Research Article

Metaphoric Perceptions of Pre-service Teachers about the Concepts of "School Principal" and "Education System" [1]

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Abstract

The aim of the study was to determine the pre-service teachers' metaphoric perceptions about school principal and education system. The research was a metaphor study designed on the basis of qualitative research paradigm. Metaphors are an important tool in revealing specific characteristics of a situation or an object. The particiapants of the research consisted of 97 pre-service techers studying at Anadolu University in the 2018-2019 academic year. The criterion sampling method was used to determine participants in the study. The criterion in determining the participants was that pre-service teachers had completed the Turkish Education System and School Management course and had experienced the teaching practice courses. In this context, data collection forms were distributed to 115 pre-service teachers who met the criteria. However, 18 forms that did not include metaphor sources were excluded from the analyzing process. Hence, perceptions of 97 participants related to the concept of "school principal" and perceptions of 92 participants on the concpt of "education system" were analyzed. The data in the study were collected using the metaphor form prepared by the researcher. Reliability percentage was calculated in the scope of Miles and Huberman (1994) formula of coding reliablity. According to the findings, it can be stated that the perceptions of pre-service teachers related to the school principal and the education system were gathered in 9 categories.

Keywords: *Pre-service teachers, metaphor, school principal, education system*

Öğretmen Adaylarının Okul Müdürü ve Eğitim Sistemi Kavramlarına İlişkin Metaforik Algıları

Öz

Bu araştırmada, öğretmen adaylarının eğitim sistemi ve okul müdürü kavramlarına ilişkin metaforik algılarının belirlenmesi amaçlanmıştır. Araştırma, nitel araştırma paradigması temelinde desenlenmiş bir metafor çalışmasıdır. Metaforların bir duruma ya da nesneye ilişkin belirgin özellikleri ortaya koymada önemli bir araç olduğu ifade edilebilir. Araştırmanın çalışma grubunu 2018-2019 öğretim yılında Anadolu Üniversitesi'nde öğrenim gören 97 öğretmen adayı oluşturmaktadır. Araştırmada çalışma grubunun belirlenmesinde amaçlı örnekleme yöntemlerinden ölçüt örnekleme yöntemi kullanılmıştır. Araştırmadaki ölçüt öğretmen adaylarının Türk Eğitim Sistemi ve Okul Yönetimi dersini almış olmaları ve öğretmenlik uygulamalarını gerçekleştirmiş olmalarıdır. Bu bağlamda, araştırmanın çalışma grubunun oluşturulması için gerekli ölçütü karşılayan 115 öğretmen adayına formlar dağıtılmış ancak metafor kaynağı ve konusu içermeyen 18 form değerlendirme dışı bırakılmıştır. Bu nedenle okul müdürüne yönelik algılar için 97, eğitim sistemine yönelik algılar içinse 92 katılımcının görüşleri değerlendirmeye alınmıştır. Araştırmada veriler araştırmacı tarafından hazırlanan metafor formu ile toplanmıştır. Verilerin analizinde Miles ve Huberman'ın (1994) uyuşum yüzdesi formülü kullanılmıştır. Araştırma sonucunda öğretmen adaylarının okul müdürüne ve eğitim sistemine yönelik algılarının 9 kategoride toplandığı ifade edilebilir.

Anahtar Sözcükler: *Öğretmen adayları, metafor, okul müdürü, eğitim sistemi*

Introduction

Educational organizations, which are defined as interactive systems that live by receiving input from their environment, process these inputs through learning and teaching practicess, and receive feedback by presenting outputs to their environment, are handled within the framework of the system approach. Educational organizations, examined within the framework of the system approach, have been under restruction in recent years. It is observed that there are uncertainties in the restructuring processes of the Turkish Education System. (Örücü, 2014). It is important to manage educational organizations successfully in eliminating the uncertainties in the Turkish Education System. The concept of management, which is as an old discipline as the history of humanity and which is important for educational organizations as well as all the organizations, coincided with the middle of the 20th century. Management is the process of reaching organizations to their goals by employing human and material resources in an effective, efficient and coordinated manner. It emphasized that effective and efficient use of human and material resources in the organization will keep organizations alive in line with their goals (Bursalıoğlu, 2019). As educational administrators, school principals are expected to have some competence in coordinating school resources in line with the goals of the school, by motivating and leading the teachers and all the satkeholders of the school (Akçay, 2003). School principals' competencies, behaviors, the structure of the education system and the transformations it contains, are followed and interpreted by stakeholders and relevant individuals. It is possible to make sense of the perceptions about school principals and the education system with throughout metaphors. Metaphors are tools of revealing and expressing meanings that occur in mental processes. (Morgan, 2006). As a tool of perception, metaphors (Arnett, 1999) function as instruments in identifying and reconstructing images in educational researches and interpreting the needs of educational environments (Çelikten, 2006). In this context, it can be stated that metaphors are functional in revealing the perceptions of individuals, who interact with educational organizations, towards school principals and the education system. In the related literature, it is easy realize that there are metaphor studies on the concepts of school principal and the education system. (Akan, Yalçın & Yıldırım, 2014; Aslan, Bilgili & Kaya, 2018; Cerit, 2010; Korkmaz & Çevik, 2018; Özdemir & Orhan, 2019; Turhan & Yaraş, 2013). However, there are very few studies examining the metaphorical perceptions of teacher candidates for the concepts of school principal and the education system.

(Çobanoğlu & Gökalp, 2015; Kasapoğlu, 2016; Örücü, 2014; Turan, Yıldırım & Tıkman, 2016).

Everyone acknowledges the importance of schools in the education system, which plays a key role in the historical process of moving and transferring societies. Schools, where education activities are structured in formal and informal ways, contribute directly and indirectly to the functioning of human sources (Ada & Baysal, 2010). School principals are responsible for the management and operation of schools and they are the leaders who are responsible for the implementation of school's goals (Bursalıoğlu, 1976). Education system and education administaration process in Turkey has been in the process of continual restructuring. As a result of the paradigmatic transformations, it is possible to state that the problems of the Turkish Education System have become increasingly complex and the concepts such as; system, school and school administration are being questioned. (Örücü, 2014). For this reason, it is not difficult to claim that studies involving pre-service teachers' views on the concepts of education system and school principal intertwined with each other are considered important. The pre-service teachers' perceptions of the education system and the concept of school principal give clues about the system and their views towards the stakeholders about the system (Gözler, 2017). Their ideas they got as a result of observations and experiences are regardd as important for the education system (Kasapoğlu, 2016).

The scarcity of studies aimed to determine pre-service teachers' metaphorical perceptions for the education system and school management in the literature and the absence of a similar study conducted in Eskişehir province emphasize the importance and originality of this study. With in this contex, the study aimed to determine the metaphorical perceptions of pre-service teachers about the concepts of education system and school principal. In line with this general aim, answers to the following questions were sought in the study:

1. What are the metaphors produced by pre-service teachers for concept of school principal?
2. What are the categories of the metaphors produced by pre-service teachers for concept of school principal?
3. What are the metaphors produced by pre-service teachers for concept of education system?
4. What are the categories of the metaphors produced by pre-service teachers for concept of education system?

Method

Research Model

The research is a metaphor study designed on the basis of qualitative research paradigm. According to Patton (2002, p.505), metaphors are an important tool in revealing specific characteristics of a situation or an object. Leary (1994, p.4), on the other hand, defines metaphor as "giving something a name or a definition that belongs to traditions on the basics of some similarities. Metaphors enable individuals to understand their surroundings, infer meanings from objective realities with certain interpretations. (Yıldırım & Şimşek, 2008, p. 208).

Participants

The participants of the study consists of 97 pre-service teachers enrolled in Anadolu University in the 2018-2019 academic year. Criterion sampling method, one of the purposeful sampling methods, was used to determine the participants. The basic tenet in criterion sampling is to examine situations that meet a predetermined set of criteria (Yıldırım & Şimşek, 2008, p.112).. Pre-service teachers who have taken the Turkish Education System-School Management course and have experienced the teaching practicum and school observation lesssons consittuted the criterion. Pre-service teachers who took the Turkish Education System-School Management course and experienced the teaching practicum and school observation courses are thougth to have reflected their views on the school principal and the education system more effectively. Hence, it was decided that the study group would be composed of pre-service teachers who met this criterion. Forms were distributed to 115 pre-service teachers who met the criteria for forming the study group of the research. However, 18 forms that did not contain metaphor source and subject were excluded from the evaluation. Therefore, the opinions of 97 participants were evaluated. Since it was determined that 5 of the participants did not state meaningful reasons in the metaphors realted to the education system, among these 97 forms, the views of 92 participants who produced valid metaphors for the concept of education system were evaluated. The characteristics of the participants were displayed in Table 1.

Table 1
The Characteristics of the Participants

	Variable	f	%
Gender	Female	60	61.85
	Male	37	38.14
Department	Computer Education and Instructional Technology	8	8.24
	Engllish Language Teaching	15	15.46
	Primary School Mathematics Teaching	16	16.49
	Pre-school Education	7	7.21
	Special Education	9	9.27
	Arts and Crafts Education	9	9.27
	Primary School Education	14	14.43
	Social Science Education	19	19.58
Total		97	100

As indicated in Table 1, 60 (61.85%) of the pre-service teachers participating in the study were women and 37 (38.14%) of them were men. Among the participants of the study, those who were enrolled in Social Science Education had the highest percentage with 19 (19.58%) pariticpants, while those studying in the Preschool Education Program had the lowest percentage with 7 (7.21%.).

Data Collection

The data in the study were collected via metaphor form prepared by the researcher. In the first part of the form, there were questions about determining the personal characteristics of the participants, and in the second part, there were two gap-filling sentences created to reveal their perceptions about the concepts of the school principal and the education system. Accordingly, pre-service teachers were asked to complete the following sentences in order to determine the metaphors that they produced.

"School principal is like …………………. Because…………………………………………"

"Edaucation system is like………………... Because…………………………………………"

The concept of "like" in studies using metaphors, is used to evoke the connection between the metaphor subject and the source related to the metaphor more clearly. The concept of "because"

is also used to provide a logical basis for the produced metaphors (Saban, 2008, p. 428). The method was used in order to enable teacher candidates to establish a connection between the metaphors related to the concepts of the school principal and the education system and the source of the metaphors. The research data collected in paper format were transferred to the computer and prepared for the analysis.

Data Analysis

Qualitative content analysis technique was used in the analysis of the data of the research. İçerik analizi, belli bir durumu veya olguyu tanımlamak için görsel, yazılı ya da sözel verilerden çıkarımlar yapmak amacıyla nesnel ve sistematik yollar sunan bir araştırma yöntemidir Content analysis is a research technique that offers objective and systematic ways to identify a certain situation or phenomenon to by using visual, written or verbal data (Downe-Wamboldt, 1992: p.314). The aim of content analysis is to reach the concepts and the relationships between the concepts. In the content analysis technique, where similar themes and concepts are brought together, these concepts and themes are arranged and interpreted in an understandable manner. (Yıldırım & Şimşek, 2008, p.227). Within this context, the metaphors of teacher candidates regarding the concepts of school principal and education were analyzed on the basis of naming, elimination and classification, category development, ensuring validity and reliability, and interpretation of the data. (Kahyaoğlu, 2015; Saban, 2008).

Naming phase: At this stage, the metaphors produced by the teacher candidates were listed alphabetically and loaded to the computer

Elimination and Classification Phase: Eleme ve tasnif aşamasında öğretmen adaylarının ürettiği metaforlar yeniden gözden geçirilmiş, metafor niteliği olmayan ve metafor ile gerekçesi uyuşmayan metafor ifadeleri araştırmadan çıkarılmıştır. During the elimination and classification phase, the metaphors produced by the teacher candidates were revised, and the metaphor expressions that did not include metaphors and that did not match with its explanation were excluded from the study.

Category Development: At this phase, 97 valid metaphors about the concept of school principal produced by pre-service teachers and 92 metaphors about the concept of the education system were listed alphabetically. Then, the metaphors produced regarding the concepts of the school principal and the education system were classified according to their common characteristics.

Validity and Reliability Phase: In researches implemented based on qualitative research paradigm, validity and reliability approaches differ from quantiative researches. In qualitative researches the concepts of "credibility", "transferability", "dependability", "confirmability" are used instead of "internal validity", "external validity", "reliability" ve "objectivity" concepts (Lincoln & Guba, 1985, pp. 289-331; Merriam, 2009, p. 211). Credibility in qualitative research is the correct interpretation and expression of individuals' experiences. In this study, peer debriefing and member checking, among the suggested strategies (Lincoln & Guba, 1985), were used to ensure credibility. In order to prevent the prejudices of the researcher, discover the meanings objectively and clarify the interpretations, a researcher from outside of the field were consulted to increase and the credibility as a part of peer debriefing strategy during the data analysis. In addition, a collective member checking session was held with a group of 10 pre-service teachers, who were among the participants of the study. These 10 participants, who had common ideas about the conceptual categories, were invited to a simultaneous discussion session on the data. They are requested to comment on the categories and they stated that findings and interpretations were consistent with their own ideas. Transferability is the adoption of the research findings in other contexts (Lincoln & Guba, 1985). Thick description, as a strategy recommended to ensure transferability (Erlandson vd., 1993; Lincoln & Guba, 1985), was applied in this study by decribinig the process in detail. In order to make the process and conclusions transferable to other settings and people, explanations related to the data collection tool, characteristics of the study group and the scope of the research were depicted in detail.

Dependability in qualitative research shows that the research is reliable and repeatable. Inquiry audit is one of the strategies proposed to ensure dependability (Lincoln & Guba, 1985). The data analysis process in the study was audited by another researcher, who was employed in the Department of Educational Administration and used qualitative research method in her doctoral thesis, and the consistency betwen the results and the data set was examined. In this dependability analysis process, the basic criterion was the consensus among the coders. Coding

of the auditer and the researcher were compared. Then, similarities and differences between the two codings were determined. There was a disagreement on 8 of the 97 metaphors produced about the school principal. There were also different ideas on 5 of the 92 metaphors produced regarding the education system. In this context, Miles and Huberman's (1994) formula for percentage of agreement was used for the reliability of the study. According to their reliability percentage formula (Reliability Percentage=Agreement/(Total Agreement + Disagreement), the intercoder realiability of the "school princicpal" dimension was .91, (Reliability = 89/89+8= .91). On the other hand, intercoder realiability of the "education system" dimension was .94, (Reliability = 87/87+5= .94). Since the acceptable value for intra- and/or intercoder agreement sould be above 85% for reliablity (Miles, Huberman & Saldana, 2020, p. 79), the results of the research can be considered as reliable.

Data Interpretation Phase: During the interpretation phase, the metaphors produced by the participants were displayed and interpreted in the form of categories and tables.

Findings

Metaphors Produced by Preservice Teachers Regarding the Concept of School Principal

According to findings of the study, participants produced 97 valid metaphors regarding the concept of school principal. In Figure 1, metaphors produced by pre-service teachers are presented in the form of a word cloud according to their density.

Figure 1. Metaphors related to the concept of School Principal

Figure 1 explains that 10 out of 97 metaphors (Father, Brain, Dictator, Battalion Commander, Coach, Compass, Building Columns, Leader, Puppet, Machinist) were developed by more pre-service teachers than the other metaphors.

Distribution of the Metaphors Related to the Concept of School Principal in terms of the Categories

The metaphors produced by pre-service teachers for the concept of school principal were grouped under 9 categories. These categories were; "School Principal as an Administrator", "School Principal as a Leader", "School Principal as a Source of Information", "School Principal as a Pressure Figure", "School Principal as a Financial Figure", "School Principal as a Power Agent", " School Principal as Protection and Care Figure"," School Principal as an Ineffective Figure"," School Principal as a Figure of Contingency". Within this context, it was found that 30 (%30.92) of the participants described school principal as "administaror", 14 (%14.43) of the participants described school principal as "leader", 13 (%13.4) of the participants described school principal as "figure of protection and care", 11 (%11.34) of

participants described school principal as "ineffective figure", 10 (%10.3) participants described school principal as "pressure figure", 9 (%9.27) participants described school principal as "figure of contingency", 5 (%5.25) participants described school principal as "source of information" 3 (%3.09) of them described as "source of power" and 2 (%2.06) of them described as "financial figure".

Findings Regarding the Category of "School Principal as Administrator"

This category, in which school principal was expressed as an administrator, 24 different metaphors were produced by 31 (31.95%) pre-service teachers. Metaphors prodeuced in this category were; brain (6), building column (2), coach (2), base of the building (1), ship captain (1), base of the school (1), heart (1), factory owner (1), ant (1), businessperson (1), jockey (1), captain (1), commander (1), engineer (1), organizer (1), orchestra leader (1), boss (1), president (1), fire (1), foundation stone of a house (1), landlord (1), factory production manager (1), wheel of the ferris wheel (1), pilot (1).

Pre-service teachers produced most of the metaphors in this category. Examples of the metaphors are as follows:

> *School principal is like a pilot. Because it takes students to their goals with the arrangements and plannings that, he implemented in school environment. (P 31).*
> *School principal is like a boss. Because s/he manages and keeps up the school (P. 59).*
> *School principal is like an organizer. Because s/he orgizes everything in the school (P 63).*
> *School principal is like an engineer. Because s/he cannot solve problems in the school without producing projects and studies related to the system and management process. (P 2).*
> *School principal is like an orchestra leader. Because her/his is duty to manage the whole school and education-training system in a coordinated manner and follow the operational process (P 40).*
> *School principal is like a coach. Because s/he should do her/his best to use the possibilities s/he has and reach the best result with them. (P 3).*
> *School principal is like an ant. Because s/he constantly work for the school management (P 20).*
> *School principal is like a businessperson. Because s/he glorifies the school, s/he manages with herself/himself. (P 44).*

> *School principal is like a wheel of the ferris wheel. Because s/he creates a whole by bringing all the students and teachers around her/him. (P 17).*
> *School principal is like a landlord. Because requirements and management of the school are under her/his responsibility (P 38).*

Findings Regarding the Category of "School Principal as a Leader"

This category, in which school principal was expressed as a leader, 11 different metaphors were produced by 14 (%14.43) pre-service teachers. Metaphors produced in this category were; leader (2), machinist (2), compass (2), light (1), civil engineer (1), construction master (1), locomotive (1), pilot (1), chief (1), president (1), role model (1). Examples of the metaphors are as follows:

> *School principal is like a light. Because s/he enlightens the path of her/his staff withher/his knowledge and experience (P 51).*
> *School principal is like a construction master. Because, if s/he does not provide opportunities for foundation of knowledge, the efforts spent to the students will be wasted (P 46).*
> *School principal is like a leader. Because s/he leads everybody in the school with her/his charisma (P 56).*
> *School principal is like a locomotive. Because s/he goes ahead in education and guides the others as if they were wagons. (P 29).*
> *The school principal is like a machinist. Because the better a machinist operates, the lower the accident rate and the passengers will reach the point they need to reach safely. (P 12).*

Findings Regarding the Category of "School Principal as Protection and Care Figure"

This category, in which school principal was expressed as protection and care figure, 8 different metaphors were produced by 13 (%13.4) pre-service teachers. Metaphors produced in this category were; father (6), family man (1), mother (1), shoes (1), gardener (1), parent (1), house pillar (1), psychologist (1). Examples of the metaphors are as follows:

> *School principal is like a father. Because students are his children. Like some fathers, he is the one who guide us with whom we can consult everything. (P 34). .*
> *School principal is like shoes. Because s/he enables us to walk on solid roads by taking precautions in advance. S/he is a proctection against the bumps that may come ahead of us (P 30).*
> *School principal is like a gardener. If the principal does not take care of the school, the school becomes unavailable. (P 52).*

School principal is like parents. Because if the school is a house, it is the parents who decide for the best of the house and always strive for it (P 9).

Findings Regarding the Category of "School Principal as an Ineffective Figure"

This category, in which school principal was expressed as ineffective figure, 10 different metaphors were produced by 11 (%11.34) pre-service teachers. Metaphors produced in this category were; puppet (2), scarecrow (1), tong (1), parrot (1), shadow (1), ghost (1), mediator (1), machine (1), distant village (1), push-button cell phone (1). Examples of the metaphors are as follows:

School principal is like a push-button cell phone. Because s/he cannot renew hersel/himself (P 95).
School principal is like a distant village. Because s/he is there, whether we go or not see (P 66).
School principal is like a shadow. Because her/his existence and absence are the same (P 73).
School principal is like a ghost. Because s/he sometimes becomes visible (P 91).
School principal is like a puppet. Because s/he applies the orders, s/he received without any question. (P 86).
School principal is like a scarecrow. Because even though s/he seems effective at first galance, s/he just stands there without any benefit. (K 90).

Findings Regarding the Category of "School Principal as a Pressure Figure"

This category, in which school principal was expressed as a pressure figure, 6 different metaphors were produced by 10 (%10.3) pre-service teachers. Metaphors produced in this category were; dictator (4), commander of the battalion (2), sultan (1), prison guardian (1), night guard (1), government (1). Examples of the metaphors are as follows:

School principal is like a dictator. Because s/he represents pressure and authority (P 82).
School principal is like a commander of the battalion. Because all the strings are in her/his hands (P 96).
School principal is like a sultan. Because s/he impose her/his idea on students (P 69).
School principal is like a prison guardian. Because s/he tries to keep everybody under control (P 84).

School principal is like a night guard. Because s/he always watches and supervises teachers and students (P 53).

Findings Regarding the Category of "School Principal as a Figure of Contingency"

This category, in which school principal was expressed as a contingency figure, 9 different metaphors were produced by 9 (%9.27) pre-service teachers. Metaphors produced in this category were; cloud (1), bomb (1), peanut (1), air (1), hairpin (1), technology (1), distant relative (1), guest room (1), lace (1). Examples of the metaphors are as follows:

School principal is like a lace. Because s/he only appears in special occasions (P 76).
School principal is like a guest room. Because we only remember her/him in special days (P 65).
School principal is like a hairpin. Because s/he is sometimes tight and s/he is loose when necessary (P 22).
School principal is like air. Because sometimes s/he is sunny and sometimes cloudy. (P 80).

Findings Regarding the Category of "School Principal as a Source of Information"

This category, in which school principal was expressed as a source of information, 5 different metaphors were produced by 5 (%5.25) pre-service teachers. Metaphors produced in this category were; fruit tree (1), pencil (1), pencil box (1), root of a tree (1), farmer (1). Examples of the metaphors are as follows:

School principal is like a fruit tree. Because thanks to her/his knowledge, experience and experiences, we can benefit from many features like fruit trees. (P 28).
School principal is like a pencil. Because s/he writes, directs and shapes the story of the educational life of students and teachers. (P 48).
School principal is like a root of a tree. Because if the root of a tree is sufficient and strong, tree will be more green and strong. Moreover, if the knowledge and competence of the principal sufficient, school will be strong and successful (P 21).

Findings Regarding the Category of "School Principal as a Power Agent"

This category, in which school principal was expressed as a power agent, 3 different metaphors were produced by 3 (%3.09) pre-service teachers. Metaphors produced in this category were; lion (1), gavel (1), last step of a ladder (1). Examples of the metaphors are as follows:

> *School principal is like a lion. Because s/he is the strongest in school (P 97).*
> *School principal is like a gavel. Because s/he is the authority of approval for the decisions made in school (P 14).*
> *School principal is like a last step of a ladder. Because all the previous steps have been passed and s/he has arrived the last step which gives her/him all the power (P 7).*

Findings Regarding the Category of "School Principal as a Financial Figure"

This category, in which school principal was expressed as a financial figure 2 different metaphors were produced by 2 (%2.06) pre-service teachers. Metaphors produced in this category were; apartment manager (1), central bank (1). Examples of the metaphors are as follows:

> *School principal is like an apartment manager. Because s/he organizes meeting with school parents union and demands financial support (P 68).*
> *School principal is like a central bank. Because all the dues are collected by her/him (P 79).*

Metaphors Produced by Preservice Teachers Regarding the Concept of Education System

According to findings of the study, participants produced 92 valid metaphors regarding the concept of education system. In Figure 2, metaphors produced by pre-service teachers are presented in the form of a word cloud according to their density.

Figure 2. Metaphors related to the concept of Education System

Figure 2 explains that 13 out of 92 metaphors (Trash, Puzzle, Tree, Mirror, Chameleon, Horse Race, Swamp, Brain, Seed, Mine, Clock Gear, Machine, Factory) were developed by more pre-service teachers than the other metaphors.

Distribution of the Metaphors Related to the Concept of Education System in terms of the Categories

The metaphors produced by pre-service teachers for the concept of education system were grouped under 9 categories. These categories were; "Education System as an Inefficient Structure", "Education System as a Developer / Guiding Structure", "Education System as an Unsteady Structure", "Education System as a Chaotic and Ambiguous Structure", "Education System as a Competitive Structure", "Education System as a Whole of Systems", "Education System as a Political Structure", "Education System as an Organism", "Education System as an Important Fact". Within this context, it was found that 25 (%27.17) of the participants described education system as "whole of systems", 21 (%22.82) of the participants described as "chaotic and ambiguous structure", 19 (%20.65) of the participants described as "important

fact", 8 (%8.69) of the participants described as "inefficient structure", 6 (%6.52) of the participants described as "unsteady structure", 5 (% 5.43) of the participants described as "organism", 4 (%4.34) of the participants described as "developer / guiding structure", 2 (%2.17) of the participants described education system as "political", 2 (%2.17) of them described as "competitive".

Findings Regarding the Category of "Education System as a Whole of Systems"

This category, in which education system was expressed as a whole of systems 19 different metaphors were produced by 25 (%27.17) pre-service teachers. Metaphors produced in this category were; puzzle (4), factory (2), clock gear (2), machine (2), clock (1), time bomb (1) spider web (1), organism (1), motor gear (1), jenga game (1), dominoes (1), a working machine gear (1), wheel (1), gear system (1), clock wheel (1), vehicle engine and car wheel (1), liner (1), brain (1), concept maps (1). Pre-service teachers produced most of the metaphors on the concept of education system in this category. Examples of the metaphors are as follows:

> *Education system is like a clock. Because it has a certain order and time in itself (P 36).*
> *Education system is like a clock gear. Because each element affects each other and the whole system. (P 31).*
> *Education system is like a puzzle. Because, if you install all the pieces in place then it will be a whole (P 32).*
> *Education system is like a spider web. Because they are all connected gradually. If one part of it is not knitted, the other parts of the web cannot be formed. (P 23).*
> *Education system is like a machine. Because it works neatly with the help of many parts (P 29).*
> *Education system is like the game jenga. Because carelessness that will occur in lower levels can cause destruction by affecting all levels (P 43).*
> *Education system is like dominoes. Because if one of the dominoes is affected, it affects all the others and moves them (P 9).*
> *Education system is like a factory. Because, if a small problem cannot be fixed, the system goes bankruptcy (P 35).*

Findings Regarding the Category of "Education System as a Chaotic and Ambiguous Structure"

This category, in which education system was expressed as a chaotic and ambiguous structure 18 different metaphors were produced by 21 (%22.82) pre-service teachers. Metaphors produced in this category were; dustbin (3), swamp (2), balloon (1), elevator (1), garbage dump (1), rainbow (1), Gemini person (1), well (1), rubber wheel (1), mine (1), ivy (1), hotchpotch (1), outer space (1), utopia (1), ocean (1), car (1), long road (1), long journey (1). Examples of the metaphors are as follows:

> *Education system is like a dustbin. Because everything exists and it is messy (P 82).*
> *Education system is like a swamp. Because the more you try to get out, the more you sink (P 61).*
> *The education system is like a Gemini person. Because it is inconsistent (P 87).*
> *Education system is like an elevator. Because some systems take students to the 28th floor, while some systems get students lower until to the basement. (P 7).*
> *Education system is like a well. Because it constantly draws you in (P 80).*
> *Education system is like a rubber wheel. Because it can explode at any time (P 88).*
> *Education system is like a mine. Because it is hard to understand when it gets deeper (P 70).*

Findings Regarding the Category of "Education System as an Important Fact"

This category, in which education system was expressed as an important fact 18 different metaphors were produced by 19 (%20.65) pre-service teachers. Metaphors produced in this category were; tree (2), mirror (1), moon (1), building column (1), brain (1), construction base (1), internet (1), skeleton (1), harbor (1), locomotive (1)), mine (1), civilization (1), season (1), deed (1), water (1), basic stone (1), construction stone (1), comrade (1). Examples of the metaphors are as follows:

> *Education system is like a construction stone. Because our feature is a kind of construction and we owe our future to education (P 38).*
> *Education system is like a comrade. Because it goes along with people (P 73).*
> *Education system is like water. Because it is one of the basic need of human nature (P 17).*

Education system is like internet. Because education can find an answer for any questions (P 27).
Education system is like a skeleton. Because just as our skeletal system keeps our body upright, the education system keeps us alive (P 34).
Education system is like a moon. Because it illuminates the darkness of ignorance (P 57).
Education system is like a brain. Because it is the center of all components (K 60).

Findings Regarding the Category of "Education System as an Inefficient Structure"

This category, in which education system was expressed as an important fact 8 different metaphors were produced by 8 (%8.69) pre-service teachers. Metaphors produced in this category were; justice system (1), chronically injured football player (1), parrot (1), flat tire (1), boring book (1), phone update (1), rotten building (1), periodic table (1). Examples of the metaphors are as follows:

Education system is like the justice system. Because it only has a name (P 83).
Education system is like a parrot. Because the same things keep repeating (P 92).
Education system is like a periodic table. Because it is based on only memorization (P 94).
Education system is like a boring book. Because, when you want to quit, you cannot quit it since you are at the middle (P 69).
Education system is like a chronically injured football player. Because it never yields (P 84).
Education system is like a phone update. Because with every new update you think, it will improve but the situation gets worse (K 28).

Findings Regarding the Category of "Education System as an Unsteady Structure"

This category, in which education system was expressed as an unsteady structure 5 different metaphors were produced by 6 (%6.52) pre-service teachers. Metaphors produced in this category were; chameleon (2), practice board (1), seasons (1), dollar rate (1), tempera set (1). Examples of the metaphors are as follows:

Education system is like a chameleon. Because it changes constantly (P 97).
Education system is like a practice board. Because by making continuous changes, different results are expected (P 53).

Education system is like a dollar rate. Because it's constantly changing (P 54).
Education system is like a tempera set. Because it adds color to our lives with its changes (P 96).

Findings Regarding the Category of "Education System as an Organism"

This category, in which education system was expressed as an organism 5 different metaphors were produced by 5 (% 5.43) pre-service teachers. Metaphors produced in this category were; sports (1), living creature (1), garden's ivy (1), tree (1), seed (1). Examples of the metaphors are as follows:

Education system is like sports. Because without exercising, working out, training cannot be efficient. (P 2).
Education system is like a living creature. Because, like every living creature, it has needs as well. It requires regular maintenance and must adapt to changes in order to survive (P 5).
Education system is like a tree. Because, if you care about it, it grows up and gets stronger (P 10)
Education system is like a garden's ivy. Because it needs care. When it gets care, it will be more beautiful (P 6).
Education system is like a seed. If you take good care of the seed, it will sprout and the sprouts will produce fresh fruits. (P 20).

Findings Regarding the Category of "Education System as a Developer / Guiding Structure"

This category, in which education system was expressed as a developer/guiding structure, 4 different metaphors were produced by 4 (%4.34) pre-service teachers. Metaphors produced in this category were; light (1), mirror (1), plaster mold (1), tour guide (1). Examples of the metaphors are as follows:

Education system is like a light. Because it guides for the future (P 89).
Education system is like a tour guide. Because it guides individuals' lives like a tour guide (P 45).
Education system is like a mirror. Because it reflects students as itself. If it is qualified enough, students will be qualified in the future (P 41).
Education system is like a plaster mold. Because students are shaped in just like the shape of mold (P 64).

Findings Regarding the Category of "Education System as a Political Structure"

This category, in which education system was expressed as a political structure, 2 different metaphors were produced by 2 (%2.17) pre-service teachers. Metaphors produced in this category were; politics (1) and government (1). Examples of the metaphors are as follows:

> *Education system is like politics. Because it changes when the political power changes (P 22).*
> *Education system is like government. Because change it changes ideologically, as governments change (P 72).*

Findings Regarding the Category of "Education System as a Competitive Structure"

This category, in which the education system is expressed as a competitive structure, 1 metaphor was produced by 2 (%2.17) pre-service teachers. Metaphor produced in this category was; horse race (2). Horse race metaphor developed in this category is presented in two different quotation:

> *Education system is like a horse race. Because people are educated like horses preparing for a race (P 74).*
> *Education system is like a horse race. Because people are always running (P 93).*

Discussion, Conclusion and Recommendations

The findings of the study reveled that pre-service teachers produced 97 valid metaphors for the concept of school principal and 92 valid metaphors for the concept of education system.

Participants of the study perceived school principal as administrator, leader, ineffective figure, protection and care figure, power agent, source of information, pressure figure, contingency figure and financial figure. On the other hand, they perceived education system as developer and guiding structure, chaotic and ambiguous structure, competitive structure, political structure, whole of systems, organism and important fact. It was found that most of the 97 metaphors developed for the concept of school principal focused on the school principal's duties and responsibilities. 31 pre-service teachers produced 24 metaphors focusing on the role

of principal while 14 pre-service teachers produced 11 metaphors focusing on the leadership role. 3 pre-service teachers produced 3 different metaphors in the category where principal is expressed as a power in school. These findings expressed that pre-service teachers' perceptions for school principal related with managing the school effectively and efficiently in line with organizational goals. According to perceptions of pre-service teachers, it is possible to assert that school principal is the most important person in the decision-making, planning and coordination processes within the school. As the leader of an educational organization, the principal should guide and play a leading role for all stakeholders of the school. Except for the categories that describe the duties and responsibilities of the school principal, the categories in which the principal is described positively and negatively were among the findings of the study. 5 metaphors were produced by 5 pre-service teachers produced 5 metaphors in the category in which school principal is expressed a source of information, while 13 pre-service teachers produced 8 metaphors in the category of care and protection figure. It is remarkable that here were few metaphors in the categories in which the principal is perceived as positive. Describing school principals as a source of information by participants through few metaphors can be interpreted, as school principals do not provide a high level of information reliability to pre-service teachers. The reason why a small number of pre-service teachers perceived school principal as a source of information may be the non-meritocratic appointment system of school principals. The fact that some pre-service teachers express school principal as protective may be due to their perception of the school as a family and center of care. Description of school principal with concepts based on care and protection such as father, mother, gardener and psychologist is an indicator of the perception of school principals as trusted and protective individuals. The negative perceptions of pre-service teachers regarding the concept of principal were grouped under the categories of school principal as an ineffective figure, financial provider, pressure figure and contingency figure.

27 metaphors expressing negative perception and gathered under 4 categories were produced by 32 pre-service teachers. School principals' necessity to collect donations for the budget management processes of schools may be the reason why participants matched school principal with the concept of money. It is possible to state that school principals sometimes show authoritarian tendencies in order to provide discipline in school management processes. Stakeholders of schools may perceive these tendencies as anti-democratic and a component of pressure. Some of the participants described the presence of school principal as a person who

appears on special occasions. They expressed through metaphors that school principal is only visible at ceremonies. The reason for this perception may be that school principals are mostly present in their rooms during school management processes, and they are not seen much in the corridors and classrooms of the school. In the metaphorical perceptions of some of the participants, school principals were depicted as an ineffective figure. It can be interpreted that pre-service teachers perceived school principals as employees who follow the orders and instructions from the central organization without any question. Central decision-making structure of the education system that restricts school principals in administrative processes might be the reason for this perception. Findings of the study revealed similarities with the findings of some studies in the literature. Akan, Yalçın, and Yıldırım (2014) examined teachers' metaphorical perceptions of school principals in their study and concluded that the metaphors developed by teachers were mostly related to school principals' roles of administration and source of knowledge. Similarly, Özdemir and Orhan (2018) stated that teachers' metaphorical perceptions of school principal were focused in the categories of leadership and figure of support. In the study on examining perceptions of pre-service preschool teachers on school principal Zembat, Tunçeli and Akşin (2015) found that metaphoric perceptions on school principal were expressed as being a director, organizer and protector. In a study investigating teachers' metaphorical perceptions on the concept of principal, Korkmaz and Çevik (2018) categorized the metaphors mostly as; a guide and leader, school principal as a management focus, school principal as a protective and reassuring person, and school principal as a unifying and balancing figure.

On the other hand, 92 metaphors produced for the concept of education system expressed negative perceptions mostly. Although the whole of systems category was the largest one with 19 different metaphors produced by 25 pre-service teachers, the explanations of the metaphors in the whole systems category were structured within the framework of the definition of objective reality rather than indicating a positive or negative perception of the system. Similarly, in 5 metaphors which were gathered under the category of "education system as an organism", perceptions were formed as defining a living organism. Therefore, metaphors in these two categories do not contain positive or negative perceptions about the education system. These findings proved that pre-service teachers perceived the education system as a vital element and as a systemic whole associated with many systems in life. Positive metaphoric perceptions on education system were gathered in the categories of "education system as an

important fact" and "education system as a developer/guiding structure". 23 pre-service teachers produced 22 metaphors indicating that education system is a fact for development and vitally important. The fact that education systems are the basis of the cultural and economic development of societies may be the reason for the perceptions of the participants. On the other hand, the categories in which education system were defined as something negative were; education system as "chaotic and ambiguous structure", "inefficient structure", "unsteady structure", "political structure" and "competitive structure". 39 pre-service teachers produced 34 metaphors in these 5 categories. The metaphors underlined negative sides such as; considerable amount of unplanned changes, chaotic structure and political agenda of the education system. Unplanned and continuous changes in the education system have frequently caught pre-service teachers unprepared and have caused plenty of problems. Negative perceptions of pre-service teachers towards the education system may stem from the chaotic structure caused by the instant changes in education, which has a permanent political agenda. The findings of the study were similar to the findings of few studies in the literature. According to Kasapoğlu (2016), perceptions of pre-service teachers on education system were gathered under the categories of "unsteady structure (%25.5)" and "complex structure (%24.5)". Similarly, Örücü (2014) found that metaphorical perceptions of pre-service teachers regarding the education system were gathered under chaos, uncertainty, competition, puzzle board, being political, inefficiency, and barrier for freedoms. Based on these findings, it is possible to state that pre-service teachers' perceptions of the education system were grouped under negative categories other than functional descriptions, and they focused on the irregularity, instability, ineffectiveness and chaotic structure of the education system. Findings of the study proved that metaphors are important tools in revealing perceptions related to the concepts of education system and school principal. Reasons for the positive and negative perceptions of pre-service teachers about school principal and education system should be investigated in thoroughly. It may be suggested to avoid sudden and unplanned changes that direct the perceptions of stakeholders in education, and to address changes in the education system with the participation of stakeholders. It would be important to avoid sudden and unplanned changes that direct perceptions of stakeholders in education. Policy makers are required to consider participation of stakeholders to decision-making process. During the pre-service education period content of Turkish Education System and School Management lesson can be improved. School experience and teaching practice courses might be carried out more effectively. Within this context, it may be suggested that cooperation between the Ministry of National Education and

universities should be established more efficiently in order to get pre-service teachers observe the administrators in public schools. Thus, the interaction of pre-service teachers with the practice can be further increased. Pre-service teachers' perceptions of the concept of school principal and education system can be investigated in different samples by using same or different research methods. It can be stated that pre-service teachers' perceptions of the concept of school principal and education system should be investigated in different samples on the basis of different research paradigms.

Statements of Ethics and Conflict of Interest

"I, as the Corresponding Author, declare and undertake that in the study titled as "*Metaphoric Perceptions of Pre-service Teachers about the Concepts of "School Principal" and "Education System"*", scientific, ethical and citation rules were followed; Turkish Online Journal of Qualitative Inquiry Journal Editorial Board has no responsibility for all ethical violations to be encountered, that all responsibility belongs to the author/s and that this study has not been sent to any other academic publication platform for evaluation."

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