



## Research Article

# Secondary school teachers' metaphorical perceptions of gifted students

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## Abstract

This research aims to reveal the metaphorical perceptions of secondary school teachers about gifted students. The study group of the research consists of 170 secondary school teachers working in secondary schools in Buca district of Izmir province in the 2021-2022 academic year. Qualitative research method was used in the research. The phenomenology design was used as the design of the research. The data used in the research were collected through a semi-structured interview form developed by the researchers. According to the research findings, secondary school teachers produced 123 different metaphors for gifted students. Valid metaphors were analyzed with the content analysis method. According to the results of the analysis, the metaphors reflecting the perceptions of the secondary school teachers about the gifted students were gathered under 12 different conceptual categories. It has been revealed that the majority of secondary school teachers have positive perceptions about gifted students, and metaphors with negative perceptions are grouped under the category of "individual in need of social support". In the study, it was also determined that the metaphors produced by male and female teachers showed different distributions. Female teachers see gifted students as individuals who need special education the most. Male teachers, on the other hand, perceive gifted students as individuals with the highest cognitive performance. In the study, it was determined that the metaphors produced by teachers in different branches showed different distributions from each other. In order to obtain accurate and more qualified information about gifted students, teachers can be given training on special education and gifted students. In this sense, psycho-educational programs can be organized for teachers.

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## Introduction

People use a variety of communication methods to more effectively express their ideas, beliefs, and understandings. Among these methods, they often refer to metaphors. As Lakoff and Johnson (1980) stated, the thought systems of individuals are largely metaphorical and the conceptual system of individuals is metaphorically structured. In addition to helping individuals express themselves, metaphors are described as the most powerful source for change. Because metaphors mean (meaning) something new (Uğurlu, 2018), concretizing abstract ideas and thoughts that cannot be

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fully defined with more familiar concept, expressing a more complex phenomenon or situation in a simpler way (Süral & Dedeşali, 2022) functions as an effective tool that shapes our perceptions and thoughts and provides opportunities such as influencing our actions. In this sense, we can define metaphors as more than a literary tool used to make communication more interesting and effective (Berliner, 1990).

It is known that the use of metaphors in education is an effective tool in associating all elements and phenomena that make up education with previous experiences (Thomson, 2016). Metaphors offer ideas about how teachers can make sense of themselves and their professional roles (Calderhead & Robson, 1991). Metaphors are frequently used in research (Açar, Kaya & Güneş, 2017; Yanarateş & Yılmaz, 2020), especially in gaining insight into teachers' thinking styles. It is also known that the metaphors that teachers choose to reveal their perceptions about students also reflect their attitudes towards students (Permatasari, Rachmajanti & Astuti, 2022). Because metaphors do not only reveal the personal ideas in the subconscious of teachers, they also directly or indirectly affect teachers' attitudes, behaviors and classroom performances and teaching practices. In this respect, metaphors are used to guide teachers' teaching practices and to conceptualize their professional roles. For this purpose, teachers try to make sense of their beliefs about the situation in question.

Teachers use metaphors as a guiding tool in developing teaching activities for students. In this context, teachers use metaphors to determine their education, teaching activities, professional skills and improve their educational activities. Accordingly, the use of metaphorical language is common in order to reveal teachers' perceptions and beliefs about students (Munby, 1987; Tobin, 1990).

It is also important to examine the perceptions of teachers who will reveal the skills of gifted students and carry them to the next century in line with their skills. The results of this research are also important in terms of enabling teachers to realize their perceptions about gifted students. With this research carried out in this way, teachers are considered important in terms of influencing the support they will provide for the cognitive and social development of gifted students. In the literature, there are many studies (Açar, Kaya & Güneş 2017; Ateş, 2018; Baş & Kivılcım, 2019; Hamilton, 2016) that deal with teachers' metaphorical perceptions. When the thesis studies on metaphor in secondary schools are examined, the scarcity of studies conducted in Turkey (Özkan, 2021; Pekbalcı, 2019; Yuvacı, 2021) and abroad (Alger, 2009; Munby, 1987; Stofflett, 1996) draws attention. No research has been found in the country or abroad that reveals the perceptions of secondary school teachers about gifted students. Therefore, in this research, it is aimed to reveal secondary school teachers' perceptions of gifted students through metaphors. Within the scope of this purpose, first of all, the theoretical framework about gifted students will be included and the point reached in the education of gifted students in our country will be discussed.

### **Gifted Student**

In the literature, different concepts are used to describe gifted students. These terms are often used interchangeably. At this point, it seems that there is no common consensus. It is seen that the concepts of "gifted student", "talented student", "highly talented student" and "specially talented individual" are used in studies. Although these concepts are used interchangeably, opinions are expressed (Tuttle, 1988) that these concepts have different meanings and should not be evaluated under the same title. In this study, it was decided to use the concept of "gifted student" for individuals who show superior performance compared to their peers.

In the literature, different definitions are made while defining the concept of "gifted student". The main reason underlying this difference in definitions stems from the different theories of intelligence put forward by different researchers for human intelligence. Renzulli (1982) defines them as those who perform more than their peers. According to Renzulli (1982), gifted students are defined as individuals who have the ability to develop a combination of skills and who can exhibit these skills in one or more areas. On the one hand, giftedness is defined as the state of having the awareness of reflecting one's own perception on emotional and mental actions (Roepeer, 1982), on the other hand, it is defined as individuals who show superior performance in a certain area compared to their peers and have the potential to increase the living standards of the society in which they live (Tannenbaum, 2003). In addition to these definitions, giftedness is also defined as individuals with natural abilities (Gagne, 2004) whose innate ability emerges spontaneously

without any training. Tannenbaum (2003) states that in addition to genetic factors, environmental factors also contribute to the formation of giftedness. According to him, it is stated that the social values of the country in which the individual lives as well as the close environment of the individual can affect the discovery, diagnosis and development of giftedness.

In the Science and Art Center (BILSEM) Directive, which is organized to provide education to gifted students in Turkey, defines who the gifted students are. In the BILSEM Directive, gifted students are defined as those who can learn faster than their peers, are ahead of their peers in areas such as leadership, creativity and art, are equipped with academic skills, can understand abstract concepts, have the ability to act independently, and perform at a higher level than their peers (MEB, 2021). It is of critical importance to enable gifted students, who should be given importance in the development of a country, to realize their own skills and to use these skills at the highest level. It is believed that the most effective way to develop gifted students in line with their abilities is through education. However, it is known that the education of gifted students is not appreciated in political, local or individual environments (Clark, 2017). The education of gifted students differs from the education of normal individuals. Gifted students are bored with traditional school types and traditional teaching environments (Feuchter, & Preckel, 2021). In this sense, in order to provide a fair and equal education, individuals should be provided with equal educational opportunities for individual differences.

### **Education of Gifted Students in Turkiye**

Enderun Schools is an important educational institution that meets the need for skilled and qualified work force in many areas of the Ottoman Empire such as administrative, military and economic. In this sense, it would be more accurate to describe Enderun Schools as an educational institution where gifted students are trained. Because not every student was admitted to these educational institutions. Individuals who were more prominent than their peers physically, cognitively and behaviorally were specially selected. As a result of the revolutionary changes in education with the establishment of the Republic of Turkey, the training of gifted students was tried to be provided through educational institutions called Village Institutes. Individuals to be elected to these institutions were selected from among individuals who were in better condition mentally and physically (Akay, 2018). After the Village Institutes were closed, educational institutions such as Anatolian High School, Science High School, Social Sciences High School, Sports and Fine Arts High School emerged as institutions providing education to gifted students in the fields of general talent, painting and music. After the Village Institutes were closed, educational institutions such as Anatolian High School, Science High School, Social Sciences High School, Sports and Fine Arts High School emerged as institutions providing education to gifted students in the fields of general talent, painting and music. However, these initiatives were insufficient to meet the educational needs of gifted students. This process, which started with Enderun Schools and continued with Village Institutes, continued even though it was interrupted at certain intervals. In this context, Science-Art Centers were established in Ankara, Istanbul, Izmir, Denizli & Bayburt provinces in order to provide more qualified education to gifted students (Akarsu, 2001).

BILSEM institutions, whose number is increasing day by day, provide service in 350 centers in 81 provinces as of 2022 in Turkey. In the 2023 Education Vision Document prepared by the Ministry of National Education, great importance is attached to the education of gifted students. In this context, it is stated that it is among the primary objectives of the Ministry of National Education that gifted students, who show superior performance in science, art, sports and similar fields, receive education in line with their abilities (MEB, 2022). It is aimed to determine the abilities of gifted students with original diagnostic tools, to follow their development processes and to create added value for the growth and development of our country. Science and Art Centers, which serve this purpose, provide education through special education programs prepared according to the abilities of gifted students. These programs include enriched activities. Gifted students receive education in Science and Art Centers without interrupting their education in formal education institutions. In these educational institutions, it provides support training to gifted students outside of school hours in a way that will not be separated from their peers. In this sense, gifted students are not differentiated from their normal peers. In addition, they are included in the process by being trained in line with their special abilities (Güçyeter, 2015).

In order to identify the talents of the students, students from the primary school 1,2,3 and 4th grade levels take the exam every year, which is accepted by the Ministry of National Education. Students are nominated by classroom teachers from at least one or at most two fields of general talent, painting and music talent. Students go through a two-stage examination process. In the first step, a written exam is given for general talent students. In the first step, tablet exams are given for art and music talent students. Students who are determined to score above the average in any of the three areas in the first step examination are entitled to take the individual assessment examination, which is the second step examination. Students who have sufficient points in both exams are entitled to receive education in line with their abilities until they finish their formal education at Science and Art Centers (MEB, 2022).

Science and Art Centers offer a 5-step education program, unlike the (4+4+4) 12-year education process carried out in formal education institutions. Program steps cover different periods. These periods are listed as adaptation, support, awareness of individual talents, development of special talents and project rotations, respectively. While students in the general talent field are directly subjected to the program of adaptation, support and awareness of their individual talents, the students who are identified in the field of painting and music talent are directly subjected to the special talent development program. Integration and support programs correspond to students' primary school 2nd, 3rd and 4th grade periods. The program to realize individual talents (5th and 6th grades) and the program to develop special abilities (7th and 8th grades) correspond to the secondary school level of the students. For this reason, secondary school level has a critical importance in recognizing students' individual abilities and developing their special abilities (MEB, 2022).

In this context, it becomes important to follow the development of students in formal education institutions at the secondary school level. It is thought that determining the perceptions of the teachers of gifted students about gifted students will contribute to their approaches to students.

### **Metaphor**

The first studies on the concept of metaphor were carried out by Lakoff (1993). Lakoff (1993) developed the Cognitive Metaphor Theory. According to this theory, metaphors are defined as the effect of the experiences of individuals on their thinking structures (Lakoff & Johnson, 1980). In particular, metaphors appear as effective tools in the learning and mental visualization of subjects with abstract content that are difficult to understand. In this sense, it can be said that metaphors can be used as an important tool in determining how people perceive some events in their lives. Yıldırım & Şimşek (2016) state that metaphors will explain unknown events through known experiences.

It is stated that metaphors enable to express complex situations in a simpler way using familiar concepts (Oxford, Tomlinson, Barcelos, Harrington, Lavine, Saleh & Longhini, 1998). In other words, metaphors are described as an effort to transfer one meaning to another meaning or the art of expressing an entity as another entity (Lakoff & Johnson, 1980). While metaphors create an unreal connection between abstract concepts and concrete things, they also help us to represent a new situation (Yob, 2003), to represent the complex as simple and the abstract as concrete (McLaughlin & Bryan, 2003). Lakoff and Johnson (1980) emphasize that metaphors have an important role in making consistent a person's past, actions in the present, dreams about the future, and common points with others. Kasoutas and Malamitsa (2009) argue that individuals use metaphors for three reasons. Accordingly, when individuals encounter unidentified situations, they use metaphors to express this situation, to reveal different and complex thinking structures in experiences, and to make their thoughts more effective and lively.

Collins & Green (1990) argue that metaphors shape our perceptions and perspectives, and further guide our actions. Similarly, Schön (1979) argues that metaphors are an effective tool to reveal our perspective on how we perceive, think and make sense of a situation. Provenzo, McCloskey, Kottkamp, & Cohn (1989) characterize this as an attempt to find meaning in life.

When the above-mentioned views on metaphor are examined, it can be said that metaphors are a result of the individual's attempt to find meaning in his own life.

### **Problem of Study**

When the studies in the literature are examined, it is noteworthy that there are few studies dealing with the metaphorical perceptions of secondary school teachers about gifted students. For this reason, this research aims to reveal the

metaphorical perceptions of secondary school teachers about gifted students. Within the scope of this purpose, answers to the following questions will be sought.

- What are the metaphors that secondary school teachers have about gifted students, and under which conceptual categories are these metaphors grouped in terms of their common characteristics?
- What is the distribution of conceptual categories according to gender and branch variables?

### Method

In this section, the research model, study group, data collection tools, data collection process, data analysis, and validity and reliability study are included in this section.

#### Research Design

Qualitative research method was used in the research. The phenomenology design was used in the study. The phenomenology design is used when there is no deep and detailed idea about an event, phenomenon or subject (Yıldırım & Şimşek, 2016). The phenomenology design focuses on the essence of the experiences related to the phenomenon and tries to reveal the perception and feelings of the experiencer (Patton, 1990). In this context, the research was carried out in a phenomenological design, as it aimed to reveal the perceptions of secondary school teachers about gifted students.

#### The Sample

This research was carried out with secondary school teachers working in secondary schools in Buca District of İzmir province in Turkey in the 2021-2022 academic year. In this context, the study group of the research being carried out consists of 170 secondary school teachers working in secondary schools. Random sampling method was used in the research, in which the probability of each unit in the universe to enter the sample is equal and independent from each other.

Demographic characteristics of the participants of the study are given in Table 1.

**Table 1.** Demographic Characteristics of Participants

		<i>f</i>	%
<b>Gender</b>	Female	110	64.7
	Male	60	35.3
<b>Branch</b>	Turkish	29	17.1
	Mathematics	25	14.8
	English	25	14.8
	Science	19	11.2
	Social Studies	16	9.4
	Fine Arts	14	8.2
	Music	11	6.5
	Culture of Religion and Knowledge of Ethics	10	5.9
	Gymnastics	7	4.1
	Technology Design	5	2.8
	Information Technologies	5	2.8
	Psychological Counseling and Guidance	4	2.4
<b>Total</b>		<b>170</b>	<b>100</b>

When Table 1 is examined, it is seen that female teachers ( $f=110$ , 64.7%) participated more in the study than male teachers ( $f=60$ , 35.3%). In addition, it was determined that the teachers who participated most in the study were in the branch of Turkish Language Teaching ( $f=29$ , 17.1%), while the teachers who participated the least were in the branch of Psychological Counseling and Guidance ( $f=4$ , 2.4%).

#### Data Collection Tools

The data collection tool used in the study was created by the researchers. The data collected in this study were obtained with the metaphor form. There are 3 sections in the relevant form. In the first part, information was given to secondary school teachers about the purpose of the research and the concept of metaphor. In the second form, "Personal

Information Form" is included in order to collect data on the demographic characteristics of secondary school teachers. In the last part of the data collection tool, statements about the metaphor perceptions of secondary school teachers were stated. In this context, the study group of the research is missing in the form "Gifted students are similar to ..... because ...." A semi-structured form is presented, which aims to reveal the metaphorical perceptions in which a sentence is left out. It is known that such metaphoric forms, which aim to reveal metaphorical perceptions, are an ideal tool for collecting qualitative data in qualitative research.

### Data Analysis

The semi-structured interview form, which was created to reveal secondary school teachers' perceptions of gifted students, was examined by a field expert and a teacher. Data were collected through the form that took its final form. Before the data were collected, the school administrations were informed about the scope, content and purpose of the research, and necessary permissions were obtained. It was stated to the teachers that the data collection processes are not compulsory and that those who want to volunteer can fill it out. The data were collected face to face by the researchers themselves. Teachers were given 30 minutes for data collection. The data collection process took an average of 25 minutes for each school. An incomplete statement that includes the phrase "Gifted students are similar to ..... because ...." sentence is presented. Semi-structured forms prepared by the researchers aiming to reveal metaphorical perceptions were distributed to the teachers in the teachers' room.

Content analysis technique was used while analyzing the data in this research, which aims to reveal the metaphorical perceptions of secondary school teachers about gifted students. In this data collection technique, similar concepts from the data collected were brought together under certain themes. The themes brought together were organized in a meaningful way. The data collected in this way is organized in a way that the reader can understand. Then, the interpretation of the themes was made. Because the data summarized and interpreted with the descriptive analysis method are analyzed in depth in the content analysis method. Thus, the concepts and themes that cannot be noticed in the descriptive analysis method are revealed by the content analysis method.

Metaphor images were brought together before the metaphors developed by secondary school teachers about the concepts in their perceptions of gifted students were analyzed and interpreted. The combined metaphors are listed in alphabetical order. It was examined whether metaphors were expressed by secondary school teachers. The related metaphor list was presented to the teachers again, and their confirmation was obtained about whether the data was processed correctly. Among the metaphors expressed by the teachers, the valid ones were coded. Meanwhile, data that are far from representing the metaphors of teachers about gifted students and expressing teachers' own thoughts were excluded from the analysis. Similarly, the data that did not sufficiently express why they had the metaphors put forward by the teachers were also deemed invalid. In this context, metaphors to be excluded from the evaluation were removed from the list of metaphors. The metaphors to be used for the analysis of the data were reordered in alphabetical order. Metaphor images were compiled and categories related to metaphors were created. While creating the categories, metaphors developed by teachers about gifted students were brought together in terms of common features. Then, these metaphors were associated with certain categories. Finally, the number of teachers (f) and percentage (%) values representing metaphor and conceptual categories were calculated. The above analysis processes are briefly discussed in three stages:

- *Code generation phase:* The metaphors created by the teachers and the reasons given by the teachers regarding the metaphors are listed to be analyzed in order to create a code. It was evaluated whether the listed metaphors and their justifications were fully made by the teachers and whether they were suitable for the analysis method. Those who were not evaluated were excluded from the list of metaphors. Among the 185 data forms collected, 15 forms that were not suitable for data analysis were excluded from the evaluation. The remaining 170 data forms were evaluated.
- *Categorization:* Metaphors obtained from the data were categorized under certain themes in terms of their relations with each other. In this context, metaphors were brought together in terms of common features. In the categorization phase, "metaphor analysis" (Moser, 2000: 8) and "content analysis" techniques were used.

Metaphors were evaluated in terms of their common features to each other. In this context, each metaphor was analyzed in terms of the relationship between the source and the subject.

- *Naming the categories:* After the grouped metaphors were categorized, they were named by the researchers within the framework of the literature. Finally, the number of teachers (f) and percentage (%) values representing metaphor and conceptual categories were calculated and they were divided into certain conceptual categories in terms of common features

### **Validity and Reliability**

In order to ensure the validity and reliability of the research, the following steps were followed by the researchers:

- For the validity of the research, the data obtained from the data collection tool were revealed in detail. In this context, the process of analyzing the data and the results obtained regarding the data are reported in detail.
- For the reliability of the research, expert opinion was used on whether the metaphors expressed by secondary school teachers and suitable for analysis correctly met the conceptual categories. As a result of the opinions received, it was determined that the metaphors included in the analysis represent the conceptual category produced by the researchers.
- Long-term interaction was ensured by resorting to expert review regarding the accuracy of the data, obtaining teachers' confirmations on whether the data were processed correctly or not, and keeping the time given to the teachers in data collection longer. Thus, internal validity (credibility) was provided.
- In order to increase the internal validity, that is, the credibility of the data, the findings obtained from the data were evaluated in terms of their consistency.
- During the data collection process, the researchers took an active part in the research. Thus, possible questions and misunderstandings from teachers were tried to be avoided. In this way, a possible data loss is prevented.
- In order to ensure the transferability of the research, which expresses the external validity of the research, the process from the beginning of the research to its reporting and the procedures applied regarding these processes are described in detail. Under the title of the method of the research, the model, study group, data collection tool, data collection process, data analysis and interpretation of the findings are explained in detail.
- Metaphors produced by teachers were coded by two independent researchers and then categorized. The numbers of consensus and disagreement were determined by comparing the metaphor lists categorized by two independent researchers. Categories with disagreement were evaluated by two researchers until a consensus was reached. The agreed list was calculated using the reliability formula. In this context, calculations were made with the formula ( $\text{Reliability} = \text{Consensus} / (\text{Consensus} + \text{Disagreement}) \times 100$ ) and the reliability rate was found to be .90. It is stated that the reliability rate being over 70 percent indicates that the analysis of the research is reliable. According to this, it can be said that the reliability of agreement between the coders carried out in the research is sufficient.

### **Result and Discussion**

In this section, the metaphors of secondary school teachers about gifted students and the common features of these metaphors are revealed under which conceptual categories. In addition, secondary school teachers' perceptions of gifted students are revealed according to gender, age and branch variables.

#### **Metaphors Produced by Secondary School Teachers About Gifted Students**

The first sub-problem of the research is "What are the metaphors that secondary school teachers have about gifted students and under which conceptual categories are these metaphors gathered in terms of their common characteristics?" determined as. The conceptual categories of different metaphors produced by secondary school teachers about gifted students and the number and percentages of metaphors under these categories are given in Table 2.

**Table 2.** Conceptual Categories of Different Metaphors Produced by Secondary School Teachers for Gifted Students

Categories	f	%	Metaphors Included in Categories	f	%
<b>Individual with high cognitive performance</b>	32	18.82	Computer(6), Einstein(3), dolphin(2), cat(2), robot(2), genius(2), sponge(2), person with high memory(1), intelligent(1), sea(1), philosopher(1), walnut(1), sun(1), USB stick(1), brain(1), clock(1), machine(1), ant(1), artificial intelligence(1), panther(1).	20	16.26
<b>Individual with special education needs</b>	32	18.82	Diamond(5), math(3), bird(3), flower(2), field(2), orchid(2), diamond(1), sea(1), gold(1), tree(1), lock(1), gemstone(1), kite(1), banana(1), animated child(1), corn(1), knowledge-hungry child(1), ore(1), straw flame(1), rough stone(1), coal(1)	21	17.07
<b>Individuals who look different than their peers</b>	22	12.94	Star(5), flower(3), diamond(2), poppy(2), watermelon(1), light(1), fish(1), adult(1), tree(1), sun(1), grandfather(1), rocket(1), precocious(1), rainbow(1)	14	11.38
<b>Individual to be discovered</b>	17	10.00	Pearl(2), metal(1), treasure(1), diamond(1), fireworks(1), still water(1), labyrinth(1), universe(1), alien(1), well(1), jewelry(1), matryoshka(1), mystery box(1), uranium(1), diamond(1), invention box(1)	16	13.01
<b>Individual with high potential</b>	11	6.47	Sea(3), fire(2), surprise egg(1), seed(1), pomegranate(1), spacecraft(1), gift wrap(1), pine cone(1)	8	6.50
<b>Individual in need of social support</b>	11	6.47	Robot(4), butterfly(1), left alone(1), naughty boy(1), full moon(1), lonely old man(1), sapling(1), snowdrop flower(1)	8	6.50
<b>Individual of unique value</b>	10	5.88	Gold(2), diamond(2), mineral(1), protected plant species(1), jewel(1), cloud(1), pearl(1), diamond(1)	8	6.50
<b>Productive individual</b>	8	4.71	Olive tree(2), bee(2), book(1), earth(1), machine(1), tree(1)	6	4.88
<b>Person with different point of view</b>	7	4.12	Star(1), math(1), light(1), telescope(1), wonderboy(1), book(1), sky(1)	7	5.69
<b>Outstanding performing individual</b>	7	4.12	Computer(2), turbo engine(1), flea(1), racehorse(1), ant(1), fantasy movie hero(1)	6	4.88
<b>Individual with different skills</b>	7	4.12	rainbow(3), sea(1), airplane(1), computer(1), gold(1)	5	4.07
<b>The individual who leads the society</b>	6	3.53	star(2), sun(2), rainbow(1), light(1)	4	3.25
<b>Total</b>	<b>170</b>	<b>100</b>		<b>123</b>	<b>100</b>

Note: The numbers in parentheses represent the number of metaphors

As seen in Table 2, as a result of data analysis, 170 secondary school teachers produced 123 different metaphors for gifted students. The most common metaphor used by secondary school teachers regarding gifted students was "Computer" (f=9). Also "Star" (f=8), "Diamond" (f=7), "Diamond, Robot and Sea" (f=6), "Flower and Rainbow" (f=5), "Gold, Mathematics and Sun" (f=4), "Pearl, Bird and Tree" (f=3) are among the most produced metaphors. Each of the metaphors of "field, orchid, olive tree, bee, fire, weasel, dolphin, Einstein, cat, robot, genius and sponge" (f=2) was produced twice by secondary school teachers, while the remaining metaphors were produced once.

While 8 of the 123 different metaphors produced above reflect the negative perception of gifted students, all of the remaining metaphors reflect positive perceptions of gifted students. Metaphors containing these negative perceptions



(robot, butterfly, left alone, naughty child, full moon, lonely old man, sapling, snowdrop flower) were gathered under the category of "individual in need of social support". Below are some of the participant opinions that will support these findings. The findings show that the majority of secondary school teachers have a positive perception of gifted students.

*"They seem to feel lonely because they are different from their peers." (T13).*

*"He has behavioral problems because he is not understood correctly by the people around him" (T36)*

*"Gifted children are those who are noticed, admired, and often admired by everyone. However, the main problem is the sense of loneliness that gifted children feel especially in their age group and society. Children who cannot communicate socially are more attached to their own world. With this attachment, children have the opportunity to develop their own abilities, on the other hand, this creates a lonely world for children" (T54)*

*"They usually have low emotional intelligence. Their ability to empathize is low. It will be different if they don't show their emotions because they think more realistically." (T166)*

The fact that most of the metaphors produced by secondary school teachers about gifted students reflect positive perceptions is important in terms of showing that secondary school teachers have a positive perception about gifted students. It has been determined that there is domestic (Bulut, 2018; Dinarlı, 2016; Ekinci, Sümer, Bozan & Çete, 2018; Özcan & Gülkaya, 2019) and international studies (Geake & Gross, 2008; Rizza & Morrison, 2003) supporting this result of the research. In Özcan & Gülkaya's (2019) research, it was determined that preschool teachers have positive perceptions about gifted students. In the studies carried out by Rizza & Morrison (2003) and Geake & Gross (2008), it has been determined that teachers who receive training for the identification and education of gifted students have a more positive perception of gifted students than other teachers, and they are more successful in identifying their special abilities. As a matter of fact, in the study carried out by Ekinci, Sümer, Bozan, & Çete (2018), it is emphasized that the pre-service and in-service trainings of teachers about gifted students may be effective in their positive or negative perception of gifted students. It can be said that these results are important for the identification and determination of the special talents of the students and for the teacher training to be carried out about the gifted students. However, it has been determined that there are also studies that do not support this result of the research and reveal that there are negative perceptions of gifted students, which is another result of our research (Baştuğ & Servi, 2021; Akkanat, Abu & Gökdere, 2018).

As a result of the research conducted by Akkanat, Abu & Gökdere (2018), it was determined that teachers have negative perceptions of gifted students such as "unsuccessful, incompatible, talking a lot and belittles their friends". Baştuğ & Servi (2021), on the other hand, revealed in their research that teachers have negative views that gifted students can develop their existing potential. In this study we have also done, when the reasons for the metaphors reflecting the negative perceptions expressed by the teachers are examined, it is seen by the secondary school teachers that the gifted students are marginalized by their families, close circles and peers due to their different cognitive, social and emotional abilities, and that they are not understood by their environment due to their mental and emotional capacities. expressed. For this reason, for secondary school teachers, gifted students who have special abilities and show superior performance compared to their peers need social support. In addition, it was also revealed that teachers emphasized the intelligence, knowledge and ability capacities of gifted students and they had very little and incomplete information about the spiritual, psychological and social aspects of students. It should be considered important that teachers have awareness of gifted students. However, when the justifications for the metaphors that teachers have are examined, it has been determined that they also have misconceptions about gifted students. In the study, it was determined that some teachers used expressions reflecting false perceptions that gifted students know everything, are talented in every field, and that they acquire these abilities from birth. In his research, Bulut (2018) determined that teacher candidates have wrong perceptions about gifted students Teachers' perceptions of students affect their behaviors towards students, communication and teaching methods (Curtis, 2005). It can be said that the correct perceptions of teachers about gifted students may be effective on the right and qualified education of gifted students. In his research, he revealed that there

are misconceptions that gifted students have all the information, always show high performance, can predict everything, and always achieve high level success in every field. In this sense, it can be said that the vast majority of teachers have perceptions of their physical, cognitive and behavioral characteristics rather than their human and emotional characteristics of gifted students. There were studies that did not support this result of the study. As a result of the research carried out by Endepohls-Ulpe & Ruf (2005), it was determined that teachers emphasized the cognitive characteristics of gifted students more. In addition, It has been determined that the results of the research conducted by Duran & Dağlıoğlu (2017) are in parallel with these results. Duran & Dağlıoğlu (2017) found in their research that teachers focus on the human characteristics and values of gifted students. There is a general misconception about gifted students in the society. In our society, gifted students have a misconception that they are gifted in every field, that they can maintain these abilities for a lifetime, and that giftedness cannot be acquired later. It can be said that these misperceptions of teachers may cause the real needs of gifted students to be ignored by not being able to meet their real needs both in the society and in formal education activities. As a matter of fact, gifted students are given less importance and attention in formal education institutions compared to their peers. It can be said that some misperceptions of teachers about gifted students may negatively affect their self-actualization levels.

### **Conceptual Categories of Metaphors Produced by Secondary School Teachers About Gifted Students**

The reasons for the metaphors produced in the first sub-problem of the research were sought. When these reasons are examined, the metaphors produced by secondary school teachers are grouped under 12 different categories. These categories were determined as "Individual who looks different according to their age", "Individual who needs to be discovered", "Individual in need of special education", "Individual with high potential", "Individual with superior performance", "Individual with high cognitive performance". In addition, "Individual in need of social support", "Individual with unique value", "Individual with different skills", "person with different point of view", "Productive individual", "Individual who directs the society" were determined as other categories.

According to Table 1, when the conceptual categories of metaphors produced by secondary school teachers are examined, it is seen that the most metaphors are gathered under the categories of "Individual with high cognitive performance and Individual in need of special education" (18.82%,  $f=32$ ). When the categories in which the most metaphors are produced are listed from most to least, the categories of "Individual who looks different according to their age" (12.94%,  $f=22$ ), "Individual who needs to be discovered" (10.00%,  $f=17$ ) come. In addition, "Individual with high potential", "Individual in need of social support" (6.47%,  $f=11$ ), "Individual with unique value" (5.88%,  $f=10$ ), "Productive individual" (4.71%,  $f=8$ ) categories are listed. In addition, it was determined that the metaphors were ranked from most to least in the categories of "Individual who can look at events from a different perspective", "Individual with superior performance" and "Individual with different skills" (4.12%,  $f=7$ ). Finally, it is seen that the category in which the least metaphors are produced is "The individual who directs the society" (3.53%,  $f=6$ ).

In the study, metaphors reflecting the perceptions of secondary school teachers about gifted students were collected in 12 different conceptual categories. It has been determined that there are domestic (Ekinci, Sümer, Bozan & Çete, 2018; Kırmızı & Tarım, 2018) and international studies (Lee, 1999; Olthouse, 2014; Stenberg & Zhang, 1995) supporting this result of the research. When the domestic studies are examined, it has been determined that the themes in the studies conducted by Ekinci, Sümer, Bozan & Çete (2018), Kırmızı & Tarım (2018) show great similarities with the themes obtained in this research. The categories included in this research (individual in need of special education, individual who looks different according to their age, individual with high cognitive performance, individual with unique value) overlap with the research results of Ekinci, Sümer, Bozan & Çete (2018). In addition, the categories of "individual in need of special education", "individual who looks different according to their age", "individual with high cognitive performance", "individual with unique value" in this study overlap with the categories revealed in the research of Kırmızı & Tarım (2018). The categories of "outperforming individual, productive individual, individual with unique value" obtained in the present study are in line with the basic elements of the Pentagon Theory put forward by Stenberg & Zhang (1995). These elements consist of the dimensions of "extraordinary, rarity, value, productivity and evidence".

The categories of "productive individual, individual who looks different compared to their peers" in the research are similar to the categories that Gökçe & Çakmakçı (2021) obtained as a result of the research. On the other hand, the categories obtained from Lee's (1999) research are similar to the categories of "high potential individual, unique value individual, superior performing individual". In addition, it was determined that the categories in Olthouse's (2014) research were related to the category of "individual with high cognitive performance". In this research, the categories of "high-performing individual, high-potential individual, productive individual, individual with unique value, individual who directs the society" overlap with the results of Brulles & Winebrenner (2011) and Silverman (2000). The category of "individual who can look at events from different angles" in this study overlaps with the research results of Palladino (2008), and the category of "individual who looks different according to their age" with the research results of Dawis & Rimm (1998). However, the category of "individual with high cognitive performance, individual with unique value" coincides with the results of Olthouse (2014).

Although the results obtained from the above studies reveal that a small number of teachers have negative and wrong perceptions about gifted students, the majority of teachers show that they have positive and correct information about gifted students. As a result, according to the teachers, it can be said that gifted students are seen as individuals who show superior performance compared to their peers in one or more of these areas in terms of having general mental abilities, special academic abilities, high-level thinking skills such as critical and creative thinking. It can be said that teachers perceive gifted students as individuals with high performance, large capacity, productive, versatile, directing the society, looking at events differently, and having different skills.

All categories, metaphors under these categories and the reasons for creating metaphors are explained below, supported by teacher statements and direct quotations.

### **Category 1. Gifted Student as an Individual with High Cognitive Performance**

The metaphors collected in this category are determined as respectively "computer" (f=6) "Einstein" (f=3) "dolphin, cat, robot, genius, sponge" (f=2) "person with high memory, intelligent, sea, philosopher, walnut, sun, USB stick, brain, clock, machine, ant, artificial intelligence, panther (f=1).

When the metaphors in the category of "individual with high cognitive performance" were examined, it was determined that all the metaphors (person with high memory, computer, dolphin, cat, sea, computer, philosopher, robot, genius, walnut, sun, Einstein, USB stick, cat, brain, sponge, clock, machine, ant, intelligent, artificial intelligence and panther) produced by secondary school teachers about gifted students were positive. Accordingly, it can be said that secondary school teachers have positive perceptions about the cognitive performance of gifted students. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*"Because they learn quickly and easily and do not forget what they have learned." (T75).*

*"They search, they question, they are impatient. They show impatience with their peers because they grasp information quickly. As their intelligence levels increase, the differences among their peers also increase. They are curious. Imaginations are wide. However, they are messy. They like to show off their motor skills. They usually sleep little. They are more sensitive to social events than their peers." (T107).*

*"Although ants are small, they are capable of creatively withstanding disasters that would wipe out another species. Ants often coordinate to nest and forage in large groups and adapt very well to their environment. Gifted children also have strong concentration abilities. They are capable of long-term attention. They have very good memories. They do not forget the experiences they heard and observed. They learn by experience and coordinate immediately. They are always energetic, cheerful and active. They have the ability to overcome difficulties and solve problems. Although they have difficulty in adapting to the environment compared to their peers, they adapt quickly." (T151).*

It has been revealed that secondary school teachers perceive gifted students as individuals with higher cognitive performance than their peers due to their features such as quick and practical thinking, versatile intelligence, strong memory, ability to think quickly and make different decisions and answers, and offer creative solutions to problems.

Accordingly, for secondary school teachers, gifted students are individuals with high cognitive performance. It has been determined that there are domestic studies (Bayar, Arslan, & Avci, 2020) that support this result of the research. Bayar, Arslan, & Avci (2020) also revealed in their research that giftedness is perceived as a genetic feature and giftedness is perceived as an advanced cognitive ability.

### **Category 2. Gifted Student as an individual in Need of Special Education**

According to Table 1, 32 secondary school teachers (18.82%) produced 21 different (17.07%) metaphors in the category of "individual in need of special education". The metaphors collected in this category are "Diamond" (f=5), "mathematics, bird" (f=3), "flower, field, orchid" (f=2), "diamond, sea, gold, tree, lock, precious stone, kite, banana, active child, corn, knowledge-hungry child, ore, straw flame, raw stone, coal" (f=1). When the metaphors in the category of "individual in need of special education" are examined, only two of the metaphors produced by secondary school teachers about gifted students are metaphors reflecting negative perception (bird and mathematics), and the remaining metaphors (diamond, flower, field, orchid, diamond, sea, gold, tree, lock, precious stone, kite, banana, active child, corn, knowledge-hungry child, ore, straw flame, raw stone, coal) were found to be positive. This situation shows that secondary school teachers have a perception that they need a special education for gifted students so that they can realize themselves. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*"Requires correct key to open" (T7).*

*"Gold is a rare metal that is difficult to extract and work with. Purifying (processing) gold is a difficult task, but when it is sufficiently processed, its value increases. Gifted children are like gold. They are difficult to discover. They are difficult to train compared to other children. But if they are trained with the right methods, they become very valuable like gold" (T34).*

*"Just as coal becomes as valuable as a diamond in a long time with pressure and heat, gifted children will shine like Einstein and Stephen Hawking, who were the diamonds of their time, with the right trainer, with time and hard work." (T142).*

According to secondary school teachers, there is no qualified education and training environment that will identify and develop the talents of gifted students and enable them to use them at the highest level. In addition, for secondary school teachers, gifted students who have different abilities in many areas compared to their peers need educators who will understand themselves and effectively evaluate their skills and potential. According to secondary school teachers, gifted students need qualified educators and scientific and artistic environments where they can discover their talents and reveal their talents. According to them, gifted students cannot realize themselves because they do not have qualified educators and qualified educational environments that will satisfy their cognitive skills. As a result, according to secondary school teachers, gifted students need special education in which they can realize themselves in line with their abilities. Supporting this result of the research, domestic (Akkanat, Abu & Gökdere, 2018; Baştuğ & Servi, 2021; Erdoğan & Gücyeter, 2019; Karsak & Gider, 2019) and abroad (Brookby, 2004; Cunningham & Rinn, 2007; Lee, Olszewski-Kubilius & Thomson, 2012) studies were found. In the research of Karsak & Gider (2019), it was revealed that teachers have a perception that it is imperative to create educational programs and educational environments organized in line with the abilities of gifted students. In addition, it has also been determined that teachers who will train gifted students have perceptions that they should be subjected to a qualified education. Gifted students need a differentiated special education program in order to be successful and to maximize their potential. Akkanat, Abu & Gökdere (2018) revealed in their research that teachers have negative perceptions about the inadequacy of educational opportunities provided for gifted students. The reasons for this were given as reasons such as the economic situation of the country, the lack of teachers, the inability to develop talents, the inadequacy of materials and teaching environment. Christensen-Needham (2010), on the other hand, argues that gifted students need special education and that teachers are inadequate against gifted students and that they should be trained to recognize gifted students and meet their educational needs. In their research, Erdoğan & Gücyeter (2019) state that it is important for teachers to identify gifted

students and to create appropriate educational environments and to develop their talents, and qualified teaching is important. Because, as Gagne (2004) states environmental conditions such as education, training and orientation are effective in the development of the talents of gifted students.

### **Category 3. Gifted Student as an Individual who Looks Different from Their Peers**

According to Table 1, 22 secondary school teachers (12.94%) produced 14 different (11.38%) metaphors in the category of “individual who looks different compared to their peers”. The metaphors collected in this category are “star” (f=5), “flower” (f=3), “diamond, poppy (f=2), “watermelon, light, fish, adult, tree, sun, grandfather, rocket, precocious individual, rainbow” (f=1). When the metaphors in the category of “individual who look different according to their age” are examined, it is seen that all the metaphors produced by secondary school teachers about gifted students (star, flower, diamond, poppy, watermelon, light, fish, adult, tree, sun, grandfather, rocket, precocious individual, rainbow) were found to express positive perceptions. Secondary school teachers stated that gifted students look different from their peers physically, cognitively, emotionally, and psychologically. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*“They are more mature and perceptive than their peers. The reason for this can be shown in the answers they give to the question asked about their behavior and behavior.” (T104).*

*“They struggle like fish out of water to be accepted because they are seen as different in society.” (T112).*

*“Although they are different in color like the weasel, they are also children like the others. But they think differently. Although they seem out of sync with the environment, they open our horizons. His abilities are special.” (T133).*

*“Although it is rare, they can be flowers that grow in the same soil under the same conditions (physical) but can reach different heights and give different colors.” (T170).*

Secondary school teachers stated that gifted students look different from their peers in terms of physical, cognitive, affective and psychological aspects, they are more mature, clear perceptions, different thinking, behaving, different inside and outside, growing and shrunken individuals compared to their peers. Accordingly, according to secondary school teachers, gifted students are individuals who look different from their peers. Although they have common aspects such as their success, creativity, and ability to look at events from different perspectives, gifted students differ from each other and from their peers. Supporting this result of the research, domestic (Akkanat, Abu & Gökdere, 2018; Gökçe & Çakmakçı, 2021; Karsak & Gider, 2019; Şakar & Köksal, 2021; Ünal, Erdoğan & Demirhan, 2016) and international (Laine, Kuusisto & Tirri, 2016; Lee, 1999; Webb, Gore, Amend, DeVries & Kim, 2008) studies were found. In the study of Karsak & Gider (2019), teachers state that gifted students have very different characteristics in cognitive, affective and psychomotor areas. In addition, Şakar & Köksal (2021) state that gifted students who are described as different twice in their research do not represent a homogeneous group, so gifted students can differ from each other and their peers in many different aspects. Laine, Kuusisto & Tirri (2016) draw attention to the fact that teachers' characteristics of gifted students are an important factor that distinguishes them from their peers. Lee (1999), on the other hand, states in his research that teachers differentiate gifted students with their rare and remarkable features compared to their peers. Webb, Gore, Amend, DeVries & Kim (2008) emphasize that teachers believe that gifted students are different from their peers in terms of their extraordinary humor and curiosity. According to the results above, teachers perceive gifted students as individuals who differ from their peers in many aspects due to their different thinking, different perspectives, and different behaviors. For this reason, while providing education to gifted students, attention should be paid to preparing education programs by considering their differences, individual characteristics and abilities. In this sense, teachers should be aware of these differences between students and plan their education courses accordingly. This research should be considered important in terms of showing that teachers are aware of these individual differences of students.

#### Category 4. Gifted Student as an Individual Needing to be Discovered

According to Table 1, 17 secondary school teachers (10.00%) produced 16 different (13.01%) metaphors in the category of "individual to be discovered". The metaphors collected in this category are respectively "pearl" (f=2), "mine, treasure, diamond, fireworks, still water, labyrinth, universe, alien, well, jewellery, matryoshka, mystery box, uranium, diamond, invention box" (f=5) was determined. When the metaphors in the category of "individual to be discovered" are examined, it is seen that all metaphors (pearl, metal, treasure, diamond, fireworks, still water, labyrinth, universe, alien, well, jewel, matryoshka, mysterious box, uranium, diamond, invention box) produced by secondary school teachers about gifted students have been found to express positive perceptions. It has been determined that secondary school teachers perceive gifted students as mysterious, difficult to understand, having advanced thinking ability, on top of our thinking system, needing to go deep like a matryoshka, waiting to be discovered underground like precious metals, and difficult to be noticed. This situation shows that secondary school teachers have positive perceptions about gifted students as individuals who need to be discovered. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*"Gifted children, like mines, are invaluable and waiting to be discovered and worked on. Just as underground mines promise prosperity and development for a country, gifted children also promise a prosperous and hopeful future for countries as aboveground mines." (T1).*

*"Gifted students see opportunities wherever they are. They absorb all the information that can fuel a creative expression. Just like an oyster starts its journey of formation by adding layers with a strong and shiny mother-of-pearl mineral on the tiny sand grains it has taken inside. Our task is to discover the pearl that is waiting to be discovered under the protection of the oyster, which is unique, has the ability to seize opportunities and creativity features and has now evolved into something completely different from sand." (T2)*

*"These children are just as valuable as uranium and are waiting to be discovered by someone underground. They are very dangerous if the discoverer is bred for malicious purposes. But if it is cultivated for good in a positive way, it will turn it into something good for humanity, just like uranium." (T155)*

According to secondary school teachers, gifted students are individuals who are mysterious, difficult to understand, have the ability to think at an advanced level, are above our thinking system, need to go deep like a matryoshka, are waiting to be discovered underground like precious metals, and are difficult to be noticed. It has been determined that there are domestic (Ekinci, Sümer, Bozan & Çete, 2018; Gökçe & Çakmakçı, 2021; Karsak & Gider, 2019) and international (Olszewski-Kubilius, 2018) studies that support this result of the research. In the research of Karsak & Gider (2019), it is argued that teachers need to discover gifted students and to ensure this, teachers, families, and cooperation between guidance research centers have great responsibilities. In addition, Gökçe & Çakmakçı (2021) stated in their research that teachers believe that gifted students are fascinating and that they always have unexplored sides. Similarly, Olszewski-Kubilius (2018) draws attention to the importance of diagnostic processes for the discovery of gifted students. According to these results, special talented students for secondary school teachers have unique and different abilities and they need explorers who can correctly discover their talents and use these talents at the highest level.

#### Category 5. Gifted Student as an Individual with High Potential

According to Table 1, 11 secondary school teachers (6.47%) produced 8 different (6.50%) metaphors in the "high potential individual" category. The metaphors collected in this category were determined as "sea" (f=3), "fire" (f=2), "surprise egg, seed, pomegranate, spacecraft, gift package, pinecone" (f=1). When the metaphors in the category of "individual with high potential" were examined, it was determined that all of the metaphors (sea, fire, surprise egg, seed, pomegranate, spacecraft, gift package, pinecone) produced by secondary school teachers about gifted students expressed positive perceptions. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*"Gifted children are full of surprises that have no end, contain many things." (T15).*

*“Many gems are hidden inside, but not apparent at first glance.” (T27).*

*“On the outside, they are people who look like us. However, when we get to know gifted students closely, we realize that they have different abilities and characteristics. (T47).*

Secondary school teachers perceive gifted students as hyperactive individuals who have the ability to surprise those around them, who have many skills and characteristics, who always have the potential to grow and develop. Therefore, for secondary school teachers, gifted students are individuals with high potential compared to their peers. In the study of Karsak & Gider (2019), teachers perceive gifted students as individuals with high performance and high capacity. It has been determined that there are domestic (Erdoğan & Gücyeter, 2019) studies supporting this result of the research. Therefore, it can be said that teachers believe that they can use their capacities at the highest level when appropriate educational conditions are given to gifted students. Because gifted students have high capacity in many fields. When they use these capacities effectively, they can show high performance. However, at this point, it should be noted that the expectation of the teacher about the high capacity of gifted students can be disappointing for both the teacher and the student. If the student knows that the expectations regarding his/her own capacity are high, he/she may enter into mental states such as not being able to make mistakes or being perfect. In order to prevent this, teachers should be aware of the capacities of the subjects while forming their expectations for gifted students and shape their expectations according to these capacities.

#### **Category 6. Gifted Student as an Individual in Need of Social Support**

According to Table 1, 11 secondary school teachers (6.47%) produced 8 different (6.50%) metaphors in the category of “individual in need of social support”. The metaphors collected in this category were determined as “robot” (f=3), “butterfly, left alone, naughty boy, full moon, lonely old man, sapling, snowdrop flower” (f=1). When the metaphors in the category of “individual in need of social support” were examined, it was determined that all of the metaphors (robot, butterfly, left alone, mischievous child, full moon, lonely old man, sapling, snowdrop flower) produced by secondary school teachers about gifted students expressed negative perceptions. In this case, it can be said that secondary school teachers may have negative perceptions about gifted students. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*“Gifted children are those who are noticed, admired, and often admired by everyone. However, the main problem is this: The sense of loneliness that gifted children feel especially in their age group and in society. Children who cannot communicate socially are more attached to their own world. With this attachment, children have the opportunity to develop their own abilities. It also creates a lonely world for children.” (T54).*

*“Our gifted children need attention, care and love. Just as a seedling's soil is ventilated, watered, freed from harmful harms, approached with love and grown, they will be beneficial to all humanity. They contribute to the whole world with their fruit and the oxygen they produce. Gifted children can also be identified at an early age and bear fruit that will benefit all humanity.” (T154).*

*“They usually have low emotional intelligence. Their ability to empathize is low. Because they think more realistically, it will be different if they don't show their emotions.” (T166)*

When the reasons for the metaphors produced by secondary school teachers are examined, teachers perceive gifted students as individuals in need of social support due to their sensitivity, feeling lonely due to their differences, inability to communicate, being excluded by their peers, being overly sensitive, needing attention, care and love, and low emotional intelligence. detected. According to secondary school teachers, gifted students need social support. In the research, domestic (Ekinçi, Sümer, Bozan & Çete, 2018) and international (Clark, 2017; Miller, 2009) studies supporting this result were found. However, it has been determined that there are studies abroad (Davis & Rosso 2006; Davis, Rimm & Siegle, 2011) that do not support the result of the research. In addition, as a result of their research, Ekinçi, Sümer, Bozan & Çete (2018) determined that teachers have a perception that gifted students are individuals in need of attention, in this sense, emotional aspects of gifted students should be considered rather than their physical and mental

characteristics. Clark (2017), on the other hand, states that gifted students need social support from their environment. According to him, gifted children who do not receive social support experience some problems. Miller (2009) found that teachers have negative perceptions about their perceptions about gifted people, such as they are not silent, they cannot easily establish a social relationship, they are incompatible with school, and they do not do their homework. Bayar, Arslan & Avcı (2020) also revealed in their research that giftedness is perceived as a genetic feature, while giftedness is perceived as advanced cognitive ability, and that gifted people are seen as asocial. He argues that gifted students resort to temporary and ineffective ways, such as isolating themselves from the environment, making themselves accepted by their peers, or tending to pretend they don't know the subjects they know, in order to overcome the problem of asociality. On the basis of negative perceptions regarding the social characteristics of gifted students, it may be due to teachers' false beliefs that gifted students are disorganized and introverted individuals who cannot communicate. This situation is due to the widespread belief in Turkish society. According to him, there is a misconception that being a gifted individual in our society brings with it behavioral problems and that gifted individuals are problematic individuals. This perception causes them to be perceived as asocial and problematic individuals.

### **Category 7. The Gifted Student as an Individual of Unique Worth**

According to Table 1, 10 secondary school teachers (5.88%) produced 8 different (6.50%) metaphors in the category of "individual with unique value". The metaphors collected in this category were determined as "gold, diamond" ( $f=2$ ), "mineral, protected plant species, jewel, cloud, pearl, diamond" ( $f=1$ ). When the metaphors in the category of "individual with unique value" were examined, it was determined that all of the metaphors (gold, diamond, metal, protected plant species, jewel, cloud, pearl, diamond) produced by secondary school teachers about gifted students expressed positive perceptions. This indicates that secondary school teachers may have positive perceptions of gifted students as a unique value. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*"Like a gold mine, gifted children are very precious and rare. They are different from other children. In any environment, wherever and under any circumstances, they make themselves noticed with their distinctive intelligence" (T149).*

*"They are valuable because they are rare and unique. They add value to society." (T37).*

Secondary school teachers perceive gifted students as individuals who are rare, add value to society, unique and valuable, but these values are not processed. For secondary school teachers, gifted students are seen as a unique value for societies. According to this result, it can be said that teachers consider gifted students valuable. There were domestic studies (Bulut, 2018; Erdoğan & Güçyeter, 2019; Duran & Dağlıoğlu, 2017; Gökçe & Çakmakçı, 2021; Ünal, Erdoğan & Demirhan, 2016) supporting this result of the research. As a matter of fact, as much as an individual has a special talent, this talent must be accepted as unique and valuable by his social environment (Sternbergen & Zhang, 1995). However, as Gökçe & Çakmakçı (2021) stated, valuing can have positive and negative aspects. According to them, a teacher who values his student is meticulous and attentive in his educational activities. However, the value given by teachers can also increase their expectations from their students. In order to achieve this balance, the teacher should keep the value he says within the realistic limit.

### **Category 8. Gifted Student as a Productive Individual**

According to Table 1, 8 secondary school teachers (4.71%) produced 6 different (4.88%) metaphors in the "productive individual" category. The metaphors collected in this category were determined as "olive tree, bee" ( $f=2$ ), "book, soil, machine, tree" ( $f=1$ ). When the metaphors in this category are examined, it has been determined that all of the metaphors (olive tree, bee, book, soil, machine, tree) produced by secondary school teachers regarding gifted students express positive perceptions. This situation shows that secondary school teachers can have positive perceptions of gifted students as productive individuals. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.



*“They can't stay still like a bee. They are in constant motion like a bee. They look to bees that come in and out of the hive to produce. I liken it to a bee in terms of movement and industriousness.” T(43).*

*“It is not known from which branch it will bear fruit and what kind of fruit it will be. They see life as more beautiful than we do. They are constantly producing like a fruit tree.” (T123).*

*“The olive is a sacred fruit. It is a panacea from its branches to its fruits. It can live for centuries. They resemble the olive tree, which lives for years and benefits humanity and produces continuously” (T146).*

Secondary school teachers perceive gifted students as individuals who constantly research, question, strive to achieve, tend to produce something, persevere in working, and are dedicated to helping humanity by living for years. Therefore, according to secondary school teachers, gifted students are productive individuals. There were domestic (Gökçe & Çakmakçı, 2021; Ünal, Erdoğan & Demirhan, 2016) studies supporting this result of the research. Gökçe & Çakmakçı (2021) argue that pre-service teachers perceive gifted students as productive and productive individuals.

### **Category 9. Gifted Student as an Individual with a Different Perspective**

According to Table 1, 7 secondary school teachers (4.12%) produced 7 different (5.69%) metaphors in the category of "person with different point of view". The metaphors collected in this category were determined as "star, mathematics, light, telescope, child prodigy, book, sky" (f=1). When the metaphors in the category of "person with different point of view" were examined, it was found that all of the metaphors (star, math, light, telescope, child prodigy, book, sky) produced by secondary school teachers about gifted students expressed positive perceptions. This situation shows that secondary school teachers may have positive perceptions about their ability to look at events related to gifted students from different perspectives. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*“He sees the objects that everyone cannot see and analyze from different angles and explains them with scientific interpretations.” (T74).*

*“They have different thoughts and perspectives, like millions of stars and unknown objects.” (T129).*

*“They have a multi-faceted perspective. They are adept at seeing the reason behind things.” (T161).*

It has been determined that secondary school teachers perceive gifted students as individuals who can constantly approach events from different perspectives, offer creative solutions to the problems they encounter, notice events that everyone sees but cannot analyze and explain the underlying causes of these events with scientific interpretations. Accordingly, for secondary school teachers, gifted students can look at things from a different perspective than their peers. This result of the research agrees with the giftedness theory developed by Renzulli (1982). According to this theory, special talent emerges with the interaction of three basic elements. To have above-average intelligence and ability, to have high motivation to complete a job, and to have the ability to come up with creative solutions by approaching problems from different angles.

### **Category 10. The Gifted Student as a High Performing Individual**

According to Table 1, 7 secondary school teachers (4.12%) produced 6 different (4.88%) metaphors in the "High performing individual" category. The metaphors collected in this category were determined as "computer" (f=2), "turbo engine, flea, racehorse, ant, fantasy movie hero" (f=1), respectively. When the metaphors in the category of "outstanding performer" were examined, it was determined that all of the metaphors (computer, turbo engine, flea, race horse, ant, fantasy movie hero) produced by secondary school teachers about gifted students expressed positive perceptions. This situation shows that secondary school teachers may have positive perceptions about gifted students' superior performance. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*“They can outperform their peers in every field.” (T87).*

*“He is constantly on the move and on the move. It’s hard to catch because he’s always one step ahead of you.” (T91).*

*“They constantly generate their brains, they don’t like to be idle and they run non-stop...” (T124).*

*“They seem to be able to do and grasp anything quickly, just like movie protagonists.” (T163)*

It has been determined that secondary school teachers perceive gifted students as individuals who are always agile and active compared to their peers, who are always one step ahead of their peers in cognitive terms, who can grasp a problem immediately and solve it in a practical way, and show superior performance in many areas. Therefore, for secondary school teachers, gifted students show superior performance compared to their peers. In the literature, it has been determined that there is domestic (Akkanat, Abu & Gökdere, 2018; Erdoğan & Güçyeter, 2019; Karsak & Gider, 2019) and international (Godor, 2019) studies that support this result. has been done. In the study conducted by Karsak & Gider (2019), teachers perceive gifted students as individuals with high performance, high capacity, and high research skills. Godor (2019) argues that teachers see gifted students as individuals with excessive capacity, strong performance and potential. Superior performance is a situation encountered for gifted students.

### **Category 11. Gifted Student as an Individual with Different Skills**

According to Table 1, 7 secondary school teachers (4.12%) produced 5 different (4.07%) metaphors in the category of "individual with different skills". The metaphors collected in this category were determined as "rainbow" (f=3), "sea, plane, computer, gold" (f=1), respectively. When the metaphors in the category of "individual with different skills" were examined, it was determined that all of the metaphors (rainbow, sea, plane, computer, gold) produced by secondary school teachers about gifted students expressed positive perceptions. This situation shows that secondary school teachers may have positive perceptions about gifted students having different skills. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*“If we look at the means of transportation in general, each of them should be evaluated separately. Maintaining a car is not the same as maintaining a ship. Gifted children also have unique abilities. Appropriate training and management are required for these skills. In some subjects, they have superior, creative thoughts and skills compared to other individuals. It is necessary to evaluate and develop each of these skills individually.” (T152).*

*“Gifted or more accurately gifted children outperform their peers in one or more skill areas. In addition, gifted children can come up with new ideas and solutions with a unique way of thinking.” (T158).*

*“They constantly generate their brains, they don’t like to be idle and they run non-stop...” (T124).*

*“They are versatile in every sense. They are individuals with different knowledge and abilities. The solutions they set up are more information-filled than their peers. Their self-confidence is like a big person.” (T159).*

It has been determined that secondary school teachers perceive each of their gifted students as different colors like a rainbow compared to their peers, as individuals with high-level thinking skills such as critical thinking and creative thinking, and with their own special abilities. Accordingly, gifted students have different skills for secondary school teachers. It has been determined that there is domestic (Ekinci, Sümer, Bozan & Çete, 2018; Erdoğan & Güçyeter, 2019) and international (Fisher & Williams, 2004) researches supporting this result of the research. As a result of their research, Ekinci, Sümer, Bozan & Çete (2018) found that teachers perceive gifted students as individuals equipped with versatile skills and having different skills. Fisher & Williams (2004) argues that gifted students are creative individuals and that this creativity stems from their differences. In their study, Erdogan and Güçyeter (2019) revealed the perceptions that gifted students have different skills in a positive way compared to their peers. However, misconceptions and incomplete information about gifted students in society may cause gifted students' having different skills to be perceived as an abnormality. According to this result of the current research, it is important in terms of showing that teachers have

awareness that gifted students have different skills compared to their peers. According to this, teachers need to plan teaching activities by considering these differences of gifted students before education and training activities.

### Category 12. Gifted Student as an Individual Who Directs the Society

According to Table 1, 6 secondary school teachers (3.53%) produced 4 different (3.25%) metaphors in the category of "individual directing the society". The metaphors collected in this category were determined as "star, sun" ( $f=2$ ), "rainbow, light" ( $f=1$ ), respectively. When the metaphors in the category of "individual who directs the society" are examined, it has been determined that all of the metaphors (star, sun, rainbow, light) produced by secondary school teachers about gifted students express positive perceptions. This situation shows that secondary school teachers may have positive perceptions about giving direction to the society regarding gifted students. Below are the statements of teachers who are thought to represent the metaphors gathered under this category.

*"They provide enlightenment to the society with their activities in many fields." (T28).*

*"They are the inventors of inventions that enlighten humanity." (T59).*

*"She inspires everyone around her with her light. They illuminate humanity with different perspectives." (T93).*

It has been determined that secondary school teachers perceive gifted students as the inventors of inventions that have different skills in many areas, enlighten the society with their different skills, intelligence levels and activities, inspire and shape the society. For this reason, for secondary school teachers, gifted students direct the society with their special talents. It has been determined that there are domestic studies (Ekinci, Sümer, Bozan & Çete 2018) that support this result of the research. As a result of their research, Ekinci, Sümer, Bozan & Çete (2018) found that teachers perceive gifted students as individuals who shape the society, the future, lead the society and are seen as saviors, thanks to their special abilities.

### Conceptual Categories Related to the Gender and Branch Variables

The second sub-problem of the research is "How does the conceptual categories show a distribution according to gender and branch variables?" determined as. Table 2 shows how the conceptual categories of different metaphors produced by secondary school teachers regarding gifted students are distributed according to the gender variable; The distribution of the branch variable is given in Table 3.

**Table 3.** Distribution of Metaphors Produced by Secondary School Teachers for Gifted Students by Gender

Categories	Female		Male	
	<i>f</i>	%	<i>f</i>	%
Individual with special education needs	21	19.09	11	18.33
Individual with high cognitive performance	19	17.27	13	21.67
Individuals who look different than their peers	14	12.73	8	13.33
Individual to be discovered	10	9.09	7	11.67
Individual with high potential	8	7.27	3	5.00
Individual of unique value	7	6.36	3	5.00
Individual in need of social support	6	5.45	5	8.33
Person with different point of view	6	5.45	1	1.67
Individual with different skills	6	5.45	1	1.67
Productive individual	5	4.56	3	5.00
Outstanding performing individual	4	3.64	3	5.00
The individual who leads the society	4	3.64	2	3.33
Total	110	100	60	100

When Table 3 is examined, it is seen that %35.29 ( $f=60$ ) of the secondary school teachers participating in the research are male teachers and %64.71 ( $f=110$ ) are female teachers. Accordingly, the most female secondary school teachers participated in the study. When the metaphors produced by secondary school teachers are examined, it is seen that female teachers ( $f=110$ ) produce more metaphors than male teachers ( $f=60$ ). It is seen that the metaphors most produced by

women are gathered in the category of “individual in need of special education” (%19.09,  $f = 21$ ). It was determined that the metaphors they produced the least were in the categories of “outstanding individual and society-directing individual” (%3.64,  $f = 4$ ). It is seen that the metaphors most produced by men are gathered in the category of “individual with high cognitive performance” (%21.67,  $f = 13$ ). It was determined that the metaphors they produced the least were in the categories of “individual who can look at events from different angles and individuals with different skills” (%1.67,  $f = 1$ ). According to the findings above regarding the distribution of the conceptual categories regarding the gender variable, the metaphors produced by female and male teachers show different distributions.

In the study, it was revealed that secondary school teachers' being of different genders creates differences in their perceptions of gifted students. Accordingly, the majority of female teachers believe that gifted students need a special education to be prepared for their own skills. Male teachers, on the other hand, believe that gifted students are mostly individuals with higher cognitive performance than their peers. It has been determined that there are studies that support this result of the research (Duran & Dağlıoğlu, 2017) as well as studies that do not support this result (Dinarlı, 2016; Özcan & Gülkaya, 2019). Özcan & Gülkaya (2019) state that teachers do not affect their perceptions of gifted students according to their gender. However, there is a negative perception that women with special talents try to develop under inadequate conditions compared to men, that they are not effective in this regard, and that these students cannot develop in line with their abilities due to the education system and social conditions. Duran & Dağlıoğlu (2017), on the other hand, revealed in their research that gender creates differences in the perception of gifted students. Accordingly, although fewer women participated in the study, it was determined that the number of metaphors produced by women compared to men was more comprehensive.

**Table 4.** Distribution of Metaphors Produced by Secondary School Teachers for Gifted Students by Branch

Categories	Turkish	Mathematics	English	Science	Social Studies	Fine Arts	Music	Culture of Religion	Gymnastics	Technology Design	Information Tec.	Psychological C.G
	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>
Individual with special education needs	5	4	5	4	2	3	3	3	2	-	-	1
Individual with high cognitive performance	5	5	6	3	4	4	1	1	1	1	1	-
Individuals who look different than their peers	4	3	2	2	1	-	3	3	2	2	-	-
Individual to be discovered	3	3	3	1	1	2	1	-	-	-	2	1
Individual with high potential	1	1	4	1	-	1	1	1	1	-	-	-
Individual of unique value	2	3	1	3	1	-	-	-	-	-	-	-
Individual in need of social support	2	1	1	3	1	-	-	1	-	-	1	1
Person with different point of view	-	2	-	-	2	1	-	-	-	1	1	-
Individual with different skills	1	1	-	1	1	1	-	1	1	-	-	-
Productive individual	2	2	-	1	2	-	1	-	-	-	-	-
Outstanding performing individual	1	-	2	-	-	1	1	-	-	1	-	1
The individual who leads the society	3	-	1	-	1	1	-	-	-	-	-	-
<b>Total</b>	29	25	25	19	16	14	11	10	7	5	5	4

In Table 4, the branches of the secondary school teachers participating in the research are examined. These branches are listed as follows, respectively: “Turkish” (17.06%,  $f=29$ ), “Mathematics and English” (14.71%,  $f=25$ ), “Sciences” (11.18%,  $f=19$ ), “Social Studies” (9.41%,  $f=16$ ), “Fine Arts” (8.24%,  $f=14$ ), “Music” (6.47,  $f=11$ ), “Culture of Religion and Knowledge of Ethics” (5.88%,  $f=10$ ), “Gymnastics” (4.12%,  $f=7$ ), “Technology Design and Information Technologies” (2.94%,  $f=5$ ) and “Psychological Counseling and Guidance” (2.35%,  $f=4$ ).

According to this, the teachers in the Turkish course branch participated in the research the most, while the teachers in the Guidance branch participated the least. The most metaphors for gifted students were produced by teachers in the Turkish branch (17.06%,  $f=29$ ). The least metaphors were produced by the teachers in the Psychological Counseling and Guidance branch (2.35%,  $f=4$ ).

It was determined that teachers in the Turkish branch ( $f=5$ ) mostly produced metaphors in the categories of “Individual in need of special education and Individual with high cognitive performance”. Teachers in the mathematics branch ( $f=5$ ) and the teachers in the English branch ( $f=6$ ) produced metaphors mostly in the category of “individual with high cognitive performance”. While the teachers in the Science branch ( $f=4$ ) produced metaphors the most in the category of “Individual in need of special education”, the teachers in the Social Studies and Fine Arts branch ( $f=4$ ) produced metaphors in the category of “Individual with high cognitive performance”. It has been determined that teachers in Music, Psychological Counseling and Guidance ( $f=3$ ) and Gymnastics ( $f=2$ ) teachers produce the most metaphors in the categories of “Individual in need of special education and Individual who looks different according to their peers”. While the teachers in the Technology Design branch ( $f=2$ ) produced the most metaphors in the category of “Individual who looks different according to their age”, Information Technology teachers ( $f=2$ ) produced the most metaphors in the category of “Individual to be discovered”. Teachers in the Psychological Counseling and Guidance branch produced metaphors in the categories of “individual in need of special education”, “individual to be discovered”, “individual in need of social support”, “individual with superior performance”.

According to the findings above regarding the distribution of the conceptual categories regarding the branch variable, the metaphors produced by the teachers in different branches show different distributions. In the study, it was revealed that secondary school teachers' being in different branches creates differences in their perceptions of gifted students. Accordingly, according to the teachers in the Turkish branch, gifted students are individuals who need special education and have higher cognitive performance compared to their peers. When all categories are examined according to branches, most of the branches see gifted students as individuals who look different from their peers and exhibit higher cognitive performance compared to their peers, who need special education and who need to be discovered in terms of their skills in qualified educational environments. The least metaphors were produced by the teachers in the guidance branch. According to them, gifted students differ from their peers. Teachers in the guidance branch produced metaphors that express that gifted students perform better than their peers and that they are individuals that need to be discovered in this sense. They also emphasize that these students need special education and social support. When the literature is examined, there are domestic studies (Baştuğ & Servi, 2021) that support the result of the research. However, research results (Gökçe & Çakmakçı, 2021) that did not support the result of the research were also found. Baştuğ & Servi (2021), in their study, found that a significant portion of those in the science branch and some of the students in the mathematics branch perceive the gifted students as superior and valuable individuals. In addition, it has been revealed that those who are in the special education branch have perceptions that gifted students need special education and that their skills can only be revealed and developed with qualified education. He stated that the reason for this result is that gifted students have high academic success in science and mathematics courses and that as the intelligence level increases, students show more interest in science and mathematics (Bildiren, 2017). Gökçe & Çakmakçı (2021) determined that a few teachers in the preschool and counseling branch who participated in the research produced metaphors that express that gifted students do not differ from their peers, on the contrary, they have ordinary characteristics.

These metaphors reflect a positive perception of gifted students. Because, although they are gifted students, these individuals are children like their peers by nature and they have the natural characteristics of being a child. Characterizing them as special and making them feel this perception creates a great expectation on the student and this expectation

causes the students to feel under pressure. However, it is known that gifted students differ from their peers as a result of their innate abilities and the support of these abilities with environmental factors. Gifted students differ from their peers because of their ability to look at events from different perspectives, to deal with events and phenomena more deeply in cognitive terms, to look at events with a critical eye, and to offer creative solutions to the problems they encounter.

### **Conclusion**

This research aimed to analyze secondary school teachers' perceptions of gifted students. Answers were sought to the questions determined within the scope of this purpose. Obtained results are listed below:

Secondary school teachers produced 123 different metaphors for gifted students. It has been revealed that 8 of the metaphors produced are negative and 115 of them are metaphors that reflect positive perceptions. Metaphors reflecting secondary school teachers' perceptions of gifted students were collected in 12 different conceptual categories. It was revealed that secondary school teachers produced the most metaphors under the categories of "Individual with high cognitive performance and Individual in need of special education". Metaphors containing negative perceptions were grouped under the category of "individual in need of social support". In all the remaining categories, it was determined that secondary school teachers produced metaphors reflecting positive perceptions of gifted students. Secondary school teachers believe that gifted students should have higher cognitive performance, productive and high potential compared to their peers; It has been revealed that they perceive it as a unique value that looks different from their peers in terms of looking at events from a different perspective, showing superior performance, and guiding the society with their different skills. In addition, secondary school teachers teach gifted students who need social support and special education because of their differences; As a result, they perceive them as individuals who need to be discovered.

In the study, it was determined that the metaphors produced by male and female teachers showed different distributions. Accordingly, it was revealed that female teachers produced more metaphors than male teachers. While women see gifted students as individuals in need of special education the most, it has been revealed that gifted students have less perception that they perform superiorly and that they are individuals who shape the society. While men perceive gifted students as individuals with the highest cognitive performance, it has been determined that they have less perception that they are individuals who can look at events from different perspectives. In the study, it was determined that the metaphors produced by teachers in different branches showed different distributions from each other. Accordingly, the most metaphors about gifted students were produced by teachers in the Turkish branch. The least metaphors were produced by the teachers in the Psychological Counseling and Guidance branch. According to the teachers in the Turkish branch, gifted students are individuals who need special education and have higher cognitive performance compared to their peers. When all categories are examined according to branches, most of the branches see gifted students as individuals who exhibit cognitive performance, need special education and need to be discovered in terms of their skills in qualified educational environments.

### **Recommendations**

This research was handled with a qualitative method. In future studies, richer results can be obtained by including quantitative research data that will support qualitative data. In this context, the research can be handled with a mixed method. In addition, metaphors about gifted students were analyzed by reducing them to one dimension. For this reason, metaphor research should be supported with different methods and techniques. Secondary school teachers working in formal education institutions were included in the study. The perceptions of teachers at different levels of education in formal education institutions and teachers in Science and Art Centers about gifted students can be compared. In order to obtain accurate and more qualified information about gifted students, teachers can be given training on special education and gifted students. In this sense, psycho-educational programs can be organized for teachers.

### **Limitations of Study**

This research is limited to the teachers working in public secondary schools in the Buca district of İzmir in the 2021-2022 academic year. In addition, the data obtained are limited to the data collection tools used for this research. The

research is limited to the answers given by the teachers to the data collection tool. The research is limited to the qualitative research method and the phenomenology pattern carried out with this method.

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## References

- Açar, D., Kaya, G. & Güneş, G. (2017). Özel gereksinimli bireyler hakkındaki görüşlere ilişkin metafor çalışması (Metaphorical Study on the Perceptions for Individuals with Special Needs). *Elektronik Sosyal Bilimler Dergisi (Electronic Journal of Social Sciences)*, 16(62), 935-944. <https://doi.org/10.17755/esosder.284397>.
- Akarsu, F. (2001). *Üstün Yetenekli Çocuklar: Aileleri ve Sorunları (Gifted Children: Their Families and Their Problems) (b. 11)*. Eduser Yayınları, Ankara.
- Akay, M. (2018). *Üstün yetenekli öğrencilerin eğitiminde kullanılacak matematik temelli STEM etkinliklerinin geliştirilmesi (The development of mathematics based STEM activities to be used in the education of gifted students)*. Master Thesis. Atatürk University, Erzurum, Turkey.
- Akgün E. (2016). Okul öncesi öğretmen adaylarının “çocuk” ve “okul öncesi öğretmeni” kavramına ilişkin metaforik algıları (Prospective Pre-School Teachers' Metaphors about the Concept of “Child” and “Pre School Teacher”). *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi (Abant İzzet Baysal University Faculty of Education Journal)*, 16 (4), 1652-1672. Retrieved from <https://dergipark.org.tr/en/pub/aibuefd/issue/28550/304590>.
- Akkanat, Ç., Abu, N. K. & Gökdere, M. (2018). Öğretmenlerin üstün yetenekli öğrencilerin özellikleri ve eğitimlerine yönelik algıları (Teachers' Perceptions of Gifted Children's Characteristics and Their Education). *Karaelmas Eğitim Bilimleri Dergisi (Karaelmas Journal of Educational Sciences)*, 6(2), 185-201. Retrieved from <https://dergipark.org.tr/en/pub/kebd/issue/67221/1049162>.
- Alger, C. L. (2009). Secondary teachers' conceptual metaphors of teaching and learning: Changes over the career span. *Teaching and Teacher Education*, 25(5), 743-751. <https://doi.org/10.1016/j.tate.2008.10.004>.
- Ateş, H. K. (2018). *Gifted children metaphor from the perspective of teachers and parents*. *Journal for the education of gifted young scientists*, 6(2), 30-41. <https://doi.org/doi:10.14689/issn.2148-2624.1.7c.2s.8m>.
- Baş, G. ve Kivılcım, Z. S. (2019). Türkiye’de öğrencilerin merkezi sistem sınavları ile ilgili algıları: bir metafor analizi çalışması (Perceptions of Students on Central System Examinations in Turkey: A Metaphor Analysis Study). *Eğitimde Nitel Araştırmalar Dergisi (Journal of Qualitative Research in Education)*, 7(2), 639-667. <https://doi.org/doi:10.14689/issn.2148-2624.1.7c.2s.8m>.
- Baştuğ, Y. E. & Servi, C. (2021). Öğretmen adaylarının özel gereksinimli bireylere ilişkin tutumlarının metaforik algıları çerçevesinde incelenmesi: Bir karma desen incelemesi (An Investigation of Pre-Service Teachers' Attitudes Towards Individuals with Special Needs in the Framework of Their Metaphoric Perceptions: A Mixed Method Analysis). *e- Kafkas Eğitim Araştırmaları Dergisi (e- Kafkas Journal of Educational Research)*, 8, 770-787. <https://doi.org/10.30900/kafkasegt.957732>.
- Bayar, S., Arslan, D. & Avcı Doğan, G. (2020). Özel eğitim öğretmen adaylarının üstün zekâ kavramına yönelik algısı (Special Education Preservice Teachers' Perceptions of Giftedness). *Anadolu Üniversitesi Eğitim Fakültesi Dergisi (Journal of Anadolu University Faculty of Education)(AUJEF)*, 4(3), 232-253. <https://doi.org/10.34056/aujef.673373>.
- Berliner, D. C. (1990). If the metaphor fits, why not wear it? The teacher as executive. *Theory into practice*, 29(2), 85-93. <https://doi.org/10.1080/00405849009543437>.
- Bildiren, A. (2017). Examination of the skill areas of gifted children using wisc-r intelligence scale scores. *European Journal of Education Studies*, 3(9), 378-391. <https://doi.org/10.5281/zenodo.887944>.
- Brookby, S. A. (2004). *Academic self-efficacy and social self-concept of mathematically gifted high school students in a summer residential program* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (PQ number: 3133644).

- Brulles, D. & Winebrenner, S. (2011). The school wide cluster grouping model: Restructuring gifted education services for the 21st century. *Gifted Child Today*, 34(4), 35-46. <https://doi.org/10.1177/1076217511415381>.
- Bulut, A. S. (2018). Prospective primary school teachers' perceptions about highly talented individuals and concepts of special education. *Journal of Kirsehir Education Faculty*, 19(3), 2357-2376. <https://doi.org/10.29299/kefad.2018.19.03.015>.
- Calderhead, J. & Robson, M. (1991). Images of teaching: Student teachers' early conceptions of classroom practice. *Teaching and Teacher Education*, 7(1), 1-8. [https://doi.org/10.1016/0742-051X\(91\)90053-R](https://doi.org/10.1016/0742-051X(91)90053-R).
- Christensen-Needham, V. (2010). *Primary teachers' perceptions of the social and emotional aspects of gifted and talented education*. A dissertation submitted in partial fulfilment of the requirements for the degree of master of Teaching and Learning in the university of Canterbury, New Zealand.
- Clark, B. (2017). Social ideologies and gifted education in today's schools. In *Charting a New Course in Gifted Education*, (81-100). Routledge. <https://doi.org/10.1080/0161956X.1997.9681867>.
- Collins, E. C. & Green, J. L. (1990). Metaphors: The construction of a perspective. *Theory into practice*, 29(2), 71-77. <https://doi.org/10.1080/00405849009543435>.
- Cunningham, L. G. & Rinn, A. N. (2007). The role of gender and previous participation in a summer program on gifted adolescents' self-concepts over time. *Journal for the Education of the Gifted*, 30(3), 326-352. <https://doi.org/10.1177/016235320703000303>.
- Curt, S. J. (2005). *Preservice Teacher' Attitudes Toward Gifted Students and Gifted Education*. Degree of Doctoral Thesis: USA.
- Curtis, J. (2005). Preservice teachers' attitudes toward gifted students and gifted education. Teachers College, Columbia University. *Columbia University (Online)*. Retrieved May 25, 2009 from <http://www.proquest.um.com>.
- Çapan, B. E. (2010). Öğretmen adaylarının üstün yetenekli öğrencilere ilişkin metaforik algıları. *Journal of International Social Research*, 3(12).
- Davis, G. A. & Rosso, J. A. (2006). *Gifted children and gifted education: A handbook for teachers and parents*. Scottsdale, AZ: Great Potential Press.
- Davis, G. A., Rimm, S. B. & Siegle, D. (2011). *Education of the gifted and talented* (6th Ed.). New Jersey: Pearson Education, Inc.
- Süral, S. & Dedeşali, N. C. (2022). Öğretmen adaylarının öğrenme öğretme anlayış düzeyleri ile metaforik algılarının incelenmesi (Examination of teacher candidates' learning-teaching understanding levels and metaphorical perceptions). *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi (Pamukkale University Faculty of Education Journal)*, 54 158-187. <https://doi.org/10.9779/pauefd.853592>.
- Demirok, M. (2012). *Öğretmeni Yönetici, Denetmen ve Velilerin Üstün Yetenekli Öğrencilere Yönelik, Algı, Görüş ve Eğitim İhtiyaçlarının Belirlenmesi. (Determination of Perception, Opinion and Educational Needs of Teachers, Managers, Supervisors and Parents for Gifted Students)*. Doctoral Thesis. Yakındoğu University, Lefkoşa, Cyprus.
- Dinarlı, J. (2016). *Özel eğitim öğretmenlerin üstün zekâli öğrencilere yönelik algı ve görüşlerinin belirlenmesi. (Determining the perceptions and views of special education teachers towards gifted students)*. Master Thesis. Yakındoğu University, Lefkoşa, Cyprus.
- Duran, A. & Dağlıoğlu, H. E. (2017). Okul öncesi öğretmen adaylarının üstün yetenekli çocuklara ilişkin metaforik algıları (The Metaphoric Perceptions of Preschool Teacher Candidates Regarding Gifted Children). *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi (Journal of Gazi University Education Faculty)*, 37(3), 855-881. <https://doi.org/10.17152/gefad.328869>.
- Ekinci, A., Sümer, S., Bozan, S. & Çete, U. (2018). Sınıf öğretmenlerinin özel yetenekli öğrencilere ilişkin algıları: metaforik bir çalışma (Classroom Teachers' Perceptions of Gifted Students: A Metaphorical Study). *Mustafa Kemal Üniversitesi Eğitim Fakültesi Dergisi (Hatay Mustafa Kemal University Journal of the Faculty of Education)*, 2(3), 1-20. Retrieved from <https://dergipark.org.tr/en/pub/mkuefder/issue/42370/489701>.
- Endepohls-Ulpe, M. & Ruf, H. (2005). Primary school teachers' criteria for the identification of gifted pupils. *High Ability Studies*, 16, 219-228. <https://doi.org/10.1080/13598130600618140>.
- Epçaçan, U. (2018). *Bilim ve sanat merkezinde öğretim uygulamalarının öğrenci ve öğretmen görüşlerine göre değerlendirilmesi. (Evaluation of teaching practices in science and art center according to student and teacher opinions)*. Master Thesis. Dicle University, Diyarbakır, Turkey.
- Erdoğan, S. C. & Gücyeter, Ş. (2019). Öğretmen Adaylarının Üstün Zekâ ve Üstün Yetenek Metaforları (Pre-service Teachers' Metaphors About Giftedness and Talent). *İlköğretim Online (Elementary Education Online)*, 18(3), 1307-1325. <https://doi.org/10.17051/ilkonline.2019.612177>.
- Ertürk, A. (2019). *Bilim ve Sanat Merkezleri Destek Eğitim Programının sınıf öğretmenleri görüşlerine göre değerlendirilmesi. (An examination of the science and art centers (BILSEM) support education program based on form teachers' views)*. Master Thesis. Trabzon University, Trabzon, Turkey.
- Feuchter, M. D. & Preckel, F. (2022). Reducing boredom in gifted education—Evaluating the effects of full-time ability grouping. *Journal of Educational Psychology*, 114(6), 1477. <https://doi.org/10.1037/edu0000694>.
- Fisher, R. (2004). *Creativity across the curriculum* In R. Fisher & M. Williams (Eds.) *Unlocking creativity. Teaching across the curriculum*.
- Gagné, F. (2004). Transforming gifts into talents: The DMGT as a developmental theory. *High ability studies*, 15(2), 119-147. <https://doi.org/10.1080/1359813042000314682>.
- Geake, J.G. & Gross, M.U. (2008). Teachers' Negative Affect Toward Academically Gifted Students: An Evolutionary Psychological Study. *Gifted Child Quarterly*, 52, 217-231. <https://doi.org/10.1177/0016986208319704>.

- Godor, B. P. (2019). Gifted metaphors: exploring the metaphors of teachers in gifted education and their impact on teaching the gifted. *Roepers Review*, 41(1), 51-60. <https://doi.org/10.1080/02783193.2018.1553219>.
- Gökçe, F. Ö. & Çakmakçı, Y. (2021). Öğretmen Adaylarının “Üstün/Özel Yetenekli Çocuk” Kavramına İlişkin Metaforik Algıları (The Metaphorical Perceptions of Teacher Candidates Regarding the Concept of "The Gifted Child"). *Sakarya Üniversitesi Eğitim Fakültesi Dergisi (Sakarya University Journal of Education Faculty)*, 21(1), 13-35. Retrieved from <https://dergipark.org.tr/en/pub/sakaefd/issue/62657/751564>.
- Güçyeter, Ş. (2015). Ortaokul matematik öğretmenleri ve sınıf öğretmenlerinin matematikte üstün zekâlı öğrenci özelliklerine yönelik yargılarının incelenmesi (Investigating Middle School Math and Primary Teachers' Judgments of the Characteristics of Mathematically Gifted Students). *Türk Üstün Zekâ ve Eğitim Dergisi (Turkish Journal of Giftedness and Education)*, 5(1), 44-66.
- Hamilton, E. R. (2016). Picture This: Multimodal representations of prospective teachers' metaphors about teachers and teaching. *Teaching and Teacher Education*, 55, 33-44. <https://doi.org/10.1016/j.tate.2015.12.007>.
- Karsak, O. H. G. & Gider, B. (2019). Metaphorical perceptions and views of teachers about gifted and talented students and their education. *Cumhuriyet International Journal of Education*, 8(4), 961-982. <http://dx.doi.org/10.30703/cije.543321>.
- Kasoutas, M. & Malamitsa, K. (2009). Exploring Greek teachers' beliefs using metaphors. *Australian Journal of Teacher Education (Online)*, 34(2), 64-83. <http://dx.doi.org/10.14221/ajte.2009v34n2.6>.
- Kırmızı, M. & Tarım, K. (2018). Matematik Öğretmenlerinin Üstün Zekâlılar Hakkındaki Görüşlerinin İncelenmesi: Bir Metafor Çalışması (Investigating Mathematics Teacher Perceptions' of Gifted Students Using Metaphors). *Sakarya University Journal of Education*, 8(4), 337-350. <https://doi.org/10.19126/suje.452059>.
- Laine, S., Kuusisto, E. & Tirri, K. (2016). Finnish teachers' conceptions of giftedness. *Journal for the Education of the Gifted*, 39(2), 151-167. <https://doi.org/10.1177/0162353216640936>.
- Lakoff, G. (1993). *The contemporary theory of metaphor*. In A. Ortony (Ed.), *Metaphor and thought* (pp.202–251, 2nd ed.). New York, NY: Cambridge University Press. Retrieved from <https://cloudfront.escholarship.org/dist/prd/content/qt54g7j6zh/qt54g7j6zh.pdf>.
- Lakoff, G. & Johnson, M. (1980). *Metaphors We Live By*. Chicago and London: The University of Chicago Press.
- Lee, L. (1999). Teachers' conceptions of gifted and talented young children. *High Ability Studies*, 10, 183–196. <https://doi.org/10.1080/1359813990100205>.
- Lee, S. Y., Olszewski-Kubilius, P. & Thomson, D. T. (2012). Academically gifted students' perceived interpersonal competence and peer relationships. *Gifted Child Quarterly*, 56(2), 90-104. <https://doi.org/10.1177/0016986212442568>.
- McLaughlin, H. J. & Bryan, L. A. (2003). Learning from rural Mexican schools about commitment and work. *Theory into Practice*, 42(4), 289-295. [https://doi.org/10.1207/s15430421tip4204\\_5](https://doi.org/10.1207/s15430421tip4204_5).
- Milli Eğitim Bakanlığı [National Ministry of Education] (2021). *Özel eğitim hizmetleri yönetmeliği (Special education services regulation)* [http://orgm.meb.gov.tr/www/icerik\\_goruntule.php?KNO=608](http://orgm.meb.gov.tr/www/icerik_goruntule.php?KNO=608) adresinden 15.06.2022 tarihinde erişilmiştir.
- Metin, N., Şenol, F. B. & İnce, E. (2017). Determination of the prospective teachers' attitudes toward the education of the gifted children. *Journal of Theoretical Educational Science*, 10(1), 95-116. Retrieved from <https://dergipark.org.tr/en/pub/akukeg/issue/29365/314205>.
- Miles, M. B., Huberman, A. M. & Saldana, J. (2014). *Qualitative data analysis a methods sourcebook* (3rd Ed.). California, Sage Publications, Inc.
- Miller, E. M. (2009). The effect of training in gifted education on elementary classroom teachers' theory-based reasoning about the concept of giftedness. *Journal for the Education of the Gifted*, 33(1), 65-105. <https://doi.org/10.1177/016235320903300104>.
- Moser, K. S. (2000). Metaphor analysis in psychology. Method, theory, and fields of application. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, 1(2). <https://doi.org/10.17169/fqs-1.2.1090>.
- Munby, H. (1987). Metaphor and teachers' knowledge. *Research in the Teaching of English*, 21(4), 377-397. <https://www.jstor.org/stable/40171124>.
- Neumeister, K. L. S., Adams, C. M., Pierce, R. L., Cassady, J. C. & Dixon, F. A. (2007). Fourth-grade teachers' perceptions of giftedness: Implications for identifying and serving diverse gifted students. *Journal for the Education of the Gifted*, 30(4), 479-499. <https://doi.org/10.4219/jeg-2007-503>.
- Olszewski-Kubilius, P. (2018). The role of the family in talent development. In *Handbook of giftedness in children* (pp. 129-147). Springer, Cham.
- Olthouse, J. (2014). How do preservice teachers conceptualize giftedness? A metaphor analysis. *Roepers Review*, 36(2), 122-132. <https://doi.org/10.1080/02783193.2014.884200>.
- 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. [https://doi.org/10.1016/S0346-251X\(97\)00071-7](https://doi.org/10.1016/S0346-251X(97)00071-7).
- Özcan, D. & Güllkaya, Ş. (2019). Okul öncesi öğretmenlerinin üstün yetenekli çocuklara yönelik algı ve eğitim ihtiyaçlarının belirlenmesi (Determination of Preschool Teachers' Perceptions and Training Needs towards Gifted and Talented). *Kastamonu Eğitim Dergisi (Kastamonu Education Journal)*, 27(5), 2355-2368. <https://doi.org/10.24106/kefdergi.3776>.

- Özkan, Y. (2021). *Matematik öğretmenlerinin ve ilköğretim matematik öğretmen adaylarının zekâ oyunlarına yönelik algılarının metaforlar yoluyla belirlenmesi (Determining the perceptions of math teachers and elementary mathematics teachers candidate about intelligent games through metaphors)*. Master Thesis. Erciyes University, Kayseri, Turkey.
- Özsoy, Y. (2014). *Bilim ve sanat merkezi öğrenci, öğretmen ve velilerin üstün yetenekli öğrenci kavramına ilişkin metaforları (Metaphors of Science And Art Center Students, Teachers and Parents Regarding Gifted Students)*. *Üstün Yeteneklilerin Eğitimi Araştırmaları Dergisi (Journal of Gifted Education Research)*, 2(1), 74-87.
- Palladino, C. (2008). *Teachers' Perspectives on Educating the Gifted Learner Within the Regular Education Classroom*. Degree of Doctoral Thesis: Walden University. Retrieved May 20, 2009 from <http://www.proquest.um.com>.
- Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice*. (3rd Ed.) Sage publications.
- Pekbalcı, M. (2019). *Fen bilimleri öğretmenleri ve fen bilimleri öğretmen adayları ile sınıf öğretmenleri ve sınıf öğretmeni adaylarının öğrenci, öğrenme, öğretme ve öğretmen kavramlarına ilişkin sahip oldukları metaforların karşılaştırılması (A comparison of science teachers and science teacher candidates and primary school teachers and primary school teacher candidates in terms of the metaphors they produce about the concepts of student, learning, teaching and teacher)*. Master Thesis. Kahramanmaraş Sütçü İmam University, Kahramanmaraş, Turkey.
- Permatasari, Y. S., Rachmajanti, S. & Astuti, U. P. (2022). Revealing Attitude and Motivation of Young Efl Learners Through Metaphor Analysis: Learning English in the Crisis Time. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*, 7(5), 182-189. <http://dx.doi.org/10.17977/jptpp.v7i5.15249>.
- Provenzo Jr, E. F., McCloskey, G. N., Kottkamp, R. B. & Cohn, M. M. (1989). Metaphor and meaning in the language of teachers. *Teachers College Record*, 90(4), 551-573. <https://doi.org/10.1177/016146818909000406>.
- Renzulli, J. S. (1982). What makes a problem real: Stalking the illusive meaning of qualitative differences in gifted education. *Gifted Child Quarterly*, 26(4), 147-156. <https://doi.org/10.1177/001698628202600401>
- Rizza, M. G. & Morrison, W. F. (2003). Uncovering stereotypes and identifying characteristics of gifted students and students with emotional/behavioral disabilities. *Roeper Review*, 25(2), 73-77. <https://doi.org/10.1080/02783190309554202>.
- Roeper, A. (1982). How the gifted cope with their emotions. *Roeper review*, 5(2), 21-24. <https://doi.org/10.1080/02783198209552672>.
- Sak, U. (2011). Prevalence of misconceptions, dogmas, and popular views about giftedness and intelligence: A case from Turkey. *High Ability Studies*, 22(2), 179-197. <https://doi.org/10.1080/13598139.2011.622942>.
- Schön, D. A. (1979). Generative metaphor: A perspective on problem-setting in social policy. *Metaphor and thought*, 2, 137-163.
- Silverman, L. (2000). *Characteristics of Giftedness. Gifted Development*. Retrieved 26.06.2022 from [www.gifteddevelopment.com](http://www.gifteddevelopment.com).
- Sternberg, R. J. & Zhang, L. (1995). What do we mean by giftedness? A pentagonal implicit theory. *Gifted Child Quarterly*, 39(2), 88-94. <https://doi.org/10.1177/001698629503900205>.
- Stofflett, R. (1996). Metaphor development by secondary teachers enrolled in graduate teacher education. *Teaching and Teacher Education*, 12(6), 577-589. [https://doi.org/10.1016/S0742-051X\(96\)00002-9](https://doi.org/10.1016/S0742-051X(96)00002-9).
- Sürmeli, V. (2015). *Sınıf öğretmenlerinin üstün yetenekli öğrenciler hakkındaki farkındalık düzeyleri (Awareness levels of primary school teachers about gifted students)*. Master Thesis. İstanbul Gelişim University, İstanbul, Turkey.
- Şakar, S. & Köksal, M. S (2021). Özel eğitim öğretmen adaylarının iki kere farklılığa yönelik metaforik algıları (Metaphors of Prospective Special Education Teachers Towards Twice Exceptionality). *İnönü Üniversitesi Eğitim Fakültesi Dergisi (Inonu University Journal of the Faculty of Education)*, 22(3), 1924-1941. <https://doi.org/10.17679/inuefd.908319>
- Şayir, T. (2015). *Üstün yetenekli çocuklara ilişkin sınıf öğretmenlerinin bilgi düzeylerinin incelenmesi (Investigation of knowledge level of classroom teachers for gifted children)*. Master Thesis. Yıldız Teknik University, İstanbul, Turkey.
- Şenol, C. (2011). *Üstün yetenekliler eğitim programlarına ilişkin öğretmen görüşleri (BİLSEM örneği) (Views of teachers about gifted curriculum (case of BİLSEM))*. Master Thesis. Fırat University, Elazığ, Turkey.
- Tannenbaum, A. J. (2003). *Nature and nurture of giftedness*. In N. Colangelo & G. A. Davis (Eds.) *Handbook of gifted education* (3rd edition) (pp. 45-59). Boston: Allyn and Bacon.
- Thomson, M. M. (2016). Metaphorical images of schooling: beliefs about teaching and learning among prospective teachers from the United States displaying different motivational profiles. *Educational Psychology*, 36(3), 502-525. <https://doi.org/10.1080/01443410.2015.1024612>.
- Tobin, K. (1990). Changing metaphors and beliefs: A master switch for teaching? *Theory into practice*, 29(2), 122-127. <https://doi.org/10.1080/00405849009543442>.
- Tuttle Jr, F. B. (1988). *Characteristics and identification of gifted and talented students*. NEA professional Library, PO Box 509, West Haven, CT 06516.
- Uğurlu, Z. (2018). Öğretmen adaylarının üniversite kavramına ilişkin algılarının metafor analizi (The Metaphors Teacher Candidates Produced Concerning University Notion). *Çağdaş Yönetim Bilimleri Dergisi (Journal of Contemporary Administrative Science)*, 5(1), 82-97. Retrieved from <https://dergipark.org.tr/en/pub/cybd/issue/37095/411569>
- Ünal, D., S., Erdoğan, D. G. & Demirhan, E. (2016). Bilsem’nde öğrenim gören çocukların anne ve babalarının üstün yetenekli çocuk kavramına dair metaforik algıları (Metaphoric Perception of Mothers and Fathers of Children in Science and Art Centers (BİLSEM) Regarding the Gifted Child Concept). *Eğitim ve Öğretim Araştırmaları Dergisi (Journal of Research in Education and Teaching)*, 5(30), 266-274.

- Webb, J. T., Gore, J. L., Amend, E. R., DeVries, A. R. & Kim, M. (2008) A Parent's Guide to Gifted Children. *Gifted and Talented International*, 23(1), 155-158, <https://doi.org/10.1080/15332276.2008.11673523>.
- Yanarateş, E. & Yılmaz, A. (2020). Öğretmen adaylarının "çevre duyarlılığı" kavramına yönelik metaforik algıları (Metaphorical Perceptions of Prospective Teachers Towards the Concept of Environmental Sensitivity). *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi (journal of Gazi University Gazi Education Faculty)*, 40(3), 1019-1050. <https://doi.org/10.17152/gefad.699406>
- Yıldırım, A. ve Şimşek, H. (2016). *Sosyal bilimlerde nitel araştırma yöntemleri (Qualitative research methods in the social sciences)* (b. 10). Ankara: Seçkin Yayıncılık.
- Yob, I. M. (2003). Thinking constructively with metaphors. *Studies in Philosophy and Education*, 22, 127-138. <https://doi.org/10.1023/A:1022289113443>.
- Yuvacı, T. S. (2021). *Ortaokul öğrencilerinin, öğretmenlerinin ve yöneticilerinin müzik dersine ilişkin algılarının belirlenmesi: bir metafor analizi çalışması (Determining the perceptions of middle school students, teachers and administrators regarding music lesson: A metaphor analysis study)*. Master Thesis. Sivas Cumhuriyet University, Sivas, Turkey.

