachers (Gültekin, 2017; Yurdakul, 2015) prospective teachers (Akinoğlu, 2017; Gültekin, 2013; Özdemir, 2012) faculty members (Örten & Erginer, 2016) and pedagogical formation students (Nartgün & Özen 2015) upload to the curriculum, and that comparing the metaphorical perceptions of teachers and prospective teachers on the curriculum (Aykaç & Çelik, 2014). Educational programs are a comprehensive, systematic learning experience process that includes answers to the questions of why should we teach, what to teach, how to teach and how much we have been able to teach, both in school and out of school. In this context, it is important to reveal the metaphorical perceptions of teacher candidates regarding this process. However, no studies showing metaphorical perceptions of primary curricular components have been found. This research aims to reveal the perceptions of prospective primary teachers regarding the curriculum and curricular components metaphorically.

## **METHOD**

This study was designed using qualitative research method. Qualitative research method can be defined as a study using qualitative data collection methods such as observation, interview and document analysis, and monitoring a qualitative process for realistically and holistically revealing perceptions and events in the natural environment (Yıldırım & Şimşek, 2013). Metaphors can also be used as a qualitative data collection tool and rich findings can be obtained through concepts (Patton, 2002; Yıldırım & Şimşek, 2013).

### **Participants**

In this study conducted with qualitative research method, the participants are (100) senior (fourth-year) students who continue primary teacher’s undergraduate program of a State University in Central Turkey and take all the lessons in the curriculum. In qualitative research, purposive sampling types are used in sample selection (Patton, 2002). In this study, the criterion sampling method, one of the purposive sampling methods was used. Criterion sampling, one of the purposive sampling types, was used to determine the participants of the research. The purposive sampling allows for in-depth study of situations that are considered to have rich knowledge (Patton, 2002). The basic understanding of the criterion sampling method is to study situations that meet a set of predetermined criteria. In determining the mentioned criteria, a pre-determined criteria list may be used as well as the criteria to be determined by the researchers (Yıldırım & Şimşek, 2013). In this study, grade level, taking the all-curriculum lesson, the undergraduate program students attend and were taken as criteria.

There are no single answer or perfect way or hard rule about determining sample size in qualitative research (Coyne, 1997; Gill, 2020; Morse, 1994; cited: Luborsky & Rubinstein, 1995). Sample size in qualitative research should be evaluated in the context of how meets the research objectives related to the subject/situation and the suitability of the sample units. These sample units are participants, words, observations, events, activities, social process, any issues in research (Luborsky & Rubinstein, 1995). The researcher can decide sample size in qualitative research depend on context of situations/issues in

research, objectives of research and quality data (Abrahams, 2010; Morse, 2000). In addition, it is recommended to consider the richness, adequacy and convincing of the data obtained not the sample size in the chosen of samples in the selection of samples in qualitative studies (Staller, 2021). In the context, 100 prospective teachers participated in this study. Since the pre-service teachers participating in the research were selected by criterion sampling, it is thought that the data obtained is qualified and meets the aims of the study.

### **Data Collection and Data Analysis**

A questionnaire consisting of open-ended questions prepared by the researchers was used to collect the data of the study. In metaphor studies, a questionnaire consisting of open-ended questions which includes the metaphor question, is usually used (Doğan, 2017; Ekici & Akdeniz, 2018; Kavrayıcı, 2021; Kuzu, Kuzu & Sivacı, 2018; Öztürk, 2021; Tortup, 2013; Yılmaz, Göçen & Yılmaz, 2013). Since study is also a metaphor study a questionnaire consisting of open-ended questions was used to collect the data of the study.

Views were taken from three experts working in the field of metaphor studies and primary school teacher education to forming the questionnaire consisting of open-ended questions. The experts examined the questionnaire consisting of open-ended questions and expressed their views. Among these views are that each question should be on one page and the concepts should be written in bold. In the context, the questionnaire consisting of open-ended questions were made corrections to experts' views. Thus, the questionnaire consisting of open-ended questions was given its final form.

A questionnaire consisting of open-ended The form consisted of two parts. In the first part, demographic information such as the gender of the participants is included. In the second part, there is a semi-structured sentences with two parts, which was created to learn the metaphoric perceptions of the participants for curriculum and the components of curriculum

The sentences are "Curriculum is similar to....., because.....", "Goals/Gains are similar to....., because.....", "Content is similar to....., because.....", "Teaching and learning process is similar to....., because....." and "Measurement and assessment is similar to....., because.....". The participants needed to produce metaphors in the first part while they need to justify the metaphor, they produce in the second part. In this way, the researcher tried to determine for what purpose was the metaphor used and whether these metaphors were valid or not.

Data analysis in qualitative research includes the experiences, the regulation of what is seen, read and heard to understand those experiences (Glesne, 2012). Within the scope of this arrangement, the data is divided into units, encoded, synthesized to see the contexts between the data and create themes (Bogdan & Biklen, 2007). Thus, qualitative data is expressed in a clear, understandable, original form (Liamputtong, 2009). The data obtained from the study were analyzed by thematic analysis. The data were coded by the thematic analysis and obtained from the codes to categories, from categories to themes.

In the process of collecting data, prospective teachers were asked to complete the sentences which as "Curriculum is similar to....., because.....", "Goals/Gains are similar to....., because.....", "Content is similar to....., because.....", "Teaching and learning process is similar to....., because....." and "Measurement and assessment is similar to....., because.....", considering the features of the curriculum and the curricular components. The expression "because" here seeks to reveal logical reasons for the created metaphors. In this way, it is aimed to establish the reasons for the metaphors created by prospective teachers. Participants have written their own statements on pre-prepared forms. Each participant was given 15-20 minutes to complete the form by informing them

about the purpose of the research and the contributions they can make to this study. Furthermore, it is stated that the information they provide will not be used in any way except for this research.

The process of analyzing the metaphors created by prospective teachers was carried out in four stages: determination of metaphors, classification of metaphors, category development and providing validity and reliability (Saban, 2008). In order to determine the metaphors used by prospective teachers in terms of curriculum and curricular components, answers of prospective teachers were analyzed individually and transferred to the computer environment. As a result of this examination, the metaphors used by prospective teachers were identified by the researchers. During the process of determining metaphors, it was examined whether prospective teachers clearly articulated a certain metaphor regarding the concepts on the curriculum and curricular components. At the stage of classifying the metaphors, the metaphors produced by prospective teachers are reviewed and each metaphor has been analyzed in terms of the subject of the metaphor, the source of metaphor and the relationship between the subject of the metaphor and the source of the metaphor are grouped with similar characteristics. Additionally, metaphors produced by prospective teachers are categorized by taking into account the relationship between the subject of the metaphor and the source of metaphor.

In order to achieve the reliability of the research, the categories of the metaphors and the metaphors itself used by prospective teachers were determined by an expert other than the researchers. As a result of the analysis conducted, the discussion was focused on the points that were mentioned and the analysis was finalized. The data obtained were categorized according to the metaphors used by prospective teachers in terms of the curriculum and curricular components, and the categories were also thematized.

## FINDINGS

In total, 194 metaphors were produced by the prospective teachers who participated in this study, which aimed to present their perceptions of the curriculum and the components of the curriculum which are gains, content, teaching-learning process and measurement and assessment through metaphors. The categories were created from the metaphors produced by prospective teachers, the metaphors below the categories created were presented in a chart format and citations were included



Figure 1  
Metaphors created by prospective teachers in terms of curriculum

Table 1 includes the categories created from the metaphors created by prospective teachers regarding curriculum and quotations from prospective teachers.

Table 1  
Metaphors created by prospective teachers in terms of curriculum

Categories	Metaphors	Quotations of Prospective Teachers
Curriculum as a guiding program	Guide, Map, Directory, Sun, Light, Signpost, Road, Compass, Leader	PT71 "Curriculum guides people on training." (Guide metaphor) PT1 "Because it shows us the way we want." (Map metaphor)
Curriculum as a Descriptive and Explanatory Factor	User Manual, Navigation, Signboard, Encyclopedia, Dictionary	PT2 "Describes what to do, which course to teach, which subject to explain." (User Manual Metaphor) PT64 "The curriculum also guides as navigation by telling us what to teach." (Navigation metaphor)
Curriculum as the Keystone of Education	Water, Nature, Life	PT3 "It is the main source of education. It reveals the basic philosophy of a country." (Water metaphor) PT8 "It is indispensable for the course and also for the world." (Nature metaphor)
Curriculum as a Collaborative Field	Ant, Construction Skeleton	PT9 "It's a part of collaboration with multiple specialized fields." (Ant metaphor) PT35 "It is created by hand." (Construction metaphor)
Curriculum as a Factor with Diversity and Complexity	Food, Life, Soup, Space	PT13 "Because the curriculum includes content, goal, gain, educational situations and measurement and assessment." (Food metaphor) PT40 "It is as complex as life." (Life metaphor)
Curriculum as a Frightening Factor	Love, Amusement Park, Monster	PT99 "It is frightening, you never know what will happen." (Love metaphor) PT33 "It is scary like an amusement park." (Amusement Park metaphor)
Curriculum as a Planned and Excellent Factor	Computer, Calculator, Recipe	PT41 "Every stage should be planned and perfect." (Computer metaphor) PT47 "If it is calculated correctly and accurately, we will reach the goals and the right answers." (Calculator metaphor)
Curriculum as an Extending Component	Stairs, Path, Garden, Movie Trailer	PT76 "We go higher than one step of the stairs. As the achievements are completed, it raises us step by step." (Stairs metaphor) PT25 "As we go on, we encounter another road." (Path metaphor)
Curriculum as a Changing Factor	Virgo, Flower, Moving Tribe, Phases of the Moon	PT22 "It must be in constant change and development." (Virgo metaphor) PT43 "Open to constant change" (Flower metaphor)
Curriculum as a Binding-Limiting Factor	Bond, Dictator, Chain	PT100 "It binds the teacher." (Bond metaphor) PT54 "It won't let you do anything more." (Dictator metaphor)
Curriculum as a Tool	Car, Pen, Mirror	PT51 "It allows us drive along the way like a car. (Car metaphor) PT21 "It writes the procedure of the course like a pen." (Pen metaphor)

As shown in Table 1, the metaphors created by prospective teachers in terms of curriculum are as follows: "Curriculum as a guiding program", "Curriculum as a Descriptive and Explanatory Factor", "Curriculum as the Keystone of Education", "Curriculum as a Collaborative Field", "Curriculum as a Factor with Diversity and Complexity", "Curriculum as a Frightening Factor", "Curriculum as a Planned and Excellent Factor", "Curriculum as an Extending Component", "Curriculum as a Changing Factor", "Curriculum as a Binding-Limiting Factor", "Curriculum as a Tool". It has been observed that the metaphors in the categories emphasize the different characteristics of the curriculum. The curriculum as a guiding program created by metaphors such as maps, guides, compass, and so on produced by prospective teachers drew attention to the fact that the curriculum is a guide for a course, metaphors such as water, nature, and life also draw attention that the curriculum is the keystone of education. Furthermore, the metaphors of love, amusement parks and monsters produced by prospective teachers in the curriculum as a frightening factor emphasized that the curriculum is an

indefinite process and negative for the teacher. The metaphors of bond, dictator, chain, which are included in the curriculum as a binding-limiting factor and produced by the teacher, also showed that the curriculum is binding for the teacher. When analyzing the metaphors under the categories and categories created, it can be said that the perceptions of the prospective teachers regarding the curriculum are positive and that they emphasize the operability of the curriculum and its characteristics which are developed by experts, its scope is wide and can be changed.

Figure 2 shows that most frequently produced metaphors by prospective teachers regarding goal/gain component are mountain peaks, castle, harbor, peak point. Prospective teachers also produced metaphors such as star, water, ladder, step, book, cookbook, menu, lantern for goal/gain component. When analyzing the metaphors produced by prospective teachers regarding goal/gain component, it was observed that they embodied the concept of goal/gain.

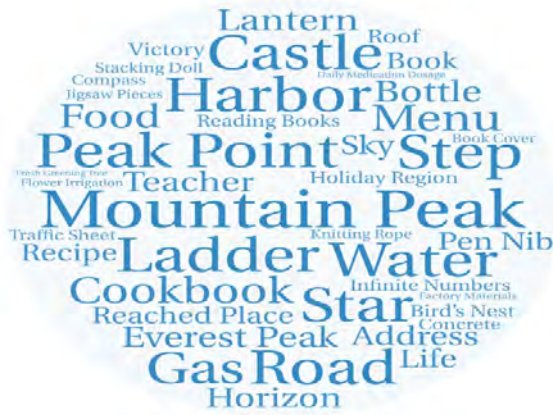


Figure 2  
Metaphors created by prospective teachers in terms of goal/gain component

Table 2 shows the categories created from the metaphors produced by prospective teachers regarding the goal / gain component and the quotations of prospective teachers

Table 2  
Metaphors created by prospective teachers in terms of goal/gain component

Categories	Metaphors	Quotations of Prospective Teachers
Goal/Gain as Destination	Mountain Peak, Everest Peak, Castle, Horizon, Peak Point, Reached Place, Holiday Region	PT2 "It shows the desired point." (Mountain Peak metaphor) PT5 "Goals/gains show us where we want to get to, like Everest Hill." (Everest Peak metaphor)
Goal/Gain as a Tool	Ladder, Step, Gas, Road, Address	PT76 "We climb higher than one step of the ladder. As the achievements are completed, they raise us step by step." (Ladder metaphor) PT47 "The message to be given to the students is to be taught properly within a period of time." (Step metaphor)
Goal/Gain as a Required Labor Component	Reading Books, Bottle, Food, Harbor, Mountain Peak	PT1 "This book takes effort. When it's over, all the parts complete each other and you don't regret the effort you put in." (Reading books metaphor) PT75 "As a baby strives until it reaches, the teacher strives to help his students." (Bottle metaphor)
Goal/Gain as a Diverse Component	Cookbook, Star, Infinite Numbers, Pen Nib, Stacking Doll	PT9 "there are multiple recipes. We strive to achieve the goal in a gradual manner according to the contents of the meal." (Cookbook metaphor) Ö32 "As the stars in the sky, it is a variety." (Star metaphor)
Goal/Gain as a Complex Component	Complex Knitting Rope, Bird's Nest, Jigsaw Pieces	PT8 "PT8 "I struggle with gains while preparing the curriculum." (Complex knitting rope metaphor) PT11 "It is as complex as a bird's nest and difficult to reach." (Bird's Nest metaphor)
Goal/Gain as a Balanced Component	Daily Medication Dosage, Recipe, Flower Irrigation	PT12 "Less or more may cause trouble." (Daily Medication Dosage metaphor) PT60 "The ingredients and their amounts are explained one by one, and the meal is prepared accordingly. If the recipe is not followed, there is no meal." (Recipe metaphor)
Goal/Gain as a Shaping and Formatting Component	Teacher, Victory, Book, Factory Materials, Fresh Greening Tree	PT15 "It focuses on skills and knowledge like a teacher; children learn knowledge skills through gains." (Teacher metaphor) PT58 "It is the behavior change that we want to achieve." (Victory metaphor)
Goal/Gain as a Guiding and Descriptive Component	Lantern, Menu, Traffic Sheet, Compass, Road, Teacher	PT80 "It indicates where we need to tell." (Lantern metaphor) PT91 "It determines what we tell." (Menu metaphor)
Goal/Gain as a Component of Uncertain Process	Book Cover, Sky, Life	PT63 "It outlines the course and what to teach. We cannot know exactly what we expect before we start the course." (Book Cover metaphor) PT6 "It is uncertain what the sky will make during the day, it is unclear how the gains will be taught." (Sky metaphor)
Goal/Gain as the Keystone of the Curriculum	Concrete, Water, Roof	PT27 "The gain is required to prepare the curriculum, if concrete is required for construction." (Concrete metaphor) PT21 "If water is the basis of life, the gain is the basis of the curriculum." (Water metaphor)

As shown in Table 1, the metaphors created by prospective teachers in terms of curriculum are as follows: "Curriculum as a guiding program", "Curriculum as a Descriptive and Explanatory Factor", "Curriculum as the Keystone of Education", "Curriculum as a Collaborative Field", "Curriculum as a Factor with Diversity and Complexity", "Curriculum as a Frightening Factor", "Curriculum as a Planned and Excellent Factor", "Curriculum as an Extending Component", "Curriculum as a Changing Factor", "Curriculum as a Binding-Limiting Factor", "Curriculum as a Tool". It has been observed that the metaphors in the categories emphasize the different characteristics of the curriculum. The curriculum as a guiding program created by metaphors such as maps, guides, compass, and so on produced by prospective teachers drew attention to the fact that the curriculum is a guide for a course,



metaphors such as water, nature, and life also draw attention that the curriculum is the keystone of education. Furthermore, the metaphors of love, amusement parks and monsters produced by prospective teachers in the curriculum as a frightening factor emphasized that the curriculum is an indefinite process and negative for the teacher. The metaphors of bond, dictator, chain, which are included in the curriculum as a binding-limiting factor and produced by the teacher, also showed that the curriculum is binding for the teacher. When analyzing the metaphors under the categories and categories created, it can be said that the perceptions of the prospective teachers regarding the curriculum are positive and that they emphasize the operability of the curriculum and its characteristics which are developed by experts, its scope is wide and can be changed.

Figure 2 shows that most frequently produced metaphors by prospective teachers regarding goal/gain component are mountain peaks, castle, harbor, peak point. Prospective teachers also produced metaphors such as star, water, ladder, step, book, cookbook, menu, lantern for goal/gain component. When analyzing the metaphors produced by prospective teachers regarding goal/gain component, it was observed that they embodied the concept of goal/gain.



Figure 3  
Metaphors created by prospective teachers in terms of goal/gain component

Table 3 includes the categories created from the metaphors produced by prospective teachers regarding the concept of the content and the quotations of prospective teachers

Table 3  
Metaphors created by prospective teachers in terms of content component

Categories	Metaphors	Quotations of Prospective Teachers
Content as a Main Component	Apple Seed, Center of the Circle, Main Dish, Tomato Paste	PT8 "The middle of meaning of the curriculum is the content." (Apple seed metaphor) PT75 "The focus of subjects is content." (The center of the circle is metaphor)
Content as an Informative Component	Wise Man, Book, Main Menu, Television, Inventory, Dictionary, Recipe	PT1 "We can reach whatever we want only by asking." (Wise man metaphor) PT2 "It gives us, like a book, what we teach and what the subjects are." (Book metaphor)
Content as a Tool	Bus, Automobile Engine, Vase	PT93 "It makes it easier for us to travel from one place to another. It facilitates what we teach in the content." (Bus metaphor) PT33 "It is the engine that drives the car. Content drives the education process." (Automobile engine metaphor)
Content as a Prominent Component	Book Cover, Star, Advertisement, Flower	PT15 "Content should be impressive like a book cover." (Book cover metaphor) PT72 "The main component that is intended to be explained is the content. It should shine like a star for this reason." (Star metaphor)
Content as Contribution	Tomato Paste, Onions in Turkish Omelet, Salt, Spice, Color	PT26 "There is tomato paste in every meal. Every course has content." (Tomato paste metaphor) PT11 "We wouldn't know what to teach and what to discuss without content." (Onions in Turkish omelet metaphor)
Content as a Diverse Component	Hodgepodge, Soup, Children's Park, Human Body, Pomegranate, People, Ankara, Trash, Meal, Stacking Doll, Magazine Program	PT14 "It contains all kinds of food. The content can be any kind of information." (Hodgepodge metaphor) PT16 "There's a little bit of everything in it." (Soup metaphor)
Content as a Determining Component	Map, Picture, Table of Contents Section	PT21 "It indicates the extent." (Map metaphor) PT62 "The clarity given to the student is that everyone is taught the same things, not to go beyond the gain." (Picture metaphor)

As shown in Table 3, the metaphors created by prospective teachers in terms of content component are as follows: "Content as a Main Component", "Content as an Informative Component", "Content as a Tool", "Content as a Prominent Component", "Content as Contribution", "Content as a Diverse Component", "Content as a Determining Component". When analyzing the metaphors under the categories and categories created, it can be said that the prospective teachers are aware of some of the features of the content concept. For example, the metaphors of apple seed, center of the circle, main dish, tomato paste regarding "Content as a Main Component" category and the metaphors of wise man, book, main menu, television, inventory, dictionary, recipe regarding "Content as an Informative Component" category indicates that the concept of content is part of the teaching and gives information to teachers about what to teach. Prospective teachers emphasize that the metaphors of tomato paste, onions in Turkish omelet, salt, spice, color regarding "Content as Contribution" category and the metaphors of bus, automobile engine, vase regarding "Content as a Tool" category are included in each training process and are a tool for learning. Prospective teachers also stated that the content is diverse and should be striking with the metaphors of book cover, star, advertisement, flower regarding "Content as a Prominent Component" category and the metaphors of hodgepodge, soup, children's park, human body, pomegranate, people, Ankara, trash, meal, stacking doll, magazine program regarding "Content as a Diverse Component" category. Prospective teachers also stated that the content specifies the scope of the teaching process with the metaphors of map, picture and table of contents section regarding "Content as a Determining Component" category as the determining factor. Prospective teachers may be said to be aware of some of the features of the content concept.

As shown in Figure 4, the most common metaphors they produce in the teaching-learning process for prospective teachers are cooking, food type, and making cakes. In addition, prospective teachers produced metaphors such as construction, compass, rainbow, sports and traffic lights for the teaching-

learning process. When analyzing the metaphors produced by teachers in the teaching-learning process, it is seen that they emphasize certain characteristics of the teaching-learning process.



Figure 4  
Metaphors created by prospective teachers in terms of teaching-learning component

Table 4 shows the categories created by the metaphors produced by prospective teachers in the teaching-learning process and quotations of them.

Table 4  
Metaphors created by prospective teachers in terms of teaching-learning component

Categories	Metaphors	Quotations of Prospective Teachers
Teaching-Learning Process as a Distinctive Component	Cooking, Food Type Food Presentation, Recipe, Dress, Car Greengrocer, Gearbox, Rainbow, Car Gear	PT55 "How we describe it makes us different like how we cook." (Cooking metaphor) PT52 "Each meal is cooked differently." (Food type metaphor)
Teaching-Learning Process as a Component Requiring Labor and Process	Paddle, Basketball Game Bus Journey, Wheat Long Journey, Butterfly, Life, Running Race	PT10 "Even though it is a guide, everyone has to work hard for the boat to move forward." (Paddle metaphor) PT18 "If you don't do things hierarchically and regularly and if you don't struggle, the output will be bad." (Basketball game metaphor)
Teaching-Learning Process as a Progressive Component	Construction, Making Cake, Ladder	PT4 "The teaching-learning process progresses gradually like construction " (Construction metaphor) PT73 "The desired gain is achieved through certain processes." (Making cake metaphor) PT31 "We go gradually like the steps in a ladder." (Ladder metaphor)
Teaching-Learning Process as a Guiding Component	Traffic Lights, Road, Transportation Vehicles Compass	PT14 "Guides us and protects us from possible disaster." (Traffic lights metaphor) PT42 "It determines the direction and type of going." (Road metaphor)
Teaching-Learning Process as a Component Providing Progress and Development	Road, Sport, School, Life	PT2 "It indicates that we are moving forward." (Road metaphor) PT6 "The teaching-learning process develops the teacher as it constantly develops the human being. (Sport metaphor)
Teaching-Learning Process as an Informative Component	Computer, Nutrition, Collection, Ocean	PT65 "In the process, many information can be added in different ways." (Computer metaphor) PT64 "Both teacher and student are saturated with the information." (Nutrition metaphor)

As shown in Table 4, the metaphors created by prospective teachers in terms of teaching-learning component are as follows: “Teaching-Learning Process as a Distinctive Component”, “Teaching-Learning Process as a Component Requiring Labor and Process”, “Teaching-Learning Process as a Progressive Component”, “Teaching-Learning Process as a Guiding Component”, “Teaching-Learning Process as a Component Providing Progress and Development”, “Teaching-Learning Process as an Informative Component”. When analyzing the metaphors under the categories and categories created, it can be said that the prospective teachers are aware of some of the features of teaching-learning concept. For example, the metaphors of cooking, food type, food presentation, recipe, dress, car, greengrocer, gearbox, rainbow, car gear regarding “Teaching-Learning Process as a Distinctive Component” category for prospective teachers emphasized that the teaching-learning process differs for each teacher and student, and that each teacher can use different methods and techniques in the teaching-learning process. Prospective teachers also stated that the teaching-learning process is a demanding and gradual process with the metaphors of paddle, basketball game bus journey, wheat long journey, butterfly, life, running race regarding “Teaching-Learning Process as a Component Requiring Labor and Process” category and the metaphors of construction, making cake, ladder regarding “Teaching-Learning Process as a Progressive Component” category. Prospective teachers have indicated that the teaching-learning process through road, sport, school, life metaphors regarding “Teaching-Learning Process as a Component Providing Progress and Development” and traffic lights, road, transportation vehicles compass metaphors regarding “Teaching-Learning Process as a Guiding Component” are the guides for the teacher and ensures the progress.

In Figure 5, the metaphors created by prospective teachers in terms of measurement and assessment component are given in the form of a word cloud depending on the usage intensity of teachers.



Figure 5  
Metaphors produced by prospective teachers in terms of measurement and assessment

Table 5 shows the categories created by the metaphors produced by prospective teachers in terms of measurement and assessment process and quotations of them.

Table 5

## Metaphors produced by prospective teachers in terms of measurement and assessment

Categories	Metaphors	Quotations of Prospective Teachers
Measurement and Assessment as a Decision-Making Component	Match End, Fruit, Traffic Lights, Planting Trees, Soccer Match, Traffic Accident, Armageddon, Exam, Goal, Endpoint, Competition, Judge, Cooking	PT15 "It is obvious who won at the end of the match." (Match end metaphor) PT82 "It is the part where all labor is seen or not seen." (Fruit metaphor) PT43 "We need to decide where and what to do at the end of the process." (Traffic lights metaphor)
Measurement and Assessment as a Tool	Lock, Filter, Pencil, Meter, Scales	PT9 "You cannot enter, if you do not have a key. If you do not know, the doors are closed to you." (Lock metaphor) PT22 "The ones that remain on top are the ones that are learned."
Measurement and Assessment as an Applied Component	Car, Swimming, Painting	PT61 "Whatever you learn, it applies on it" (Car metaphor) PT25 "We go into the sea to assess whether we learn swimming or not, and we apply what we learn in measurement and assessment." (Swimming metaphor)
Measurement and Assessment as a Component of Peace and Happiness	Cycling, Peace, Eating, Fruit	PT70 "At first we don't know how to ride a bicycle. But as we learn it gives us happiness. Measurement and assessment brings happiness as it brings success." (Cycling metaphor) PT79 "At this stage, we will get in return for what we have shown and the better the feedback we have received, the more peaceful we will be." (Peace metaphor)
Measurement and Assessment as an Informative Component	Book, Star, Data Table, Jar	PT13 "When we open a book, it gives us lessons when we read it. It allows us to see our shortcomings and mistakes." (Book metaphor) PT65 "After learning the knowledge in your life shines like a star whatever has been learned." (Star metaphor)
Measurement and Assessment as a Guiding Component	Compass, Wind, Director	PT35 "We determine what to do with the measurement and assessment. (Compass metaphor) PT48 "Measurement and assessment determine the direction of the teacher like wind that affects the direction of the ship." (Wind metaphor)

As shown in Table 5, the metaphors created by prospective teachers in terms of measurement and assessment component are as follows: "Measurement and Assessment as a Decision-Making Component", "Measurement and Assessment as a Tool", "Measurement and Assessment as an Applied Component", "Measurement and Assessment as a Component of Peace and Happiness", "Measurement and Assessment as an Informative Component", "Measurement and Assessment as a Guiding Component". Prospective teachers emphasized the characteristics of measurement and assessment through metaphors. For example, the metaphors of match end, fruit, traffic lights, planting trees, soccer match, traffic accident, Armageddon, exam, goal, end point, competition, judge, cooking regarding "Measurement and Assessment as a Decision-Making Component" category for prospective teachers indicates that it is the final component of the curriculum and is the stage in which decisions are taken regarding the teaching process. Prospective teachers state that lock, filter, pencil, meter, scales metaphors regarding "Measurement and Assessment as a Tool" category and car, swimming, painting metaphors regarding "Measurement and Assessment as an Applied Component" category are a process in which students are determined by measurement and assessment, and the information they learn is used during this process. cycling, peace, eating, fruit metaphors produced by prospective teachers in terms of "Measurement and Assessment as a Component of Peace and Happiness" category show that if the feedback for teachers and students is positive, it is a process that gives the teacher and the student peace and happiness. Prospective teachers also stated that the measurement and assessment process through book, star, data table, jar metaphors produced by them in terms of "Measurement and Assessment as an Informative Component" category reveals what is learned by students. Prospective teachers also stated that measurement and assessment process through compass, wind, director

metaphors produced by them in terms of “Measurement and Assessment as a Guiding Component” category directs the teacher for future educational activities.

When the metaphors by the prospective teachers are produced related to the curriculum and curriculum elements (objective/outcome, content, teaching and learning process, measurement-evaluation) and the categories consisting of the metaphors are examined, it can be said that the prospective teachers emphasize the features and functionality of the curriculum and its components. In addition, it can be stated that the prospective teachers don't produce negative metaphors related to the curriculum and its components except for some prospective teachers. In this context, it can be said that the prospective teachers are aware of the curriculum and its components. Also prospective teachers have knowledge about the curriculum and its components.

### **CONCLUSION, DISCUSSION AND SUGGESTIONS**

The metaphors created by prospective teachers in terms of curriculum are as follows: “Curriculum as a guiding program”, “Curriculum as a Descriptive and Explanatory Factor”, “Curriculum as the Keystone of Education”, “Curriculum as a Collaborative Field”, “Curriculum as a Factor with Diversity and Complexity”, “Curriculum as a Frightening Factor”, “Curriculum as a Planned and Excellent Factor”, “Curriculum as an Extending Component”, “Curriculum as a Changing Factor”, “Curriculum as a Binding-Limiting Factor”, “Curriculum as a Tool”. It has been determined that there are metaphors of guide, map, directory, sun, light, signboard, road, compass, leader in the category of “Curriculum as a guiding program”. “Curriculum as a Descriptive and Explanatory Factor” category reveals user manual, navigation, signboard, encyclopedia, dictionary metaphors and “Curriculum as the Keystone of Education” category reveals water, nature, life metaphors. “Curriculum as a Collaborative Field” category reveals ant, construction skeleton metaphors, “Curriculum as a Factor with Diversity and Complexity” category reveals food, life, soup, space metaphors and “Curriculum as a Frightening Factor” category reveals love, amusement park, monster metaphor. “Curriculum as a Planned and Excellent Factor” category reveals computer, calculator, recipe metaphor, “Curriculum as an Extending Component” category reveals stairs, path, garden, movie trailer, “Curriculum as a Changing Factor” category reveals Virgo, flower, moving tribe, phases of the moon metaphor, “Curriculum as a Binding-Limiting Factor” category reveals bond, dictator, chain metaphor and “Curriculum as a Tool” category reveals car, pen, mirror metaphor.

The metaphors created by prospective teachers in terms of goal/gain component are as follows: “Goal/Gain as Destination”, “Goal/Gain as a Tool”, “Goal/Gain as a Required Labor Component”, “Goal/Gain as a Diverse Component”, “Goal/Gain as a Complex Component”, “Goal/Gain as a Balanced Component”, “Goal/Gain as a Shaping and Formatting Component”, “Goal/Gain as a Guiding and Descriptive Component”, “Goal/Gain as a Component of Uncertain Process”, “Goal/Gain as the Keystone of the Curriculum”. It has been established that the metaphors of mountain peak, Everest peak, castle, horizon, peak point, reached place, holiday region are in the “Goal/Gain as Destination” category and the metaphors of ladder, step, gas, road, address are in the “Goal/Gain as a Tool” category. It has been turned out that there are metaphors of reading books, bottle, food, harbor, mountain peak regarding “Goal/Gain as a Required Labor Component” category and metaphors of cookbook, star, infinite numbers, pen nib, stacking doll regarding “Goal/Gain as a Diverse Component” category. It has been observed that the metaphors of complex knitting rope, bird's nest, jigsaw pieces are in the “Goal/Gain as a Complex Component” category and the metaphors of daily medication dosage, recipe and flower irrigation are in the “Goal/Gain as a Balanced Component” category. It has been revealed that the metaphors of teacher, victory, book, factory materials, fresh greening tree are in the “Goal/Gain as a Shaping and Formatting Component” category and the metaphors of lantern, menu, traffic sheet, compass, road and teacher are in the “Goal/Gain as a Guiding and Descriptive Component” category. It has been observed that the metaphors of book

cover, sky, life are in the “Goal/Gain as a Component of Uncertain Process” category and the metaphors of concrete, water and roof are in the “Goal/Gain as the Keystone of the Curriculum” category.

The metaphors created by prospective teachers in terms of content component are as follows: “Content as a Main Component”, “Content as an Informative Component”, “Content as a Tool”, “Content as a Prominent Component”, “Content as Contribution”, “Content as a Diverse Component”, “Content as a Determining Component”. It has been established that the metaphors of wise man, book, main menu, television, inventory, dictionary, recipe are in the “Content as an Informative Component” category and the metaphors of bus, automobile engine, vase are in the “Content as a Tool” category. It has been revealed that the metaphors of tomato paste, onions in Turkish omelet, salt, spice are in the “Color are in the Content as Contribution” category, the metaphors of hodgepodge, soup, children’s park, human body, pomegranate, people, Ankara, trash, meal, stacking doll, magazine program are in the “Content as a Diverse Component” category and the metaphors of map, picture, table of contents section are in “Content as a Determining Component” category.

The metaphors created by prospective teachers in terms of teaching-learning component are as follows: “Teaching-Learning Process as a Distinctive Component”, “Teaching-Learning Process as a Component Requiring Labor and Process”, “Teaching-Learning Process as a Progressive Component”, “Teaching-Learning Process as a Guiding Component”, “Teaching-Learning Process as a Component Providing Progress and Development”, “Teaching-Learning Process as an Informative Component”. It has been observed that the metaphors of cooking, food type food presentation, recipe, dress, car greengrocer, gearbox, rainbow, car gear are in the “Teaching-Learning Process as a Distinctive Component” category and the metaphors of paddle, basketball game, bus, journey, wheat, long journey, butterfly, life, running race are in the “Teaching-Learning Process as a Component Requiring Labor and Process” category. It has been established that the metaphors of construction, making cake, ladder are in the “Teaching-Learning Process as a Progressive Component” category and the metaphors of traffic lights, road, transportation vehicles compass are in the “Teaching-Learning Process as a Guiding Component” category. It has been revealed that the metaphors of road, sport, school, life are in the “Teaching-Learning Process as a Component Providing Progress and Development” category and the metaphors of computer, nutrition, collection and ocean are in the “Teaching-Learning Process as an Informative Component” category.

The metaphors created by prospective teachers in terms of measurement and assessment component are as follows: “Measurement and Assessment as a Decision-Making Component”, “Measurement and Assessment as a Tool”, “Measurement and Assessment as an Applied Component”, “Measurement and Assessment as a Component of Peace and Happiness”, “Measurement and Assessment as an Informative Component”, “Measurement and Assessment as a Guiding Component”. It has been observed that the metaphors of match end, fruit, traffic lights, planting trees, soccer match, traffic accident, Armageddon, exam, goal, endpoint, competition, judge, cooking are in the “Measurement and Assessment as a Decision-Making Component” category and the metaphors of lock, filter, pencil, meter, scales are in the “Measurement and Assessment as a Tool” category. It has been established that the metaphors of Car, Swimming, Painting are in the “Measurement and Assessment as an Applied Component” category and the metaphors of Cycling, Peace, Eating, Fruit are in the “Measurement and Assessment as a Component of Peace and Happiness” category. The metaphors of Book, Star, Data Table, Jar are included in the “Measurement and Assessment as an Informative Component” category and the metaphors of Compass, Wind, Director are included in the “Measurement and Assessment as a Guiding Component” category.

In the study conducted by Özdemir (2012) with pre-service teachers, pre-service teachers created a total of 148 metaphors in 8 categories related to the education program. The categories discussed in

the study, which are similar to the categories obtained in this study, are as follows: "Training program as an organization/mechanism that is created/operated in a regular and hierarchical manner, "training program as a guide", "training program as a process", "training program as a result" education program as a tool to reach people", "education program as a design prepared in line with a rule, principle or purpose", "education program as an indispensable element", "education program as a pattern that shapes individuals", "as a constantly changing concept". education program". In the study conducted by Semerci and Özçelik (2018) with school administrators in the context of the same subject, 59 metaphors related to the education program were obtained. These metaphors are grouped under 12 different categories according to their common characteristics. It is in the form of a complex and versatile structure, a shaper, a guide and a guide, a well-founded structure that needs updating, a planned and programmed, limited, broad and comprehensive, goal-oriented, open to change, instructive and educational process that requires effort. Gültekin (2017) defines the meaning that primary school teachers attribute to the curriculum as "a set of elements that need to be carefully prepared", "a variable structure", "directing", "pressure element", "comprehensiveness", "a complex structure" and "an indispensable element". explained in 7 categories, including 200 metaphors. Akınoğlu (2017), in his study with pre-service teachers, stated that pre-service teachers produced 107 metaphors related to the curriculum and most of the metaphors were positive. Similarly, Yurdakul (2015) in his research conducted due to the necessity of revealing the meaning that teachers attribute to the curriculum because it can be reflected in the learning and teaching process, stated that teachers perceive the curriculum as a theoretical text, political text, scope (content) or guidebooks prepared by publishers and that the curriculum is shaped in practice has shown. Çırak Kurt (2017) gathered the metaphors of secondary school teachers about the curriculum in ten categories.. The categories created are "The curriculum as a constantly changing structure", "The curriculum as a well-designed structure on the outside", "The curriculum as a pile of knowledge", "The curriculum as a process that takes into account individual characteristics", "an unrealistic curriculum". curriculum as a structure", "curriculum as a guide", "curriculum as a structure with a deficient infrastructure", "curriculum as a structure shaped by the teacher", "curriculum as a complex structure that creates problems". In the study, pre-service teachers used positive metaphors about the curriculum in general.

Similarly, Aykaç and Çelik (2014) tried to explain the prospective teachers' education program with positive and good metaphors. By analogy with metaphors such as star, sun, play dough, circus and theater, the prospective teachers expressed their views that the program makes the students active, is flexible compared to the previous program, includes activities, allows the use of active methods such as drama, and allows for change according to the conditions of the day. When the researches were examined, the metaphors produced by the prospective teachers about the teaching and training program reflected the variability of the education and training program concepts, that they were the main elements and some negative features. In this study, there is an emphasis that the curriculum guides the teacher in most of the metaphors produced by the pre-service teachers about the curriculum. In some of the metaphors produced by the pre-service teachers, the negative features of the curriculum are emphasized. It can be said that the prospective teachers participating in the research have different perspectives on the curriculum. However, it can be said that the prospective teachers participating in the research are aware of the function and features of the curriculum.

In this study, when the metaphors produced by prospective teachers regarding the goal/gain which is a program element, are examined, it can be said that the metaphors are mostly related to the definition of the purpose/gain concepts. Therefore, it can be said that pre-service teachers have knowledge about what the concept of purpose/gain is and what it does. It can be said that similar results are similar to the results of the studies conducted by Taşgın and Köse (2015) and Gültekin (2013).

When the metaphors produced by prospective teachers participating in the research regarding the concept of content, which is another element, are examined, it can be said that the prospective teachers



emphasized that the content should have certain characteristics. These features can be listed as being remarkable, showing diversity, being a part of teaching, and indicating the scope of the teaching-learning process. In this context, it can be said that prospective teachers are aware of the characteristics of the concept of content.

When the metaphors produced by prospective teachers participating in the research regarding the teaching-learning process are examined, it can be said that they have knowledge about what to do in the teaching-learning process. In other words, primary school prospective teachers emphasized that the teaching-learning process may be different in the metaphors they produced regarding the teaching-learning process, and that different methods and techniques could be used in the teaching-learning process. The fact that prospective teachers are aware of the need to use different methods and techniques in the teaching-learning process can be evaluated as the fact that the pre-service teachers will carry out the teaching-learning process effectively with this awareness when they start the profession. When the metaphors produced by t prospective teachers regarding assessment and evaluation are examined, it is seen that there are metaphors emphasizing that measurement-evaluation is the last element of the curriculum, that some decisions are made at the end of the teaching-learning process, and that it is a stage to determine whether students learn or not. In this context, it can be said that prospective teachers are aware of the function of the measurement-evaluation process. Similar results emerged in the study conducted by Yeşilyurt (2011). Therefore, the fact that prospective teachers know what measurement-evaluation does can be evaluated as they can pay attention to measurement-evaluation in their professional life.

Considering the metaphors produced by class teachers on the elements of the training program and the training program, it can be said that candidates for teachers have an awareness of these concepts. Classroom teachers can be described as emphasizing the features and functionality of educational program and training program elements through metaphors they produce. In addition, the candidates for class teachers did not indicate any negative problems regarding their training programs and elements. According to the findings, it has been revealed that the nominees for teachers produce different metaphors for the elements of the training program. Similar studies may be carried out for other concepts of education.

## REFERENCES

- Akınoğlu, O. (2017). Pre-service teachers' metaphoric perceptions regarding the concept of curriculum. *International Journal of Instruction*, 10(2), 263-278.
- Abrams, S. L. (2010). Sampling 'Hard to Reach' Populations in qualitative research the case of incarcerated youth. *Qualitative Social Work*, 9(4), 536-550, DOI: 10.1177/1473325010367821
- Aykaç, N. (2005). *Öğretme öğrenme sürecinde aktif öğretim yöntemleri*. Ankara: Naturel Yayınları.
- Aykaç, N., & Çelik, Ö. (2014). Öğretmenlerin ve öğretmen adaylarının eğitim programına ilişkin metaforik algılarının karşılaştırılması. *Education and Science*, 39(137), 328-340.
- Akkoyunlu, B. (1998). *Bilgisayarlar ve eğitimde kullanılması. Çağdaş eğitimde yeni teknolojiler*. Eskişehir: Anadolu Üniversitesi Açıköğretim Fakültesi yayınları, No. 564.
- Botha, E. (2009). Why metaphor matters in education. *South African Journal of Education*, 28, 431-444.
- Bowdle, B. F., & Gentner, D. (2005). The career of metaphor. *Psychological Review*, 112(1), 193-216.
- Büyükkaragöz, S. S. (1997). Program geliştirme. Konya: Öz Eğitim Yayınları

- Çelik, F. (2006). Türk eğitim sisteminde hedefler ve hedef belirlemede yeni yönelimler. *Burdur Eğitim Fakültesi Dergisi*, 6(11) 1-15.
- Çırak Kurt, S. (2017). Ortaokul Öğretmenlerinin “Öğretim Programı” Kavramına İlişkin Metaforik Algıları. *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, 31, 631-641.
- Demirel, Ö. (2010). *Kuramdan uygulamaya eğitimde program geliştirme*. Ankara: Pegem Akademi yayıncılık.
- Doğan, Y. (2017). Ortaokul öğrencilerinin çevre kavramına ilişkin sezgisel algıları: Bir metafor analizi. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi, (KEFAD)*, 18(1), 721-740.
- Ekici, G. & Akdeniz, H. (2018). Öğretmen adaylarının “sınıfta disiplin sağlamak” kavramına ilişkin algılarının belirlenmesi: Bir metafor analizi çalışması. *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, 33, 26-37.
- Ekiz, D. (2008). Öğretimle ilgili temel kavramlar ve program geliştirme, Çepni, S. ve Ayyıldız, S. (Ed.) *Öğretim ilke ve yöntemleri*. Trabzon: Celepler Matbaa
- Ertürk, S. (1978). *Eğitimde program geliştirme*. Ankara: Yelken Tepe Yayınları.
- Gill, S. L. (2020). Qualitative sampling methods. *Journal of Human Lactation*, 36(4), 579-581. DOI: 10.1177/0890334420949218
- Gültekin, M. (2013). İlköğretim öğretmen adaylarının eğitim programı kavramına yükledikleri metaforlar. *Education and Science*, 38(169), 126-141.
- Gültekin, M. (2014). Trends in primary education programs in the world and turkey. *Elementary Education Online*, 13(3), 726-745
- Gültekin, M. (2017). Metaphoric perceptions of primary school teachers on the concept of curriculum. *Journal of Education and Future*, 11, 51-73.
- Haggis, T. (2004). Constructions of learning in higher education: Metaphor, epistemology, and complexity. In J. Satterthwaite, & E. Atkinson (Eds.), *The disciplining of education: New languages of power and resistance* (pp. 181e197). London: Trentham Books.
- Kavrayıcı, C. (2021). Metaphoric perceptions of pre-service teachers about the concepts of “School Principal” and “Education System”. *Turkish Online Journal of Qualitative Inquiry (TOJQI)*, 12(2), 89-115. DOI: 10.17569/tojq.833572.
- Kemp, E. (1999) Metaphor as a Tool for evaluation. *Assessment & Evaluation in Higher Education*, 24(1), 81-89.
- Kuzu, O., Kuzu, Y. & Sıvacı, Y. S. (2018). Preservice teachers’ attitudes and metaphor perceptions towards mathematics. *Çukurova Üniversitesi Eğitim Fakültesi Dergisi*, 47(2), 897-931.
- Lakoff, G. & Johnson, M. (2010). *Metaforlar: hayat, anlam ve dil*. (Çev. G. Y. Demir) İstanbul: Paradigma
- Leavy, A., M., Mcsorley, F., A. & Bote, A., L. (2007). An examination of what metaphor construction reveals about the evolution of preservice teachers’ beliefs about teaching and learning. *Teaching and Teacher Education*, 23(7), 1217-1233. doi:10.1016/j.tate.2006.07.01
- Lynch, H.L. & Fisher-Ari, T.R. (2007). Metaphor as pedagogy in teacher education. *Teaching and Teacher Education*, 195-203.

- Luborsky, R. M. & Rubinstein, L. R. (1995). Sampling in qualitative research. *Res Aging*, 17(1), 89-113. DOI: 10.1177/0164027595171005.
- Morse, J. M. (2000). Determining sample size. *Qualitative Health Research*, 10(1), 3-5.
- Nartgün Ş.S., & Özen, R. (2015). Investigating pedagogical formation students' opinions about ideal teacher, teaching profession, curriculum, responsibility, public personnel selection examination (ppse) and employment: A metaphor study. *Procedia- Social and Behavioral Sciences*, 174, 2674 – 2683.
- Oxford, R. L., Tomlinson, S., Barcelos, A., Harrington, C., Lavine, R. Z., Saleh, A., & Longhini, A. (1998). Clashing metaphors about classroom teachers: Toward a systematic typology for the language teaching field. *System*, 26, 3- 50.
- Örten, D., & Erginer, E., (2016). Türkiye'de eğitimde program geliştirme alanındaki öncü akademisyenlerin eğitimde program geliştirmeye ilişkin metaforik algıları. *OPUS – Uluslararası Toplum Araştırmaları Dergisi*, 6, 387-414.
- Özdemir, S. M. (2012). Eğitim programı kavramına ilişkin öğretmen adaylarının metaforik algıları. *Kuramsal Eğitim Bilimleri Dergisi*, 5(3), 369-393.
- Öztürk, K. B. (2021). Digital reading and the concept of ebook: Metaphoric analysis of preservice teachers' perceptions regarding the concept of ebook. *Sage Open*, 1-12.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods*. California: Sage Publication.
- Staller, M. K. (2021). Big enough? Sampling in qualitative inquiry. *Qualitative Social Work*, 20(4), 897-904. <http://dx.doi.org/10.1177/14733250211024516>
- Saban, A. (2008). İlköğretim I. kademe öğretmen ve öğrencilerinin bilgi kavramına ilişkin sahip oldukları zihinsel imgeler. *İlköğretim Online*, 7(2), 421-455.
- Sanchez, A., Barreiro, J. M & Maojo, V. (2000). Design of virtual reality systems foreducation: a cognitive approach. *Education and Information Technologies*, 5(4),345-362.
- Semerci, N. ve Özçelik, C. (2018). Okul yöneticilerinin eğitim programı kavramına ilişkin algılar. *Bartın Üniversitesi Eğitim Araştırmaları Dergisi*, 2(2), 1-12
- Sönmez, V. (2008). *Program geliştirmede öğretmen el kitabı*. (14. Baskı). Ankara: Anı Yayıncılık.
- Staller, M. K. (2021). Big enough? Sampling in qualitative inquiry. *Qualitative Social Work*, 20(4), 897-904. DOI: <https://doi.org/10.1177/14733250211024516>.
- Steen, G. (2007). *Finding metaphor in grammar and usage*. Amsterdam: John Benjamins BV
- Taşgın, E. & Köse, E. (2015). Preservice classroom teachers' metaphors about objective and evaluation. *Hacettepe University Journal of Education*, 30(3), 116-130.
- Tortup, S. H. (2013). Öğretmen adaylarının üniversite hocası hakkındaki metaforları ve bir değerlendirme aracı olarak metafor. *Journal of Higher Education and Science*, 3(2), 153-160. DOI: 10.5961/jhes.2013.070.
- Uslu-Yardımcı, E. & Bal, M. (2015). Türk çocuk şiirlerinde anne metaforu. *Ana Dili Eğitimi Dergisi*, 3(1), 1-16.
- Vadeboncoeur, J. A & Torres, M., N. (2003). Constructing and reconstructing teaching roles: a focus on generative metaphors and dichotomies. *Discourse: Studies in the Cultural Politics of Education*, Carfax Publishing, 24(1).87-103 DOI: 10.1080/0159630030303034.

- Yaşar, Ş. (2014). Eğitimde program geliştirmeyi etkileyen sosyal-kültürel etmenler. *Uluslararası Eğitim Programları ve Öğretim Çalışması Dergisi*, 3(6).
- Yeşilyurt, E. (2011). Yapılandırmacı öğrenme temelli bir Öğretim programının oluşturulmasına ilişkin öğretmen adaylarının görüşlerinin değerlendirilmesi. *Turkish Studies*, 6(4), 865-885.
- Yılmaz, F., Göçen, S. & Yılmaz, F. (2013). Öğretmen adaylarının öğretmen kavramına ilişkin algıları: Bir metaforik çalışma. *Mersin University Journal of the Faculty of Education*, 9(1), 151-164.
- Yurdakul, B. (2015). Perceptions of elementary school teachers concerning the concept of curriculum. *Educational Sciences: Theory & Practice*, 15(1), 125-140.
- Yurtseven, N. (2017). The investigation of teachers' metaphoric perceptions about professional development. *Journal of Education and Learning*, 6(2), 120-131. DOI: doi:10.5539/jel.v6n2p120