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Full Length Research Paper

Group guidance services with self-regulation technique to improve student learning motivation in Junior High School (JHS)

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This study aims at: determining students motivation before being given a group guidance with self-regulation technique, determining students’ motivation after being given a group counseling with self-regulation technique, generating a model of group counseling with self-regulation technique to improve motivation of learning, determining the effectiveness of group counseling with self-regulation techniques to improve students motivation at JHS of 13 Semarang State. This study used research and development (R & D) method; Students’ motivation increased after they follow the activities of the group with self-regulation techniques. Therefore, it proves to be effective to increase students’ motivation, which is indicated by changes in student motivation before and after being given a treatment. The conclusions and recommendations of the study are: Students’ motivation after being given guidance service group with self-regulation technique is categorized medium and high categories; it is found that a design of a model of group guidance with self-regulation techniques are able to improve students’ motivation, the model is effective to improve students’ motivation.

Key words: Group guidance, self-regulation, learning motivation.

INTRODUCTION

Guidance Group Conventional commonly performed using only the stages already common practice, common in the conventional group guidance is opening stage, intermediate stage, stage activities and stages of closing/termination. Stages through guidance group with different techniques of self-regulation for the stage in group counseling with self-regulation techniques, stage activities of self-regulation in the input technique. Techniques of self-regulation are expected to assist students in improving learning motivation. Educational goals will be achieved if the children are trying to optimize and develop all its potential. Schunk

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(2012: 32) explains that learning is a process conducted by an individual to obtain a change in the behavior of the new overall as a result of individual experience itself in interaction with the environment, so it is clear that with the learning process, the child will experience better behavior change and purposeful. These objectives have described their desire to develop all the potential of a child is a good potential for academic and non-academic potential of such skills.

At the time of study there will be an adjustment of the knowledge we have with new knowledge. So that at no stage of the learning process checks and creek, to such information if the knowledge is still relevant or should be renewed. Schunk and Zimmerman (2008: 37) introduced the concept of "Self-Regulated Learning". In the process of learning that must be owned by a student who can be assumed to include the category of 'self-regulated' is an active student in the learning process, both metacognitive, motivational, and behavioral effects. They generate ideas, feeling and actions to the achievement of learning.

Metacognitively they can have a certain motivation is effective in processing information. While the motivation to talk about the spirit of learning that is internal. As for behavior, shown is in the form of concrete actions in the study. In the learning process, there is also the process of monitoring the effectiveness of the motivation that has been applied. Awareness of students choose and use specific learning motivation will distinguish students who learn the correct and modest student learning.

The educators are very aware of the importance of motivation in terms of learning, where the presence of highly motivated student will get a score and a proud achievement because students feel that urge or high motivation in itself will achieve good performance. Definition of motivation according to Schunk (2012: 06) "motivation is a process maintenance of activities aimed at achieving the goal.", While according to Sadirman (2005: 90) motivation to learn is the overall driving forces that exist within the student who learning improve activities so the desired objectives can be achieved by the subjects studied.

Mechanical self-regulation can also be done by maintaining the motivation to complete the task of learning. Taught himself to have the efficiency of the ability to complete the task successfully. Furthermore, by using the technique of controlling attention to maximizing attention on the learning task. Taught himself tried to focus their attention on the problem and explain their emotions. Mechanical application of self-regulation is to select and use the appropriate way to learn. Techniques to monitor yourself is with a view gradually to see how to achieve the goal. Evaluation techniques themselves that determine what has been done or incurred in a business. Learn by themselves determine what they have learned and are effective for their purpose. The latter technique is the reflection to determine the extent to which the motivation to learn has been successful and efficient and the possibility of identifying for effectiveness impending.

Research Zemerman (2008: 167) in the journal entitled "Investigating the Self-Regulation and Motivation: Historical Background, methodological Developments and Future Prospects" which states that self-regulation can be an arrangement to enhance learning motivation in students through thinking and their own behavior.

This research difference with the former is self-regulation techniques in the group guidance include the steps are: Techniques of self-regulation will be implemented in all three phases (phase activities) in the counseling group. At this stage in the activities of group counseling, group leaders will provide strategies of self-regulation techniques to improve students' motivation through the steps as follows: (1) Planning, (2) Self-monitoring, and (3) Self reflection/evaluation.

This study focuses on one of the internal factors, namely education learning motivation is enhanced through group counseling services with engineering self-regulation. motivation to learn is indispensable for anyone in activity. With high motivation, goals to be achieved was the maximum. Conversely, if the lack of motivation, achievement of the objectives will be reduced.

**METHODOLOGY**

The final goal of this research is the completion of the formulation of the model group counseling services with self-regulation techniques to improve students' motivation. A structured model framework based on the study of theoretical, empirical and factual conditions of group counseling and low student motivation. Therefore, this study uses the method and design of floating research (research and development) that is based on principles and measures according to Borg and Gall (2003:409).

The subjects in this study were students of Junior High School 13 Semarang State with a total sample of 10 students of class VIII G. The samples in this study using purposive sampling technique. This research data obtained from the students' motivation scale.

The purpose of this study carried out drafting group counseling services model formulation with self-regulation techniques to improve students' motivation. A model framework based on a theoretical study, empirical data, and objective conditions of implement Guidance Services Group. Therefore, in this study using the method and design of research and development (research and development) based on the principles and steps of the Borg and Gall (2003).

Putra (2011: 67) explains that the simple R & D can be defined as a method of research that deliberately, systematically, aiming/directed to seek findings, formulate, refine, develop, produce, test the effectiveness of products, models, methods/strategies/ways, services, certain ways that are superior, new, effective, efficient, productive and meaningful. Further Bock in Putra (2011:68) wrote: 

Definition 1. Research is a process that acquires new knowledge 

Definition 2. Development is a process that Applies knowledge to create new devices on effects. Research seek the truth, while development seeks utility.
Borg and Gall (2003:409), the steps that must taken in research and development, among others: (a) a preliminary study, (b) planning, (c) development of hypothetical model, (d) a review of hypothetical model, (e) revision, (f) limited testing, (g) revision of the test results, (h) test more broadly, (i) revision of the last model, and (j) dissemination and outreach. However, in this study, the tenth step modified into six steps that are tailored to the needs of research. The six steps are as follows.

Phase I: Preparation model development

At this stage, the researchers conducted a preliminary study in Junior High School 13 Semarang State to find the real needs of students oriented to the growth of student motive and photographed the goal conditions of implementation of group counseling services at the school.

Furthermore, researchers conduct studies related theoretical concepts of group counseling services, with the technique of self-regulation, as well as the analysis of the results of earlier studies are relevant. The last step in this phase is to compare the goal conditions on the ground with the ideal, both with regard to group counseling services as well as about the motive to learn, this will do to look at the level of the gap between the goal conditions with ideal conditions. Inequality used as a basis in preparing the hypothetical model.

Preliminary studies

Digging information used as the data for analyze object conditions in Junior High School 13 Semarang State, among others:

1. Describing the findings of the real needs of students of Junior High School 13 Semarang State in increasing motive to learn.
2. Describing the findings of object conditions of implementation of group counseling services in Junior High School 13 Semarang State.

Theoretical review

1. Examines the theoretical concept of group counseling services, self-regulation techniques.
2. Examines the results of research relevant to developing a model of group counseling services with self-regulation techniques to improve students' motivation.

Phase II: Designing a hypothetical model

Designing a hypothetical model of group counseling services with self-regulation techniques to improve students' motivation, which developed by the goal conditions of implementation Guidance Services Group at Junior High School 13 Semarang State, theoretical studies, the goal conditions of students' motivation, and assessment of relevant earlier research.

Phase III: Feasibility model

1. Test the feasibility of the model by two expert guidance and counseling. As for the aspects of the hypothetical model were assessed by two experts are component models from the scientific guidance and counseling which includes: A rational, spiritual foundation and understanding, purpose, qualified counselor (counselor), the function of the services, content services, criteria success, procedure implementation, evaluation and support systems.
2. Test the feasibility of the model by two practitioners of guidance and counseling. As for the aspects of the hypothetical model were assessed, among others: The feasibility of model components, contributing a model to the achievement of program objectives of guidance and counseling in schools, ease of models to be understood, chances implementation models, competence counselors as service providers, and fitness model with characteristics of students as subjects of service.

Phase IV: Repair model hypothetical

Measures conducted by researchers at this stage, based on the results of due diligence research models make improvements to the hypothetical model in accordance with suggestions/feedback/recommendations from experts and practitioners in guidance and counseling. In general, the steps that have been made are:

1. Analyzing the results of feasibility studies and inventory models.
2. Fixing hypothetical model.
3. The group also prepared guidance service model with self-regulation techniques to improve students' motivation.

Phase V: Field test hypothetical model

At this stage, the steps undertaken by researchers are trying out (field test) hypothetical model that has been repaired. Field tests carried out in collaboration with teacher guidance and counseling in drafting research activities, as well as implementing the service model of group counseling techniques of self-regulation and describe the results of the field test. Points of the field tests are Junior High School 13 Semarang State with the involvement of the teacher's guidance and counseling as collaborators and students as research subjects. Furthermore, the results of this field test are used as a hypothetical model refinement. In general, the steps conducted by researchers at this stage are as follows:

1. Develop action plan field tests.
2. Carry out field tests.
3. Describing the results of the field tests.

Phase VI: Final results product

At this stage, by researchers is to design a final model of group counseling services with self-regulation techniques to improve students' motivation. Results obtained from field tests then analyzed to base in refining the model. Completion is done collaboratively between researcher and teacher guidance and counseling in schools. Next, after going through the process can produce the final model. In general, the steps conducted by researchers at this stage are as follows:

1. Evaluating the results of the field test with a group counseling service model of self-regulation techniques.
2. Fix service model of group counseling with self-regulation techniques collaboratively.
3. Compiling the final model of group counseling services with self-regulation techniques to improve students' motivation.

Visually stages and the development steps of the research is as shown in Figure 1. Based on the above framework and the
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Figure 1. Chart stage research.

characteristics of the problems in this study, it is to get information, data, and information clearly and accurately related to guidance services group in Junior High School 13 Semarang State, in this study using mixed method design sequential concurrent with weights and qualitative methods impartial, or quantitative and qualitative methods in an integrated way.

Quantitative methods used to assess the level of preparedness of students' learning motivated and effectiveness of group counseling services with the technique of self-regulation. While qualitative methods used to describe the implementation of group counseling services that implemented and which have been developed, as well as validation (experts and practitioners) model design guidance services group with the techniques of self-regulation to improve students' motivation.

**Trial product**

The products were tested in the research are the development of a model guidance services group with self-regulation techniques themselves to improve students' motivation. The test is done to test whether the model developed has met the criteria as a model of effective group counseling services used in schools.

**Design trial**

**Test the feasibility of the model:** To test the feasibility of hypothetical model, the researchers conducted tests and test expert practitioners. Expert test conducted by expert guidance and counseling, while the practitioner test carried out by the teacher guidance and counseling.

**Limited test:** Carried out to determine the effectiveness of the service model developed. Limited test carried out in JHS of 13 Semarang State where research was conducted.

**Research subjects**

In this study, carried out in several stages with different subjects. In the preliminary study phase, the chosen subject is class VIII G with a number of 10 students.

At this stage of the development and validation of the subject are the expert guidance and counseling as much as two validators and two teachers guidance and counseling as a validator practitioners. While on the subject of service in group counseling services are determined as many as 10 students were determined by purposive sampling or sample of aims. According to Arikunto (2010: 183) samples aiming is done by taking the subject is not based on strata, random, or region but based on their particular purpose. Researchers took a sample of SMP Negeri 13 Semarang. The sampling was based on the results of preliminary studies with the acquisition spread to student learning motivation scale JHS of 13 Semarang State to determine the categories of students who have the motivation to learn. Category motivation to learn is divided into four, namely: high, medium, low and very low.

There are 10 students who become subjects of the research. Students will be guided students in the process of group counseling. Samples spread of students who have a very low category number 1 student, who has a much lower category, 3 students, five students have the moderate category and which has a high category number 1 student. After the 10 students were given group counseling services with self-regulation techniques, then they are given a posttest or final evaluation to determine the increase motivation to learn them.

**Research sites**

The research was conducted in Junior High School 13 Semarang
State. Some considerations chose this school as a test site, among others:

1. Characteristics of students in JHS of 13 Semarang State in accordance with the characteristics of the subject of service expected.
2. Implementation of group counseling services that have been implemented in JHS of 13 Semarang State more focused.

Techniques and data collection instrument

Samsudi (2009: 97) argues that one important step in the research, and the results will affect the next step is to determine the techniques of data collection and preparation of instruments. In principle researching is measuring, then there must be a good measuring tool. Sugiyono (2011: 148) stated that the research instrument is an instrument used to measure the natural and social phenomena. The instrument used in this study to reveal the quantitative and qualitative data. Here is presented the data collection instruments used in this study.

Qualitative data

Qualitative data collection through interviews, observation, and validation expert and practitioner validation.

Interview

Sugiyono (2011: 194) stated that the interview was used as data collection techniques if researchers want to conduct a preliminary study to find problems that should be investigated. In interviews conducted research on preliminary studies are used to uncover data and factual information about the condition of the implementation of Guidance Services Group at Junior High School 13 Semarang State. To obtain the desired data, researchers used a structured interview. Still in Sugiyono (2011: 194) argues that a structured interview was used as data collection techniques if researchers have known for sure about the information to be obtained.

Observation

Hadi (in Sugiyono, 2011: 203) argues that the observation is a complex process, a process that is composed of various biological and psychological processes. Two of the most important is the processes of observation and memory. In this study the mean does the observation is to: (a) examine the implementation of counseling services group in JHS of 13 Semarang State has been done and implementation guidance services group with the techniques of self-regulation (the model developed in this study), (b) determine the development of motivation studied for giving treatment.

Validation sheet

At this stage of development of a model also used the same technique to interpret the results of expert validation and validation practitioners. To avoid errors in interpreting the results of expert validation and validation practitioners of the need for the instrument, in this study the instrument used is a sheet of expert validation and validation sheet practitioners.

Quantitative data

The tools used to collect quantitative data is the psychological scale. Azwar (2012: 26) argues that fiscal tends to be used to measure the affective aspects, such as interests, attitude and various other personality variables. Aspects measured in this study is the motivation to learn, then the scale used is the scale of motivation to learn.

RESULTS

Conditions implementation group guidance services at Junior High School 13 the State of Semarang

An overview of the implementation of guidance services group, researchers report based on interviews with Guidance and Counseling teachers and some teachers BK or another counselor. Interview conducted by researchers focused on data relating to: (a) planning group guidance, (b) the implementation of group counseling, (c) material or problems in group counseling, (d) the time and schedule of group guidance, (e) target used in the guidance of the group, (f) evaluation and follow-up, (g) supporting and inhibiting factors. (H) the evaluation of group guidance in the form of immediate assessment.

Guidance group model with self-regulation techniques to improve student motivation

This study was to determine the level of students' motivation is measured by scale motivation to learn in terms of motivation to learn which consists of three indicators: (1) task choice, (2) effort, and (3) persistence, which are translated at 60 and 51 grains which tested its validity by the number of students 32. the categories used to determine the motivation to learn is high, medium, low, very low. For the implementation of the intervention and 10 students conducted research subjects in Junior High School 13 the State of Semarang with the consideration that of the three indicators of motivation to learn, mostly experienced by students of JHS of 13 Semarang State. Therefore this study was conducted in Junior High School 13 the State of Semarang. The results of students' motivation pretest and posttest in Junior High School 13 the State of Semarang is given in Table 1.

Test results effectiveness model to improve student motivation

Based on calculations, it can be seen that the statistics can be interpreted that the Group N as many as 10 students for each treatment. Mean generated at pretest phase amounted to 6.686 while the posttest phase
Table 1. Acquisition of pretest and posttest scores total motivation in junior high school 13 the State of Semarang

<table>
<thead>
<tr>
<th>Initials</th>
<th>Pree test</th>
<th>%</th>
<th>Categories</th>
<th>Post test</th>
<th>%</th>
<th>Categories</th>
<th>Change (%)</th>
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<tr>
<td>AL</td>
<td>144</td>
<td>70.59</td>
<td>M</td>
<td>197</td>
<td>96.57</td>
<td>H</td>
<td>25.98</td>
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<tr>
<td>ALE</td>
<td>127</td>
<td>62.25</td>
<td>L</td>
<td>184</td>
<td>90.2</td>
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<tr>
<td>BRF</td>
<td>167</td>
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<td>M</td>
<td>183</td>
<td>89.71</td>
<td>H</td>
<td>7.85</td>
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<tr>
<td>CSA</td>
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<td>62.25</td>
<td>L</td>
<td>201</td>
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<td>H</td>
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<tr>
<td>EIL</td>
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<td>FN</td>
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<td>40.69</td>
<td>VL</td>
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<td>KCN</td>
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<td>176</td>
<td>86.27</td>
<td>H</td>
<td>3.43</td>
</tr>
</tbody>
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Sources: Primary data is processed, 2015. Information: H, High; M, medium; L, low; VL, very low.

amounted to 10.456. Furthermore, standard error of mean on stage was at 2.11 while the pretest-posttest was at 3.30.

T-test previously conducted with the equality test variant F Test, which means that the same variant of the t using equal variance assumed and if the variant is different then using equal variance not assumed. Testing criteria Ho accepted if P value <0.05. Comparing probability/significant where P value (0.151) so that Ho refused. So we can conclude that the variant is not the same. Testing independent sample T-Test, the results of calculations using the help of SPSS 19 is obtained the data Sig <0.05 (0.000), then Ho is rejected and Ha accepted (Table 2). This means that there are differences of group counseling services to enhance learning motivation that had been done in JHS of 13 Semarang State with group counseling services to enhance the motivation to learn to use the techniques of self-regulation effective.

**DISCUSSION**

Group guidance service model with self-regulation techniques to improve student motivation Junior High School

Group guidance service model developed in this study is the guidance of a group by using the technique of self-regulation to improve student motivation. The assumption that the problem of student motivation needs to be improved optimally due to the motivation to learn has a major contribution to the success of students in maximizing its capabilities so that students achieve success and excel in real life in the community.

Learning motivation is a process in which an activity is initiated and directed to achieve learning objectives. The purpose of learning motivation is the driving force from the student to trigger teaching learning activities. Through this motivate the goal is achieved based on each student's learning motivation.

Consideration utilizes a technique of self-regulation in the counseling group that self-regulation technique can also be done by maintaining the motivation to complete the task of learning. Taught himself to have the efficiency of the ability to complete the task successfully. Furthermore, by using the technique of controlling attention to maximizing attention on the learning task. Taught himself tried to focus their attention on the problem and explain their emotions. Mechanical application of self-regulation is to select and use the appropriate way to learn. Techniques to monitor yourself is with a view gradually to see how to achieve the goal. Evaluation techniques themselves that determine what has been done or incurred in a business. Learn by themselves determine what they have learned and are effective for their purpose. The latter technique is the reflection to determine the extent to which the motivation to learn has been successful and efficient and the possibility of identifying for effectiveness impending.

Visually Group guidance with regulatory techniques can be used to improve students’ motivation show in Figure 2. Group guidance with regulatory techniques can be used to improve students’ motivation show in Figure 2. Committed in a situation of group counseling in group dynamics that the students are effective in revealing the topic of problems regarding motivation to learn together with other members. through the guidance of the group stages, namely: (1) the establishment phase, (2) an intermediate stage, (3) the stage of activity, (4) the stage of termination. Techniques of self-regulation will be implemented in all three phases (phase activities) in the counseling group. At this stage in the activities of group counseling, group leaders will provide strategies of self-regulation techniques to improve students’ motivation through the steps as follows: (Show in Figure 3 and Figure 4) (1) Planning, (2) Self-monitoring, and (3) Self reflection / evaluation.
Table 2. Calculation results independent sample T-test.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. error mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>10</td>
<td>161.4000</td>
<td>6.68664</td>
<td>2.11450</td>
</tr>
<tr>
<td>Posttest</td>
<td>10</td>
<td>185.0000</td>
<td>10.45626</td>
<td>3.30655</td>
</tr>
</tbody>
</table>

Levene’s test for equality of variances

<table>
<thead>
<tr>
<th>F</th>
<th>Sig.</th>
<th>t</th>
<th>Df</th>
<th>Sig. (2 tailed)</th>
<th>Mean difference</th>
<th>Std. error difference</th>
<th>95% Confidence interval of the difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.246</td>
<td>0.151</td>
<td>-6.013</td>
<td>18</td>
<td>0.000</td>
<td>23.6000</td>
<td>3.92485</td>
<td>1.84580 - 5.35420</td>
</tr>
<tr>
<td>-6.013</td>
<td>15.306</td>
<td>0.000</td>
<td>18</td>
<td>23.6000</td>
<td>3.92485</td>
<td>1.95106</td>
<td>5.24894</td>
</tr>
</tbody>
</table>

Independent samples test

Figure 2. Process group guidance service model with self-regulation techniques to improve student motivation junior high school.

Figure 3. Students create concept maps in learning.
Experienced researchers as a group leader in the activities of group counseling by utilizing the techniques of self-regulation to improve students’ motivation, it was found that the procedures for implementing the service increase student motivation with the model group guidance through the techniques of self-regulation provide equal opportunities to each group to get involved and active during the activity. Starting from the establishment phase to the termination stage.

Group counseling be effective and efficient if all the elements involved in the process of guidance is seen as a system. Variable or component in the guidance system of the group according Wibowo (2005: 189), namely: “Variable raw input (students / group members); instrumental input (counselors, programs, stages and facilities); environmental inputs (norms, goals and environment); processor intermediary (interactions, treatment of behavioral contract that was agreed to be changed and group dynamics); output that is related to changes in behavior or control tasks”.

Conclusions

Group guidance with regulatory techniques can be used to improve students’ motivation. Committed in a situation of group counseling in group dynamics that the students are effective in revealing the topic of problems regarding motivation to learn together with other members. through the guidance of the group stages, namely: (1) the establishment phase, (2) an intermediate stage, (3) the stage of activity, (4) the stage of termination. Techniques of self-regulation will be implemented in all three phases (phase activities) in the counseling group. At this stage in the activities of group counseling, group leaders will provide strategies of self-regulation techniques to improve students’ motivation through the steps as follows: (1) Planning, (2) Self-monitoring, and (3) Self reflection/evaluation.

Based on this research, it was found that there are significant differences between the average scores of students’ motivation before receiving group counseling services and the value of the average score of students’ motivation after receiving group counseling services. This implies that the implementation of counseling services group with the techniques of self-regulation effective in improving students’ motivation.

Suggestions can be put forward for researchers who want to carry out research on students’ goal, so that these models can be developed to assess the development of other indicators that exist on students.

Limitations

Model guidance of the group is still possible to be developed further by extending the model components and the various parties who can contribute so that guidance and counseling program becomes more comprehensive. The test model is not only implemented in certain schools, that can be ascertained objectively whether a particular model of group counseling services with self-regulation techniques are also effective when given to students from other schools, and therefore expected next researcher to cooperate with various parties.
RECOMMENDATIONS

Based on the research conclusions, the following suggestions are given, among others.

**For teachers guidance and counseling**

1. In light of the importance of student motivation problems, treatment using techniques of counseling services group with self-regulation can be programmed to periodically, especially for students who are learning motivation to get in a low category.
2. In applying the model of group counseling with self-regulation techniques, the counseling teacher must have the required competency model, and at the time of implementation guidance counseling teachers in order to provide a food or things that support students that are not easily bored and hungry on the activities of group counseling.

**For students**

Students are expected to follow the activities of group counseling services more enthusiastically and not cool with himself, indifferent, and more excited and participated in group counseling that the activities of the group dynamics can live and achieve the expected goals.

**For schools**

For the school is expected to provide opportunities, support, or facilities to the teacher guidance and counseling for implementing group counseling services with self-regulation techniques to improve students' motivation.

**For further research**

1. Researchers (continued) will conduct a study related to the same techniques that self-regulation techniques are expected to examine more deeply about this technique of self-regulation, self-regulation technique has various methods that have not all taken.
2. The test model is not only implemented in certain schools, that can be ascertained objectively whether a particular model of group counseling services with self-regulation techniques are also effective when given to students from other schools, and therefore expected next researcher to cooperate with various parties.

**Conflicts of Interests**

The authors have not declared any conflict of interests.

REFERENCES

The aim of this research is to define the perceptions of prospective special education teachers regarding special education teacher through metaphors. Phenomenology design was used in this research. The study group comprised 116 third year prospective special education teachers studying at Marmara University, Ataturk Faculty of Education, Special Education (Mentally Disabled Teaching) Department. The prospective special education teachers were asked to fill a form featuring the phrases, “The special education teacher is like (similar to) …….; because …..” The data were analyzed through content analysis. The results showed that the metaphors created by prospective special education teachers on the concept of special education teacher were grouped under ten categories. These categories are: (1) Patience and devotion; (2) Difficulty of profession; (3) Source of love and affection; (4) Complementing; (5) Superiority of profession; (6) Life coaching/guidance; (7) Weariness of profession; (8) Skill teaching; (9) Social leadership/enlightening, and (10) Social prejudices. All these categories were discussed within the scope of previous researches and some concrete research proposals were suggested for further studies.

Key words: Special education, teacher, prospective teacher, metaphor.

INTRODUCTION

There is no enough and accurate information about the number and proportion of disabled people in Turkey. “Turkey Disability Survey-2002” (State Institute of Statistics, 2009) presents some data about these proportions that “Total disability proportion in the overall population is 12.29%. The proportion of orthopedically, seeing, hearing, speaking and mentally disabled people is 2.58% and the proportion of people having chronic illnesses is 9.70% as well.” (p.5). In Turkey, according to 2011 Population and Housing Census, the number of population who has at least one type of disability (in seeing, hearing, speaking, walking, climbing stairs, holding or lifting something, learning, doing simple calculations, remembering and concentrating compared to peers) was 4 million 882 thousand and 841. In other words, 6.6% of the total population has at least one type of disability (Turkish Statistical Institute, 2015). In addition to these data, the National Education Statistics (2015-16) reveal that the number of students with special needs studying in different types of schools and levels within
formal education was 288.489 (Ministry of National Education, 2016). As the total number of students in school at the aforementioned period is 17,588,958, the rate of students with special needs may be considered to be 1.64%. While there may be differences in methods and periods of calculation, and terms used (disabled, handicapped etc.); it is evident that there is a considerable amount of people with special needs, in school age or not.

Regardless the age group, education is one of the primary needs of individuals with special needs. The Regulation on Special Education Services (2006) defines individuals with special needs as “individuals with significant difference compared to their coevals on personal and developmental features as well as educational capabilities due to various reasons.” The same regulation defines special education as “the education carried out by specially trained personnel and specially developed education programs and methods in line with all the developmental features and academic capabilities of individuals with the need of special education in suitable environments, in order to fulfill the educational and social needs of these individuals.”

As it may be understood from the definition of special education, specially trained personnel is required for this education to be carried out. In special education processes, there may be a number of different professionals, from physiotherapists to guidance and psychological consultants. Among these professionals, special education teachers hold an important role. In 2009, the State Advisory Council of the President’s Office (2009) released a report stating that schools did not have the sufficient number of special educators.

“Training teachers is an important issue in special education, just like in any other step of general education. The success of special education services depends on the quality of the personnel providing these services, therefore the teacher quality. Since 1981, personnel have been trained for special education in bachelor’s degree level. The special education teachers, who can provide mentally, visually or hearing disabled individuals with direct education services, are trained by the Faculties of Education Special Education Teaching Departments. These teachers are specialists who are directly responsible for defining mentally, visually or hearing disabled children’s educational needs, developing, applying and assessing personalized education programs (PEP).” (p. 182)

The same report released by the State Advisory Council of the President’s Office (2009) emphasizes the need of qualified staff on special education field.

“The training of personnel needed for the special education field is the prerequisite of starting and sufficiently improving special education services. The qualified personnel need in special education is comparable to that of other fields. Special education service is a bundle of interdisciplinary services that requires several personnel to work side by side. The personnel carrying out this work should be trained in fields like medicine, psychology, social services, sociology, child development and education, physiotherapy, home economics, audiology and speech disorders, arts and crafts teaching” (p. 182-183).

The profession of special education teaching appears to be a versatile professional field that also needs specialization. For instance, the methods and techniques used by the special education teacher will vary per type of disability. Furthermore, the area of responsibility for the special education teacher is not limited to children and youth of school age. Individuals with special needs outside school age will also be within the area of responsibility of the special education teacher. The possibility of working with individuals with more than one disability is also among the realities of this profession which would require different professional knowledge and skills. Additionally, the special education teacher will have to cooperate with other specialties in the education process of the individual with special needs.

Evidently, the special education teacher carries out a multi-dimensional and complex profession that requires expertise. For this reason, an in-depth analysis of the special education teacher regarding their profession will help better understanding of the different aspects of this profession. Within this scope, the aim of this research is to define the perceptions of prospective special education teachers regarding “special education teacher” through metaphors. It is expected that the research will provide hints on the profession of special education teaching and create new points of discussion.

METHODOLOGY

Research design

In this study conducted to define the prospective special education teachers’ perceptions on the “special education teaching” concept, the phenomenology design among the qualitative research methods is used. Yıldırım and Şimşek (2013: 78) claim that the phenomenology design may be used in perceiving concepts that we are not completely unaware of but we do not have a thorough understanding on. In this study, the conception of special education teaching is attempted to be understood through metaphors based on the perceptions of students receiving education on this very field.

Study group

The study group of the study is comprised 116 prospective teachers studying third year at the Marmara University Atatürk Faculty of Education Special Education (Mentally Disabled Teaching) Department in 2015-16 academic term.

Data collection tool

The prospective special education teachers are given a form
featuring the phrases, “The special education teacher is like (similar to) ……, because …..” The prospective special education teachers are asked to fill the first blank with a metaphor on the concept of special education teacher and provide justification for this metaphor filling the second blank. Participant prospective education teachers are asked to produce only one metaphor.

**Data analysis**

The data analysis is carried out in four stages. These are; (1) sorting, (2) screening, (3) sense-making (categories) and categorization, (4) explaining the categories and exemplification. In the first stage, the metaphors produced by prospective special education teachers, without being separated from their justifications, are sorted alphabetically. In the second stage, nine prospective special education teachers that did not produce metaphors or provide a meaningful justification are taken out of the study. For example, the responses without meaningful justification such as “special education teachers are like artists because they work hard for students to learn” are discarded. In this stage, a variety of metaphors is observed and the distribution of this variety (frequency and percentage) is given in Table 1. In the third stage, the justifying statements of prospective special education teachers are examined and categories are created according to their content. The categories created and the distributions of metaphors under these categories are given in Table 2. And in the fourth stage the distribution of metaphors under defined categories is given separately as tables with exemplary justifications.

In order to ensure the validity of the research, the prospective special education teachers’ statements are quoted directly. The statements are also coded with an abbreviation showing the linkage with the owner of the statement like PSET1, PSET2 (prospective special education teacher 1)… Also, in order to ensure intra rater reliability, the categorization is redone by the researcher after three weeks. The intra rater reliability of the research is measured as 0.94. The metaphors categorized differently in two assessments are revised by the researcher and the final decision is made.

**FINDINGS**

The frequency and percentage analysis of metaphors created by prospective special education teachers on the concept of special education teacher is given in Table 1. In Table 1, it has been understood that 116 prospective special education teachers whose metaphors are taken into account produced 60 different metaphors. Among 116 metaphors created, the most frequent are “mother” composed by 27 (23.2%) prospective special education teachers and “rock of patience” composed by 12 (10.3%) prospective special education teachers. These are followed by the “mother/father” metaphor composed by 6 (5.17%). When “mother” and “mother/father” metaphors are classified together, it is used by one third of the prospective special education teachers. Below given are examples of these three most frequent metaphors, one each with their justifications.

PSET4: “The special education teacher is like a mother
because the special educator is as patient and affectionate as a mother. They give their love to the student, first and foremost.”

PSET97: “The special education teacher is like the rock of patience because they need to be patient to fulfill the needs of their profession and also to be able to face the social pressure on their profession.”

PSET34: “The special education teacher is like a mother/father because the special education teachers have students/children that they have to take care of every need, like a mother/father.”

The metaphors created by prospective special education teachers on the concept of “special education teacher” as classified under several categories. Accordingly, ten categories are created. In Table 2, the names of categories, and the frequency and percentages of metaphors under these categories are given. It is observed also that the two categories where the most number of metaphors produced by prospective special education teachers are grouped under are “patience and devotion” category by 23.28% and “difficulty of profession” by 20.69%.

The metaphors produced by prospective special education teachers on the concept of “special education teacher” and the categories comprised of these metaphors are given in Tables 3 to 12.

As observed in Table 3, 27 metaphors exist under patience and devotion category and these metaphors constitute 23.28% of the total. Nine different metaphors are listed under patience and devotion category. The most frequent metaphor among them is the “rock of patience” by 44.44%. This is followed by “mother” (22.22%) and “angel” (11.11%). Some of the justifications provided by prospective special education teachers under patience and devotion category are given as follows:

PSET93: “The special education teacher is like a rock of patience because it is possible to meet expected results in a student under if you are patient. If there is no patience, most of the things that need to be given with enthusiasm go away.”

PSET12: “The special education teacher is like a mother because a mother bears with everything her children do and pay an effort to show the right way with patience. The special education teacher is just like that. They try to show the right way to the students tirelessly, with patience.”

Ö78: “The special education teacher is like an angel because they are devoted to children with special needs. They pay an extraordinary effort to help the child, already born with a challenge, overcome their challenges and be raised as an independent individual, by taking them under their wings.”

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Table 2. The conceptual categories of metaphors created by prospective special education teachers on the concept of special education teacher.

<table>
<thead>
<tr>
<th>Metaphor category</th>
<th>f</th>
<th>%</th>
<th>Metaphor category</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patience and devotion</td>
<td>27</td>
<td>23.28</td>
<td>Life coaching/guidance</td>
<td>10</td>
<td>8.62</td>
</tr>
<tr>
<td>Difficulty of profession</td>
<td>24</td>
<td>20.69</td>
<td>Weariness of profession</td>
<td>7</td>
<td>6.03</td>
</tr>
<tr>
<td>Source of love and affection</td>
<td>16</td>
<td>13.79</td>
<td>Skill teaching</td>
<td>4</td>
<td>3.45</td>
</tr>
<tr>
<td>Complementing</td>
<td>11</td>
<td>9.48</td>
<td>Social leadership/enlightening</td>
<td>3</td>
<td>2.59</td>
</tr>
<tr>
<td>Superiority of profession</td>
<td>11</td>
<td>9.48</td>
<td>Social prejudices</td>
<td>3</td>
<td>2.59</td>
</tr>
</tbody>
</table>

Table 3. Metaphors under patience and devotion category.

<table>
<thead>
<tr>
<th>Metaphors</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock of patience</td>
<td>12</td>
<td>44.44</td>
</tr>
<tr>
<td>Mother</td>
<td>6</td>
<td>22.22</td>
</tr>
<tr>
<td>Angel</td>
<td>3</td>
<td>11.11</td>
</tr>
<tr>
<td>Self-sacrificing person</td>
<td>1</td>
<td>3.70</td>
</tr>
<tr>
<td>Carpet weaver</td>
<td>1</td>
<td>3.70</td>
</tr>
<tr>
<td>Robot technician</td>
<td>1</td>
<td>3.70</td>
</tr>
<tr>
<td>Jewel designer</td>
<td>1</td>
<td>3.70</td>
</tr>
<tr>
<td>Tailor</td>
<td>1</td>
<td>3.70</td>
</tr>
<tr>
<td>Prophet</td>
<td>1</td>
<td>3.70</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 4. Metaphors under difficulty of profession category.

<table>
<thead>
<tr>
<th>Metaphors</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>2</td>
<td>8.33</td>
</tr>
<tr>
<td>Precision scale</td>
<td>2</td>
<td>8.33</td>
</tr>
<tr>
<td>Sculptor</td>
<td>2</td>
<td>8.33</td>
</tr>
<tr>
<td>Pencil/Pen</td>
<td>2</td>
<td>8.33</td>
</tr>
<tr>
<td>Candle</td>
<td>2</td>
<td>8.33</td>
</tr>
<tr>
<td>Fish swimming against the flow</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Cook</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Gardener</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Leavening the lake</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Ant</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>A pitcher trying to fill a broken glass</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Pirate</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Penny bank</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Marathon runner</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Lapidary</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Engineer</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Warrior</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Eraser</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Sisyphus</td>
<td>1</td>
<td>4.17</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 5. Metaphors under affection and source of love category.

<table>
<thead>
<tr>
<th>Metaphors</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>12</td>
<td>75</td>
</tr>
<tr>
<td>Mother/father</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>100</td>
</tr>
</tbody>
</table>

Ö90: “The special education teacher is like a robot technician, because the robot technician tries to make robots think, act and decide like human. The special education teachers devote themselves trying to eliminate situations that make individuals robots and make them more normal.”

As observed in Table 4, 24 metaphors are classified under difficulty of profession category and these metaphors constitute 20.69% of the total. Under difficulty of profession category, there are 19 different metaphors. Some of the statements constituting the difficulty of profession category are given as follow:

PSET10: “The special education teacher is like a mother because just like a mother taking care of her child’s everything, the special education teacher takes care of their student’s eating when hungry, relieving their pain when they fall down, not just their education.”

PSET59: “The special education teacher is like a precision scale because their profession has so many delicacies and sensibilities that they need to balance them all.”

PSET60: “The special education teacher is like a sculptor because they try to turn the material they have from almost nothing to the most perfect possible.”

PSET69: “The special education teacher is like an ant because like the ant overcoming challenges bigger its size, the special education teacher tries to overcome challenges in their field. They are robust. They know they always have to work hard for students’ benefit.”

PSET74: “The special education teacher is like a marathon runner because they are in a long run to reach their goals and see the results. They always have to work harder.”

PSET106: “The special education teacher is like Sisyphus, like he knows it will not stand up when he carries the rock to the top, we [special education
Table 6. Metaphors under complementing category.

<table>
<thead>
<tr>
<th>Metaphors</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gardener</td>
<td>2</td>
<td>18.18</td>
</tr>
<tr>
<td>Mother</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Cane</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Sun</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Remedy</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Angel</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Candle</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Interpreter</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Soil</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Puzzle maker</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>11</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 7. Metaphors under superiority of profession category.

<table>
<thead>
<tr>
<th>Metaphors</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccination</td>
<td>2</td>
<td>18.18</td>
</tr>
<tr>
<td>Water</td>
<td>2</td>
<td>18.18</td>
</tr>
<tr>
<td>Locksmith</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Pottery master</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Diamond</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Crafts person treating diamond</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Silk cloth</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>Snowdrop</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td>A rare fruit tree</td>
<td>1</td>
<td>9.09</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>11</td>
<td>100</td>
</tr>
</tbody>
</table>

As observed in Table 5, there are 16 metaphors under affection and source of love category and these metaphors constitute 13.79% of the total. Under this category, two different metaphors, albeit similar, exist. The most repeated metaphor is the “mother” by 70.59%. This is followed by “mother/father” metaphor by 25%. Some of the statements by prospective special education teachers under affection and source of love category are given as follow:

PSET21: “The special education teacher is like a mother because, in order to reach their special students, they approach them with motherly love and affection.”

As observed in Table 6, there are 11 metaphors under complementing category and these metaphors constitute 9.48% of the total. Under this category, ten different metaphors are present. The “gardener” metaphor is created twice while other ten metaphors are mentioned once. Some of the statements by prospective special education teachers under complementing category are given as follows:

PSET39: “The special education teacher is like a gardener because just a gardener trying to make a plant flourish by completing its missing water and soil, the special education teacher sees the missing parts in individuals with needs of education and helps to make them cling to life.”
Table 8. Metaphors under life coaching/guidance metaphor.

<table>
<thead>
<tr>
<th>Metaphors</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life coach</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Mother</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Road companion</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Nanny</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Hero</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Guide</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 9. Metaphors under weariness of profession category.

<table>
<thead>
<tr>
<th>Metaphors</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>1</td>
<td>14.28</td>
</tr>
<tr>
<td>Mother /father</td>
<td>1</td>
<td>14.28</td>
</tr>
<tr>
<td>Jellyfish</td>
<td>1</td>
<td>14.28</td>
</tr>
<tr>
<td>Velvet cloth</td>
<td>1</td>
<td>14.28</td>
</tr>
<tr>
<td>Rock</td>
<td>1</td>
<td>14.28</td>
</tr>
<tr>
<td>Candle</td>
<td>1</td>
<td>14.28</td>
</tr>
<tr>
<td>Type-o-negative blood</td>
<td>1</td>
<td>14.28</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>

PSET42: “The special education teacher is like a cane because they support the individuals requiring special education and make them stand.”
PSET111: “The special education teacher is like an interpreter because they speak the language of those requiring special education. They understand their emotions and needs from motions. As the person understanding them, they provide communication with the family and the society.”
PSET115: “The special education teacher is like a puzzle because they complete the missing parts of their students.”

As observed in Table 7, there are 11 metaphors under superiority of profession category and these metaphors constitute 9.48% of the total. Nine different metaphors exist under superiority of profession category. “Vaccine” and “water” metaphors are used twice. Some of the statements that constitute the superiority of profession category are given as follows:

PSET38: “The special education teacher is like a vaccine applied to the tree because the vaccine fixes the defects in the tree’s fruits and the fruits become high quality and tastier. The special education teacher is a vaccine that increases the disabled students’ life quality and improves them, meeting expectations.”
PSET50: “The special education teacher is like a diamond because they are rare [like a diamond]. They [special education teacher] are also made out of coal with great effort. They know every child will become a diamond with effort.”
PSET64: “The special education teacher is like a silk cloth because among many types of cloth the silk is one of the most valuables. There are a lot of teachers but because of the nature of their job, the special education teachers are superior to other teachers.”
PSET86: “The special education teacher is like a rare fruit tree because it requires a great effort of themselves and others to raise them. When they are raised, their fruits become very valuable. These valuable fruits heal every individual that require special education.”

As observed in Table 8, there are ten metaphors under life coaching/guidance category and these metaphors constitute 8.62% of the total. Six different metaphors exist under this category. The most frequent metaphor among them is the “life coach” metaphor that the category is named after. Some of the statements by prospective special education teachers that constitute the life coaching/guidance category are given as follows:

PSET118: “The special education teacher is like a life coach because they not only give knowledge to the students with special needs; they also teach them adaptation to social life.”
PSET120: “The special education teacher is like a trip companion because when they walk with the student
requiring special education, the student's trouble and happiness becomes their own trouble and happiness. Whenever they fall, they stand back up together."

PSET46: "The special education teacher is like a nanny because not only they give knowledge; they prepare children requiring special education to life. In need, they become a brother, sister for them."

As observed in Table 9, there are seven metaphors under weariness of profession category and these metaphors constitute 6.03% of the total. All metaphors under this category are used only by prospective special education teachers. Some of the statements by prospective special education teachers that constitute the weariness of profession category are given as follows:

PSET47: "The special education teacher is like a jellyfish because the profession [of special education] wears them down and pulls off pieces but they know how to renew themselves."

PSET65: "The special education teacher is like a velvet cloth because the velvet cloth keeps its softness even when it is worn down. The special education teacher is also worn down but keeps the softness that the profession requires."

PSET70: "The special education teacher is like a rock because as each year passes it takes something out of them. After all those year, that giant rock becomes a small piece of stone."

PSET87: "The special education teacher is like the type-o-negative blood because they always give. They give their patience, labor and life, but never take. This is because; it is very hard to get feedback from kids."

As observed in Table 10, there are four metaphors under skill teaching category and these metaphors constitute 3.44% of the total. Only “mother” and “mother/father” metaphors are created under this category. Some of the statements by prospective special education teachers that constitute the skill teaching category are given as follows:

PSET7: "The special education teacher is like a mother because they prepare students to life. They teach all the skills such as using the toilet, holding forks and spoons that a mother teaches."

PSET31: "The special education teacher is like a mother/father because just like parents teaching all the skills to prepare the child to life, the special education teacher teaches the children with needs all the skills."

As observed in Table 11, there are three metaphors under social leadership/enlightening category and these metaphors constitute 2.58% of the total. "Light", “sword and shield”, and “courageous person” metaphors are used once. The statements by prospective special education teachers that constitute the social leadership/enlightening category are given as follows:

PSET43: "The special education teacher is like a courageous person because they undertake a profession that they do not know at first and lead bringing in outcast individuals back to society."

PSET62: "The special education teacher is like a light because just like a light enlightening its surroundings, they enlighten their environment by bringing in individuals with special needs to society and making them accepted by the society."

PSET71: "The special education teacher is like the sword and shield because the children with special needs are in battle with the ignorant society. What will end this battle for good are the warrior [special education teacher] and their weapons [knowledge of special education]."

As observed in Table 12, there are three metaphors under social prejudices category and these metaphors constitute 2.58% of the total. "Light", “sword and shield”, and “courageous person” metaphors are used once. The statements by prospective special education teachers that constitute the social prejudices category are given as follows:

PSET43: "The special education teacher is like a courageous person because they undertake a profession that they do not know at first and lead bringing in outcast individuals back to society."

PSET62: "The special education teacher is like a light because just like a light enlightening its surroundings, they enlighten their environment by bringing in individuals with special needs to society and making them accepted by the society."

PSET71: "The special education teacher is like the sword and shield because the children with special needs are in battle with the ignorant society. What will end this battle for good are the warrior [special education teacher] and their weapons [knowledge of special education]."
constitute 2.58% of the total. “Rower rowing against the wind”, “robust building”, and “volunteer” metaphors are used once. The statements by prospective special education teachers that constitute the social prejudices category are given as follows:

PSET53: “The special education teacher is like the rower rowing against the storm because the society is so sure that you cannot teach them [individuals with special need of education] anything. They never give up pitying you. You profess under these conditions:

PSET56: “The special education teacher is like a volunteer because they give their greatest effort for these children even when their families do not want them.”

PSET103: “The special education teacher is like a robust building because just like a [robust] building standing tall against quakes, the special education teacher tries to stand tall while educating a socially outcast group.”

### CONCLUSION AND DISCUSSION

The metaphors created by prospective special education teachers on the concept of special education teacher are grouped under ten categories. These categories are: (1) Patience and devotion; (2) Difficulty of profession; (3) Source of love and affection; (4) Complementing; (5) Superiority of profession; (6) Life coaching/guidance; (7) Weariness of profession; (8) Skill teaching; (9) Social leadership/enlightening, and (10) Social prejudices. Among these categories, patience and devotion (33.3%) feature the difficulties the special education teacher faces while professing, along with the delicacies and sensibility required while working with individuals with special needs. Working with individuals with special needs necessitate using different methods and techniques. While it is not possible to mention all these techniques, a few examples may be given. For instance, knowing and applying prompting-related techniques such as simultaneous prompting (Ar et al., 2010; Karşiyakalı et al., 2014; Swain et al., 2015), constant time delay prompting (Sayığın, 2009), most-to-least prompting (Davenport and Johnston, 2015; Eren et al., 2013) during skill teaching are just a few of the skills that a special education teacher needs to possess. Meanwhile, special teaching techniques in different fields may also be applied to the field of special education, like the use of the Orff approach in teaching concepts to individuals with special needs (Eren et al., 2013; Sağırkaya, 2014). Adapting and using technological developments in special education (Acungil, 2014; Eliçin, 2015; Özbek, 2014; Xin and Leonard, 2015) can increase the difficulty of the profession, as it shows the variety of skills that a teacher has to acquire. Additionally, existence of different disabilities and an individual possibly having multiple disabilities appear as factors that increase the difficulty of profession. The special education teachers are also in an intense cooperation with the parents while professing. The special education teacher educating the family or making use of the family in the development of children with special needs (Elmalı Alptekin, 2011; Çakmak, 2011; Meadan et al., 2015) is among the distinctive and important features of this profession which also renders it more difficult. Also, the fact that the expected results from individuals with special needs taking a huge amount of time is another professional difficulty. An and Sipal (2009) said that printed and audiovisual materials, the lack of professional development opportunities, students’ attitudes and inadequate salaries as the factors affecting job satisfaction among professionals working in special education field. The difficulties that a special education teacher may face can be categorized in a simple and limited manner, within the scopes of examples given. The

### Table 12. Metaphors under social prejudices category.

<table>
<thead>
<tr>
<th>Metaphors</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rower against the storm</td>
<td>1</td>
<td>33.3</td>
</tr>
<tr>
<td>Volunteer</td>
<td>1</td>
<td>33.3</td>
</tr>
<tr>
<td>A robust building</td>
<td>1</td>
<td>33.3</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>100</td>
</tr>
</tbody>
</table>

"Concerning the education of disabled children, it is obvious that the teachers working in this field should be as patient and self-sacrificing as the families. It is also known that the education and care of disabled children, compared to those of their normal coevals, require more patience and self-sacrifice." (p.173)
difficulties are grouped as: (1) difficulties related to methods and techniques while working with individuals with special needs; (2) difficulties related to including parents of individuals with special needs in the process, and guidance; (3) difficulties related to the probability of expected results in individuals with special needs appearing late; and (4) difficulties related to working environment and facilities.

The source of love and affection category features the importance and requirement of love and affection for the individuals with special needs shown by the special education teacher while teaching. It is generally accepted that, concerning teacher-student relationship, the profession of teaching contains more emotions than other professions (Celep, 2009; Çelik, 2011). Regarding special education teaching, it should not be surprising that this emotional relationship is even more intense compared to other fields of teaching. Especially, the education processes dominated by face-to-face and one-to-one relationships and the fact that individuals with special needs may be more sensitive and vulnerable render the emotional dimension of education more important.

Complementing category emphasizes the special education teacher being complementary on inadequacies of individuals with special needs. In this dimension, like in life coaching/guidance, preparing the individual with special needs to life is featured. Meanwhile in this category, it is important that the special education teachers consider themselves to be the person complementing the inadequacies of the individual with special needs. In this regard, a limited, non-pathological, normal narcissism may be at stake. In metaphors and justifying statements under this category, the prospective special education teachers underline that they are essential and indispensable while comparing themselves to a puzzle piece or a cane helping them to stand. This emphasis is similar to the features of "holding a sense of self-importance," "believing to be a special and unparalleled person" (APA, 2013) found in narcissistic tendencies. Meanwhile, the same metaphors point to an empathetic approach by statements such as "understanding the emotions of individuals with special needs." Pincus and Lukowitsky (2010) state that the narcissistic patterns may have negative consequences such as ignoring other people, while it may also have positive consequences such as establishing empathetic bonds with people, therefore there may be a normal/healthy narcissism. Additionally, Pincus and Lukowitsky (2010) also claim that every individual may have normal narcissistic needs. Therefore, it is important to underline that, the complementing category does not refer to a pathological narcissism, a personality disorder. It is a healthy narcissism with normal limits. The statements under the superiority of profession category also support this discussion and give hints on a normal/healthy narcissism.

The superiority of profession category features the superiority of special education teaching profession over other professions, notably over other fields of teaching. The special education teachers, due to the nature of their profession, directly intervene in the lives of individuals with special needs, as it may be also seen in facilitating, life coaching/guidance categories. This intervention is important as it enables the individual with special needs clinging to life, their dependency on others become reduced, and they become productive. In other words, the special education teacher helps social, emotional and even professional development of individuals with special needs. Regardless of how slow the development may be, the results acquired are extremely valuable for the individual with special needs, their family and also the special education teacher. On the other hand, the special education teacher being professional sources of hope for many helpless families constitutes another important aspect of the profession. For these reasons, the special education teaching is deemed to be superior over other professions.

The life coaching/guidance category features emphasis on special education teachers' close and warm (empathetic) and constant relationship with the individual with special needs, preparing them for life and facilitating their life. The prospective special education teachers justifying the metaphors they used underline the guidance for preparing the individual with special needs for life, and not any guidance towards families or other teachers. It is noteworthy that the life coaching/guidance is limited for individuals with special needs. The Regulation on Special Education Services (2006) mentions the necessity of preparing individuals with special needs for life by improving their social, professional and basic life skills among the objectives of special education. Accordingly, guidance is prioritized in every step of special education services. Furthermore, within the scope of "Field Proficiencies for Special Education Teachers" defined by the Ministry of National Education (2008), special education teachers guiding students in different disability groups, their families and other teachers is required within different performance indicators.

The weariness of profession category features the negative effects of the profession over the special education teachers. In the justification of metaphors under this category, while the weariness of profession is underlined, the belief on special education teachers mending/repairing themselves is equally emphasized. Professional exhaustion may also be considered to be a consequence of weariness of special education teaching. There have been a number of studies that state the special education teachers face professional exhaustion of different levels (Brunsting et al., 2014; Karakan, 2012; Karahan and Uyanik Balat, 2011; Kaya and Uskun, 2012; Şahin and Şahin, 2012; Williams and Dikes, 2015).

Skill teaching category features that the special
education teachers not only give knowledge for preparing the individual with special needs for life but are also responsible for teaching/improving all kinds of skills. Skill teaching may be considered to be important in the education of individuals with special needs. In the studies on the field of special education, skill teaching is emphasized more than scholar skills such as reading and writing (Elcin, 2015; Şengül, 2008), solving math problems (Karabulut, 2015; Kasap, 2015; Yakubova et al., 2015), overlapping professional (Bennett, 2013; Kwon and Lee, 2016; Özsey, 2015) and daily life skills (Kalayci, 2014; Kaya, 2015; Kurtoğlu, 2015; Stanton-Chapman and Brown, 2015).

Social leadership/enlightening category features the role of special education teachers in bringing individuals with special needs in society, eliminating conflicts between the society and these individuals, and promoting the profession within the society. In a society where social prejudices over individuals with special needs persist, many shortcomings from environmental planning to education and care services exist; it is clear that the special education teacher will continue to have an increasing role of social leadership.

Social prejudices feature the biases the special education teacher faces while teaching, caused by the society and even the family of the individual with special needs. Among the studies examining the attitudes towards individuals with special needs, there are studies pointing at the existence of some positive attitudes (Bek et al., 2009; Yarali, 2015). A number of works have been done by the state and NGOs to increase society’s awareness on individuals with special needs, their adaptation to society and productivity. However, despite all these efforts, it is not possible to say prejudices over individuals with special needs do not exist. Tezcanci (2013) claims that disabled people working in public service face prejudices such as “disabled people cannot be productive”, “disabled people cannot manage that”, “disabled people are uneducated,” emphasizing most disabled people continue to receive education while working, in order to break the prejudice. Yavuz (2016) also emphasizes that mentally challenged individuals are underestimated, mocked and disregarded in society and this excluding approach emerges in many different ways; for instance a family with a mentally challenged child may face difficulties even when renting an apartment. The article also states that the acquaintances of a mother with a mentally challenged child once complained “will this child become a professor by going to school” (p.58).

The research findings generally suggest that the professional functions, responsibilities and difficulties of special education teachers are widely spread. Examining the categories revealed by this study more thoroughly in other studies will provide a more qualified and evidence-based approach towards the profession of special education teaching. In this regard, research topics such as (1) professional proficiencies of special education teachers and prospective special education teachers, (2) the social prejudices they face, (3) the effects of the profession on their own sense of self, (4) their perceptions on their social leadership role may be suggested.

Conflicts of Interests

The authors have not declared any conflict of interests.

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Karacan A (2012). An investigation about the level of burnout of the teachers who work with individuals can be trained and taught at the private educational institutes: The case of Anatolian side of Istanbul. Unpublished master’s thesis, Maltepe University, Istanbul, Turkey.
An analysis of teachers’ perceptions through metaphors: Prospective Turkish teachers of science, math and social science in secondary education

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In this study, teachers’ perceptions of prospective Turkish teachers (that is, those who have completed their undergraduate studies) in the fields of Science, Mathematics and Social Sciences are investigated through teacher metaphors. These perceptions were classified in accordance with their answers to two open-ended questions within a metaphoric structure used as the data collection tool. This classification employs the tripartite metaphorical classification developed by Martinez et al. and includes the following perspectives: Transmissive, constructivist, and situative. In the study, 58 different teacher metaphors were identified. As a result of the research, metaphors within the Transmissive class were observed predominantly in prospective teachers of both groups, followed by Constructivist in prospective Science and Math teachers, and Situative in prospective Social Science teachers. Findings from the study are also discussed within the scope of relevant literature.

Key words: Teaching perception, prospective teacher, teacher training, secondary education.

INTRODUCTION

Perceptions of teachers can effectively reflect their teaching practices within the classroom; therefore, it is important to identify the predominant beliefs and perceptions of prospective teachers during their education, through targeted studies. Fenstermacher (1994) and Richardson (1997) indicated that this is one of the most important objectives of teacher education.

In Turkey, changes in teaching philosophy began with the primary school curriculum in 2004, when a constructivist teaching approach (that is, a student-centered approach) was adopted. During the 2008 to 2009 academic year, the change was also reflected in formal secondary education (Demir and Demir, 2012).

This change in the philosophy of education programs is the theoretical side of the issue, while teachers’ responsibility to implement these educational programs in classrooms is the practical side. Teachers are the most important instruments in classrooms to reflect this change. If teaching perceptions of teachers and prospective teachers are different, this change is not...
reflected in classrooms. In this context, teachers and prospective teachers to determine the perception of teachers is very important.

According to Lakoff and Johnson (1980, 1999), metaphor is one of our most important tools of thought, and it identifies something as being the same or similar to an unrelated thing, thus highlighting similarities between the two. The analogical thinking mechanism used since early human history is turned into a metaphor when our last perception regarding something is created. In this context, according to Aubusson et al. (2006), all metaphors are analogies, but not all analogies are metaphors; similarly, metaphor is a reflection of deep perceptions of a person regarding a fact mentioned at that moment (Saban, 2010).

We symbolize our perceptions and understanding regarding a subject through metaphors. Martinez et al. (2001) called this “blueprint”. All teachers have their own philosophies (or perceptions) that are shaped over time within the framework of their individual experiences as a result of their interactions with the social environment. However, it is difficult to reveal the ultimate philosophy understanding of teachers (Mellado et al., 2012). Many previous studies suggest that personal metaphors can be used to reveal the ultimate philosophy understanding of teachers (Leavy et al., 2007; Martinez et al., 2001; Mellado et al., 2012; Saban, 2004; Saban, 2010; Saban et al., 2007).

Schmitt (2005) considers metaphor as an important data collection tool in qualitative research. Metaphors present a holistic framework of perception because they provide an understanding of experience related to the subject of the metaphor (Wormeli, 2009). Prospective teachers can be aware of their real perceptions regarding their attitudes toward teaching, through metaphors. In this way, metaphors can be used more actively in training programs for teachers. As stated by Mellado et al. (2012), this self-realization will play a key role for prospective teachers in changing or improving their attitudes, perceptions, and beliefs as appropriate.

Metaphors allow us to replace a concept or an idea with another one to better explain the original idea with another. There is an interpretation and a relative similarity in question (Ortory, 1993), and Lakoff and Johnson (1980) state that metaphor tries to explain what is unknown with something else.

Metaphors are not just a means of expressing perceptions of people regarding something; rather, they are also thinking and interpretation tools used continuously and unintentionally in the process of analysis (Martinez et al., 2001). Saban (2010) likens metaphor to a pair of glasses, where the metaphor of a person regarding something is the last perception framework of that person related to that thing and he/she interprets other concepts or ideas regarding this thing thorough these metaphoric “glasses.

**Teachers’ and prospective teachers’ metaphors in education**

All people, including teachers, use a carefully structured language in accordance with established rules that may not fully reflect their true understanding and ideas. As such, metaphor is an important cognitive tool that can help teachers present important information regarding real teaching perceptions and classroom practices (Boujaoude, 2000; Boyd and Bloxham, 2014; Briscoe, 1991; Gurney, 1995; Tobin and LaMaster, 1995). According to Tobin and Tippins (1996), metaphors can be considered as a source of reflection of ideas that will develop in the future.

While perceptions and ideas of prospective teachers regarding teaching and learning improve during their academic lives (Briscoe, 1991), perceptions and statements of teachers also contain conflicts. For example, although they express their teaching perceptions as student-centered, their real perceptions may be teacher-centered (Simmons et al., 1999).

A metaphoric study conducted by Saban (2004) on prospective primary teachers, they consider themselves more student-centered than teacher-centered; however, they see their secondary school colleagues as being more teacher-centered. According to various studies, it is a time-consuming process to make changes in the teaching perceptions of teachers (Mellado et al., 2006; Wahbeh and Abd-El-Khalick, 2014). In addition, there is an inconsistency among perceptions, thoughts, and implementation methods in general. In fact, there are significant inconsistencies among the ideas and practices of new teachers and those of prospective teachers (Brown and Melear, 2006; Da Silva et al., 2007).

Teachers develop their metaphors consistent with changes in their perceptions that affect new lives and experiences (Russell and Hrycenco, 2006; Tobin et al., 1994). Thomas and Beauchamp (2011) have investigated changes in professional perceptions of primary and secondary school teachers during their first years through the use of metaphors. Although most prospective teachers consider themselves “ready to prove themselves” or motivated at the beginning of the year, this perception may turn into one of mere survival toward the end of the year.

Tobin and Fraser (1989) indicate that metaphorical vocational perceptions of prospective teachers are exposed to considerable changes during the course of their academic lives. Teaching and learning perceptions of prospective teachers change as they experience real teaching practice, achieve new theoretical knowledge, and live new teaching experiences. Furthermore, prospective teachers develop new metaphors consistent with their changing perceptions (Leavy et al., 2007; Pinnegar et al., 2011; Volkmann and Anderson, 1998).

Several previous studies have investigated the
emotional perceptions of teachers and prospective teachers through self-created metaphors (Maxwell, 2015; Saban, 2011; Saban et al., 2014; Thomas and Beauchamp, 2011). From such studies, it is known that perceptions of teachers regarding their students affect their metaphors (Ben-Peretz et al., 2003; Saban, 2010).

Teaching practice serves as a real-world playing field for prospective teachers to implement their ideas in learning and teaching methods. Metaphor is an important tool that reflects perceptual changes of prospective teachers regarding teaching and learning during this teaching practice (Russell and Hrycenko, 2006).

Metaphors created by teachers tell us whether the perception of the teacher is student-, teacher-, or content-centered. In the curriculum of both National Science Education Standards (National Research Council, 1996) and the new secondary school curriculum of Turkey (MONE, 2013), a student-centered teaching environment is most desirable. For this purpose, a variety of activities and training programs are added to these curriculums; however, to what extent these changes made in the curriculum are perceived by students and teachers and their perceptions regarding these changes remained unanswered. Because teachers are responsible for applying the curriculum, the aim of this study is to determine the teaching perceptions of prospective teachers, who will be teaching in their own classrooms soon, through self-created teacher metaphors. The objectives of the research are as follows:

1. To determine the metaphors of prospective teachers regarding the concept of “teacher”.
2. To classify metaphors of prospective teachers regarding “teacher”.
3. To determine the distribution of “teacher” perceptions of prospective teachers by their gender
4. To determine distribution of “teacher” perceptions of prospective teachers depending on their length of teaching experience.

Criteria of metaphor analysis

According to Lorsbach et al. (1992), metaphor studies cannot be evaluated without classification. In this regard, the triple metaphorical classification used by Martinez et al. (2001) is employed in this study, which uses transmissive, constructivist, and situative perspectives. These classification titles are explained below within the scope of the related literature.

Transmissive perspective

Metaphors that see teachers as information translators and/or sources of information in many studies have been included in this classification (Gurney, 1995; Powell, 1994; Tobin and Espinet, 1989). In this group of metaphors, prospective teachers describe themselves as a “book” and students as “readers” of this book. In addition, the teacher is metaphorized as a person possessing more knowledge. Visual metaphors reflecting behavioral teaching characteristics, such as a source of light that illuminates the darkness, are included in this group (Mellado et al., 2012).

In this metaphor, light is considered to be the knowledge transferred from teachers to students. Expressions such as transparency, clarity, and reflection are used by teachers to explain this metaphor of teachers as sources of light. In some other students’ perceptions, the teacher is considered to be a “cook” and students are “food” that must be “prepared” (Leavy et al., 2007). In the studies of Ben-Peretz et al. (2003) and Mellado et al. (2012), the metaphor of a “fair judge” has emerged to highlight the objectivity of teachers.

Teacher is also metaphorized as “the sun” when describing a teacher-centered classroom. In this metaphor, “the sun” sheds light on all students (Buaraphan, 2012). In other words, the teacher transfers knowledge to students. These metaphors consider students as either “tabula rasa” (or “blank slates”), according to other researchers (Martinez et al., 2001; Mellado et al., 2012). In some studies, military metaphors such as “commander” or “training camp leader” are included in this classification (Bradford and Dana, 1996).

According to Saban (2010), clarifying the status of the teacher’s authority in the classroom is crucial because it determines the group (and, thus, the characteristics) of the metaphor. In this sense, metaphors emphasizing the dominant role of the teachers in the classroom are included in the transmissive class.

Constructivist perspective

Metaphors that promote teachers as facilitators of learning (Boujaoude, 2000; Buaraphan, 2011; Tobin and Lamaster, 1995) and students as individuals building their own knowledge (Mellado et al., 2012) are included in the constructivist class. Defining a teacher as “a bird everyone can see” in previous literature is included in this classification (Bradford and Dana, 1996).

According to Pinnegar et al. (2011), the guidance and counseling role of the teacher in students’ learning process refers to the secret support of the teacher; therefore, metaphors emphasizing the guiding and counseling role of the teacher are included in this group.

In determining which category to be included in the metaphor has been significant in the explanation of the second question, building a scaffolding of instruction, advocating opinions that have been included in this category. Only the teacher can modify the students’
existing knowledge, and add something to it. Metaphors like "Traffic signs" or "Conductor" have been included in this category (Buaraphan 2011). Also, "Trainer of the dance" has been included in this category (Leavy et al., 2007). Here the student is the "dancer". The instructor presents her work plan and the guidance does, however, the basic responsibility belongs to the student. No matter how good the trainer is the result is determined by the student.

Considering students as members of a team and the teacher as the "team leader" responsible for the organization and cooperation in the team is also included in this group (Mellado et al., 2012). In other definitions that fall within this class, teachers are considered "theater directors" or "dance instructors" (Leavy et al., 2007), in addition to the teacher as a "catalyst," as in chemical reactions (Boujaoude, 2000). Metaphors that involve the transformation and evolution of students are also included in this class (Gurney, 1995; Russell and Hrycenko, 2006).

**Situative perspective**

According to this perspective, the learning environment and life cannot be considered independently. Students' previous experiences and learning environment (friends, colleagues etc.) are effective for what? One of the most important points is the interaction in learning. Learning is done by doing and experiencing (Clancey, 1997; Lave and Wenger, 1991). In addition, the current culture and social environment has a significant share in learning (Brown et al., 1989).

According to Leavy et al. (2007), teaching is like a student's backpack on a camping trip fill. At the beginning of the trip, the student's prior knowledge and experiences are filled in the backpack. The teacher helps and guides the students to discover new things during the trip. "Tour guide", "Coach", "Conductor", "Coactor/Co-actor" as teacher metaphors, according to Buaraphan (2011), were in this category.

Metaphors that consider the teacher as a guide for students and emphasize the socio-cultural sides of teachers and teaching are included in the situative group (Gurney, 1995). Describing teachers as "tour guides" who take students to new places are also included in this class (Whitcomb et al., 2008).

The teacher is the "northern star" included in this category. As students travel to new places, the teacher indicates the direction and the light source; the teacher will supply your needs (Leavy et al., 2007). Students "passengers" teacher "sign", students "flock of sheep", the teacher "shepherd" were also included in this category (Mellado et al., 2012).

Considering teachers as those who encourage students to explore new ideas and who guide them to unknown places (that is, new subjects and concepts) are other metaphors included in this class (Boujaoude, 2000; Buaraphan, 2011; Ritchie, 1994).

**METHODOLOGY**

**Participants**

All the participants are secondary school prospective teachers. Also, all participants have completed their bachelor's degree in 9 different disciplines. The study group consisted of 112 prospective teachers of Science and Math among a total of 143 prospective teachers. The distributions of these prospective Science and Math teachers are as follows: 75 women (67%) and 37 men (33%); 58.9% of the prospective teachers were either 31 or older than 31 years old; 28.6% were between the ages of 26 and 31; and 12.5% were between the ages of 21 and 25. Twenty-four (16.8%) prospective teachers received their bachelor's degree in chemistry, 26 (18.2%) in physics, 42 (29.4%) in biology, and 20 (14%) in mathematics.

Thirty-one of the total 143 prospective teachers focus on social science. Their distribution is as follows: 16 women (51.6%) and 15 men (48.4%); 19.4% of the prospective teachers were either 31 or older than 31 years old; 38.7% were between the ages of 26 and 31; and 41.9% were between the ages of 21 and 25. Ten (7%) prospective teachers received their bachelor's degree in theology, 8 (5.6%) in Turkish language and literature, 4 (2.8%) in geography, 5 (3.5%) in sociology, and 4 (2.8%) in philosophy.

Prospective teachers were asked a question to determine whether they had previous experience in private schools. Sixty-seven (46.85%) had teaching experience that ranged from 1 to 11 years, while 76 (53.15%) had no previous teaching experience at all.

**Data collection process**

Although most of the teachers graduated from Education Faculties in Turkey, it is possible for graduates of other faculties to become a teacher after taking a two-semester pedagogical certificate program. This study was conducted in May 2013, and participants of the study were those receiving pedagogical training in a public university in the Mediterranean Region and had already completed their undergraduate studies. The data collection was initially conducted with a total of 175 prospective teachers in the last four weeks of their pedagogical training; however, only 143 of these 175 prospective teachers were included in the study because some of the answers given to the two open-ended questions were not usable. Thirty-two prospective teachers who did not answer the second question were excluded from the study. Prospective teachers in the sample group had 9 different branches. Since the branch distribution of the candidate teachers was high, a dual classification was preferred. The first one is the Science & Math Group and the second is Social Sciences.

Brief introduction was made to the participants about the measuring instrument used in the study. At first, it was told what the metaphor was. Secondly, several example of the metaphors were given. We were then given 30 minutes to respond to the questions on the questionnaire. In the data collection form, credentials of prospective teachers were not requested. There was a beginning section asking their age, gender, and focus of their bachelor’s degree in the beginning of the survey. In the remaining section, they were asked to answer the following questions:
Table 1. Level of consistency between classification of metaphors conducted by experts and the researcher.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expert 1</th>
<th>Expert 2</th>
<th>Expert 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number of metaphors in agreement by both researcher and experts</td>
<td>130</td>
<td>132</td>
<td>129</td>
</tr>
<tr>
<td>Reliability</td>
<td>90.9%</td>
<td>92.3%</td>
<td>90.2%</td>
</tr>
</tbody>
</table>

1. Imagine yourself as a teacher in a secondary school. In this case, how do you metaphorize yourself as a teacher? 
2. Can you explain the reason why you metaphorized yourself as above?

Data analysis process

In the analysis process of the prospective teachers’ metaphors, the metaphor review systematics of Schmitt (2005) was taken into account. According to Schmitt (2005), metaphor analyses require a kind of qualitative content analysis methodology; thus, the following three-step process was conducted:

1. Naming metaphors/labelling
2. Classification of researchers, and
3. Determination of reliability rates between evaluators.

According to Roth (1993), some metaphors have a structure that is difficult to understand and is open to different interpretations, as it contains simple details based on different ideas. In this respect, capturing the actual meaning behind metaphors is the most important yet challenging issue. Two open-ended questions were asked to prospective teachers during the data collection process of this study to overcome this problem. The first question asked participants to metaphorize themselves as “teacher”. The second question asked a reliability question that presents the actual reason of the metaphoric description given in the first question. It is inevitable, however, to receive metaphors that are difficult to classify or could be put into multiple categories. The level of compliance between the metaphoric classification created for this study was examined to increase the reliability of this issue.

Naming metaphors/labelling

In this step, metaphors created by prospective teachers about being a teacher were entered sequentially in a Microsoft Excel file. In this document, their demographic variables were also included. In addition, notes were taken based on explanations written by prospective teachers in response to the second question. Thirty-two data points were not appropriate for evaluation, and as such, were excluded from the study.

Classification of researchers

In this step, metaphors created by prospective teachers about the teacher were classified in line with answers given in response to two open-ended questions in accordance with the tripartite classification developed by Martínez et al. (2001).

Determination of reliability

In the classification of metaphors created by prospective teachers, three different field experts were consulted for reliability of the study. Tripartite classification of Martínez et al. (2001) regarding teaching and learning was introduced to three different field experts with academic experience of 20, 18, and 12 years, respectively. These experts classified metaphors by considering the answer given in response to the two open-ended questions in a manner independent from each other and the researcher. Then, the level of consistency was determined by comparing the classifications done by the researcher and classifications done by the experts. The reliability analysis used the formula (reliability = agreement/ agreement + disagreement × 100) created by Miles and Huberman (1994), and the consistency rate was found to be at least 90.2% (Table 1). Miles and Huberman (1994) consider a study reliable if the consistency rate is greater than or equal to 90% and is provided by comparing classifications conducted by two or more different field experts.

RESULTS

Metaphors are primarily seen in the transmissive class for both groups of prospective teachers and the most common include metaphors of “elder brother/sister,” “gardener,” “farmer,” and “sun,” respectively (Tables 2 and 3). Prospective teachers stated that elder brothers and sisters are more knowledgeable and experienced; and teachers transfer their knowledge to students just as an elder brother or sister does to his or her younger siblings. This metaphor is used. In the metaphor of “mother,” students are considered children who need to be looked after. In the metaphors of “gardener” and “farmer,” students are described as flowers, seeds, or seedlings to be grown. In the metaphor of “sun,” students are depicted as treasure that has been hidden in the dark, or as plants in need of light. Although there is no significant difference between prospective Science, Math and Social Sciences teachers in terms of percentage distributions of metaphors within the class of transmissive, prospective Science, Math teachers have slightly more transmissive teaching perceptions compared to prospective Social Sciences teachers. (Figure 1)

While metaphors in the class of constructivist rank second in terms of prospective Science and Math teachers, these metaphors are in the last place for prospective Social Science teachers. Although there is no significant difference between these two groups, prospective Science and Math seem to have more constructivist teaching perceptions compared to prospective Social Sciences teachers. The most common metaphors in this class are the metaphors of “maestro,”
Figure 1. Metaphoric teaching perceptions of prospective science, math and social sciences teachers.

Table 2. Teacher metaphors expressed by prospective Science and Math teachers.

<table>
<thead>
<tr>
<th>Transmissive</th>
<th>Constructivist</th>
<th>Situative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elder brother/sister (10)</td>
<td>Maestro (6)</td>
<td>Bus driver (5)</td>
</tr>
<tr>
<td>Gardener (10)</td>
<td>Coach (6)</td>
<td>Guide (2)</td>
</tr>
<tr>
<td>Mother (6)</td>
<td>Flower (3)</td>
<td>President</td>
</tr>
<tr>
<td>Farmer (6)</td>
<td>Clerk (3)</td>
<td>Shepherd</td>
</tr>
<tr>
<td>Sun (4)</td>
<td>Bird open to observation (2)</td>
<td>Ocean</td>
</tr>
<tr>
<td>Cook (3)</td>
<td>Computer game</td>
<td>Compass</td>
</tr>
<tr>
<td>Water (3)</td>
<td>Auditor ant</td>
<td>-</td>
</tr>
<tr>
<td>Father (2)</td>
<td>Referee</td>
<td>-</td>
</tr>
<tr>
<td>Babysitter (2)</td>
<td>Shield</td>
<td>-</td>
</tr>
<tr>
<td>Cloud (2)</td>
<td>Leader of migratory birds</td>
<td>-</td>
</tr>
<tr>
<td>Sea (2)</td>
<td>Prism</td>
<td>-</td>
</tr>
<tr>
<td>Pencil (2)</td>
<td>Manager of a company</td>
<td>-</td>
</tr>
<tr>
<td>Oil lamp (2)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Candle (2)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cake master (2)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Battery (2)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Open book</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fair judge</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Crossword Solver</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Potter</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Doctor</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sculptor</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Interior architect</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Queen Bee</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Puppeteer</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pianist</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chicken</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Theatre player</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Spring</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Craftsman</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
“coach,” “flower,” “clerk,” and the “bird open to observation,” respectively. In the metaphor of “maestro,” students are explained as the members of an orchestra, and the maestro conducts a symphony by using abilities of each member of the orchestra. In the metaphor of “coach,” the teacher designs the game plans by knowing the skills of each team member and promoting cooperation to reach the goal of becoming champions. In the metaphor of “flower,” students are bees that produce honey by collecting the essence from all of the flowers. In the metaphor of “clerk,” the idea of marketing a product to a customer and the concept of good advertising comes to the fore. As in the study of Bradford and Dana (1996), two prospective teachers metaphorized the teacher as a “bird that can be observed,” supporting this metaphor by indicating that students see some teachers as their role models, more or less.

In the metaphor of “clerk,” the idea of marketing a product to a customer and the concept of good advertising comes to the fore. As in the study of Bradford and Dana (1996), two prospective teachers metaphorized the teacher as a “bird that can be observed,” supporting this metaphor by indicating that students see some teachers as their role models, more or less. There are also some definitions given by prospective teachers who consider themselves as a “protective shield,” “auditor ant,” or “leaders of migratory birds,” the latter of which involves students as the migratory birds and emphasizing the guidance role of the teacher (Tables 2 and 3).

While metaphors in the class of situative are in the last place for prospective Science and Math teachers, these metaphors are in the second place for prospective Social Science teachers. The most important difference between the two groups of prospective teachers emerged in the class of situative teaching perception, as the number of prospective Social Sciences teachers that adopted the situative teaching perception is two times more than the number of prospective Science & Math prospective teachers (Figure 1). According to the findings of this study, “bus driver,” “compass,” and “guide” are the most commonly used metaphors in this class (Tables 2 and 3).

Whitcomb et al. (2008) and Gurney (1995) also reached similar findings. Some prospective teachers defined teachers as “rivers” or “oceans.” In these metaphors, students are regarded as fishermen. In another metaphor, teachers are regarded as “compasses” and “maps” that help students to find their way and explore new routes (Boujaoude, 2000; Buaraphan, 2011; Ritchie, 1994) (Tables 2 and 3).

The effect of prospective teachers’ teaching experience on their perceptions in line with the data is presented in Figure 2. Both prospective teachers with and without any teaching experience seem to adapt to transmissive teaching perceptions at high ratios. For example, 71.64% of experienced prospective teachers and 59.21% of prospective teachers without any teaching experience have adopted this teaching perception. The most important difference has emerged in the situative teaching perception, where 2.99% of the experienced prospective teachers and 21.05% of prospective teachers with no teaching experience have adopted this perception. According to this result, experienced teachers have seven times lower rates of having situative teaching perceptions compared to prospective teachers without any teaching experience. Therefore, it can be stated that teaching experience highly and adversely affects situative teaching perceptions of prospective teachers.

Differences in the teaching perceptions of prospective teachers based on genders are shown in Figure 3. Accordingly, teaching perception in the transmissive class is in first place for all prospective teachers, followed by constructivist and situative teaching perceptions, respectively. Transmissive teaching perception is almost identical for both genders; however, the number of male
teachers who adopted constructivist teaching perceptions is quite high compared to female teachers. The highest difference has emerged in the situative teaching perception, where the ratio of female teachers who adopted this perception is double the ratio of male teachers.

**DISCUSSION AND CONCLUSION**

The results of this study indicate that most prospective secondary school teachers in Turkey have adopted the transmissive perception, which consider teachers as a source of knowledge and students as the receiving party. Another important result is that the ratio of prospective Social Sciences teachers that adopted the situative teaching perception is almost twice than the ratio of prospective Science and Math teachers.

This result can be explained by the structure of the Social Sciences discipline, which requires more communication and social learning. On the other hand the low level of prospective Science and Math teachers’ situative metaphors was not expected because the science discipline also requires social interactions. One
possible reason for this unexpected result might be teachers' preferences for teaching science course in school halls such as atelier, science lab etc.

According to the results of this study, both prospective teachers with and without any teaching experience seemed to adapt to the transmissive teaching perceptions at high ratios; however, prospective teachers with teaching experience had higher rates of transmissive teaching perception than those without teaching experience (Figure 2).

Prospective teachers with no experience had seven times higher rates of situative teaching perceptions compared to experienced prospective teachers. This is one of the most interesting findings of this study. Entrance exams for higher education are one of the most important factors in determining the quality of education in Turkey. These exams consist of multiple-choice questions and, according to Içbay (2005), these exams limit the thinking skills of students. Thus, these exams lead students and their teachers down the path of a transmissive teaching approach. This is probably why situative teaching perceptions of experienced prospective teachers are lower than these perceptions of prospective teachers with no teaching experience. They usually prefer to present course content and focus on preparation activities to university entrance exams based on multiple choice tests rather than contextual and discovery based teaching activities.

Leavy et al. (2007) state that teaching practices conducted by prospective teachers at the entry level increase teachers' transmissive teaching perceptions and reduce their situative learning perceptions. Similarly, in the study of Martínez et al. (2001), experienced teachers had quite higher levels of transmissive teaching perceptions compared to prospective teachers with no experience. Conversely, prospective teachers with no experience seemed to have higher rates of situative teaching perceptions compared to experienced teachers. This may be caused by that although it is stated that curriculums adopted the student-centered approach in Turkey and in other countries, no serious changes are conducted in class teaching practice and instrumental spaces and tools (for example, textbooks, materials, decoration and equipment) are unable to keep pace with these changes (Çubukcu, 2012; Öztürk, 2011; Thanh, 2010; Wang, 2011). Findings of both this study and those of Martínez et al. (2001) show that teaching experience adversely affects the situative teaching perceptions of prospective teachers. In this sense, further studies can be conducted to determine the factors that negatively affect situative teaching perceptions of both teachers with experience and prospective teachers.

Leavy et al. (2007) presented that teaching practices conducted by prospective teachers have positive impacts on their constructivist teaching perceptions; however, Martínez et al. (2001) stated that prospective teachers have higher rates of constructivist teaching perceptions compared to experienced teachers. As a result of this study, it has been determined that prospective teachers with teaching experience have higher rates of Constructivist teaching perception. According to these results, teacher training that is mainly based on teaching practices will have positive effects on student-centered (that is, constructivist) teaching perceptions. For this reason, education faculties and pedagogical formation education programs in Turkey should be supervised in accordance with further student-centered education programs. It will also be useful to enhance teaching experience, including student-centered practices. In addition, addressing the teaching perceptions of instructors is also important. This is proposed as a subject of research for future studies.

Another interesting finding of this study is that the ratio of female prospective teachers who adopted situative-teaching perceptions is double the ratio of male prospective teachers who adopted this perception. One possible reason for this finding is that females are more prone to employing social teaching methods.

As in the case of most research studies, this study has also several limitations. First of all, the sample of prospective teachers was formed through convenience sampling from two specific state universities in Turkey. Thus, the findings may not be generalised to other populations. Second, in this study, the tripartite metaphorical classification developed by Martínez et al. (2001) is employed, even though some metaphors could be included in multiple groups. While this could be considered a limitation of the study, the consistency coefficient for classifying the metaphors by both researchers and experts has been checked in an attempt to overcome this problem.

Conflicts of interest

The authors have not declared any conflict of interests.

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Educational Research and Reviews

Related Journals Published by Academic Journals

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- Journal of Media and Communication Studies
- Journal of African Studies and Development
- Journal of Fine and Studio Art
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